Choosing the Future

Smithsonian Institution

Five-Year Prospectus ♦ Fiscal Years 1991 – 1995

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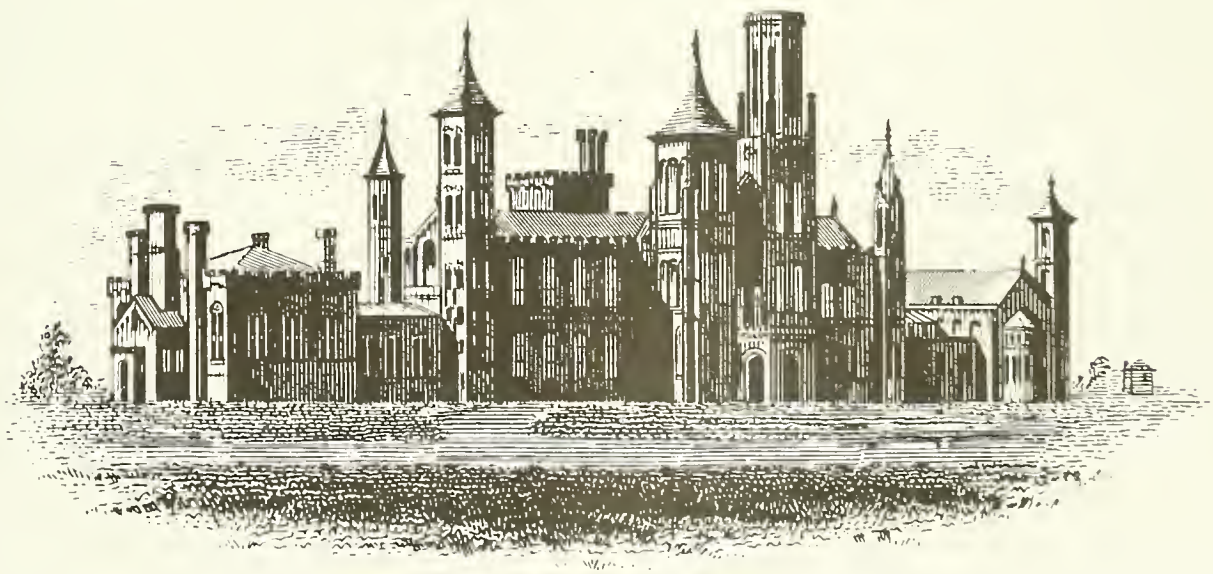
Choosing the Future



Smithsonian Institution

Five-Year Prospectus ♦ Fiscal Years 1991 – 1995

SMITHSONIAN INSTITUTION

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January 1990

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Choosing the Future

Message from the Secretary

There are differing views about the utility of a five-year prospectus like this one. To the cynics, it is largely an exercise in futility. Tradition-laden and venerable as it is, the Smithsonian is largely at the mercy of external forces governing not only its potential for growth but even its basic stability. All the uncertainties of the budget process render spurious the apparent precision of next year's estimates, while those for five years hence are almost completely shrouded by mists of speculation. Major undertakings spring to life through the generosity of previously unknown or elusive donors, or through ideas that may have hovered in the wings for years until favorable majorities mysteriously coalesce in the Congress around the conviction that their time has come. Counter-intuitive though it may be, the essence of good management in Washington is opportunism. How can one plan "rationally" in this environment?

At most times, fortunately, cynics with views like these are in the minority. Chaos and entropy may always threaten, but they do not prevail precisely because good people work together to hold them back. Plans, and especially long-range ones, do sometimes have to be changed suddenly and unavoidably, but we at least mitigate the destructive impacts of those changes by encapsulating them in webs — even quite elastic and fragile ones — of greater certainties. Habitual self-discipline tightens the formal and informal bonds within an institution, just as exercise not only strengthens a person but subtly shapes his or her attitudes. We make our choices of direction consequential by basing them on all the relevant information we can gather, by approaching them rigorously — and by believing in them.

This is the spirit in which we submit the present document. Like its predecessors, the current *Prospectus* is the product of Institutional self-scrutiny. Staff throughout the Institution have helped to formulate and express directions for their respective bureaus and for the Institution overall. Despite the difficulty, we have looked upon the process of developing this Prospectus not as a chore limiting Institutional options, but as an opportunity for a regeneration of spirit and ideas that permit us to realize the potential of the Institution's future. Indeed, in debating the possibilities and in crafting this Prospectus, we have thought of ourselves as choosing the future of the Smithsonian.

In choosing the Smithsonian's future, we have examined our capacity to be stewards of the Smithsonian trust. We have found our facilities and program infrastructure deficient in a number of ways. As old, heavily used buildings do, ours have deteriorated. This is of particular concern in the Natural History Building

This Prospectus represents our Institutional rededication, in the context of our resources, society's concerns, and global needs, to the Smithsonian's paramount goal to increase and diffuse knowledge. The product of an invigorating process of choosing the Smithsonian's future, this Prospectus constitutes an implicit reaffirmation of our faith in the vitality of the Institution, its staff, and its future.

where the heating system is on the verge of failure. We also recognize the need to catch up with private industry and the scholarly community in the use of computer technology in daily management and scientific research. We have begun initiatives that will eliminate these structural and programmatic deficiencies and that will allow us to meet our public responsibilities vigilantly.

In choosing the Smithsonian's future, we have assessed the extent to which the Institution's programs and staff reflect the Nation's diverse races and cultures. We have resolved to increase the representation of various races and cultures in the Institution's programming by creating the National Museum of the American Indian, by expanding African-American programming on the Mall, and by enhancing services to and opportunities for women and minorities.

In choosing the Smithsonian's future, drawing upon the Institution's century-long commitment to conservation and species preservation, we have resolved to place the Smithsonian in the forefront of tropical rainforest preservation. Through biological, zoological, and astrophysical research, the Institution will advance understanding of the processes influencing and resulting from global environmental change, and the origins of the universe.

This Prospectus represents our Institutional rededication, in the context of our resources, society's concerns, and global needs, to the Smithsonian's paramount goal to increase and diffuse knowledge. The product of an invigorating process of choosing the Smithsonian's future, this Prospectus constitutes an implicit reaffirmation of our faith in the vitality of the Institution, its staff, and its future. I urge you to read it carefully and to consider ways you can join us in our quest.

Robert McC. Adams, Secretary

Introduction

In 1977, the Board of Regents of the Smithsonian and the Secretary established a five-year planning process. Each successive five-year plan articulates the ways in which the Institution seeks to fulfill its mandate. This process continues to evolve and now includes managers and staff at all levels of the Institution. The product of planning is the *Five-Year Prospectus,* a document that broadly describes the Institution's intended programmatic emphasis and resource allocation during the coming five years. Through this process, the Institution can more effectively allocate its human, financial, and physical resources to accomplish its goals. The *Five-Year Prospectus* describes the rationale for the Institution's short-term managerial, programmatic, and resource allocation decisions.

To provide formal guidance in the Institution's implementation of its basic mission "to increase and diffuse knowledge," the Secretary and the other senior managers developed the Institution's "Statement of Purpose," the "Goals of the Institution," and the "Areas of Emphasis." Senior management uses these three statements, reproduced here as introductory material, to develop the Institution's federal budget request and the recommended budget for nonappropriated funds, and to develop the five-year plan.

The *Five-Year Prospectus: Fiscal Years 1991–1995* describes the Institution's operating program plans for fiscal years 1991 through 1995. This *Prospectus* also includes plans for the Institution's longer-term construction and facility repair programs.

During fiscal years 1991 through 1995, the Institution will emphasize two categories of initiatives: those that address the Smithsonian's basic programmatic infrastructure and those such as global environmental change, astrophysical research, or cultural pluralism that respond to national or public imperatives through research and public activities. Also during these five years, and in the longer-term as well, the Institution will continue to focus on the repair and restoration of buildings and new construction to meet programmatic demands.

Effective organizational planning not only involves focusing upon a few programmatic objectives but also requires the Institution to survey the broad perspective of its assets and needs. As part of its planning, the Institution sets objectives for the resources that will be required to meet the Institution's goals. In the final section, this *Prospectus* describes the projected major sources of funds required during the five-year period to meet the Institution's objectives.

The *Prospectus* articulates the Institution's broad purpose, its immediate and general course of direction, and its resource

In 1796, George Washington, in his farewell address to his fellow-countrymen, said: "Promote, then, as an object of primary importance, institutions for the general diffusion of knowledge. In proportion as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened." Thirty years later an Englishman, James Smithson, as though influenced by these words, bequeathed the whole of his property to the United States of America in trust "to found at Washington an establishment for the increase and diffusion of knowledge among men."

Extracted from the Preface written by President William McKinley for *The Smithsonian Institution 1846–1896.*

requirements. An appendix includes the Institution's plans for collections-related research, projections of resource requirements by bureau, and more detail about planned facility repairs and restoration. The *Prospectus Appendix* is available upon request.

Children at the Smithsonian Early Enrichment Center enjoy a surprise visit from Mickey Mouse. The famous mouse was at the National Museum of American History for the opening of an exhibition marking his sixtieth anniversary. (Photo by Eric Long)

Smithsonian Institution Statement of Purpose

The Smithsonian Institution was created by Act of Congress in 1846 to carry out the terms of the will of James Smithson of England, who bequeathed his entire estate in 1826 to the United States of America "to found at Washington, under the name of Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men."

Joseph Henry, the first Secretary, in his efforts to give direction to activities of the fledgling Institution, commented on Smithson's will in his annual report for 1864:

> "He evidently did not intend by these precise terms to found a library or a mere museum for the diffusion of popular information to a limited community, but a cosmopolitan establishment, to **Increase** the **Sum** of human knowledge and to diffuse this to every part of the civilized world. No other interpretation of the will is either in accordance with the terms employed or with the character and habits of the founder. The **Increase** of human knowledge, by which we must understand additions to its sum, would be of little value without its diffusion, and to limit the latter to one city, or even to one country, would be an invidious restriction of the term **Men**."

Over the course of its 143-year history, and under the direction of succeeding Secretaries, the Institution has evolved into an eminent research center and the world's largest museum complex. In service to all mankind, its activities span the globe and are devoted to research, museology, and public education in the arts, sciences, and history.

The Smithsonian is a unique establishment which is both publicly supported and privately endowed, and whose governance is vested in an independent Board of Regents composed of federal officials, members of Congress, and private citizens. Donations from both the public and private sector increase its collections, and continuing additions to its trust funds expand and nourish the Institution's usefulness. Appropriations by Congress provide federal support for the Smithsonian's far-reaching services to the public. Annually hundreds of thousands of service hours are provided to the Institution by dedicated volunteers.

The Smithsonian conducts a wide range of programs in carrying out its broad goal of increasing and diffusing knowledge. One of its basic commitments is the conduct of

original research in many fields. Another is the selective acquisition, management, care, exhibition, and security of collections that are also among the primary objects of its research. The Institution's holdings are a trust responsibility and serve as important assets for future generations. Related responsibilities include the maintenance of its buildings, facilities, and natural areas in Washington and other locations around the world.

In seeking to study and understand subjects of world importance, the Smithsonian participates in joint ventures with other organizations in the United States and on every continent. Fundamental data are assembled for use by planners and research workers in other organizations, both government and private, national and international in scope. Scientific, historical and art studies, which enhance human knowledge of the natural and cultural worlds and contribute to societal growth, are major endeavors. The results of the Institution's varied activities are disseminated to racially, ethnically, culturally, and economically diverse audiences through exhibitions, education programs, publications and other public media programs.

Most important to fulfilling the basic purpose of its founding benefactor, the Institution places the highest priority on achieving quality in the conduct of its activities while making the most effective use of available resources.

Goals of the Institution

The Institution seeks to achieve its basic mission to increase and diffuse knowledge in the following ways:

- By pursuing collections management, exhibitions, publications, research, and other program activities devoted to helping explain to the public the present state of understanding of diverse fields of the arts and sciences as well as related problems or issues of contemporary importance.
- By giving special emphasis to exhibitions and other programs that will increase participation by culturally diverse communities, minorities, handicapped persons, senior citizens, and other specialized groups.
- By providing professional leadership and expertise of the highest quality, through emphasis on excellence of the staff and through maintaining and improving technical assistance, fellowship programs, equipment, and facilities.
- By promoting joint research, collections management, museum education, exhibition, and other interpretative programs with other domestic and foreign academic, research, and museum enterprises through an exchange of knowledge, expertise, exhibitions, collections, facilities and other resources.
- For the sake of future generations of scholars and visitors, by careful attention to the acquisition, care and preservation of collections and institutional facilities that house them, especially as related to protection, inventory, storage, building maintenance, equipping activities, and renovation of exhibit and other public areas.
- By dedicating exhibition, research, publication and other programmatic efforts to the long-term need for conservation and improvement of our natural and human resources, and drawing attention to the special responsibility each generation has to its successors.
- By maintaining management, administrative, and support services to meet program needs, by fostering strong internal financial and other management information systems and controls, by periodic assessments of current programs and support activities and related operating practices and procedures, and by orderly planning for new and renovated facilities for purposes of conducting research, collections management, education, and public related programs.

Areas of Emphasis

Stewardship of the Public Trust

Reinvest in the infrastructure of programs to assure that they can fulfill the Institution's trust responsibilities and will advance its contemporary goals, especially in the following ways:

- Replace outdated exhibitions with new ones, temporary as well as permanent, incorporating recent intellectual developments and interpretive techniques that facilitate visitor education.
- Refurbish existing facilities and acquire new facilities, both to assure a safe and healthy environment and to accommodate expanding collections, research and other program and public needs.
- Improve access to archival, library, and museum collections and forestall their deterioration and loss to assure their continued availability to future generations of scholars and the public.
- Strengthen technical support to and acquire advanced research instrumentation for scholars to facilitate their research efforts.
- Expand and coordinate the use of information resource management and related services to meet Institutional needs.
- Pursue initiatives that permit growth in endowments and operating funds.
- Assure that administrative and other service functions have the capacity to keep pace with recent and projected growth of Institutional programs.
- Stimulate a greater public appreciation and understanding of history, science and art by exploiting the use of media technology.

Understanding the Global Environment and Our Place in the Universe

Advance public understanding of biological and physical processes influencing and resulting from global environmental change, and the origins of the universe, especially in the following ways:

- Expand biodiversity research on: the human as well as natural dimensions of environmental change; the dynamics of tropical, temperate, and boreal ecosystems, including the greenhouse effect; and ecological and evolutionary history.
- Strengthen wildlife management, conservation and preservation efforts through zoological and other research programs.
- Increase understanding of the origins of the universe, its stars and planets, including the earth, and its relationship to contemporary issues.

Exemplifying the Nation's Pluralism

Interpret the many facets of the nation's social, ethnic, and cultural composition, especially in the following ways:

- Establish a National Museum of the American Indian by:
  - Developing, together with the Indian community, a comprehensive museum program, including exhibitions, education, research, curation and administration.
  - Planning for and constructing a new museum on the Mall; renovating space in the old U.S. Custom House in New York City; and planning and constructing a facility for storage and curation of collections at Suitland, Maryland.
  - Conducting a national campaign to raise $35 million in private matching funds for the construction of the Mall facility.
- Assure that enhanced pluralism considerations are integrated into all aspects of the Institution's governance, planning, staffing, and programming.
- Commemorate the 500th anniversary of the voyage of Christopher Columbus and the ensuing growth of new civilizations throughout the Western Hemisphere from multi-disciplinary, multi-cultural perspectives.
- Expand and improve African-American programming on the Mall.
- Initiate and expand collaborative opportunities with colleagues from diverse communities nationally and internationally.

Saffire, Uppity Blues Women is a unique musical trio, three women who play a lean, mean blues in the "uppity" tradition sassy and tough, yet good-humored. They performed a brunch concert for the Resident Associate Program at the Carmichael Auditorium in the National Museum of American History.

Stewardship of the Public Trust

Visitors to the Smithsonian are consistently impressed by its numerous buildings, its well-maintained gardens, its exhibit halls, its theaters and lecture halls, and its several public cafeterias, including the recently completed terrace restaurant in the National Air and Space Museum. The Institution's managers constantly maintain, renovate, improve, and replace these facilities to reverse the ravages of time and heavy use. However, the Institution recognizes its responsibility to reinvest not only in the infrastructure of bricks and mortar but also in the infrastructure of programs conducted within these buildings, halls, and theaters.

During the planning and budgeting cycle the Institution's management recognized a clear imperative to address critical needs in resources for program support. The Institution's "Areas of Emphasis" specifically refer to these needs, such as the need to "enhance institutional research efforts by strengthening technical support to scholars," the need to "provide the necessary level of support to create and/or enhance bureau equipment acquisition and replacement," the need to "alleviate operating and funding deficiencies" in security and specific administrative areas, and the need to "eliminate health and safety hazards" which potentially threaten the public or staff.

The Institution's bureaus have identified a total need of over $63 million annually to assure an adequate resource base. The Institution will need to address this backlog in the near future. The Institution's backlog of program infrastructure needs falls into 15 categories:

- Conservation of library/archival collections
- Reinstallation of permanent exhibit halls
- Library acquisitions
- Human resource management
- Clerical support staff
- Specialized/technical staff and support costs
- Laboratory/scientific equipment
- Computers
- Information systems
- Audit deficiencies
- Space deficiencies
- Facilities maintenance deficiencies
- Health/safety measures for staff and visitors
- Security of facilities and collections
- Collections management.

Category Descriptions

Conservation of Library/Archival Collections

The Smithsonian's archives and libraries — containing books, documents, films, photographs, and recordings — are national resources. These words and images underpin the Institution's mission for knowledge and understanding. Many of these materials are renewable but many unique ones are not. Conservation and sustained investment are essential to maintain them. The Institution can replace or preserve less unique material only with difficulty and considerable expense. If not, the Institution ensures and accelerates the deterioration, destruction, and depletion of these national intellectual resources. Deferred investment compounds the future national cost of replacement and renewal. Conservation is not a one-time need; it represents essential, sustained capital investment. The relative neglect and less than adequate investment in conservation over the past decade have resulted in an urgent need to increase resources dedicated to this effort. Each year the Institution fails to bring investment up to optimum levels accelerates the cumulative deterioration, increases the total loss and total cost, and makes it increasingly difficult to recover these collections.

By fiscal year 1995 the Institution will seek additional base federal funding of $6 million per annum to conserve adequately library and archival collections.

(Top) Studio photograph of young Edward Kennedy "Duke" Ellington, at age 4. The Duke Ellington Collection, acquired by the National Museum of American History, consists of an estimated 600 cubic feet of materials. The Ellington archives contain more than 3,000 original and orchestrated pieces of music; tape recordings of concerts and interviews; personal scrapbooks tracing his numerous concert tours; a variety of concert programs and posters; personal and professional correspondence; more than 2,000 photographs; and a variety of trophies and memorabilia.

(Bottom) An assemblage of documents and artifacts from the Duke Ellington Collection, National Museum of American History, including the Presidential Medal of Freedom presented to Ellington on April 29, 1969 by President Richard Nixon. (Photo by Dane A. Penland)

Reinstallation of Permanent Exhibit Halls

The Smithsonian is a national museum and, as such, has a responsibility to uphold standards of excellence in its exhibitions. Also the Smithsonian receives visitors from around the world who come to be educated, entertained, and inspired by the materials that the Institution presents.

Over time, even permanent exhibitions become obsolete either because of the design strategies that have been used or because ongoing research and perspectives change the way curators wish to describe the topics. Smithsonian museums must balance the expense of updating each exhibit with the need to reflect changing perceptions of our world and advances in exhibition design and interpretive strategies. The Institution has regrettably allowed some exhibitions to outlive their timeliness because funding for upgrading or replacement has not been available. If introduced within existing exhibitions, many new excellent exhibition techniques, such as laser disc and computers, could more effectively educate, entertain, and even inspire the public.

In order to maintain the quality and accuracy of exhibits, the Smithsonian plans to replace those that are outdated. Smithsonian museums will update exhibits to keep them abreast of technical and intellectual developments. The Institution plans total replacement of existing, outdated permanent exhibitions in the National Museum of Natural History, and the Freer Gallery of Art where the reinstallation of collections will coincide with its reopening. This effort will perpetuate the Smithsonian's reputation for presenting to the public exhibits of high quality. By fiscal year 1995 Smithsonian museums will seek additional base federal funding of $5 million per annum for the reinstallation of permanent exhibition halls.

Library Acquisitions

Whether in the Smithsonian itself or in the United States Geological Service, Fish and Wildlife Service, Department of Agriculture, or the National Oceanographic and Atmospheric Administration which the Smithsonian Institution Libraries also serve, modern researchers are entirely dependent on the availability of published results from colleagues working in related fields. Scholarly journals most often and most expeditiously disseminate these results. In the sciences, there are over 40,000 journals; this number reflects the degree of specialization in the fields. Thus, an active scholar in any of the disciplines (e.g., molecular biology) can no longer simply read one or two of the scores of specialized journals available. For scholars, rapid access to this literature is as important for research as research equipment.

The recent relative weakness of the dollar against foreign currencies and other factors including high rates of inflation for

specialized journals have resulted in the escalation of subscription costs for many of the journals Smithsonian scholars rely upon. The Institution has in recent years attempted to maintain its current level of periodical subscriptions by cancelling some of the less used journals, taking advantage of interlibrary loans, and

The Yoruba staff, "oshe Shango," was carried by Shango cult devotees as an emblem of office. Shango is the god of thunder worshipped by the Yoruba peoples who live primarily in southwestern Nigeria. The National Museum of African Art purchased the oshe Shango in 1988 with funds from the Smithsonian Institution Collections Acquisition Program. (Photo by Jeffrey Ploskonka)

utilizing private document delivery services. Though the Institution has pursued these options it does not yet regularly subscribe to journals dealing with such pivotal national issues as global change and molecular genetics. Hence, the Institution needs new resources to ensure our scholars' regular access to rapidly changing information in their fields. If such journals are inaccessible to Smithsonian scholars it will significantly impede them from researching critical national interests including global warming, embryo transfer, space research, and others.

By fiscal year 1995 the Institution will seek additional base federal funding of $3 million per annum to adequately address deficiencies in library and collections acquisitions.

Human Resource Management

In its May 1989 report *Improving Personnel Operations and Policies,* the National Academy of Public Administration (NAPA) urged that, for its long-term organizational health, the Smithsonian transform its personnel office from a "procedures and process" operation to an organization which provides leadership in managing the Institution's human resources. To that end, the Academy recommended that the Office of Personnel Administration should be responsible for human resource planning and budgeting, personnel policy development and administration, management and supervisory training, oversight, and related information systems. The Academy reaffirmed that accountability accompanies responsibilities and that the

Collection Manager John Lehnhardt, Keeper Morna Holden, and other Zoo keepers walk with "Grunt," the Vietnamese pot-bellied pig in the National Zoo's centennial birthday parade on March 2, 1989. (Photo by Jessie Cohen)

personnel office should be accountable for maintaining efficient and effective personnel operations and improving the Smithsonian's personnel system.

To achieve prerequisite efficiency and effectiveness, the report made many recommendations pertaining to day-to-day operations. In addition, the Academy acknowledged that the ratio of employees served to personnel staff was well over the ratio recommended by the President's Council on Management Improvements. This finding affirmed the general perception, both within and outside the personnel office, that it is understaffed.

By fiscal year 1995 the Institution will seek additional base federal funding of $1 million per annum to meet the requirements for effective human resource management.

Clerical Support Staff

Over the past years, increasing public demand for programs has increased the need for clerical staff. Additional clerical support for scientists, curators, and other museum specialists could improve the productivity of many programs. The clerical shortage slows the Institution's progress in addressing critical programmatic imperatives, such as global environmental change research and cultural diversity.

This shortage is most evident at the Smithsonian Tropical Research Institute (STRI). As STRI expands its global change research program, the Institute will require additional assistance to free its scientists from clerical tasks in order to increase their scientific productivity. STRI has identified clerical needs totaling 19 full time equivalent positions and $500,000 annually and must correct this shortage in the near future.

However, a clerical shortage exists throughout the Institution. Other bureaus with this problem include the Joseph Henry Papers, Smithsonian Environmental Research Center, National Sciences Resource Center, Office of International Relations, International Center, Office of Governmental Relations, and other administrative and support areas. In total, various bureaus and offices have identified clerical needs requiring an additional base federal funding of $1 million per annum.

Specialized/ Technical Staff and Support Costs

Among the Institution's major areas of concern over the past decade has been the closure of selective gaps in its research programs through the recruitment of new professional staff. The Institution has a parallel objective to provide an adequate level of technical assistance to this professional staff so that they may be more efficient and productive in their scholarly pursuits. For too long, many of the highly trained staff within the Institution have had to perform functions best suited to technicians, diverting them from their primary pursuit: the advancement of scholarship

and public programming. In addition to dealing with these deficiencies in existing programs, the Institution must also adequately staff newly constructed or recently renovated facilities. The teaming of scholars with proficient technicians is essential for the Institution to meet the many challenges facing the nation in the next few years.

In total, the Institution requires an additional base federal funding of $6 million per annum for technical personnel and associated costs. Examples of the Institution's need for technical staff and support costs are:

The Institution has a parallel objective to provide an adequate level of technical assistance to this professional staff so that they may be more efficient and productive in their scholarly pursuits.

- The National Zoological Park (NZP) is developing advanced fields of biomedical technology with particular emphasis on the role of genetics in animal reproduction and physiology. The world's main hope for saving many species of animals from total extinction is the pioneering work performed at the NZP in the related areas of embryo transfer and cryobiology.
- In the domain of museum research, the Institution plans a more vigorous professional presence at the National Air and Space Museum (NASM), the National Museum of American History (NMAH), the Cooper-Hewitt Museum, and the National Museum of American Art (NMAA), because of valuable new collections received within the past five years. The study, preservation, and exhibition of these specialized collections demand a skilled and competent staff. For example, NASM's significant collections in avionics — which is currently the focus of its Computer Gallery — and the soon-to-be opened Computer Gallery at NMAH, require the presence of new scholars within a field that has only recently emerged as a unique sphere of scholarship. In the arts, the Cooper-Hewitt Museum requires additional staff in order to explore and promote fully its extraordinary decorative arts collection. The National Museum of American Art requires positions at both the technical and professional levels to meet the pressing need for the cataloguing, study, and exhibition of major nineteenth- and twentieth-century holdings in the American visual arts.
- As steward of the national collections and important natural research areas, the Institution commits itself to the proper guardianship of its holdings, as well as to the research and public programming that derive from these unique resources. The selective addition of staff will allow the Smithsonian to meet these trust obligations on behalf of the world's citizens, advancing scholarship and public understanding with the prudence and discernment for which the Institution is

renowned. Within the National Museum of Natural History (NMNH), the overall ratio of technicians to research staff has been woefully inadequate for over a decade. The Museum seeks to redress this imbalance in the interests of facilitating and improving scholarship in global change research and other significant fields of national interest.

- At the Smithsonian Astrophysical Observatory (SAO), there remains a critical need to fill the gap in theoretical astrophysics in order to support the many advances made in ground-based and space-born astronomy. In addition, the infusion of more junior staff into the ranks of the research community provides representation of the latest thinking within the varied fields that comprise astrophysics.
- At the Smithsonian Tropical Research Institute, the opening of a new laboratory on Barro Colorado Island, with its research programs on global change, requires new technical assistance, as well as increased professional strength. For the past two decades, STRI's scholarly community has had virtually no technical support staff available to it. The Institution must correct this deficiency. New staff, along with the attendant resources, will sustain and reinforce the vital study of global change and tropical-rainforest canopy biology.

Laboratory and Scientific Equipment

The Smithsonian is not exempt from the difficulties faced by other research institutions in overhauling obsolete research infrastructure. In this respect, one significant difference between the Institution and universities is its inability to obtain National Science Foundation funding for this purpose. Thus, direct federal funding is essential in order to attain this goal. The availability of up-to-date research equipment is a basic necessity in ensuring that scholars remain competitive with their peers worldwide. Failure to obtain necessary equipment will seriously impair the Institution's ability to meet crucial objectives in global environmental research. In the end, new facilities and talented scholars will be left without the opportunity to make full use of their skills; a scientist without proper research equipment is like a writer deprived of a pen.

For the past six years, the Institution has primarily emphasized improving its research facilities and equipment. It is not sufficient to provide scholars with new or renovated space without also supplying them with the attendant tools of their trade — research equipment. All the Institution's research bureaus and research support offices have prepared equipment acquisition and replacement plans, detailing their requirements over the next decade. In the process the Institution has realized

that, in an era in which research equipment has become increasingly sophisticated and is rapidly superceded by technological advances, much of its equipment is obsolete. The Institution has begun to systematically rebuild the critical infrastructure of laboratory/scientific equipment in selected areas.

The Institution will emphasize the acquisition of equipment associated with the Barro Colorado Island Laboratory, where existing equipment is over twenty years old. The National Zoological Park requires equipment for the study and care of endangered species that reflects the rapid advances in the biomedical field. The Conservation Analytical Laboratory must replace equipment purchased or obtained over a decade ago, sometimes acquired under excess property guidelines. The Institution also requires new equipment to complete the furnishing of its modern laboratory at the Museum Support Center in support of molecular biology research. In total, the Institution will seek additional base federal funding of $3 million per annum by fiscal year 1995 to purchase additional laboratory and scientific equipment.

Computers

The computer is an indispensable tool for scholars in the production and dissemination of research. Scholars increasingly use computers to communicate through networks that provide access to bibliographic information, to store research data, and to prepare, or even publish, manuscripts. Due to limited resources, the Smithsonian has been unable to realize fully the potential of computer technology for increasing scholarly efficiency and productivity. The Institution now seeks to purchase, install, and create effective computer networks for all of its scholars. The Institution will seek to replace and upgrade computers, software, and networks for bureaus already using computer technology. The Institution must also implement a computer acquisition program for small bureaus which lack even rudimentary computing equipment.

The Institution has a compelling need to bring its research capabilities fully into the computer age. Failure to do so would undoubtedly affect the caliber of the Institution's public programs, since it is research of high quality that underpins all such activities.

By fiscal year 1995, the Institution will seek additional base federal funding of $2 million per annum for computers.

Information Systems

In early 1989 the Office of Information Resource Management (OIRM) organized an Institution-wide planning symposium to assess information resource management (IRM) in the Institution,

to establish a working partnership between OIRM and other information users at the Institution, and to initiate an ongoing process for IRM planning and program development across the Smithsonian. Through formal presentations, discussion groups, and critiques, users and providers of information services conducted a comprehensive overview of information handling and services. In the course of their work attendees expressed an urgent need to focus IRM efforts on solving the most pressing systems-development and service-delivery requirements, including such systems for managing museum specimens, objects, and bibliographic and archival materials. The group concluded that the resources available for information-related services are inadequate to provide up-to-date technologies, systems, and communications necessary for the conduct of Institutional activities.

In the short term, the Institution must allocate resources (1) to provide services that will facilitate staff access to collections management, research, public service, and administrative information; (2) to develop, design, implement, and maintain computer and communication systems; and (3) to define how information technologies can meet established goals.

By fiscal year 1995 the Institution will seek additional base federal funding of $8 million per annum to address its needs for information systems.

Audit Deficiencies

The Smithsonian maintains a strong program of audit and review of its program and financial activity. In addition to the triennial review of internal controls, an outside CPA firm performs an annual financial audit. Also, the Smithsonian Office of the Inspector General performs program and financial audits on a regular cycle. Further, the Government Accounting Office and others perform occasional special audits.

These reviews and audits identify deficiencies in internal controls, policies, and procedures, in compliance with internal and external requirements, and in meeting the needs of the public. Additionally, they may identify areas where improvements in efficiency could be made. By implementing these audit and review recommendations the Smithsonian improves internal controls limiting the potential for waste, fraud, and abuse and becomes more effective in meeting public needs and in undertaking its programs. Eliminating deficiencies is an investment with a certain return.

By fiscal year 1995 the Institution will seek additional base federal funding of $1 million per annum to eliminate the most critical audit deficiencies.

Space Deficiencies

In the past, the Institution has located administrative and other central support functions in museum buildings on the Mall. With the growth of collections, research, and public programs, however, space in museums has gradually diminished. Increasingly, the Institution has grown to rely on leased space (in buildings convenient to the Mall) to quarter administrative functions. There are two primary centers of off-Mall support: L'Enfant Plaza for administrative functions and the Service Center on North Capitol Street for light industrial, warehouse, and technical support.

The Institution presently leases 97,000 square feet of space at L'Enfant Plaza for several central administrative and support functions, and several program activities. To pay for the rental space, the Institution uses both federal and trust resources in direct proportion to the number of civil service and trust employees in each office. The Institution anticipates additional need for leased space as buildings on the Mall use more space for the growth in public programs.

The Institution's Service Center on North Capital Street contains about 165,000 square feet of space. The Institution needs a Service Center of approximately 350,000 square feet in order to situate all related activities in one place and to free space on the Mall for public programs. The Institution is examining options for a lease-purchase agreement on a suitable facility. The Institution will require additional funding for an alternative facility, possibly as early as fiscal year 1993.

Facilities Maintenance Deficiencies

The Smithsonian owns, operates, repairs, and maintains over five million square feet of space in more than two hundred buildings. The buildings range in age from new to over 140 years old, and many appear on the registers of historic landmarks. Many are, in fact, the most precious "artifacts" the Smithsonian holds in trust for the Nation. The Smithsonian must operate and maintain the buildings to ensure the continued functioning of its many, diverse programmatic activities, as well as to preserve them for use by future generations.

The Institution has identified a backlog of, and requested funding for, essential repairs currently totaling $195 million. By increasing staff and equipment for facilities maintenance, the Institution seeks to slow the rate of deterioration of its buildings and thus slow the rate at which new repairs add to the backlog. Additional staff for facilities maintenance will also assist in the repair and restoration of buildings to ensure the timely completion of projects in that category.

By fiscal year 1995 the Institution will seek additional base federal funding of $8 million per annum to address deficiencies in facilities maintenance.

Health/Safety Measures for Staff and Visitors

The Institution is concerned about the safety and health of its staff and visitors. In recent years Congress has appropriated resources to establish a basis for an environmental management and safety program. Staff are now available to assess environmental and safety hazards in the physical plant and to identify necessary changes in the buildings or work practices. The Institution needs resources, however, to carry out these changes, particularly at the bureau level. Staff of the Office of Environmental Management and Safety are developing the programs that law or regulations require to inform and protect employees who work with dangerous chemicals or who are exposed to hazardous conditions and to identify fire or safety risks in the work place and public areas of the buildings. Additional resources will allow coordination of these efforts at the bureau level and ensure that the laboratories and offices throughout the Institution conduct the safety programs. Without additional resources, the Smithsonian will fail to comply with numerous codes promulgated to ensure a safe and healthy environment in which to work and conduct public programs. A delay in granting these resources could place many employees and visitors at risk.

An occupational health program is also in place, but the Institution needs additional resources in order to meet statutory obligations to its staff. Presently the Smithsonian is unable to meet several mandatory requirements for health monitoring of all

The National Zoo's centennial parade came complete with children in animal masks. Among those in the reviewing stand was First Lady Barbara Bush. (Photo by Jessie Cohen)

employees exposed to hazardous materials or working under extreme physical conditions. Additional funds will allow the Institution's Health Service Unit to conduct more physical examinations, and to streamline the medical records essential to such a program, making them more useful in several contexts. The Smithsonian has long-standing programs in wellness and substance abuse, but these programs require increased support. Additional resources will make counseling services available to more employees whose personal problems interfere with their well-being and job performance.

By fiscal year 1995 the Institution will seek additional base federal funding of over $1 million per annum to address health and safety measures.

Security of Facilities and Collections

The Institution is responsible for the security of its facilities and collections. The Smithsonian has over 130 million items in its collections. In addition to the very high intrinsic value of objects such as gems and coins, most of the objects are irreplaceable examples of human experience and achievement as well as global development and change. The Smithsonian stores its collections within the museum buildings on the Mall, at specially designed storage facilities in Suitland, Maryland, and in some leased warehouses in Washington, D.C., Virginia, and elsewhere around the U.S. In addition, the Institution has research facilities in a number of remote locations in Maryland, Panama, and Arizona. Security in Smithsonian facilities consists of complex alarm systems throughout buildings and physical surveillance by guards at entrances and in public galleries.

In the past several years, serious erosion of base resources to support the security program has undermined the Institution's ability to provide adequate protection for its collections and facilities. In recent years staffing shortages have caused the periodic closing of exhibit galleries when guards were not available to provide full coverage. This solution undermines the Institution's discharge of its mission and inhibits the public's enjoyment of the exhibitions and activities. The alternative — a reduction in security coverage — would place the collections and public property at risk of loss or irreparable damage. The Office of Protection Services plans to hire additional guards for galleries, entrances and exits, and grounds and to replace or maintain communications and security systems vital to the effectiveness of the security force. The present political situation in Panama has also required greater security resources to protect the Smithsonian's Tropical Research Institute staff and properties.

By fiscal year 1995 the Institution will seek additional base

federal funding of $7 million per annum to address deficiencies in the security of facilities and collections.

Collections Management

The Smithsonian is not as much the "Nation's attic" as it is the "Nation's treasure chest." The care of collections is a primary, almost sacred responsibility the Institution has to the American public now and for forthcoming generations. Collections care is technical, tedious, and omnipresent. The Institution has dedicated and continues to seek resources for improving the registration, storage, restoration, and conservation of collections.

In order to fulfill its responsibility as the caretaker of the Nation's treasures, the Smithsonian must always continue to improve its care of collections. The need for continued research into new techniques and advancements for preservation and automation make collections care an exciting, challenging, and expensive field. To meet this responsibility, the Institution will:

- continue support of the Museum Support Center and will begin placing collections into the storage units that are now ready to receive them;
- make technical improvements in the management of collections in the National Museum of American History and the National Portrait Gallery;
- make ongoing progress on the automation of the records of the National Museum of Natural History; and,
- take advantage of the closing of the Freer Gallery of Art to bring its collections-storage and conservation systems up to modern standards.

By fiscal year 1995 the Institution will seek additional base federal funding of $9 million per annum to sustain collections-management efforts.

Understanding the Global Environment and Our Place in the Universe

The current environmental situation demonstrates enormous deficiencies in human understanding of biological and physical processes. The Institution, because of its collections, interests, and qualifications in biological, geological and astrophysical research, has special responsibilities to its national and international publics to assist in remedying these deficiencies.

Our species has come to dominate the earth in a relatively short time. With our rapid and accelerating technological evolution we are increasingly in danger of producing environmental catastrophes — perhaps even ones that could subvert the planet's environmental balance. Many challenges exist including: preventing the deterioration of our natural environment and the attendant loss of biodiversity; searching for new foods and medicines; and attempting to understand what lies beyond our own planet.

The Institution plans to continue to meet its responsibilities to the citizens of all nations by expanding its research in global environmental issues. To support this expanded effort the Smithsonian will seek additional resources for three categories of research:

- Biodiversity and the Environment
- Wildlife Conservation and Preservation
- Major Scientific Instrumentation.

Biodiversity and the Environment

The Dynamics of Tropical Forests and Ecosystems

The tropics are extremely important today, not only from a purely scientific point of view, but because of the new industrial, agricultural, medicinal, and other potential products that the region can supply. The Smithsonian Tropical Research Institute (STRI) in Panama is the only United States field laboratory of its kind in the American tropics. The Institute's research activities include all aspects of terrestrial and marine ecology and behavior. STRI plans expanded research into the dynamics of tropical forests and into the forest canopy, one of the richest but least studied habitats on earth. Over the next several years STRI will intensify its studies on long-term monitoring of organisms and environmental processes in terrestrial and marine ecosystems. The Institute will also expand its research on how the rise of the Isthmus of Panama and the activities of humans have changed the biology and environment of the region.

By fiscal year 1995 the Institution will seek additional base federal funding of $7 million per annum for expanded research efforts in the dynamics of tropical forests and ecosystems.

Neotropical Biological Diversity Program

The loss of tropical rain forests is a threat to all mankind, with grave implications for global warming and other changes. Scientists at the National Museum of Natural History/Museum of Man plan to deal with the urgency of this problem by strengthening and expanding current research and training efforts in tropical biodiversity. Major efforts in Brazil will join existing programs in Peru, Bolivia, and the Guianas. The intended results will explain the diversity and dynamics of tropical forests, suggest ways to minimize forest fragmentation and loss, and clarify the effects of such deforestation.

The Greenhouse Effect

The rising level of carbon dioxide in the earth's atmosphere causes the greenhouse effect. Many scientists expect that temperatures worldwide will increase over the next several decades creating as yet unknown consequences for coastal areas, agricultural production, and global climate patterns.

In addition, the rising level of carbon dioxide has increased plant growth. At the Smithsonian Environmental Research Center (SERC), located on the Rhode River watershed system of the Chesapeake Bay, scientists are testing the effects of increased carbon dioxide upon wild plants and associated ecosystems. Preliminary findings corroborate previous laboratory determinations that plants respond to elevated carbon dioxide levels by absorbing more carbon from the air and using less water. Scientists at both STRI and SERC will undertake collaborative research in this area to establish comparative models between tropical and temperate zone ecosystems.

By fiscal year 1995 the Institution will seek additional base federal funding of $4 million per annum to expand its scientific research on the greenhouse effect.

Ecological and Evolutionary Histories

Complementing the work pursued at STRI and SERC on environmental change, scientists at the Museum of Natural History/Museum of Man plan to expand their efforts to analyze the collections of terrestrial, marine, and human fossils and specimens to understand the effects upon them of climate and other earlier changes that led to major environmental changes. Understanding the responses of earlier ecosystems to global change may enable scientists to predict the consequences of today's phenomena. These efforts will concentrate on the periods before and after major extinctions and before and after Man's emergence. Scientists will compare past records with similar modern biotas to discern evolutionary patterns governing survival or extinction.

NMNH scientists will research island ecosystems in the Atlantic, Pacific, and Indian Oceans to isolate the causes of extinctions of birds

National Museum of Natural History scientists William A. DiMichele and Francis Hueber, examining collection of rare Paleozoic Era Coal fossils donated to the Museum by John M. and Lucy McLuckie of Coal City, Illinois (1989).

and other animals. These extinctions swept the world's isolated islands well after the last ice age and apparently were caused by prehistoric human activities. Expanded, collaborative investigations with research organizations in Kenya, Ethiopia, China, India, and South America will concentrate on the long-term dynamics of human adaption to the varying environments and the effects of human activity on progressive environmental change — from the age of the hunter and gatherer, through the development of agriculture and industry, and to today's distressed terrestrial and marine ecosystems.

By fiscal year 1995 the Institution will seek additional base federal funding of $10 million per annum to expanded research on Ecological and Evolutionary histories.

Wildlife Conservation and Preservation

Zoological Research

The National Zoological Park has achieved great success in recent years in gamete research and embryo technologies. The Zoo's research is important for wildlife conservation and preservation efforts around the world. For example, scientists at the Zoo were the first to produce carnivore offspring (domestic cat kittens) from in-vitro fertilized embryos. The Zoo's scientists recently used the same approach to achieve a 45 percent fertilization rate with puma eggs. This expertise, in conjunction with Florida's, may help that state conserve the highly endangered Florida panther.

One of the two Komodo dragons (*Varanus komodoensis*) the world's largest species of lizard given to the National Zoo by the people of Indonesia surveys its new domain behind the Reptile House. The Zoo is conducting a breeding program to preserve endangered species including the Komodo dragon. (Photo by Jessie Cohen)

Other successes include techniques, developed recently in collaboration with researchers at the Dallas Zoological Park, in gestating and bringing to term a Suni antelope. Current studies include the African lion and the Australian koala for possible investigation, and Zoo scientists are gathering more information on their respective genetics and reproductive patterns.

The Zoo plans to establish a genetic bank which will utilize the rapidly growing techniques of cryobiology (the study of the effects of extremely low temperature on biological systems). Gamete and embryo cryopreservation could aid in global conservation and management of animals. Zoo scientists envision a major organized, concerted effort to sample, evaluate, cryopreserve, maintain, and use germ plasm to propagate animals other than common domestic species.

By fiscal year 1995 the Institution will seek additional base federal funding of $1 million per annum to support these expanded programs in wildlife conservation and preservation.

Major Scientific Instrumentation

The development and acquisition of new state-of-the-art instruments is increasingly necessary to conduct modern, basic scientific research. The Smithsonian consistently has pioneered the research and development of new instruments pertinent to its areas of investigation. The Smithsonian developed the Baker-

Nunn camera to facilitate astrophysical research in the late 1950s and early 1960s, and to track the orbits of interplanetary material and satellites. The Institution developed increasingly sophisticated instruments for measuring solar phenomena and the changes in chemical processes related to photosynthesis. The Institution was at the forefront of developing new technologies and instrumentation used in the first multiple-mirror telescope. Many improvements to seismic, climatic, atmospheric, and underwater devices have occurred because of the Smithsonian's special interests and research needs.

Advances in instrumentation have become increasingly expensive to pursue. Therefore, the Institution is seeking multi-year funding to develop, alter, or reconfigure major scientific instrumentation.

Astrophysical Instrumentation

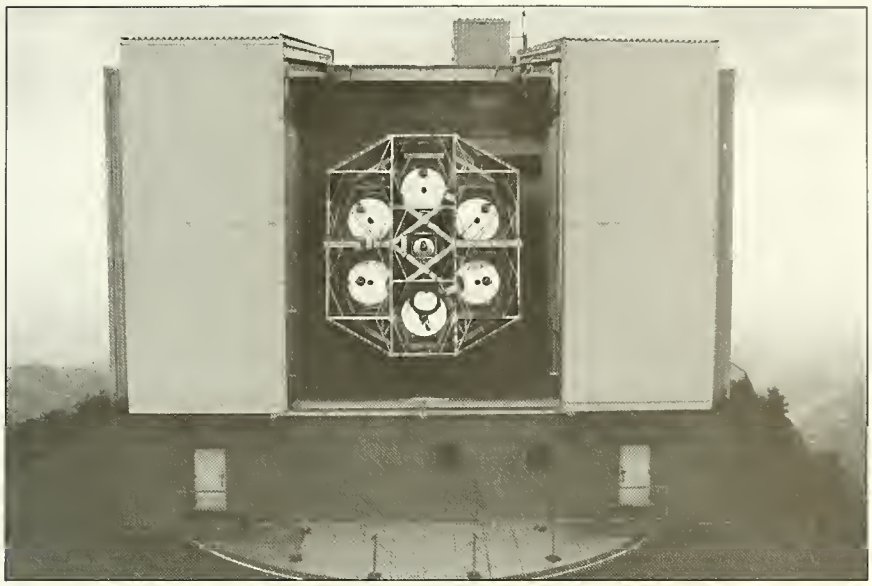
The Astrophysical Observatory plans to continue development of two major scientific instruments: the submillimeter wavelength telescope array; and the 6.5-meter diameter mirror to convert the multiple-mirror telescope, atop Mount Hopkins, Arizona, into a large single mirror telescope.

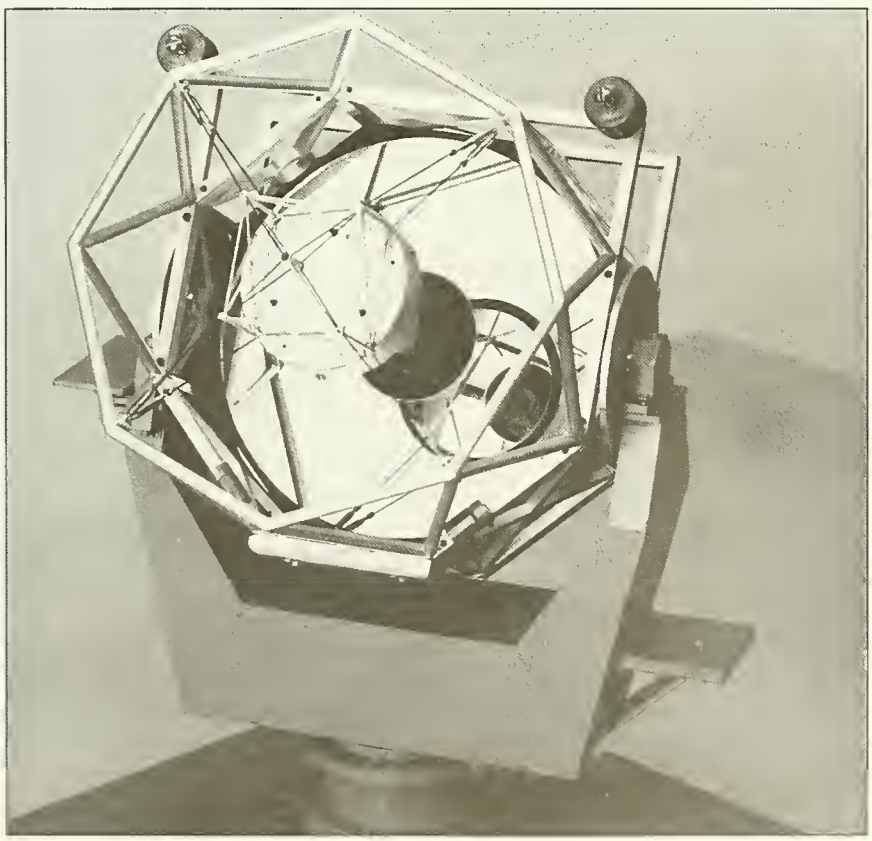
The submillimeter telescope represents a bold new step in the exploration of space through ground astronomy. By studying the universe with instruments of high resolving power at submillimeter wavelengths scientists can observe the birth of stars, research the cores of quasars and galaxies, and study the atmospheres and surfaces of planets. The submillimeter telescope would enable astronomers to observe the largely unexplored part of the electromagnetic spectrum that lies between radio and infrared waves. This band is important because it covers the invisible emissions of the ice halos of comets, the emissions from molecular clouds which can become stars, and those from the swirling disks of dust and gas that can form planetary systems. Astronomical sources which emit mostly submillimeter radiation are "cool objects," having average temperatures near absolute zero (-459.673 degrees Fahrenheit).

SAO's submillimeter telescope would consist of six movable six-meter-diameter telescopes. Together the instruments would comprise a interferometer in which the separate instruments work together to create the equivalent of a single telescope with a resolution 100 or more times better than any one of the individual instruments.

The Institution, working in conjunction with scientists at the University of Arizona, is using new technology to spin cast a honeycomb 6.5-meter diameter mirror. This mirror will be the first truly large mirror of its kind and will help keep the nation at the forefront of astronomy.

By fiscal year 1995 the Institution will seek approximately $40 million in federal appropriations for these projects for astrophysical Instrumentation.





The Multiple Mirror Telescope, a joint facility of the Smithsonian Institution and the University of Arizona, is located on the summit of Mt. Hopkins in southern Arizona. The unusual design of the MMT uses six separate mirrors to achieve a light-gathering capability equivalent to a conventional telescope with an aperture of 4.5 meters. In 1989, the Institution and University began plans to convert the MMT into a single-mirror instrument using a lightweight, spin-cast, 6.5-meter-diameter mirror, thus producing a twofold increase in light-gathering power and a 100-fold increase in field of view. (Photos from Mulitple Mirror Telescope Observatory)

National Museum of the American Indian

On November 28, 1989 President Bush signed legislation (Public Law 101-185) establishing the National Museum of the American Indian. This legislation follows an agreement between the Smithsonian and the Museum of the American Indian, Heye Foundation, that would transfer the Foundation's extraordinary assemblage of more than one million American Indian artifacts from all parts of the Western Hemisphere to the Institution to form the basis for the new National Museum of the American Indian. The agreement also provides for the transfer of the Foundation's endowment and most of its other property, including a 40,000-volume library and 86,000-item archives.

The agreement culminates lengthy negotiations between the Foundation, the City and State of New York, and the Institution. When the new museum is completed in the late 1990s, it will stand as a tribute to the heritage and the contributions of American Indians and Alaskan Native cultures. In congressional testimony describing the potential of the museum, Secretary Adams has said, "it is likely to alter beyond all expectation public understanding of American Indian people. . . . The collections suggest undreamed of possibilities for exhibition, research, and demonstrations of historic and contemporary Indian culture, inspiring an exponential increase in studies of the Indians of America."

The primary structure of the National Museum of the American Indian will stand just a few minutes' walk from the National Gallery of Art, the National Archives, and the National Air and Space Museum. Its collections will be so rich that it will be possible to provide an unparalleled series of traveling

Secretary Adams signs the Memorandum of Understanding with the Museum of the American Indian, Heye Foundation, that will transfer its superb collection of American Indian artifacts to the Smithsonian. Looking on are (left to right) Suzan Harjo, member, board of trustees, Museum of the American Indian, Heye Foundation; Roland Force, director, Museum of the American Indian; Sen. Daniel Inouye, D-Hawaii; Dick Baker, member of the Lakota Sioux Red Feather Society; and Congressman Ben Nighthorse Campbell, D-Colo., the only American Indian member of Congress. (Photo by Laurie Minor)

exhibitions for other cities, rural communities, and Indian reservations and pueblos. Training opportunities built into the Museum's programs will provide access to the collections for Indian people. Indians working with the collections will add to the sum of our knowledge through their identification and interpretation of the materials.

Public Law 101-185 authorizes Museum facilities in three separate locations:

- a building to be constructed on the Mall in Washington, D.C. on land Congress reserved for the Smithsonian in 1975;
- a portion of the Old United States Custom House at the tip of lower Manhattan in New York City; and
- a facility adjacent to the Institution's Museum Support Center in Suitland, Maryland.

The Institution anticipates four major sources of funding for these facilities: New York City; the State of New York; federal appropriations; and non-federal contributions.

The Museum on the Mall

The museum facility on the Mall will house major exhibitions, reference and collection areas, an auditorium, museum shops, and other public and administrative programs. The Institution currently estimates the total cost of construction for the Mall facility at $106 million, of which $35 million will derive from a national fund-raising campaign. The Institution anticipates occupying the building in fiscal year 1997 and opening it to the public in 1998.

The United States Custom House, New York City

The street-level floor of the United States Custom House in lower Manhattan, New York City, will house an extension of the National Museum of the American Indian. Under the terms of the agreement this facility will bear the name of George Gustav Heye who established the Foundation to preserve and exhibit his extensive collection. The Heye Center will contain space for exhibitions, educational programs, and other public services. The Institution projects the cost of preparing the space in the U.S. Custom House at approximately $25 million, and anticipates opening the facility to the public in fiscal year 1994. The City and State of New York have each pledged one-third of the cost, up to $8 million a piece, for this project.

Collections Storage and Research Facility

The Institution plans to construct a facility adjacent to its Museum Support Center in Suitland, Maryland. The Museum will use this facility to provide a stable, secure environment for most of its collection and to conduct conservation, preservation, and research activities. The Institution anticipates completing and occupying the Support Center facility in fiscal year 1995 at an approximate cost of $44 million.

Operating Costs

The Institution estimates that the National Museum of the American Indian will require approximately $25 million annually for the operation of programs and facilities. This estimate is commensurate with the operating costs of existing Smithsonian museums of comparable size and activity.

An eagle crest helmet, Haida from the Museum of American Indian, Heye Foundation, New York City. It has wood inlaid with an abalone shell and copper with human hair and eagle down from the 19th century.

Exemplifying the Nation's Pluralism

Cultural diversity has always been a strength of the nation. As this diversity increases it places many new public demands upon and challenges to the Smithsonian. The Smithsonian is pursuing ways to address these demands and meet these challenges. The Institution is committed to enhancing its public education programs, exhibitions, and other efforts to provide a comprehensive and meaningful interpretation of the many facets of the changing social and cultural environment.

The Institution plans exhibits and educational programs that will convey varied perspectives about the meaning of family and the importance of individual choice in religious preference, property ownership, career development, and job fulfillment.

The Smithsonian also faces the challenge of increasing public understanding of the world's various cultures. Many cultures have contributed constructively to this nation, and there is a great need to educate the general public about these contributions.

Baba Olatunji and Drums of Passion — A world renowned master drummer, cultural ambassador, and one of the most respected figures in African music for over three decades, Baba Olatunji brought *Drums of Passion,* his multi-talented music and dance troupe to the Smithsonian, for a Resident Associate Program concert, May 1989 at the Baird Auditorium in the National Museum of Natural History. In a workshop at the National Museum of African Art, he also presented the traditional songs and electrifying rhythms of his native Nigeria.

The Institution will further diversify its programs by establishing the National Museum of the American Indian and by undertaking the many projects relevant to the Columbus Quincentenary. In addition, the Institution will enhance its cultural diversity in many other ways, including increased minority representation on boards and commissions and increased minority staffing at all levels.

In addition to funding for the NMAI and the Quincentenary programs, by fiscal year 1995 the Institution will seek additional base federal funding of $9 million per annum for cultural pluralism programs.

Management Initiatives

The Institution will implement several management initiatives to speed its achievement of cultural pluralism. Paramount of these is the involvement of minorities in the decision-making process regarding all aspects of the Institution's programs. Parallel initiatives will include: ensuring the recruitment and hiring of minority professionals; providing career development and training opportunities for current minority staff; and training minorities in all aspects of museum operations to increase the number of trained minority people throughout the profession at large.

African-American Programs

Central to the Institution's plans is a determination to increase integration of African-American materials, collections, research, and public programs into the activities of Smithsonian bureaus. The Institution's management encourages closer working relationships with other — predominantly minority — organizations and museums, such as the African-American Museums Association and its members. In addition, the Institution plans to establish a broadly based advisory committee, to staff a special unit to guide the Institution in developing these activities, and to review the most effective ways to ensure an expanding presence of African-American programs on the Mall. The Resident Associates Program will continue its successful programs to attract African American members and audiences.

Traveling Exhibition Service

The Smithsonian Institution Traveling Exhibition Service provides an opportunity for the Institution to disseminate programming to a wide and culturally diverse audience. During the planning period, the Institution will strive to make exhibits

more accessible to culturally diverse audiences by offering more relevant programming and by lowering the SITES charges.

SITES plans traveling exhibitions based on several exhibitions produced by Smithsonian museums. These include:

- Two Anacostia Museum exhibits, one about the Black church movement in America and the other presenting African-American invention;
- A National Museum of American History exhibition on the relationships among fashion, gender, and social roles;
- A traveling version of the National Museum of Natural History's Quincentenary exhibition, Seeds of Change; and
- An exhibition featuring the Office of Folklife Program's activities and concentrating on family farms.

From the exhibition, *Inside Active Volcanoes* organized by the Smithsonian Institution Traveling Exhibition Service and the National Museum of Natural History in cooperation with the U.S. Geological Survey, this photo depicts the eruption of Mount St. Helens May 18, 1980. (Photo by Austin Post, U.S. Geological Survey)

SITES supports the bulk of its operations through participation fees collected from museums and other organizations enlisting its services. SITES is seeking funding to support its operation. With additional operating funds SITES will lower participation fees, and this reduction will put the cost of a SITES exhibition within the reach of smaller, economically disadvantaged and more diverse institutions.

Media Initiatives

The Smithsonian will continue to develop more effective uses of media as a key tool to reach new audiences and distribute educational materials.

- The Smithsonian World, the top-rated prime time public television documentary, will produce five one-hour specials a year. These programs will explore the scope of modern cultures using the Institution's wide-ranging cultural agenda as the nexus.
- The Smithsonian Press, through its publication and recording programs, is exploring ways to increase and improve its material to reach broader cultural audiences.
- The Office of Telecommunications is developing several projects to reach more culturally diverse audiences. Among these are a series of short features for Spanish-language television, as well as major documentary programs focusing on Latino culture. A national 13-part radio series, produced with the Native American Public Broadcasting Consortium, will look at the Columbus Quincentenary from the Native American perspective. Plans also call for a series of ongoing vignettes with an African-American flavor for Black commercial radio.

Quincentenary Programs

Christopher Columbus' voyage of 1492 started an interaction between two "Worlds" that profoundly changed humanity and history. In commemoration of the 500th anniversary of Columbus' landfall in America, the Smithsonian will explore the consequences of his journey from a multi-disciplinary and multi-cultural perspectives. The Smithsonian's Quincentenary commemoration focuses on the repercussions of the encounter between the original inhabitants of the Americas with Europeans, Africans, Asians, and other people. More than twenty offices and museums of the Smithsonian will offer a diverse array of activities including exhibitions, conferences, publications, sound recordings, and a television series.

The Smithsonian's Quincentenary commemoration will serve as the basis for a permanent program focusing on the history and cultures of the Americas. These programs will require additional private support.

Permanent Programs

Programs in Hispanic American History

This program, at the National Museum of American History, focuses specifically on the Latino population of the United States. Scholarly and public symposia, musical programs, exhibitions, and related publications will concentrate on Hispanic culture and history.

American Indian Outreach Project

The Office of Quincentenary Programs will develop a traveling exhibition on native ethnobotany, which will adapt to different locales in order to reach out to American Indian communities. As a result of this project, the Institution will publish related educational materials.

Exhibitions

Seeds of Change

The National Museum of Natural History is planning a major exhibition organized around the concept of seeds of change. The exhibition will examine plant, animal, and disease exchanges that occurred between the Old and New Worlds transforming the cultural and ecological landscape of the Americas. The exhibition will include some 700 objects, as well as murals, dioramas, models, and audio-visual supplements. In addition, NMNH will present symposia, educational programs, and publications associated with the exhibition.

American Encounters

The National Museum of American History plans an exhibition entitled *American Encounters* scheduled to open in October 1992. NMAH is designing its Quincentenary programs to help the public understand colonization and its continuing influence on North American culture. *American Encounters* will

examine the consequences of Columbus' arrival in the New World, with emphasis on Spanish North America and the development of Hispanic culture within the United States. *American Encounters* will explore the continuing encounter between Indian, Hispanic, and Anglo-American cultures in New Mexico, and the ways in which Indians and Hispanics have devised various strategies to preserve the essences of their own cultures.

The West as America: 1820 to 1920

The National Museum of American Art is organizing an exhibition titled *The West as America: 1820 to 1920* that will link the opening of the western frontier with the first explorations of the

Mi Casa Es Su Casa, **presented at the Resident Associate Program's Discovery Theater from February 21 to March 3, 1989, brought the culture of Latin America to life on the stage through lively songs and fascinating puppets. (Photo by Donna Wisniewski)**

Americas. Examining images of popular misconceptions about expansion, the exhibition will use major paintings by Frederic Church, Albert Bierstadt, Emanuel Leutze, George Catlin, George Caleb Bingham, Frederic Remington, and their contemporaries.

Where Next, Columbus?

The National Air and Space Museum will present an exhibition entitled *Where Next, Columbus?* that will consider the medical, astrophysical, and technological challenges that the Nation must meet to advance its prospects during the next 500 years for the exploration of new worlds in space.

Court Portraiture in 16th-Century Spain

The National Portrait Gallery, in cooperation with the Prado Museum in Spain and the Kimbell Museum of Art in Fort Worth, is developing an exhibition featuring the portrait treasures of Spain. The goal of the exhibition is to increase understanding of the culture that precipitated the voyages of 1492 and subsequent interaction with the peoples of the Americas.

Maps Through the Ages

The Cooper-Hewitt Museum will present an exhibition that of maps as they have documented views of the world through the ages and how their design reflects the changing technologies available to mapmakers.

Four Latin American Modernists

The Hirshhorn Museum and Sculpture Garden will feature an exhibition of works by four 20th-century Latin American artists who have explored new frontiers of expression titled *Four Latin American Modernists: Torres-Garcia, Rivera, Lam, Matta.*

American Painting and Sculpture

The National Museum of American Art and the National Portrait Gallery are collaborating on an exhibition titled *American Painting and Sculpture at the World's Columbian Exposition* that will examine the 1893 Columbian Exposition in Chicago, a pivotal event in American culture.

Traveling Exhibitions

In commemoration of the Columbus Quincentenary, the Smithsonian Institution Traveling Exhibitions Service (SITES) will distribute exhibitions it has originated, as well as exhibitions from other Smithsonian museums, to communities around the United States.

In conjunction with the National Museum of Natural History, SITES will design a traveling version of the exhibition *Seeds of Change*. In conjunction with the National Air and Space Museum, SITES will design a traveling version of the exhibition *Where Next, Columbus?*

Other traveling exhibitions SITES will design and distribute include:

Columbus in America which will examine the traditional imagery of Christopher Columbus.

Contrasts: 40 years of Change and Continuity in Puerto Rico which will focus on the transformation of Puerto Rico from an impoverished agricultural community to a highly industrialized urban society with the highest standard of living in the caribbean.

Paintbrush Diplomacy: Children's Art From the Americas which will include approximately 65 paintings by children from Argentina, Brazil, Panama, Ecuador, Haiti, Mexico, Canada, the United State, and other countries.

Symposia

Exploring the Unknown

The Office of Interdisciplinary Studies (OIS) is developing a public symposium entitled Exploring the Unknown that will examine the biological and cultural diversity of the Americas in the next 500 years. The aim of this symposium, which OIS will host October 12-15, 1992, is to chart long-term cooperative research opportunities in the Americas in the sciences and humanities.

Fourth World Congress on National Parks

In 1992, the Smithsonian Tropical Research Institute plans to co-sponsor the Fourth World Congress on National Parks. The International Union for Conservation of Nature and Natural Resources, a major non-governmental conservation organization, coordinates this major international congress every ten years. The congress will highlight the substantial recent progress in park development in Latin America, including the Barro Colorado Nature Monument at STRI, and will encourage regional and international cooperation.

Women in the Americas

The Office of Quincentenary Programs will host a symposium in the spring of 1990 called Women in the Americas: Myth and Reality. This symposium will focus on the experience of women in the Americas for the past 500 years.

Publications and Educational Materials

Atlas of Satellite Images

The voyage of Columbus resulted in a more precise knowledge of geography and cartography. The desire to understand the shape of the Earth, its land masses, and oceans continues to the present day. The National Air and Space Museum plans to publish a world atlas of satellite images with an associated user's guide. The atlas, scheduled for publication by

October 1992, will target a general audience and will illustrate the dramatic advances in geographic knowledge over the past 500 years--in particular, the past 25 years of space exploration.

Multi-cultural Educational Packets

The Office of Elementary and Secondary Education will develop a series of multi-cultural education packets written in Spanish, English, and Portuguese for distribution throughout the United States and Latin America. These curriculum kits can introduce pre-school age children to the cultures and animals of the Americas.

Smithsonian Institution Press

The Smithsonian Institution Press is publishing a variety of books on themes related to the Columbus Quincentenary at the popular and the scholarly levels. Forthcoming titles include: *The Artifacts of the Spanish Colonies (volume 1); Columbian Consequences;* and, *My Puerto Rico/Puerto Rico Mio.* The Press' Quincentenary publications will focus not so much on the actual voyages or the moment of discovery, but on exploring, with the best available scholarship, the social and cultural history of the New World before and after 1492. The Press also is working with other Smithsonian offices to develop publications from the many exhibitions and scholarly symposia planned.

Preservation of Cultural Property

The Office of Museum Programs has developed bilingual, taped presentations on the preservation of cultural property. Also, five museum professionals from Latin America and the Caribbean will participate in training sessions at the Smithsonian, and a conference will address the preservation of cultural heritage by indigenous peoples.

Television Program

The Buried Mirror

The Smithsonian Office of Quincentenary Planning is developing an exciting television series, *The Buried Mirror,* for a fall 1991 premiere. The series will highlight the principal themes of the Smithsonian's Columbus Quincentenary program. The five scheduled shows are:

- *The Moving Frontier;*
- *The Virgin and the Bull;*
- *In Search of El Dorado;*
- *The Eagle and the Serpent;* and
- *Five Hundred Years After.*

The Institution anticipates that *The Buried Mirror* will reach millions of viewers on the Public Broadcasting System. Associated programming will include a book by Mexican author

Carlos Fuentes (narrator of the series), a series of video cassettes, teaching materials published by the Smithsonian Office of Elementary and Secondary Education, a Smithsonian Institution Press recording of the music of Latin America, and a Smithsonian traveling exhibition that will bring images and artifacts from the series to people around the world.

Folklife Programs

Living Exhibitions

The Office of Folklife Programs is conducting a series of symposia exploring the social and cultural expressions based on plant and subsistence systems in the Americas. The three symposia are: *Seeds of the Past; Seeds of Commerce;* and, *Seeds of Industrialization*. These symposia will lead to "living exhibitions" which the Smithsonian will present on the National Mall during 1991. These living exhibitions will focus on the Caribbean area and indigenous America. In 1992, living exhibitions will focus on the interplay of Native American, African, European and Asian people in the Americas.

Repair and Restoration of Buildings

The Smithsonian's responsibility for its museum buildings and other facilities requires a continuing program of repair and maintenance--which the staff accomplishes in part with funds from operating budgets--and renovations and restorations. The objectives of the Repair and Restoration program are to provide appropriate, safe, and accessible facilities for research, education, and care of collections. Maintenance and preservation of facilities to ensure their long-term operation is one of the Institution's highest priorities. This priority reflects the Institution's great concern for the condition of its buildings, several of which date to the nineteenth century.

The Repair and Restoration of Buildings (R&R) account funds building repairs, restoration, and remodeling to bring buildings into conformance with life-safety and health regulations and to replace or renovate major building equipment or components. This effort is a substantial one because the Institution's buildings and facilities (other than the Zoo) consist of 14 museums and galleries in Washington, D.C. and New York City; facilities at Suitland, Maryland, for the preservation and storage of collections; centers for biological research, conservation, and education in the Republic of Panama and on the Chesapeake Bay; a center for astrophysics in Cambridge, Massachusetts; and the Whipple Observatory on Mt. Hopkins near Tucson, Arizona.

Maintenance and preservation of facilities to ensure their long-term operation is one of the Institution's highest priorities. The objectives of the Repair and Restoration program are to provide appropriate, safe, and accessible facilities for research, education, and care of collections.

In past years, funding for maintenance, repair, and preservation of buildings has not kept pace with need, resulting in a currently identified backlog of $195 million in R & R requirements. In fiscal year 1991, the Institution will seek $29 million for repair and restoration of buildings. The R&R program will require this level of annual funding throughout the next five years in order to make progress in eliminating the backlog. During the subsequent five years, the Institution will shift resources within the R&R account from projects related to repair, restoration, and code compliance, to projects related to Major Capital Renewal.

During the next five years the Institution will address a number of major problems including:

- installation of fire detection and suppression systems required throughout Smithsonian buildings to meet current fire codes;
- removal or containment of dangerous substances, such as asbestos, remaining in many buildings;
- replacement of deteriorated plaza surfaces, and repair or replacement of roofs, skylights, and windows at several buildings; and
- replacement of electrical systems and of heating, ventilating, and air conditioning (HVAC) systems at the Natural History,

SMITHSONIAN INSTITUTION

Repair & Restoration of Buildings

Fiscal Years 1990–1995
(Millions of Dollars)

BY MAJOR CATEGORY

	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
Repair, Restoration & Code Compliance						
General Repairs	$ 2.0	$ 4.0	$ 3.9	$ 3.1	$ 1.2	$ 1.1
Facade, Roof & Terrace Repairs	5.4	3.8	8.0	3.8	0.7	1.2
Fire Detection & Suppression	0.5	0.9	0.3	0.3	0.3	
Access, Safety & Security	2.4	2.7	2.9	2.7	1.4	1.8
Utility System Repairs	1.9	2.1	4.8	7.2	1.5	0.2
Advanced Planning & Inspection	0.7	1.3	1.4	1.7	2.2	1.7
Subtotal	12.9	14.8	21.3	18.8	7.3	6.0
Major Capital Renewal	13.6	13.9	16.7	16.9	29.1	30.6
TOTAL FOR R&R	**$26.5**	**$28.7**	**$38.0**	**$35.7**	**$36.4**	**$36.6**

BY BUILDING

	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
National Museum of American History	$ 4.2	$ 4.5	$ 6.8	$ 4.4	$ 1.7	$ 0.2
National Museum of Natural History	10.3	10.3	11.4	13.8	17.8	16.6
Smithsonian Institution Building	1.6	0.8	0.2	0.6	1.1	3.1
Arts & Industries Building	0.2	0.4	0.4	1.0	7.2	7.7
American Art/Portrait Gallery	0.5	0.2	0.3	0.4	1.8	1.8
National Air & Space Museum	2.4	1.6	7.3	6.5	1.7	2.3
Renwick Gallery	0.4			1.2		
Freer Gallery of Art	1.4	1.7	0.8			
Silver Hill Facility	0.1	0.3	0.8	0.7	0.1	0.1
Environmental Research Center	0.1	0.3	0.9	0.5	0.1	0.1
Hirshorn Museum & Sculpture Garden	1.4	0.7	1.5	0.8		
Anacostia Museum	0.2	0.2	0.1	0.1	0.1	0.1
Smithsonian Tropical Resarch Institute	0.1	0.5	0.7	0.2	0.2	0.2
Smithsonian Astrophysical Observatory	0.3	0.5	0.8	0.8	0.1	0.1
Cooper-Hewitt Museum	0.6	3.0	0.9	0.8	0.7	0.1
Museum Support Center	0.3	0.2	0.6			
Miscellaneous	2.4	3.5	4.5	3.9	3.8	4.2
TOTAL FOR R&R	**$26.5**	**$28.7**	**$38.0**	**$35.7**	**$36.4**	**$36.6**

American History, Arts & Industries, and American Art and Portrait Gallery buildings.

The R & R account consists of two subaccounts: Repairs, Restoration and Code Compliance; and Major Capital Renewal.

Repairs, Restoration and Code Compliance

This subaccount funds routine repair and restoration including: general repairs; facade, roof, and terrace repairs; fire detection and suppression; access, safety, and security; utility system repairs; and advanced planning and inspection for such projects. During the next five years, the Institution will continue to seek funding to eliminate the backlog in these projects. In fiscal year 1991, the Institution will seek $15 million. The Institution projects a declining need for this subaccount as the backlog is reduced.

Major Capital Renewal

During the next five years, a number of the Institution's historic buildings will reach the age at which the Institution must undertake cyclical renewal of building components and systems. Despite the best of care, heating, ventilating, and air conditioning (HVAC) systems, for example, reach an age when no reasonable amount of repair can keep the equipment running. Unless the Smithsonian pays extraordinary attention to the specific needs of its older buildings now, the Institution increases the possibility that equipment and systems failure may require the closing of significant portions of buildings dedicated to exhibitions, collections storage, and research activities. The Institution has already undertaken a significant portion of this cyclical renewal, but further analysis of the condition of the Smithsonian's older buildings will add to the list.

Projects in this category involve replacing major building systems and components that have outlived their useful lives. Complete replacement ensures long-term operation and preservation of the building. Modifications of the building also improve energy efficiency, meet fire detection and suppression requirements, and correct hazardous conditions. By grouping these tasks together, the Institution saves money and avoids repeated disruption to building activities. The Institution must relocate staff and collections from the areas under construction to prevent damage and to allow staff to continue working during the construction period.

In total, the Institution will seek $14 million in fiscal year 1991 for Major Capital Renewal. The Institution projects an increasing need in this account as new projects begin. In fiscal year 1995, the Institution will seek $31 million for Major Capital Renewal projects.

Some of the current and planned Major Capital Renewal projects are:

HVAC System, American History Building

In 1982, a study of the HVAC system of the American History building recommended replacement of the deteriorated HVAC and refrigeration equipment and controls in the now 25-year-old building. This will ensure continued energy efficient climate control. The Museum will isolate the vertical segments of the building and work simultaneously on fire protection, asbestos removal, and the HVAC replacement. The museum will synchronize its exhibition reinstallation and other activities with this renovation to take maximum advantage of the down-time in each area of the building. Work began on the project in 1987, and the museum expects to complete the project in 1992. A subsequent project will replace systems in the basement.

HVAC and Electrical Systems, Natural History Building

Over the past several years the Institution has undertaken separate studies of energy conservation, fire protection and suppression, communications, security upgrading, asbestos abatement, and other measures to remedy building deficiencies, especially in the HVAC and electrical systems of the Natural History building. The studies revealed that the building requires extensive work, and managers have developed a schedule that will economically sequence construction while limiting major disruption of the museum's activities. The Institution proposes to construct in the East Court a new building to provide permanent additional space for the museum's current activities. The museum will use this building as staging space during renovation, to allow relocation of staff and collections affected by renovation while work is in progress.

The principal component of the renovation project is the replacement of the HVAC and major electrical equipment in the building, including the automatic temperature-control system. Ninety percent of the electrical lighting and power panels are at or near the end of their useful life. The main high-voltage switchgear equipment serving the transformers for the Natural History, as well as the Freer Gallery, Arts and Industries and Smithsonian Institution buildings, is approximately forty years old. The Institution must replace these and related electrical components because spare parts are unavailable. The Institution will incorporate fire protection modifications into the project,

along with removal or encapsulation of asbestos insulation in the attics and on equipment, duct work, and piping throughout the building. In addition, modifications will include energy conservation improvements. The museum will coordinate the exhibit reinstallation program with the renovation project.

Utility Tunnels, Arts and Industries Building

One of the finest examples of Victorian architecture in the nation, the Arts and Industries Building, originally designed to house representative artifacts of the Philadelphia Centennial Exposition, also needs extensive repair. Like the building itself, the underground utility trenches located within the building date to 1881. The tunnels are small and provide minimal or no access to the piping and electrical circuits within them making inspection, maintenance and alterations difficult and costly. Asbestos insulation covers some pipes within the tunnels. The Institution must renovate these utility tunnels before it can refurbish the HVAC, electrical, and other utility systems now reaching the end of their useful life.

HVAC System, American Art and Portrait Gallery Building

The 25-year-old HVAC system in the American Art and Portrait Gallery building is in poor condition, and the Smithsonian must replace it to ensure continued service. While renovating the HVAC, the Institution will improve the building to foster the environmental conditions necessary to preserve the collections housed in the building. These improvements will, for example, provide more precise control of humidity and provide building technicians with the capacity to operate the heating and cooling systems simultaneously during the transitional seasons to maintain appropriate temperatures. In addition, the phased project will include repair or replacement of all windows with double-glazed windows and the installation of waterproofing and of water-detection systems.

Construction

The Institution has numerous construction projects currently underway or projects that will begin shortly at facilities on the Mall, in the State of Arizona, and in the Republic of Panama. During the planning period, the Institution will continue the alterations to the Freer Gallery: including the construction of the tunnel linking the Freer with the Sackler Gallery, expansion of storage space and renovation of the basement and gallery levels — supported with trust funds and federal appropriations. The Smithsonian will also construct a new base camp at the Whipple Observatory and research and support facilities at the Tropical Research Institute's Barro Colorado Island site. In fiscal year 1990, the Institution will begin construction of additional research and laboratory facilities at the Tropical Research Institute. The Institution will also begin design of the General Post Office building renovation.

Plans for facility development in the coming years represent a major investment in the Institution's long-range program goals. The Smithsonian has a growing requirement for physical plant expansion and modification to support program needs. The total estimated cost for the comprehensive construction program is $654 million — excluding the National Zoological Park and nonappropriated sources of funds — for the next decade addressing the most urgent requirements. Through realization of these plans, the Institution will remain vital in far-reaching programs of research, collections management, public exhibitions and education, and other services.

The following sections present the key elements of the planned construction program in the next decade. The Institution's request for federal construction funding for fiscal year 1991 totals $16.2 million, excluding the National Zoological Park.

National Air and Space Museum Extension

The National Air and Space Museum currently faces a critical facilities shortage that threatens to cripple its basic collecting and exhibition programs. The museum exhibits and stores its collection of aircraft, spacecraft, and related artifacts in the Mall building and at the Paul E. Garber Facility in Suitland, Maryland. These buildings are filled to capacity, despite deliberate steps to limit the growth of the collection. The enormous size of contemporary aircraft and spacecraft also prohibits the museum from adding important artifacts to its collection because it is physically impossible to transport them, even dismantled, to existing facilities. The advanced age and deterioration of the Suitland buildings jeopardizes long-term preservation of the

SMITHSONIAN INSTITUTION

Long Range Construction Plan
(Federal Appropriations for Scheduled Projects)

Fiscal Years 1990–1999* (Millions of Dollars)

	FY 1990 – 1999 Cost	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Air and Space Museum Extension[1]	$213.0			$ 6.0	$26.0	$ 75.0			$ 6.0	$100.0	
American Indian Museum											
Custom House Renovation[2]	$ 9.0	$ 0.6	$ 6.7	$ 1.7							
Suitland Collection Storage	$ 44.0	$ 0.3	$ 1.0	$30.7	$12.0						
Mall Museum Building[3]	$ 70.7	$ 0.7	$ 0.4	$ 7.4		$ 52.2	$10.0				
Subtotal American Indian	$123.7	$ 1.6	$ 8.1	$39.8	$12.0	$ 52.2	$10.0				
Collection Managment Centers[4]	$134.0			$ 0.5	$ 4.5		$56.0	$10.0	$ 3.0	$ 50.0	$10.0
General Post Office Building[4]	$ 75.0			$ 1.7	$38.3				$ 2.0	$ 30.0	$ 3.0
Natural History East Court In-fill[5]	$ 30.0		$ 1.5	$23.5	$ 5.0						
Tropical Research Institute	$ 5.6	$ 2.0	$ 1.6				$ 2.0				
Alterations & Modifications	$ 59.0	$ 4.0	$ 4.0	$ 6.5	$ 7.9	$ 9.7	$ 5.1	$ 6.0	$ 6.0	$ 6.0	$ 6.0
Construction Planning	$ 13.7	$ 0.7	$ 1.0	$ 1.5	$ 1.5	$ 1.5	$ 1.5	$ 1.5	$ 1.5	$ 1.5	$ 1.5
Scheduled Projects Grand Total	$653.6	$ 8.3	$16.2	$79.5	$95.2	$138.4	$74.6	$17.5	$18.5	$187.5	$20.5

Note: This table does not include planned National Zoological Park Construction and Improvements.

* Estimates are subject to revision as a result of timing associated with Smithsonian and Office of Managment and Budget planning/budget cycles, and incorporation of information affecting projections.

[1]The Institution will phase development in several increments requiring twenty or more years for completion.

[2]The Institution will generate additional funding of approximately $16 million from other sources.

[3]FY 1990 & 1991 include funds for general planning of all facilities. Fund raising will provide an additional $35.3 million for construction.

[4]Estimates do not include inflation.

[5]The Institution requires this construction project to facilitate completion of the planned mechanical renovation project expected to cost approximately $100 million.

museum's existing collection. Many of the approximately 23 metal structures date to the 1940s and early 1950s, and have an estimated life span of less than ten to fifteen more years. A number of the buildings do not provide climate control necessary for preservation of fragile museum materials.

In addition to storage problems, artifact size has dictated exhibit limitations as well. The museum cannot display a number of important aircraft and spacecraft already in the collection because they are too big and/or too heavy for the Mall building. Because the current buildings cannot accommodate larger contemporary aircraft and spacecraft, the museum cannot communicate to the public the evolving social impact and policy issues exemplified by these artifacts.

The Institution has long recognized that an Air and Space Museum extension at or near an airport in the Washington area would best meet the physical requirements for storage and

A new exhibit in the Smithsonian's National Air and Space Museum's Space hall entitled "America's Space Truck — The Space Shuttle" features a 16-foot model of the space shuttle "Columbia" on its launch pad. "Columbia," the most complex flying machine ever built, is the first reusable manned space vehicle.

exhibition of contemporary aircraft and spacecraft. Such a facility, located and constructed to accommodate large scale artifacts, would provide the context in which to communicate complex themes of social, environmental, and policy change ushered in by their use.

The Smithsonian is considering locations at the Baltimore Washington International and the Dulles International airports for the site of the proposed extension. The Institution hired an architectural firm in fiscal year 1989 to compare the logistical and physical characteristics of these two sites. This study will assist the Institution in determining the most appropriate location for the extension. The contractor has provided preliminary cost estimates and schedules for construction and operation at both sites. The Smithsonian plans to complete the proposed extension in several phases. Nonappropriated funds will comprise a significant portion of the construction costs. The Institution estimates that Phase I and II of this project will cost $213 million in federal funds through fiscal year 1999. The Institution also plans another phase of the proposed Extension beyond fiscal year 1999.

National Museum of the American Indian

The Smithsonian has signed an agreement with the Museum of the American Indian (Heye Foundation) transferring the Foundation's extensive collection of American Indian artifacts to the Institution. On November 28, 1989, President Bush signed Public Law 101-185 establishing the National Museum of the American Indian. The law authorizes construction of facilities to house the museum and its collections in Washington and to prepare exhibit and education space in the U. S. Custom House in New York City. The Institution plans to construct a new museum building on the last remaining site on the Mall. Congress reserved this property, bounded by Third Street, Maryland Avenue, Fourth Street and Jefferson Drive, for future activities of the Smithsonian (P.L. 94-74, approved August 8, 1975). The Institution will also build a collections-storage and research facility on Smithsonian land in Suitland, Maryland, and will operate a satellite exhibition and education center in a portion of the old United States Custom House in New York City. Preliminary estimates indicate that construction of the new museum (including the New York facility and the Suitland facility, as well as the site on the Mall) will cost approximately $175 million. The Institution anticipates a federal appropriation of $123 million for construction of the new facilities.

Collection Management Centers

The Institution has, for a number of years, experienced a severe shortage of space in which to store, document, and conserve its collections. The Museum Support Center opened in 1983 and the proposed Air and Space Museum extension will provide space to solve the most immediate storage needs for natural history and aerospace collections. The Institution urgently needs space, however, to ensure the continued vitality of the collections-management programs of other Smithsonian museums and bureaus. The Institution has begun documenting its immediate and long-term needs for additional space to house growing collections in history and art, as well as important archival and library collections. Based on the initial phase of the master plan for Suitland, the Institution can expect to need over one million square feet of new storage and collections-management space over the next twenty years.

The age and condition of the present storage buildings at Suitland exacerbate the space problem. Among the structures at the Institution's storage facility are temporary, metal buildings which provide 115,000 square feet of storage space for the National Museum of American History. Most of these buildings have a life expectancy of less than ten to fifteen more years. Since half the NMAH collections, exclusive of stamps and coins, reside there, it is essential to have facilities ready in the next decade or so to ensure that the national collections have proper housing. Other museums, as well as archival and library bureaus, have a serious shortage of appropriate collections-storage facilities. Overcrowding in the Mall museums has caused several museums and bureaus to move collections into leased space off the Mall to avoid damage and deterioration of sensitive materials from excessive crowding. A number of these locations, as well as many of the Suitland buildings, do not provide environmental conditions necessary for long-term preservation of museum artifacts.

The Institution considers the Suitland location ideal for fulfilling most of its collections-management objectives. During fiscal year 1990 the Institution will contract for the final phase of the master plan for development of this site. The Institution will move aerospace collections from the Suitland buildings to the Air and Space Museum Extension when it is completed. The Institution then plans to sequence demolition and construction of new collections-management facilities over the next twenty years. The Institution estimates that the first phases of this project will cost approximately $134 million.

General Post Office Building

In 1984 Congress authorized the transfer of the General Post Office building from the General Services Administration to the Smithsonian. The General Services Administration will transfer custodianship of the building when the Institution receives funding to renovate the building for museum use.

America's first native-born professional architect, Robert Mills of South Carolina, designed the original wing. Mills also designed the Patent Office building, the Washington Monument, and the Treasury building. The General Post Office building, bounded by Seventh, Eighth, E, and F Streets in northwest Washington, D.C. is the fifth oldest public building in Washington and has never undergone renovation or restoration.

The Institution is concerned about the long-term preservation of this historic landmark and plans a comprehensive program of restoration and repairs to make the building usable for Smithsonian activities. In addition to old and deteriorated building systems and exterior components, a number of hazardous conditions require early renovation.

Although Congress authorized $40 million for building restoration in 1984, the Institution currently estimates that the project will cost $75 million.

National Museum of Natural History, East Court Building

The Natural History Building on the Mall is the center of numerous activities which support the Institution's basic mission to increase and diffuse knowledge. Two hundred thirty scientists and their staffs, and over three thousand visiting scientists annually conduct basic and collections-related research of critical importance to the advancement of scientific knowledge and understanding of natural phenomena. Exhibitions communicate a range of themes in the natural sciences to millions of annual visitors. The museum also houses extensive collections, educational and public service activities, and administrative and support staff. In order to accommodate the growth in the staff, the museum has repeatedly partitioned offices and laboratories into smaller and smaller spaces. Two exhibit halls, dismantled several years ago, remain closed to accommodate staff activities. The relocation of part of the collections to the Museum Support Center will relieve some of the space pressure, but not enough to maintain the best conditions for the museum's diverse programs.

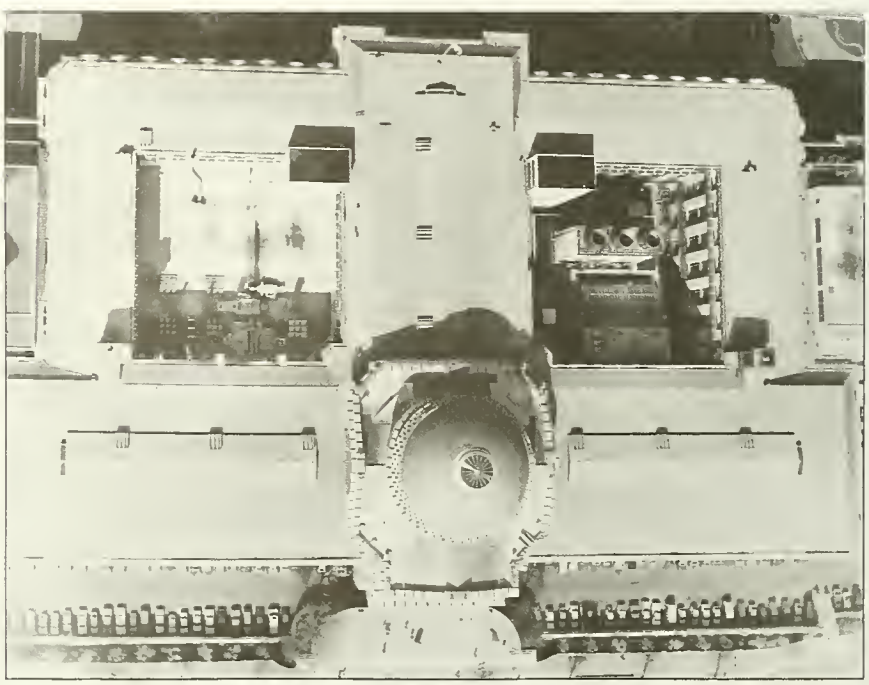
The complete renovation of the heating, ventilating, and air conditioning (HVAC), as well as electrical systems, in the building

will exacerbate the space problem at the Natural History Building over the next decade. The museum will have to find temporary staging space to house its programs and collections during this renovation. Use of exhibit space for this purpose would close many of the public exhibitions for ten years, and leased space would only provide appropriate facilities at a very high cost.

The museum plans to alleviate its space problems by building a new structure in the east court of the Natural History Building. The new building will provide about eighty-thousand net square feet of staging space for laboratories, offices, and collections during the HVAC renovation and will allow permanent decompression of staff and collection areas at the end of the construction period. To construct this building the museum must reposition the current chiller plant in a new vault under the parking lot, as well as accommodate other functions now in the East Court. The Institution will complete planning for the building in 1990 and expects to begin design in fiscal year 1991. The Institution's preliminary estimate for this project is approximately $30 million.

Smithsonian Tropical Research Institute

The Smithsonian Tropical Research Institute located in the Republic of Panama, is the nation's principal center for tropical biology. Most existing STRI facilities include buildings constructed in the 1920s and 1930s and renovated structures



Aerial photo of the National Museum of Natural History. In 1903, Congress appropriated funds for the National Museum of Natural History. The Institution added to the original structure in 1963 and 1965, and in 1975 filled in the west interior court creating three levels for mostly public use. The Institution plans to build a new structure in the east court, providing 80,000 net square feet of laboratory and office space. The construction of this structure will require the relocation of the current chiller plant to a new vault under the parking lot.

obtained from the U. S. military and other agencies. In 1986 the Institution completed a master plan to guide a comprehensive program to improve STRI's facilities to meet the Smithsonian's long-range scientific goals. The Institution is now constructing new facilities in a number of locations to replace the most inadequate and dilapidated facilities. The Tupper Laboratory and Conference Center opened in late 1989 at the headquarters site in Tivoli. The Institution is building new laboratory, dining, conference, residential, and docking facilities on Barro Colorado Island. Congress has appropriated $1.9 million for fiscal year 1990 to begin relocating and upgrading the Atlantic research field station and facilities in the San Blas archipelago, and to purchase and equip a new floating laboratory. In total, this project will cost $3.5 million. STRI plans to build a new workshop and maintenance facility at Tivoli to provide a central location for ongoing maintenance on its buildings and its fleet of vehicles and boats. The Institution estimates that this project will cost $2 million.

Construction Planning

An essential part of an effective facilities development program is the ability to assess requirements and make detailed long-range plans. A comprehensive long-range planning program identifies major issues affecting each expansion project, including program needs, spatial ideas, operating logistics and costs, and

The Smithsonian Tropical Research Institute opened the Earl S. Tupper Laboratory and Conference Center during 1989. This new facility provides STRI scientific staff and visiting scientists with modern office, laboratory, and conference facilities similar to those at major research universities. (Photo by Marcos A. Guerra)

preliminary construction cost estimates. The Institution has established an improved long-range planning capability. As a result, management adopted a ten-year development program to address the Institution's most urgent expansion needs. During the planning period the staff will consider additional requirements that will extend well beyond the year 2000. Annual resources of $1.5 million will allow the Smithsonian management to enhance decision-making.

Minor Construction, Alterations, and Modifications

The Smithsonian requires continued changes and improvements to existing buildings to meet programmatic objectives in the areas of research, collections management, exhibitions, and administration. These projects will require approximately $61 million throughout the planning period. The Institution will seek $4.0 million in fiscal year 1991 for these projects.

Into the Twenty-First Century

Beyond fiscal year 1999, the Institution will continue to require new facilities to meet its multi-dimensional program needs. The Institution is considering the following construction projects in the long-term:

- Continuation of the initiatives for development of collections-management and storage facilities;
- Removal of the antiquated buildings at the Garber facility when the NASM Extension is completed;
- Expansion of the NMAH to accommodate a larger auditorium, and to accommodate potentially increased African-American programming;
- Construction of a new, expanded facility for the Anacostia Museum;
- Expansion of the Cooper-Hewitt Museum to provide additional space for collection storage and exhibitions, and for support of educational activities;
- Expansion of the Hirshhorn Museum to accommodate increased exhibition and research programs;
- Continued acquisition of land for environmental research at the Smithsonian Environmental Research Center;
- Expansion of the Mathias Laboratory at SERC to meet the increasing need for environmental research; and
- Expansion of the NMNH West Court to accommodate increased programming and construction of a new restaurant pavilion.

Zoological Park and Conservation Research Center

In implementing its Master Plan for its 163 acres in Rock Creek Park (Washington, D.C.) and its 3,150 acre Conservation and Research Center in Front Royal, Virginia, the Zoo is repairing, altering, and improving the plant property; constructing additions and minor new facilities including exhibits; and preparing plans and specifications for further construction. The Zoo has developed a five-year construction and improvement schedule for both the Rock Creek facility and the Conservation Center at Front Royal. This section surveys the projects anticipated over the planning period.

Zoological Park Master Plan

Olmsted Walk

Restoration and construction of the Olmsted Walk began in fiscal year 1985 with emphasis given to preserving and enhancing the natural and historical character of the Park. The Zoo will renovate some exhibits along the Walk to enhance the visitors' experience of viewing the animals. This renovation will include new surfaces for the Walk, adequate drainage, new landscaping, additional benches and drinking fountains, and improved signage. These improvements will unify the exhibits and grounds and provide a pleasant and educational experience for the public at the National Zoo. The Zoo has completed the first three phases of the Olmsted Walk renovation. The Zoo will seek $1 million in fiscal year 1992. With these funds, the Zoo will complete overall landscaping of the adjacent areas. The landscaping will screen parking areas, create shade, add color, and develop diversity for the benefit of the visiting public.

Loop Trail Signage

The Olmsted Walk project established a clear pedestrian thoroughfare from the Connecticut Avenue Entrance down to the Rock Creek Entrance. This efficient route connects most of the Zoo's exhibit structures. However, it bypasses the Bird House, with its new wetlands exhibit, the exhibits in Beaver Valley, and the Zoo's new Aquatic Habitat complexes. The Loop Trail will connect these major exhibits and other animal areas with the main Olmsted Walk. The Zoo will seek $300,000 in fiscal year 1992 to provide the graphics requirements necessary to transform the Loop Trail.

Aquatic Exhibits

The Zoo plans aquatic exhibits that will include a full range of fish, aquatic mammals, birds, reptiles, and amphibians. The planned exhibits will concentrate on freshwater animals. Together with the invertebrate exhibit which opened in May 1987, the

SMITHSONIAN INSTITUTION

National Zoological Park Construction and Improvements

Fiscal Years 1990–1995
(Millions of Dollars)

ROCK CREEK

	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
Master Plan						
Olmsted Walk Landscaping			$ 1.0			
Loop Trail Graphics			$ 0.3			
Aquatic Exhibits						
Amazonia Exhibit	$ 4.5					
Amazonia Gallery		$ 3.0	$ 1.7			
Aquatic Trail			$ 6.6			
Aquatic Habitats				$ 7.5	$ 6.8	
Parking Facility[1]				$ 4.0	$ 4.0	$ 6.4
Grassland & Forest Exhibits			$ 1.7	$ 7.7	$ 5.0	
Hall of Humankind		$ 0.3	$ 3.0			
Children's Facility (Rabitat)						$ 2.0
Renovations & Repairs	$ 1.4	$ 1.9	$ 2.0	$ 2.0	$ 2.0	$ 2.2

FRONT ROYAL

	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
Development Plan						
Maintenance Facility			$ 1.5			
Multi-purpose Animal Facility			$ 2.2			
Water Systems & Hydrants & Road Extensions		$ 0.7	$ 1.3			
Training Center			$ 2.0			
Pachyderm Facility				$ 1.1	$10.0	
Renovations & Repairs	$ 0.6	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 1.0

TOTAL	**$ 6.5**	**$ 6.7**	**$24.1**	**$23.1**	**$28.6**	**$11.6**

[1]Actual Construction of the Parking Facility is scheduled to begin in FY 1993. The Zoo estimates construction costs at $19.4 million (including design) with citizen participation, through parking revenues, contributing $5 million. The chart reflects only the requirement for appropriated funds.

proposed aquatic exhibits will fill the last gap in the Zoo's presentation to the public of representatives of all the major animal groups. Previously, the Zoo emphasized terrestrial animals almost exclusively despite the fact that over 60 percent of the world's vertebrate animals are fish and despite the fact that the general public knows little about aquatic animals. The animals that the Zoo will exhibit in the new aquatic exhibits include those not exhibited in most zoos, hence the proposed exhibit provides an excellent opportunity to educate and entertain the general public about these engaging and important groups of animals.

The aquatic exhibits will include four components which together, will fully embody the BioPark philosophy: the Amazonia Exhibit; the Amazonia Gallery; an Aquatic Trail; and other Aquatic Habitat exhibits.

The Zoo has scheduled the first phase, the Amazonia Exhibit, for construction. This exhibit will display aquatic mammals, appropriate fish, invertebrates, birds and amphibians, as well as vegetation in the natural habitat, a tropical river shore. Visitors will view these animals from both aboveground and underwater viewing stations. The exhibit setting, a tropical rain forest, will illustrate the predominant features of tropical biology and emphasize complexity, specialization, and species interactions. The Zoo received an appropriation of $4.5 million in fiscal year 1990 to complete construction of this $7.7 million facility.

As an extension of the Amazonia Exhibit, the Zoo plans an 8,000 square foot Amazonia Gallery that will contain the

Keeper Sara Hallager and Associate Veterinarian Lyndsay Phillips treat a red panda cub in the Zoo's new, ultra-modern veterinary hospital. (Photo by Jessie Cohen)

Smithsonian Tropical Science and Global Environmental Science Gallery. The gallery will concentrate upon educating the visitor about global problems and tropical biology. The exhibits in the Gallery will provide close-up views of the complex web of cooperation and competition among plants and animals. The Zoo will seek $3 million in fiscal year 1991 and $1.7 million in fiscal year 1992 for construction of the gallery.

The Aquatic Trail will consist of a cluster of exhibits near the Zoo's Amazonia Exhibit. The exhibit will include the addition of two widely popular groups of animals, sea otters and penguins. These animals are the focus of important conservation efforts. Within the Aquatic Trail cluster of exhibits, the Zoo plans to highlight areas such as the American Lake, the South Atlantic Coast, the Chesapeake Marshes, and a Mangrove Swamp. The Zoo will seek a fiscal year 1992 appropriation of $6.6 million for construction of the Aquatic Trail.

In addition to the aquatic exhibits planned through fiscal year 1991, the Zoo plans additional aquatic habitats as included in the master plan. The Zoo estimates the cost of the additional aquatic habitats at $14.3 million and will seek funding for these projects in fiscal years 1993 and 1994.

Parking Facility

For over a decade the Institution has entertained a long-range plan for a centralized multi-level parking garage at Rock Creek. Such a facility would allow the Zoo to use, as exhibitions space, present surface-parking areas that occupy level land in the center of the Zoo. This level ground is more appropriate to certain species, and its use as exhibition space would increase the natural setting of the Zoo's core areas. The proposed parking garage will include approximately 1,100 spaces compared to the existing 250 spaces on the site adjacent to the present General Services Building. The construction will include a pedestrian walk and tunnel to allow visitors unimpeded access to the central animal area. The Zoo has tentatively scheduled construction of the parking facility for 1993 through 1995. The new parking facility will cost a total of $19.4 million. The Zoo will partially offset the cost of the project with $5 million that it will generate from parking fees.

Grasslands and Forests Exhibits

The Zoo proposes to develop three exhibits during the coming decade, each representing a distinct ecological and geographic area. These will include: American Grasslands, African Grasslands, and Forests. Construction of the first will occur in late 1993 and 1994.

The American Grasslands exhibit will replace Visitor Parking Lot B and will consist of two major habitats, the North American

Prairies and the South American Grasslands. Separating the two exhibits, a planted berm will conceal a service yard and holding buildings. Bison, coyotes, sandhill cranes, prairie dogs, and gopher snakes will populate the Prairie exhibit. The American Grasslands exhibit will quarter mara, giant anteaters, capybara, maned wolves, rhea, and guanacos.

The African Grasslands exhibit will also subdivide into two major habitats, the African Savannah Grasslands and the African Desert Grasslands. The Zoo will locate these exhibits on the present site of the Hardy Hoofed Stock exhibits and bus-staging area. The trails in the two subdivisions will include screening and specimen plantings to create the illusion of being in Africa. Animal species such as zebra, ostrich, wildebeest, flamingo, spotted hyena, blesbok, gerenuk, and dwarf mongoose will inhabit the new exhibit. A nocturnal exhibit will include species such as the zorille, aardvark, fennec fox, cobra, and insects. The Zoo plans to include gazelle, crowned crane, meerkat, duiker, and klipspringer in the Desert exhibit.

The Zoo will locate the Forests exhibit on the hilly terrain east of the Connecticut Avenue entrance. The exhibit will feature three major habitats: West African Forests, Southeast Asia Forests, and the Sulawesi Forests. The Zoo will include mandrill, leopard, bongo, Eld's deer, tapir, muntjac, anoa, and babirusa in the exhibit.

The Zoo estimates that the Grasslands and Forests Exhibits will cost $14.4 million and that construction will occur between fiscal years 1992 and 1994.

Hall of Humankind

In order to reflect its enhanced animal husbandry standards, the Zoo will remodel the Monkey House and replace it with the Hall of Humankind. The new facility will innovatively treat primate biology and will include human biology, origins, and cultural achievements. This exhibit will complement exhibits on human origins in the National Museum of Natural History. Here the Zoo will exhibit tool-using capuchin monkeys, language- and drawing-capable apes, orb-weaving spiders, leaf-cutting ants, and honeybees as analogues of socially, technologically, agriculturally, linguistically, and artistically accomplished humans. In total, the planning and construction of this facility will cost over $3 million.

Children's Facility (Rabitat)

The Zoo plans to construct a Children's Facility beginning in fiscal year 1995. The new exhibit will provide programming directed to children and their families. The building, to be known as the Rabitat, will include both an indoor and an outdoor activity garden with naturalistic animal exhibits, a human-size game

maze, and a sensory garden maze. Rabitat will combine fantasy with a natural environment to help children learn about a habitat and the animals that share it. The Zoo projects that the Rabitat will cost $2 million.

Renovations and Repairs

In addition to the redevelopment master plan, the Zoological Park is responsible for a continuing program of maintenance and repair of its sixty separate structures, of which 18 are major buildings, and associated grounds, utilities, and equipment. The current plant value is over $100 million. The Zoo will seek $1.9 million in fiscal year 1991 and will require $2 million annually ($2.2 million in fiscal year 1995) for structural, mechanical, and electrical repairs and renovation of the physical plant.

Conservation and Research Center Development Plan

Maintenance Facility

To improve operations, security, and accessibility, the Zoo will consolidate into one area the maintenance trade shops that serve the Conservation and Research Center. The Zoo will renovate and modify a group of supply buildings to serve as the new trade shops and to provide parking for the Center's motor pool operations and off-site employees. The Center will use the space the present shops vacate for expanded research laboratories and student housing. These improvements will cost $1.5 million.

Multi-Purpose Animal Facility

This proposed new facility will provide needed additional space to support research and breeding programs for small to medium-sized endangered species of mammals. This facility will utilize the same passive solar heat/natural light that has proven so successful in the small animal facility devoted to conservation and improved animal health. Management plans to locate the facility, scheduled for construction in 1991, in the middle of the Conservation and Research Center. The Multi-Purpose Animal Facility will cost $2.2 million.

Water System, Hydrants, and Road Extensions

The Conservation and Research Center plans to develop an infrastructure that will serve equally any of the major functional paths that the Center may follow in the next twenty years. The Center will upgrade and extend the water distribution system, including fire hydrants. The Center will also redesign the road system to improve vehicular access to outlying areas and will repair or replace deteriorating existing roads. In total, these improvements will cost $2 million.

Training Center

The Zoo's Conservation Research Center at Front Royal, Virginia, will continue to expand its widely acclaimed international training programs. These programs have now involved more than 35 countries. The Zoo plans to construct a new complex of classroom, laboratory, auditorium, living and recreational space which will serve its training and small conference needs. The Zoo will seek fiscal year 1991 funding for design of the Training Center, of which construction will occur in fiscal year 1992. In total, the Training Center will cost $2 million.

Pachyderm Facility

This facility, scheduled for construction in fiscal years 1993 and 1994, will quarter large, nontemperate mammals for research and breeding. The Zoo has chosen a site that is well suited for this purpose and will require minimal support. The facility will permit the Zoo to pursue actively breeding programs for such critically endangered groups as rhinoceroses and tapirs. In total, the Pachyderm facility will cost $11.1 million.

Institutional Funding Requirements

Funding sources available to the Smithsonian Institution divide into two broad categories: appropriated and nonappropriated. The Institution estimates that total net funds provided for operations will grow from $541 million in fiscal year 1991 to $782 million in fiscal year 1995.

Two of the areas of emphasis deal directly with general development of the Institution's Trust resources: the examination and consideration of various realistic ways to increase basic trust resources of the Institution; and the examination and continued pursuit of opportunities to develop new products, to explore new auxiliary enterprise opportunities, and to collaborate, as these may exist among core revenue-producing programs. Primarily, the planned activities of the Office of Membership and Development and the Product Development and Licensing Division of the Business Management Office will address these areas of emphasis.

Appropriated Funds

The federal government appropriates funds to the Smithsonian in separate accounts that correspond to the operating, and facilities construction and maintenance budgets that the Institution administers: Salaries and Expenses (S&E); Repair and Restoration of Buildings (R&R); Construction and Improvements, National Zoological Park; and Construction.

The S&E appropriation, the Smithsonian's basic federal operating budget, meets the basic expenses of: research in the fields of art, science, and history; development, preservation, and documentation of the national collections; presentation of public exhibitions and performances; collection, preparation, dissemination, and exchange of information and publications; conducting education, training, and museum assistance programs; administration; maintenance, alteration, operation, leasing, and protection of buildings and facilities.

The Institution estimates that its federal salaries and expenses will grow from the requested fiscal year 1991 level of $256 million to $415 million in fiscal year 1995.

Nonappropriated Funds

While Federal appropriations provide core support for the Institution's programs, nonappropriated funds from various sources are vital to Smithsonian activities. There are two sources of nonappropriated funding: Smithsonian Trust funds and Government Grants and Contracts. Smithsonian Trust funds derive from a variety of sources, including gifts and grants

received from individuals, corporations, and foundations, earned revenues of the auxiliary and bureau activities, non-government contracts, and investment income received on balances of the various types of nonappropriated funds. Government agencies provide the Smithsonian with government grants and contracts to support specific research, exhibitions, or other projects that the Institution undertakes as a result of its expertise or its ability to respond quickly to certain kinds of needs.

Major Income-Producing Activities

The Institution derives unrestricted trust income from a variety of auxiliary and bureau activities. The major income-producing activities offer a diverse range of services to the Institution's various audiences, make the activities of the Smithsonian more accessible, and enhance the quality of educational experiences available to the general public. A brief description of the anticipated, major income-producing activities during the planning period follows.

Office of Membership and Development

To help meet the need for increased private funds in future years, the Institution plans to enlarge its development staff. This increase will take place both in the Office of Membership and Development (OMD) and at the bureau level. The Institution will encourage individual museums and offices to pursue direct support for their programs, while OMD will solicit funding for pan-Institutional and multi-bureau projects as well as to assist those bureaus without separate fund-raising staff. OMD has planned a series of programs in major cities across the country to introduce the Institution to a larger pool of possible supporters. OMD is also considering new international initiatives in both Europe and Japan.

The OMD and the Development Officers' Committee will continue to coordinate development activities across the Institution, in line with the Institution's recent decentralized fund-raising focus. The Office is reorganizing to provide enhanced development, research, and other specialized services directed at all segments of the philanthropic market for the Institution and its constituent parts.

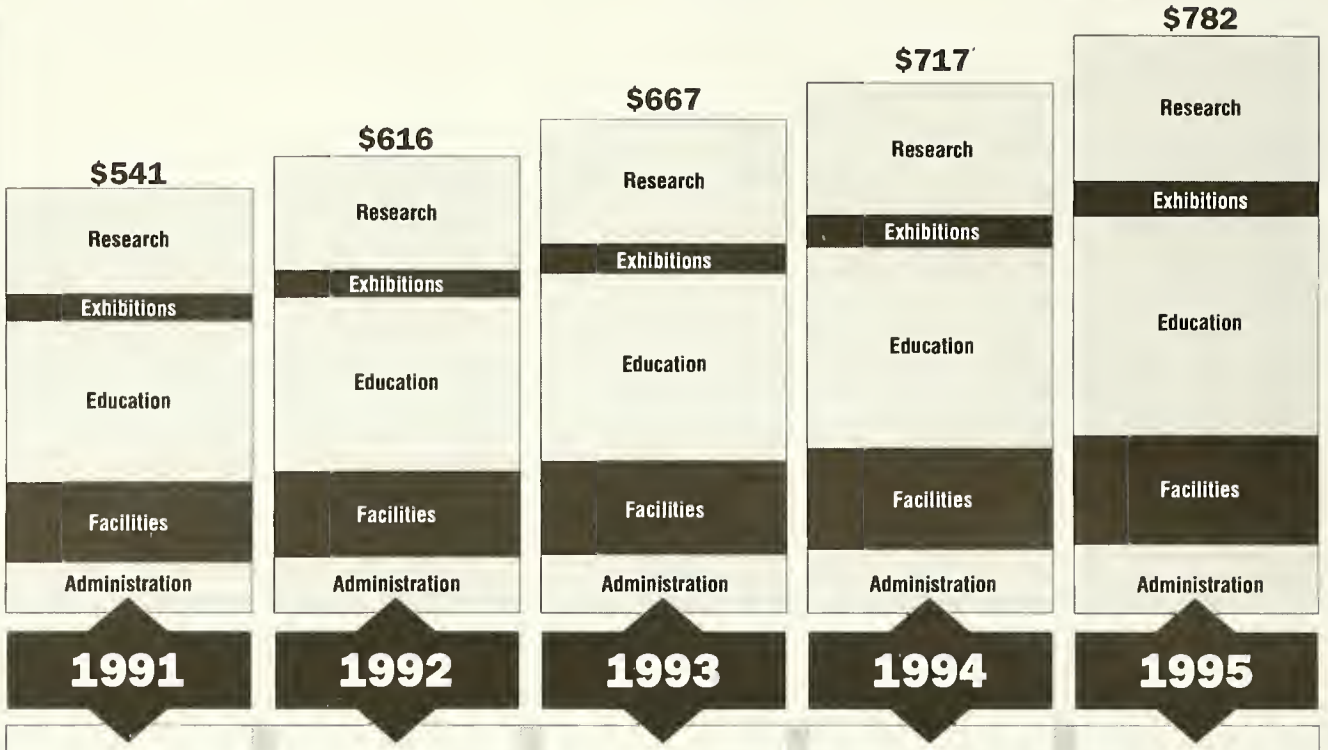
Smithsonian National Associate Program

The National Associate Program (SNAP) derives income from its Contributing Membership Program as well as its tours and seminars. SNAP's Contributing Membership Program will begin fiscal year 1990 with 53,000 members. SNAP will increase membership to 96,000 by the end of fiscal year 1995 through more aggressive acquisition, maintenance, and upgraded strategies. SNAP will also seek to raise unrestricted support from corporations through the Corporate Associate Program, to begin

Smithsonian Institution Growth in Operating Requirements

PROJECTED EXPENSES

By fiscal year, in millions of dollars

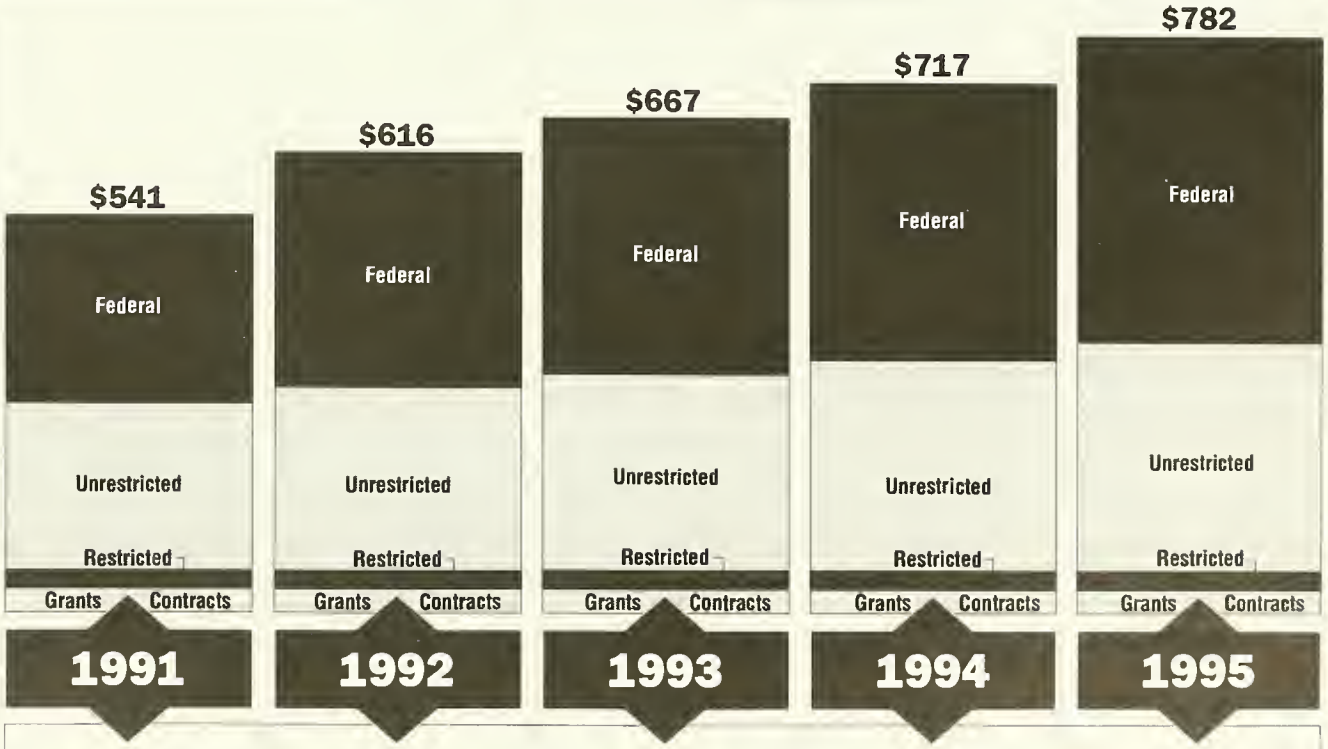


	1991	1992	1993	1994	1995
Research and Curation	$135	$154	$167	$179	$196
Exhibitions	32	37	40	43	47
Education	206	235	254	273	297
Facilities Operations	103	116	126	136	148
Administration	65	74	80	86	94
TOTAL SMITHSONIAN	541	616	667	717	782

Smithsonian Institution Growth in Operating Requirements

PROJECTED SOURCES OF FUNDING

By fiscal year, in millions of dollars



	1991	1992	1993	1994	1995
Federal Salaries & Expenses	$256	$315	$345	$375	$415
Trust Funds — Unrestricted	230	246	265	284	309
Trust Funds — Restricted	23	23	24	24	25
Government Grants and Contracts	32	32	33	34	33
TOTAL OF ALL SOURCES	541	616	667	717	782

in fiscal year 1990. During the planning period, SNAP will work closely with the Office of Membership and Development to identify prospects capable of significant contributions.

Resident Associate Program

The Resident Associate Program (RAP) derives income from four primary sources: membership; activity registration; commissioned art work; and occasional grants. In additional to these sources of income, foundations and collaborative programming with other cultural institutions provide in-kind services for specific projects and initiatives. RAP serves a membership exceeding 60,000 households, equalling approximately 140,000 individuals in the metropolitan Washington area. RAP estimates total memberships of 75,000 households by fiscal year 1995. To generate new memberships RAP is evaluating its direct mail efforts and advertising. RAP will install new software in fiscal year 1990 which will enable it to serve membership even more effectively and to plan programs specifically tailored to its many constituencies. RAP will continue a special effort to reach minority populations through relevant programming. During the planning period, RAP will continue to seek more financial support from new sources, especially to enhance the months approaching its 25th anniversary celebration, September through December 1990.

Smithsonian Magazine

The Smithsonian Magazine has been one of the most successful public education ventures established by the Institution. Astutely aware of the vicissitudes of publishing, the magazine's management nonetheless expects demand for its product to remain strong. Revenues from the magazine meet the cost of production first, with net proceeds distributed to the General Unrestricted Trust Fund.

Air and Space Magazine

The Air and Space Magazine explores human endeavor in flight and in exploration, science, and research within the atmosphere and beyond. Air and Space's experienced operating losses during its first three years of publication, however, management expects it to produce a small net surplus in fiscal year 1991 and beyond.

Smithsonian Institution Press

The Smithsonian Institution Press is a vital information dissemination activity. Its customers include libraries, museums, scientific institutions, and the general public. the Press designs exhibition catalogs, educational pamphlets, and informational leaflets that serve the Institution's millions of visitors and its extensive programs. It publishes high quality scholarly and general interest books, together with recordings that preserve

significant developments in the history of American music. The Press expects to continue to perform successfully with some net gains each year from the production and sales of its products.

Optical Publishing

The Office of Optical Publishing (OOP) coordinates the development of integrated digital multi-media publications for the Institution. OOP is principally responsible for the development of co-publishing relationships with third-party underwriters of Smithsonian publications. These relationships will generate revenue by using multi-media, computer based publishing technologies for the Institution's publications.

Museum Shops

The Smithsonian has provided sales desks since the 1860s, offering a diverse array of Institution-related products. Centrally managed museum shops operate in the Museum of American History, the Museum of Natural History, the Arts and Industries Building, the Air and Space Museum, the Hirshhorn Museum and Sculpture Garden, the Museum of American Art, the Portrait Gallery, the Renwick Gallery, and the Museum of African Art in the Quadrangle. Shops managed by individual museums include those in the Freer Gallery and the Cooper-Hewitt Museum.

Each item offered for sale in a museum shop must relate to the collections, be appropriate to the museum where sold, and conform to high standards of quality and taste. Exhibition catalogs and other publications consonant with exhibition themes, plus all works by Smithsonian scholars, are available in the museum shops. Other offerings include reproductions of three dimensional artifacts, handcrafts, and educational materials for children.

Mail Order

Formed in 1975, Mail Order produces several catalogs each year. Sent to Associate members, these catalogs offer special items that reflect Smithsonian collections and programs. Items are chosen for their quality, taste, and educational value. The Mail Order's receiving and shipping center is in Springfield, Virginia.

Product Development and Licensing

The Product Development and Licensing Division, formed in 1985, licenses major manufacturers to produce and market reproductions and Smithsonian-related product lines. The Smithsonian now has over 50 licensees, representing approximately 250 products bearing the Smithsonian name. While many licensed products are sold through the Museum Shops and Mail Order, the primary objective is sales of licensed products in stores and catalogs around the nation. Continued growth of the Product Development and Licensing Division will

increasingly promote the Smithsonian via quality educational reproductions and adaptations.

Concessions

Through concession arrangements, the Institution provides visitors with restaurant facilities in major Smithsonian museums, including an old-fashioned ice cream parlor in the Museum of American History. The new NASM facility, opened in August 1988, contains a cafeteria seating 800 and a full-service restaurant on the mezzanine level. The Commons in the original Smithsonian building is open to Contributing Members and Smithsonian staff. Other income-producing activities run by concessionaires are, in warm weather, the popular carousel and popcorn wagons on the Mall, and the shop, restaurant, and parking facilities at the Zoo.

Bureau Activities

Bureau Activities in the Institution function primarily as support for their bureau. Most notable is the Langley Theater at the National Air and Space Museum.

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"...for the increase and diffusion of knowledge..."

Smithsonian Institution

Five-Year Prospectus ♦ Fiscal Years 1991 – 1995