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**DEPARTMENT OF THE INTERIOR AND RELATED
AGENCIES APPROPRIATIONS FOR 1990**

HEARINGS
BEFORE A
SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES
ONE HUNDRED FIRST CONGRESS
FIRST SESSION

SUBCOMMITTEE ON THE DEPARTMENT OF THE INTERIOR AND
RELATED AGENCIES

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Staff Assistants

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Printed for the use of the Committee on Appropriations

THURSDAY, MARCH 16, 1989.

SMITHSONIAN INSTITUTION

WITNESSES

ROBERT McC. ADAMS, SECRETARY
DEAN W. ANDERSON, UNDER SECRETARY
TOM L. FREUDENHEIM, ASSISTANT SECRETARY FOR MUSEUMS
ROBERT S. HOFFMANN, ASSISTANT SECRETARY FOR RESEARCH
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IRWIN SHAPIRO, DIRECTOR, SMITHSONIAN ASTROPHYSICAL OBSERVATORY
IRA RUBINOFF, DIRECTOR, SMITHSONIAN TROPICAL RESEARCH INSTITUTE
MARTIN O. HARWIT, DIRECTOR, NATIONAL AIR AND SPACE MUSEUM
FRANK TALBOT, DIRECTOR, NATIONAL MUSEUM OF NATURAL HISTORY/
MUSEUM OF MAN
DIANNE PILGRIM, DIRECTOR, COOPER-HEWITT MUSEUM
PETER POWERS, GENERAL COUNSEL
LINDA DUNNE, ADMINISTRATOR, COOPER-HEWITT MUSEUM
ROGER KENNEDY, DIRECTOR, NATIONAL MUSEUM OF AMERICAN HISTORY
DOUGLAS EVELYN, DEPUTY DIRECTOR, NATIONAL MUSEUM OF AMERICAN HISTORY
ALAN FERN, DIRECTOR, NATIONAL PORTRAIT GALLERY
JAMES DEMETRION, DIRECTOR HIRSHHORN MUSEUM AND SCULPTURE GARDEN
PHILIP REISS, DIRECTOR, OFFICE OF DESIGN AND CONSTRUCTION
MILO BEACH, DIRECTOR, ARTHUR M. SACKLER GALLERY AND FREER GALLERY OF ART
SUSAN HAMILTON, ACTING DIRECTOR, ARCHIVES OF AMERICAN ART
ELIZABETH BROWN, ACTING DIRECTOR, NATIONAL MUSEUM OF AMERICAN ART
SYLVIA WILLIAMS, DIRECTOR, MUSEUM OF AFRICAN ART
JOHN KINARD, DIRECTOR, ANACOSTIA MUSEUM
LAMBERTUS VAN ZELST, DIRECTOR, CONSERVATION ANALYTICAL LABORATORY
VIJA KARGLINS, ACTING DIRECTOR, SMITHSONIAN INSTITUTIONS LIBRARIES
ANNA COHN, DIRECTOR, SMITHSONIAN TRAVELING EXHIBITION SERVICE
LINDA BELL, SMITHSONIAN TRAVELING EXHIBITION SERVICE

DAVID CORRELL, ACTING DIRECTOR, SMITHSONIAN ENVIRONMENTAL
RESEARCH CENTER
ROBERT BURKE, DIRECTOR, OFFICE OF PROJECTION SERVICES

OPENING REMARKS

Mr. YATES. This is a hearing on the budget for fiscal year 1990 for the great Smithsonian Institution.

Appearing in support of that budget is its distinguished Secretary, Mr. Robert McCormick Adams; its Under Secretary, Dean Anderson; Tom Freudenheim is here somewhere; and Robert Hoffmann, Assistant Secretary for Research; Mr. Jameson is here, as well; Mr. Lovejoy, back from Brazil; Ralph Rinzler; Ms. Leven, the Treasurer; Mr. Siegle, Director—how are all your roofs?

Mr. SIEGLE. Fine. [Laughter.]

Mr. YATES. Any leaks in the glass?

Mr. SIEGLE. Yes.

Mr. YATES. We also have Mr. Robinson, Director of the National Zoological Park; and Ms. Suttentfield, Director of the Office of Planning and Budget.

Your statement will be inserted in the record Mr. Adams, to be followed by the biography of Ms. Berkowitz, who is now the Acting Director of the Office of International Relations and Coordinator of the International Center.

And we also have the biographies of Ms. Broun, the Acting Director for the Smithsonian's National Museum of American Art since the resignation of Dr. Eldredge; Anna Cohn, Director of the Traveling Exhibition Service; Karen Fort, she is not here, but she is the Assistant Director and chief of Design and Editing, Office of Exhibits Central; Ms. Gonzalez, Acting Director of Smithsonian's Office of Quincentenary Programs; Susan Hamilton—Susan, you've been with us a long time. Why are we just now getting your biography? [Laughter.]

Ms. HAMILTON. I've just grown up enough. [Laughter.]

Mr. YATES. I see you have served in a number of capacities. What are you serving as now?

Ms. HAMILTON. Acting Director of the Archives of American Art.

Mr. YATES. Archives of American Art.

Now we have Mr. Talbot, the distinguished new Director of the Natural History Museum; Ms. Pilgrim from the Cooper-Hewitt Museum; and Alice Green Burnette, the Deputy Assistant Secretary for External Affairs and Coordinator for Institutional Advancement.

That takes care of all the biographies.

Your statement and the biographies will now be inserted in the record.

[The information follows:]

STATEMENT OF ROBERT McC. ADAMS
SECRETARY OF THE SMITHSONIAN INSTITUTION
BEFORE THE
SUBCOMMITTEE ON INTERIOR AND RELATED AGENCIES
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON APPROPRIATIONS

MARCH 16, 1989

Mr. Chairman and Members of the Subcommittee,

I am happy to appear before you for the fifth year in support of the Smithsonian's FY 1990 budget request. Again, I wish to express our gratitude for your continuing interest in the wide range of programs that the Institution undertakes.

I am pleased to report that, with your past assistance, we have progressed in a number of areas of longstanding interest to the Subcommittee. We have augmented the Institution's basic research programs, especially in astrophysics, tropical biology, and molecular biology. We have also strengthened collection-based research in history and the arts. We have emphasized even more the care and conservation of the National Collections, by providing scholars with better access to collections information and by improving the environments in which we store these collections. We have also begun to reduce the backlog of repair and restoration projects necessary to maintain our facilities. Most recently, we have begun a successful process of culturally and ethnically diversifying our staff because such diversity improves the scope and depth of the Institution's programs.

FY 1990 Budget

Like the majority of budgets you will consider this year, our FY 1990 budget request is essentially a "current services" budget. As you know, such a budget simply extends baseline operating costs for existing programs. As in the FY 1989 budget, the Smithsonian's FY 1990 capital budget continues to emphasize funding to eliminate over a number of years the substantial remaining backlog of deferred maintenance and repairs. The FY 1990 capital budget also includes funding for continued construction and improvements at the National Zoo and for other previously authorized construction projects.

I would like to highlight notable features of our budget request and then turn to several other matters of concern in the current "steady state" budget environment.

Overview of Salaries and Expenses

The Salaries and Expenses (S&E) request for operating costs totals \$227.7 million and 4,330 workyears. Although this request represents an increase of \$16.5 million and 98 workyears over the FY 1989 appropriation, a simplistic comparison such as this to last year's funding level could easily be misinterpreted. The fact is that the Institution must apply approximately \$14 million (or 85 percent of the increase) to cover "uncontrollable" increases in baseline costs. These "uncontrollable" cost items include, for example, the following:

- increased rental costs;
- personnel compensation benefits, like health and retirement;
- the cost of the January 1989 general pay raise, the cost of a new pay scale for security guards, and the full-year cost of new positions approved in the FY 1989 budget; and
- utilities.

Mr. Chairman, I believe the last two of these "uncontrollable" items deserve special comment. First, unlike budgetary allowances from OMB in prior years -- which have directly funded the full-year cost of the previous year's pay raise as a technical adjustment to baseline costs -- the FY 1990 allowance did not provide funding to cover the cost of the January 1989 pay raise. Executive budget formulation policy mandated that all Federal agencies absorb permanently within the allowance levels the cost of the recent pay raise. Accordingly, the Institution applied the dollars that OMB did allow for "technical" nonpersonnel inflationary adjustments to cover instead the full cost of the pay raise. Without this reallocation, Smithsonian bureaus would have no alternative but to keep positions vacant or to curtail expenditures for equipment, supplies, and other nonpersonnel items. Moreover, absorption of the cost of the pay raise would have been disproportionate among bureaus, depending upon the extent to which their operating budgets are personnel intensive.

Second, you will note a request for funding to cover the payment for water and sewer costs to the District of Columbia. As you may recall, in each of the past two years, OMB proposed that agencies themselves pay their water and sewer costs rather than the current practice of budgeting these costs in a lump sum in the D.C. appropriation bill. Since there is no money in the Smithsonian base to cover these new costs, OMB approved funds as one of its "technical" adjustments to cover this new utility item.

These two items alone account for \$9.4 million in increased costs imposed on the Institution. Other uncontrollable items are detailed in the justification before you. While we have no choice

but to acknowledge these "uncontrollable" costs, it is nevertheless disheartening to have to earmark such a substantial proportion of increasingly scarce additional dollars in this way.

There are, however, several programs in this budget that will enable us to make further progress in several areas that have been Institutional priorities for several years now. Consistent with the President's "steady state" budget philosophy, the FY 1990 request will enable the Astrophysical Observatory to continue two major scientific instrumentation projects which Congress approved in the FY 1988 and 1989 budgets:

(I) The construction of a submillimeter telescope array will allow scientists to study more effectively the formation of stars and planetary systems and the puzzling processes occurring in the cores of galaxies and quasars. With its unique combination of wavelength coverage and resolving power, the SAO submillimeter telescope array will be a major scientific instrument of international stature.

(II) With funding provided in FY 1988 and FY 1989, SAO has begun the conversion of the Multiple Mirror Telescope to a telescope with a single 6.5-meter diameter mirror. This instrument will enable scientists to gather data on objects much fainter than is currently possible and study more than twice as much of the universe than with the present instrument.

Consistent with our previous discussions with the Subcommittee and as part of the Institution's effort to reflect the Nation's cultural and ethnic diversity in research, exhibitions and public programs, Smithsonian management has sought also to broaden the diversity of its professional staff. The Institution recently undertook a Special Employment Initiative to recruit individuals from culturally significant minority groups, either not previously represented or underrepresented, in the research and curatorial ranks throughout Smithsonian bureaus and offices. For FY 1990, the Institution requests permanent funding for 22 positions. To complement this initiative, the Institution also plans to offer a targeted professional development program for current junior staff. The Institution's FY 1990 request also includes funding to initiate this companion program.

The Smithsonian also requests additional funds to enhance financial management. The Institution is acquiring a new accounting system to replace the current 20-year-old system. The requested funding will enable the Institution to install and implement the more highly automated general ledger and accounts payable programs that comprise the new system. With the new system, the Institution will be able to provide more reliable financial reports for internal and external audits, thus improving financial accountability.

With funding provided in the FY 1989 budget, the Institution began to staff positions to manage the expanding repair and restoration program, which I will discuss shortly. In this budget are additional positions for the two offices principally responsible for managing this program: the Office of Design and Construction and the Office of Procurement and Property Management.

Overview of Repair and Restoration

Repair of facilities continues as a high priority in the FY 1990 budget. As you know, in previous budgets funding for these capital requirements did not keep pace with deterioration. We are very appreciative of your support over the last few years in increasing funding for this program. In this budget, the Institution seeks to expand further its repair and restoration (R&R) program to a level of \$26.7 million. Approximately half of the requested R&R funding is earmarked to continue the program we began in the FY 1989 budget of major capital renewal for aging facilities, which includes the cyclical replacement of major building systems. The other half of the funds will support routine maintenance and repair projects, including facade, roof, and terrace repairs; fire detection and suppression projects; and access, safety, and security projects.

Overview of Construction

For the Construction account, the Institution requests a total of \$10 million for FY 1990. This request includes funds for the design of renovations of the historic Old General Post Office Building and for the construction of Galeta/Atlantic laboratories and dormitory at the Tropical Research Institute. The FY 1990 Construction request also seeks funding for Alterations and Modifications to current facilities -- work that is essential to increase the functionality of these facilities based on program use. We are again asking for funds to conduct construction planning for future projects.

Construction and Improvements, National Zoological Park

The FY 1990 request for the Zoo Construction account is \$6.5 million. This amount includes funding for the highest priority repair and renovation projects at Rock Creek Park and at the Zoo's Conservation and Research Center at Front Royal, Virginia. In addition, the Institution is requesting funding to continue the construction of a new Aquatic Habitats exhibit at the Zoo on the flora and fauna of the Amazon. The exhibit setting, a tropical rain forest, will illustrate the predominant features of tropical biology and emphasize the complexity, specialization, and species interactions found in the tropics.

Coping in a "Current Services" Environment

Mr. Chairman, I have outlined what we believe is a very modest budget, reflecting as it does a "current services" philosophy for programs and continued attention to deficient facilities. Our FY 1990 budget request before you is consistent with the need to curtail spending in order to reduce the Federal budget deficit. Given the stark reality of the budget deficit and the resulting funding constraints, there is much that we would like to do in FY 1990 that we must defer for future consideration.

As an illustration of the magnitude of the difference between what we had hoped to do in FY 1990 and what we are actually able to support in the FY 1990 budget, a quick comparison will help. Our budget request before you includes only about one-fourth of the new and expanded program requirements that we had requested from OMB (\$3.2 million vs. \$12.1 million). In turn, our \$12.1 million request to OMB represented less than half of the \$27.4 million in new and expanded program opportunities and requirements initially requested by the bureaus and offices during our internal budget process. The bottom line is that almost 90 percent of the new resources requested by Smithsonian bureaus has already fallen out of the budget. These deferred needs and opportunities range from basic infrastructure requirements at the National Zoo, to scientific equipment for STRI's new laboratory, to the reinstallation of the Museum of Natural History's Native American Cultural Hall, and the creation of additional low-cost traveling exhibitions that would be of interest to minority or other currently underserved audiences.

The Institution may be able to request some of this funding for future fiscal years. I feel compelled to mention, however, two specific program areas for which current funding constraints may prove problematic, because we cannot defer these programs until a later time. The first of these is the wide range of programs that the Smithsonian is in the process of developing to commemorate the 500th anniversary of the voyages of Christopher Columbus. FY 1990 is a critical year for the timely development of the Institution's Columbus Quincentenary programs if we are to ensure our full participation in this important international historical observance, which will occur in 1992.

The second area of concern to me is the transition costs of the Smithsonian administration of the Museum of the American Indian, once the details of an acceptable agreement are finalized. Longer-term funding requirements will include the construction of new facilities in Washington for the collections, the renovation of a facility in New York, and the operating costs of curation of the collections and maintenance of these facilities. Faced with the reported deterioration of the collections, the Nation can ill afford a delay in implementing the agreement.

Finally, given the unavoidable reality of the Federal deficits which continue to plague all of us, I hope we will have an opportunity during the course of this hearing to discuss creative ways to allocate more effectively our current resource base. We would like to work with you to explore alternatives that would provide us with greater flexibility to reprogram funds yet still preserve the oversight that is your prerogative. For example, the current thresholds in reprogramming guidelines have not changed for several years. Due to ensuing inflation, the current \$250,000 limit actually decreases the ability of an agency to reallocate its resources independently and expeditiously when faced with urgent known and unanticipated needs. In the absence of expanded resources, there is, for example, an increasingly strong case for undertaking reprogrammings within, and, perhaps even between, museum programs to increase the sensitivity and diversity of our public programming. We are also very much interested in the "end results" budgeting proposal that the U.S. Forest Service has been discussing with your Subcommittee. We believe that the Smithsonian too should be accountable for end results rather than for a less meaningful adherence to strictly numerical limitations.

Another area we would like to explore is greater use of no-year funding for activities such as collections acquisition and exhibition design and installation, because the need to spend one-year funding prior to the end of the fiscal year sometimes interferes with the most efficient resource allocation.

Lastly, we hope that, even in the current budgetary climate, we will not have to face a future in which the Smithsonian must cover the costs of new program or uncontrollable requirements within base resources. After the past several years, in which unfunded pay costs and the cumulative effects of inflation have eroded base resources, it is now almost impossible to cover any new costs thrust upon us without endangering current programs. It is absolutely essential that an educational and research institution of national prominence not lose completely the flexibility to respond to changes and to have sufficient resources to exploit opportunities for cultural and scientific leadership.

Conclusion

As we prepare to enter the last decade of the 20th century, our focus turns to what the Smithsonian Institution should be in the year 2000 and how we arrive there from where we are today. The challenge before us is to develop and change as the world around us changes. Even though the task before us is difficult, I believe that, with your continued support, the Smithsonian will meet the challenge.

Francine C. Berkowitz

Francine C. Berkowitz, Acting Director, Office of International Relations, and Coordinator of the International Center, assumed her current position in April 1988 as part of the reorganization of the International Center. Her former position was Program Officer in the Directorate of International Activities, where, among other duties, she managed the Smithsonian's Special Foreign Currency Program. Ms. Berkowitz joined the SFCP in 1974 as a program assistant and progressed to positions of increased responsibility in the Program. Previous positions at SI included international liaison activities including responsibilities for passport and visas and other assistance to Smithsonian travelers. Ms. Berkowitz came to the Smithsonian in 1965, after four years experience at the National Science Foundation and the Renegotiation Board. A native Washingtonian, she is a proud product of the D.C. public schools and the George Washington University.

Elizabeth Broun, Acting Director
The National Museum of American Art

Dr. Elizabeth Broun has served as Acting Director for the Smithsonian Institution's National Museum of American Art since the resignation of Dr. Charles C. Eldredge in August 1988. She was Chief Curator and Assistant Director of the NMAA from 1983 until 1988. Dr. Broun was Acting Director of the Spencer Museum of Art, University of Kansas, July 1982 - September 1983 and also was Curator of Prints and Drawings from 1976 until her appointment to the National Museum of American Art. She has taught art history at both the University of Kansas and the University of Missouri.

Dr. Broun's research interests include 19th century painting, contemporary art, the Chicago Worlds Fair, and the art of Albert Pinkham Ryder and James McNeil Whistler. She has written publications and organized exhibitions of the paintings of Thomas Hart Benton and the graphic work of contemporary artist Pat Steir, as well as such diverse figures in European art as Marcantonio Raimondi and Anders Zorn, each of whose work has had a bearing upon American art taste and practice. In 1972, she co-curated a pioneering exhibition of women artists of the past for the Walters Art Gallery in Baltimore where she held a curatorial internship from 1970 to 1972.

At the University of Kansas, Dr. Broun studied the history of art, was elected to Phi Beta Kappa in 1968 and received Woodrow Wilson, Ford Foundation and Kress Foundation Fellowships. Her Ph.D. in American art, with a minor in decorative arts, was awarded in 1976 and her dissertation examined "American Painting and Sculpture at the World's Columbian Exposition, 1893." She also holds a Certificate of Advanced Study from the University of Bordeaux, France.

Anna Cohn

Anna Cohn joined the Smithsonian as director of its Traveling Exhibition Service in October, 1988. A native of Minneapolis, Minnesota, Ms. Cohn carried out graduate and undergraduate studies in art history at Williams College, the University of Minnesota, and the Hebrew University in Jerusalem. She has directed museums and exhibition projects both here and abroad.

Prior to taking the SITES directorship, Ms. Cohn developed the new permanent installation for the Asian Peoples' Hall at New York's American Museum of Natural History. Her positions before that included directing "Generations," the inaugural exhibition for the Smithsonian's International Gallery in the S. Dillon Ripley Center, and "The Precious Legacy: Judaic Treasures from the Czechoslovak State Collections," which toured North America under the auspices of SITES.

For seven years, between 1976 and 1983, Ms. Cohn was director of Washington's B'nai B'rith Museum. She also served as Interim Director of Museum Planning for the U.S. Holocaust Memorial Museum.

Karen Fort

Assistant Director and Chief of Design and Editing
Office of Exhibits Central, Smithsonian Institution

Appointed to this position in December 1985, Ms Fort supports the Director in the management, planning, scheduling, and administrative functions for the Office of Exhibits Central. The Director's position has been vacant since June 1986, and since then, Ms Fort has shared the Director's responsibilities with the Assistant Director and Chief of Production.

As Chief of Design and Editing, Ms Fort has responsibility for design and editing section of the Office of Exhibits Central. For each project, she establishes the general approach and direction, assigns teams, sets quality standards and internal schedules, reviews work for adherence to established objectives, and develops the schedule and budget for each project.

Since coming to the Smithsonian Institution in January 1976, Ms Fort has taken on increasingly responsible positions in the Office of Exhibits Central. Her specialty and expertise is in developing, writing, and editing exhibit scripts. Currently she is working on "Inside Active Volcanoes: Kilauea and Mount St. Helens," a traveling exhibition that will open in the Museum of Natural History in July 1989.

Alicia Maria Gonzalez

Alicia Maria Gonzalez is acting director of the Smithsonian's Office of Quincentenary Programs. She is responsible for planning and overseeing the Smithsonian Institution commemoration of the 500th anniversary of the voyages of Christopher Columbus.

Dr. Gonzalez joined the Smithsonian's Office of Folklife Programs in 1984, where she served as Assistant Director for Program Development. From 1984 to 1986 she also organized and curated the "living museum" exhibition, "Rice in Japanese Folk Culture," for the Office of Folklife Programs. Prior to joining the Office of Folklife Programs in 1984, she served for 3 1/2 years on the anthropology faculty of the University of Southern California, where she taught courses in symbolic and visual anthropology.

An anthropologist, with a doctorate from the University of Texas at Austin and bachelor's and master's degrees in art from the California State University at Los Angeles, Gonzalez's major areas of focus are the people and social systems of Latin America and their adaptation to U.S. culture. Her fieldwork has been in Latin America and most states in the United States, studying the cultures of Spanish-speaking peoples and the adaptation of wheat systems to the New World.

ARCHIVES OF AMERICAN ART

SECOND FLOOR, 1285 AVENUE OF THE AMERICAS, NEW YORK, NEW YORK 10019 (212) 596-5050

Susan Hamilton
Acting Director
ARCHIVES OF AMERICAN ART

Mrs. Hamilton has been with the Smithsonian Institution for some twenty years and has served in a number of capacities. She joined the Archives staff as Deputy Director in 1982, coming from the Office of the Assistant Secretary for History and Art where she was a special assistant to Charles Blitzer. From 1972 to 1977, she served as the Bicentennial Coordinator for the Institution. Prior to coming to the Smithsonian in 1969 to direct the Smithsonian Associates program, she was chief of Public Programs at the Baltimore Museum of Art.

CURRICULUM VITAE

Name: FRANK HAMILTON TALBOT

Date of Birth: 3 January 1930

Academic Qualifications

- 1949 B.Sc. Botany & Zoology majors
University of Witwatersrand, Johannesburg
- 1951 M.Sc. Marine Zoology
University of Cape Town
- 1959 Ph.D. Marine Ecology Thesis
University of Cape Town

Work Experience

- 1952 Demonstrator in Zoology, University of Durham, England
- 1953-56 Research Scientist (Marine), British Colonial Service
- 1958-59 Marine Biologist, South African Museum, Cape Town
- 1960-64 Assistant Director, South African Museum
- 1962 Visiting Research Scientist, Stanford University (6 months)
- 1964-65 Curator of Fishes, Australian Museum, Sydney
- 1965-75 Director, Australian Museum
- 1975-82 Professor of Environmental Studies & Director, Centre for
Environmental & Urban Studies, Macquarie University,
Sydney, Australia
- 1982-88 Executive Director, California Academy of Sciences,
San Francisco
- 1989- Director, National Museum of Natural History, Smithsonian Institution

Supervision of marine surveys (Australian Museum "Shelf Benthic Survey")

Coral Reef research activity including setting up of One Tree Island Field Station and directing it for 8 years (1965-72) and conception, development and control of the Australian Museum's Lizard Island (Great Barrier Reef) Research Station (1973-75)

Participation in the "CITRE" Smithsonian Institution's systems modeling workshop, British Honduras 1972

Research cruises, U.S. Research Ship "Anton Bruun" (Cruise 9)

U.S. Alpha Helix expedition to New Guinea

U.S. "Man in the Sea" project Tektite II

Frank Hamilton Talbot
Curriculum Vitae
Page Two

Committees and Boards

- 1968-69 Chairman, New South Wales Scientific Committee on Parks & Wildlife, Australia
 1968-74 Councillor, New South Wales National Parks Wildlife Service Advisory Council
 1971-72 President, Marine Sciences Association of Australia
 1972-79 Member, Metropolitan Water, Sewerage and Drainage Board, Sydney
 1973-74 President, Museums Association of Australia
 1974-77 Joint Editor, International Coral Reef Newsletter
 1976-78 Vice-President, Great Barrier Reef Committee Council
 1978-79 President, Great Barrier Reef Committee Council
 1976-80 Chairman, Coral Reef Committee of the International Association of Biological Oceanographers (ICSU)
 1980-82 Chairman, Zoological Parks Board of New South Wales
 1984- Board Member, Jane Goodall Institute
 1984- Board Member, California Marine Mammal Center
 1985- Chairman, Scientific Committee, Christensen Research Laboratory, Madang, Papua New Guinea

Honours, Scholarships & Fellowships

- Fellow, Linnean Society of London, England
 Fellow, Royal Zoological Society of New South Wales, Australia
 Fellow, Royal Society of Arts, London
 1950-51 CSIRO Student Grants, South Africa
 1953 Colonial Office Scholarship, held at the Dove Marine Laboratory, University of Durham, England
 1962 CSIRO Travel Grant
 1962-63 Carnegie Corporation of New York Fellowship
 1969 Nuffield Travel Grant

Major Activities

South African Museum

Appointed head of the Department of Marine Biology, 1958.
 Appointed as the Deputy Director in 1960, and in the Director's absence for 1 year, Acting Director.

Frank Hamilton Talbot
Curriculum Vitae
Page Three

Australian Museum

Appointed Curator of Fishes in 1964. Appointed Director of the museum in late 1965. From 1965-1975 staff was doubled and annual budget more than doubled. Set up the Museum's Field Research Station on One Tree Island in southern part of Great Barrier Reef (1966) and the Museum's Lizard Island Research Station in northern part of Great Barrier Reef (1973). Both of these research stations are performing well today. Started, at both State and National levels, the Natural Photographic Index of Australian Birds (now the Natural Photographic Index of Australian Wildlife).

Macquarie University

Accepted the founding chair of Environmental Studies at Macquarie University (with a chair also in Biology) and set up a Department of Environmental Studies. This was developed over the next 6 years, ending as the Centre for Environmental and Urban Studies, a post-graduate teaching and research facility with some 130 graduate students, and much contractual work for city, state and federal agencies.

Zoological Board of New South Wales

For 13 years was a Board member, and for the final 2 years was Chairman of this Board. This Board controls 2 zoos, Sydney's large Taronga Zoological Park and the Western plains Zoo, an open range zoo in inland New South Wales.

Research Activities

Have worked on marine and estuarine fishes and published some 60 scientific papers, and collaborated on three books. Specialty; coral reef fish ecology.

Hobbies

Botany, ornithology, fly fishing, and yachting.

DIANNE H. PILGRIM

Dianne H. Pilgrim was named Director of the Cooper-Hewitt Museum in September 1988. Prior to her appointment, Mrs. Pilgrim was Chairman of the Department of Decorative Arts at The Brooklyn Museum, from 1973 to 1988. Before joining The Brooklyn Museum, she held various research positions at the Metropolitan Museum of Art, beginning in 1965. She also served as an adjunct assistant professor at Columbia University's School of Architecture from 1976 to 1978. Mrs. Pilgrim received a Master of Arts degree in 1965 from the Institute of Fine Arts at New York University and a Bachelor of Arts degree from Pennsylvania State University in 1963. She served as president of the Decorative Arts Society, a chapter of the Society of Architectural Historians, from 1977 to 1979. Mrs. Pilgrim has also served on the boards of the Victorian Society in America (NYC Chapter), the American Art Journal, the Decorative Arts Trust, the Morris-Jumel House Museum in Manhattan, and the Friends of Claremont. She is a member of the Advisory Committee of Gracie Mansion and the Design Advisory Committee of the Art Institute of Chicago. Mrs. Pilgrim has published frequently in such journals as Antiques, Apollo, Art and Antiques, American Art Journal, and The American Art Review. She was responsible for the landmark 1986 exhibition, "The Machine Age in America, 1918-1941." She also organized the widely acclaimed 1979 exhibition "The American Renaissance, 1876-1917." For her contributions to the "Machine Age" exhibition and catalogue, Mrs. Pilgrim received The Charles F. Montgomery Prize for the most distinguished contribution to the study of American decorative arts published in the English language by a North American scholar in 1986.

ALICE GREEN BURNETTE

June 1988 - Present
 Deputy Assistant Secretary for External Affairs/
 Coordinator for Institutional Advancement
 Smithsonian Institution
 Washington, D.C.

This position serves as the foundation for assessing advancement activities (private and public sector funding, Congressional relations, use and motivation of volunteers, public relations, marketing and promotion) at the Institution in order to design a pan-Institutional capital campaign. This position will be deeply involved in strategic planning in order for advancement functions to be realigned or mobilized in support of Institutional planning goals and objectives.

July 1986 - June 1988
 Executive Assistant to the President
 Howard University
 Washington, D.C.

Provided direct support to the President of Howard University in the administrative coordination of his duties and assisted him in the management and promotion of the University. Supervised the Offices of University Planning and of Operations Analysis and Institutional Research.

July 1977 - June 1986
 Director of Development
 Howard University
 Washington, D.C.

Supervisory and management responsibility for all non-Federal fund raising at Howard University through a \$100,000,000 development program for restricted, unrestricted and endowment purposes; as of June 30, 1986, \$74,000,000 had been raised.

August 1983 - January 1985
 Director, Office of Private Sector Development
 United States Peace Corps
 Washington, D.C.
 (On leave of absence from Howard University)

Supervisory and management responsibility for securing private, non-Federal support of Peace Corps' projects in 63 foreign countries. During employment, financial level of this support was tripled and number of projects receiving support doubled.

November 1971 - June 1977

Director of Development
Morehouse College
Atlanta, Georgia

Supervisory and management responsibility for the College's fund raising program (\$20 Million goal; \$23 Million raised) and for the College's Federal relations, corporate relations and public relations programs. Designed and implemented the Morehouse School of Medicine development program, resulting in excess of \$6,500,000 in Federal, state and private gifts, grants, contracts, and Federal line item appropriations.

October 1965 - December 1966

Special Assistant to the Press Secretary
Governor's Office
Sacramento, California

Writing responsibilities in connection with speeches, press releases and gubernatorial messages, and technical support activities for political fund raising.

July 1964 - June 1965

Intern in Development
Smith College
Northampton, Massachusetts

Internship in all phases of educational advancement.

1964 B.A. degree in Sociology
 Wheaton College
 Norton, Massachusetts

1965 Further study in Sociology
 Smith College
 Northampton, Massachusetts

NATIONAL ZOOLOGICAL PARK

Mr. YATES. Now I'm going to take time out so that we may listen to Mr. Robinson and his exhibits. I understand that time is of the essence.

Mr. Robinson, the floor is yours.

RED PANDA

Mr. ROBINSON. Thank you, sir.

We brought along today for your edification and uplift, if I may say so, a really marvelous animal which we have been hand-rearing. It is a red panda, which we breed at the National Zoo. The National Zoo is the coordinator of breeding efforts for this species throughout the United States. I think the reaction of the staff around here has already shown that you can use a beautiful animal as a way of influencing people towards conservation.

There is real, aesthetic value in an animal like this.

Mr. YATES. That's a panda?

Mr. ROBINSON. It is a red panda, sometimes called a lesser panda, but there is nothing lesser about that, as you can see.

Teresa Cummings has been responsible for hand-raising it because its mother wasn't performing properly.

This is one of the many species that we breed at the National Zoo which are endangered, including the black-footed ferret. We are the first zoo to be chosen to take part in the propagation program for the ferret.

The Chinese have problems breeding the red panda, but we are breeding them very successfully.

Mr. YATES. Is this from China, too?

Mr. ROBINSON. This is from the same area of China. Giant pandas have the same kind of diet, but you'll notice it has a tail, which the giant panda does not have.

This one is seven months old and, as you can see, extraordinary.

Mr. YATES. What are you feeding it?

Ms. CUMMINGS. This is milk and panda gruel mixed together.

Mr. YATES. What is panda gruel?

Ms. CUMMINGS. Baby cereal and some material that they eat when they are older.

Mr. YATES. I remember when my son was born we fed him Similac. That's not that stuff? [Laughter.]

Ms. CUMMINGS. Actually it is similar.

Mr. YATES. Is that so?

Ms. CUMMINGS. Yes. He is almost full grown. He will gain about two more pounds.

Mr. YATES. That's all? He's almost full grown?

Ms. CUMMINGS. Yes.

Mr. YATES. That's beautiful. You are bringing in rare exhibits. Last year I think you had a hawk.

Mr. ROBINSON. That's right. This is even more significant because it is an endangered species and we are breeding them so well. The press tends to focus on our failures with the giant panda, but this is an example of our success.

Mr. YATES. Does it bite?

Ms. CUMMINGS. No. He is very tame because he has been hand-raised.

Mr. YATES. Thank you very much, Teresa, for a very fine exhibit.

SPOTTED OWL

In talking about endangered species, Mr. Robinson, we asked you to check the question of the spotted owl. Are any of them raised in captivity?

Mr. ROBINSON. They could be raised in captivity. We feel, at the moment, there is no real need to do that. There are about 6,000 of them in the wild.

The real problem is the endangerment of the habitat where they live due to timber cutting in those States where——

Mr. YATES. This is correct, and it is the subject of a court suit, as you know, as to whether or not it should be listed as endangered. Another question is whether it is essential for the spotted owl to live in old-growth timber.

Mr. POWERS. There was a piece in the paper this morning, Mr. Chairman, indicating that the judge had refused to issue a temporary injunction and that the cutting will go on.

Mr. ROBINSON. I have a detailed report for you from the Audubon Society recommending that this forest should be preserved. If necessary, we could take over breeding them in captivity, but it would focus attention in the wrong direction at the moment. The real problem is habitat destruction.

Mr. YATES. Now, did you want to show the goodies the Smithsonian has brought at this point so that they can be disbursed, too? Teresa can take Ling-Ling back with her. [Laughter.]

Ms. CUMMINGS. Chiang-Chiang.

Mr. YATES. Chiang-Chiang? Okay.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY EXHIBITS AND FILM

Mr. ADAMS. Well, there are some exhibits, including the film that is set up.

Mr. YATES. You have a short film on the first detection of other planetary systems by Dr. Shapiro.

Did you want to do that now, Dr. Shapiro? Or do you want to wait?

Mr. SHAPIRO. I don't mind. I have a few other things to show before the film.

Mr. YATES. Would you like to wait until your presentation, then?

Mr. SHAPIRO. It doesn't matter to me. Whatever you would like.

Mr. YATES. Well, let's see. Let's have Dr. Shapiro now.

Mr. SHAPIRO. Thank you.

SUBMILLIMETER TELESCOPE ARRAY ANTENNA SAMPLE

SAO, as you know, has two major projects: one, building a sub-millimeter telescope array, which will give us a world-unique instrument which will allow us to get, for the first time, unprecedented high angular resolution observations of the processes of stars as they are being formed.

I brought in here a possible material that we are investigating for making the surfaces of the antennas. This is what you might

call a "high-tech concoction" here. We have carbon epoxy, that is fibers of carbon encased in epoxy—very strong—only one tenth of one inch thick. A sandwich, but instead of the peanut butter and jelly in between, we have aluminum hexagonal arrays which give it great strength and extremely lightweight.

We have put on here a surface coating of silicon monoxide, which is finished to an accuracy of three millionths of a meter.

Mr. YATES. Three millionths of a meter.

Mr. SHAPIRO. Its primary purpose is to focus the submillimeter rays, but it is such a good finish that I think you can see a good image of yourself in here without any—

Mr. YATES. You could almost shave by it.

Mr. SHAPIRO. It is extremely light. We are working with the ESSCO Company in Mr. Atkins' District in investigating the properties of this material.

The diameter of the antenna is a little bigger than the length of this table. This material is so light that the entire surface of the antenna would weigh less than 300 pounds with this material. This sample weighs a little under a pound.

The other project we have going—

Mr. YATES. How many of those are you going to have?

Mr. SHAPIRO. This is just a sample. When it is scaled-up, the weight will be about 300 pounds per antenna, which is really very little, as you will see in a moment.

GLASS SAMPLE FOR MULTIPLE-MIRROR TELESCOPE CONVERSION

The other project we have is converting the multiple-mirror telescope into a telescope with a single, giant mirror about 22 feet in diameter.

I have brought a sample of the material out of which we will make the mirror. It requires special handling, and I brought along this unique pair of gloves to make sure that everything is okay.

Mr. YATES. Those are space gloves?

Mr. SHAPIRO. In case I don't do it right, I brought along some Band-aids. [Laughter.]

It is very sharp.

Now, here what you see is what looks like an ordinary hunk of glass.

Mr. YATES. Yes.

Mr. SHAPIRO. But it is far from an ordinary hunk of glass. It is better than ivory soap. It is 99.9999 percent pure borosilicate glass, which is made up of boron, silicon and oxygen. The major point of breaking it into these small chunks is so that we can have a uniform melt in the casting of it, which is scheduled for the end of next year in the University of Arizona Mirror Laboratory.

Its properties are such that its expansion, when you change the temperature, is only one part in a million per degree Fahrenheit. And, more important, its uniformity is such that it is one part in 100 million per degree Fahrenheit maximum deviation over the whole glass.

This is not so light, and I won't let you have this because you'll really need the Band-aids if you try. But I will point out that, in order to make this mirror, we have to order 13 tons of this glass.

Remember, 300 pounds for one antenna almost the same size, but 13 tons for the glass.

Now, you might ask why we aren't clever enough to be able to do the optical telescope with as little weight as we do the submillimeter telescope, and the reason is that the optical telescope has to be 100 times as precise in its surface, and in order to get that precision you have to go to a more hefty material.

That was all I wanted to present on that.

Now, I'd like to move on to another subject.

Mr. YATES. How do you get your mirror 22 feet across? Isn't that almost an impossible task to cast that, or whatever the process is?

Mr. SHAPIRO. Well, it is true. At the time this mirror will be cast it will be the largest single mirror ever cast in the world. There doesn't seem to be any reason to doubt that it can be done. We've been working up to it gradually. The first thing we did was a 48-inch, 4-feet in diameter mirror, and then 12-feet in diameter mirrors, two of which have already been successfully cast, and this 22-foot diameter mirror will be the next step up.

Mr. YATES. There is quite a difference between casting two 12-foot diameter mirrors and one 22-foot.

Mr. SHAPIRO. There is no question it is a leap up, but we know of no physics that will cause this to have a problem.

Mr. YATES. I see. You've consulted Dr. Rodman on this?

Mr. SHAPIRO. Among others. Roger Angel is the guiding genius behind this casting process at the university.

OTHER PLANETARY SYSTEMS

I have one other thing to talk about, and that is a serendipitous discovery at the observatory.

We achieved a major milestone on the road to answering one of the most fundamental questions that man has ever asked. It is so fundamental that it is already a cliché; namely: are we alone? Is there intelligent life elsewhere in the universe?

This question has been asked in one form or another for two and a half thousand years or so, and one still doesn't know whether there is any other life. When one looks at the solar system, as we have now, there is no indication yet of any intelligent life elsewhere, but if we go out to the universe and ask how many objects there are in the universe, well, we have roughly 100 billion stars in our own galaxy, and there are roughly 100 billion galaxies, so with all those stars surely there must be some that harbor life somewhere.

Well, that's all well and good, but we have absolutely really no idea what the probability is that intelligent life will form. We only have evidence that it formed at least one place in the universe, although there are some people who would even question that, but we'll leave that one aside. [Laughter.]

The point is that partly because of our understanding of physics, and partly because of our lack of imagination, we feel that intelligent life could only arise on planets. So then we can ask the question which we could address as one way of addressing the search for intelligent life elsewhere: Are there planets elsewhere in the universe aside from in our own solar system?

Well, that's something that everybody feels quite certain of, but where's the beef, I mean where's the proof? There has been no hard evidence up until this past summer when Dave Latham and his colleagues at SAO serendipitously discovered hard evidence for the existence of at least one planet around at least one other star.

How was this done? Well, we can't just look up at the sky and see planets revolving around other stars. They are much too small and they are out-shone by the star so much that even if they were to exist we couldn't see them that way. We have to use an indirect technique.

An indirect technique that we have used is based on the doppler shift; that is, if a star has a planet moving around it, the star, itself, will move around the common center of mass of the planet and the star, and how we detect that motion is through the so-called doppler shift. If the star is changing its velocity with respect to us, as it would if it were rotating about the center of mass along with the planet, then the color of the light from it would change in an oscillatory, periodic manner—bluer when the star is moving towards us and redder when it is moving away. That is the technique we use to infer the properties of the planetary system.

Now, there is one caveat here. There is one ambiguity. We cannot really tell from this technique whether the mass of the planet is more or less, or whether the geometry of the system is such that the orbit in which the planet is moving around its star is tilted less or more to the direction in which we are looking. So it is a fundamental ambiguity, and the only way we could be fooled is if, for example, every system we looked at were face on to our direction of observation. But that is very improbable, and when we have more cases, as we have in the last couple of months, it makes it extremely unlikely that we're seeing two-star systems and not stars with planets around them.

“PLANETS AROUND STARS, DOPPLER SHIFT, TILT VERSUS MASS”

With that introduction, I'd like to go to this multi-media presentation here where we are having a throw-back to the era of silent films, which many of you probably still remember——[Laughter.]

Mr. YATES. I don't think too many.

Mr. SHAPIRO. I will provide musical accompaniment. I hasten to add I am not a musician, but I did take lessons for this occasion from the first trombonist of the Boston Symphony Orchestra, so it shouldn't be too bad.

[Movie shown: “Planets Around Stars, Doppler Shift, Tilt versus Mass.”]

Mr. SHAPIRO. This is a home-made film of the observatory, as the other ones you have seen in past years. You'll see a little exhibit up here on the table. This part of the film is just an impressionistic view of the earth, the moon, and some of the planets and other moons in our own solar system. These were collected by spacecraft that the United States has sent to various bodies in the solar system.

This is the surface of Mars.

This is Jupiter.

This is also Jupiter.

Now you see a few views of Saturn.

This is just to warm things up so you get in the right spirit.

Here is a picture of a double star in the process of formation. Here is what it would look like in the sky.

Now we come to this technique by which we detect the planets, the doppler shift, and you'll see the relation to the exhibit on the table in just a moment.

And that, unfortunately, is the untimely end of our little toy train.

Here is what would happen in terms of light changing color with a star moving on a similar track, but, of course, we know essentially no physics that would allow a star to move like this unless there were another mass about which it were orbiting.

Now we'll just take a look at how it would appear if we were to see a star and a planet in orbit about it. We see the planet only by reflected light, if we could see it at all, which we cannot, so we have to use the change in color of the star.

But when we look at it face on, the star doesn't change color because the star doesn't change its distance from us and there is no doppler shift.

Now, as we change the inclination of the orbital plane with respect to our viewing direction, then we see the doppler shift—the red and the blue—and now we get the maximum when we're looking edge on to the orbital plane.

As I said, we cannot easily distinguish between the contribution of the inclination and of the mass of the object which is rotating around this star.

Here is what we see in the sky. We just see the changing color. We wouldn't see any motion at all, because it is on too fine a scale for us to resolve with any existing instrument.

And here is a chart recorder showing how the velocity would vary with time, with red color on the bottom and blue color on top. And the magnitude on the chart—this is actual data now. These are the actual data folded to an orbital period.

I think you'll all agree there is no question that this just isn't a question of random points, but we actually see an oscillatory motion. And, in fact, it has been confirmed by independent data taken at an independent observatory. We're really pretty confident of it.

The next part of the film illustrates this connection between the tilt of the orbital plane and the amount or the magnitude of the color changes.

All other things being equal, you have the maximum color change when you have edge-on observation. This is just showing what would happen. The color changes would be much less dramatic if you had a much smaller planet than you saw just a few seconds ago.

Now this is what you could see in the sky if you had the angular resolution, which we are nowhere near achieving with even our most sophisticated plans.

Mr. YATES. Will you with your new devices?

Mr. SHAPIRO. No. This is hopeless from direct observation at the moment.

This is just a picture of the oscillation viewed edge-on.

Now the amplitude will gradually disappear as we move toward face on configuration, and there you see the color changes are much less dramatic.

Here, again, is a view of a face-on situation in the sky—almost face-on—so the color changes, again, are not very great.

Here is a final look at the chart recorder with a smaller amplitude, indicating either a smaller planet mass or a closer to face-on view.

This is all done home-made in SAO's image processing laboratory.

We're not quite finished. These are the credits. I have been told you have to look at the credits. [Laughter.]

It was an undergraduate MIT student that did the animation. Here is the actual choo choo train on the table that was used in the movie.

Mr. YATES. Have you offered it to Roger Kennedy yet?

Mr. SHAPIRO. Not yet, but we're negotiating.

That concludes my presentation. I'd be happy to answer any questions.

Mr. YATES. Thank you very much.

Mr. SHAPIRO. I should say one more thing.

What about the characteristics of the planet that was discovered? The first one discovered has a period of a little under three months. That means it rotates around the star in a little under three months, meaning it is as close to the star, roughly, as Mercury is to our sun, and the chances of life being on that are very, very slim, indeed.

Mr. YATES. Mr. Regula has a question for you.

Mr. REGULA. Go ahead.

Mr. SHAPIRO. In the last two months, there were three more good cases discovered. Now we're looking for even more of them. Ironically, we observed these stars primarily because they did not have any change in velocity and were going to be good standards, but then we made such accurate measurements that we saw the variations, and now we have cases where the masses of the planets seem much more like the mass of Jupiter. The first one that was discovered seemed much heavier.

We are pursuing it as actively as we can, and I think it is the first really hard evidence that there are other planetary systems in the universe.

Mr. YATES. Mr. Regula?

SMITHSONIAN ASTROPHYSICAL OBSERVATORY RESEARCH

Mr. REGULA. Who would be the consumer of the information you produce? I assume the universities? Probably NASA?

Mr. SHAPIRO. I think everybody in the world is interested that there really are planets around other stars.

Mr. REGULA. I understand that.

Mr. SHAPIRO. It has universal appeal. Who is following up on the research? Primarily university people, astronomical observatories, NASA, and so forth.

Mr. REGULA. How does your work relate to that of Kitt Peak or NSF? Is there any duplication, or do they have a different mission than yours?

Mr. SHAPIRO. Well, Kitt Peak is a national observatory.

Mr. REGULA. Right.

Mr. SHAPIRO. And they respond directly to proposals from astronomers all over the country, and they choose those proposals that look like they will yield the most promising scientific results.

But the universe is so huge that the prospects of duplication or the problem of duplication is not a problem.

Mr. REGULA. Do you share information with them?

Mr. SHAPIRO. Yes. Everything we do is freely published. And, in fact, the announcement or paper on the first planet discovery by Dave Latham and his colleague will appear in "Nature" very shortly.

Mr. REGULA. Are there comparable facilities in other parts of the world? And do you share with them so that you build on what they acquire in a knowledge base, and vice versa?

Mr. SHAPIRO. Yes. For example, in this particular case this is such an exciting thing one wants to make sure one doesn't have some unsuspected systematic error affecting the data, so, for example, Dave Latham collaborated with a colleague in Switzerland who is doing a project jointly with several other European countries to do some of the measurements for the same original purpose. They hadn't looked at the data as closely for this purpose, but they did have observations on exactly the same star and were able to get exactly the same results.

The difference between the period they obtained and the period we obtained was less than one part in a thousand, which is well within the uncertainties of either determination.

Mr. REGULA. The proposed—

Mr. ADAMS. I think it might be said, Mr. Regula, that we are not simply looking at events out there in the universe. In fact, a knowledge of the fundamental particles of the basic constituents of matter—energy here on Earth, as well—is approached both through high energy accelerators, and so on, and used in experimental physics here, and through an understanding that comes from astrophysics of the whole pattern of cosmology and the evolution of the universe.

This converges in a common understanding of the fundamental particles, so that this is something that contributes to more than an understanding of events that are thousands of millions of light years away.

I think it is important to keep that in mind.

In addition, there are at least some areas now where items of truly practical understanding are beginning to emerge out of work beyond at least the atmosphere of the earth. Some of the most basic improvements in our understanding of plate tectonics—the movement of plates on the surface of the earth—is now coming through comparative planetary geophysics based on the satellites that have been circling Venus and Jupiter, and so on.

Mr. REGULA. And it is through the medium of publishing the results of what you do that this gets into the stream of knowledge?

Mr. ADAMS. That's right.

Mr. REGULA. And this is probably coordinated with things that are being developed in other parts of the world by other countries. Is there a free flow among both Free World and non-Free World nations in terms of the acquisition of knowledge?

Mr. SHAPIRO. I would say that within the free world, there is extremely good communication. In fact, one of my laments is that there are just too many conferences. If, for example, I accepted all the invitations I had to go to international conferences just in astronomy, I would never be home. So there is really very good communication.

Now with the Soviet Union the communication is improving rather markedly.

Mr. REGULA. It seems that science, because of the degree of pride of accomplishment, doesn't have a lot of political boundaries. Is that a fair statement?

Mr. SHAPIRO. That's true. Of course, individuals and countries have their own—they want to be first, naturally, and that's good. Competition is good. So we have a little of that.

But I think the cooperation and the exchange of information is excellent.

Mr. REGULA. Do you exchange people? In other words, would you have nationals from other countries that would spend time at Whipple, and vice versa?

Mr. SHAPIRO. Yes. We have a guest observer program and, again, it is done on a proposal basis. We have a committee that reviews the proposals and approves those that are best, that are sensibly done on our instrument, as well as being promising, useful, important results.

Mr. REGULA. Just in a practical way, does the information that you gain get channeled into the weather prediction system, like NOAA, for example?

Mr. SHAPIRO. Some of the studies we are doing at the observatory are directed towards understanding better the so-called solar-terrestrial relationship that has been a—

Mr. REGULA. In terms of weather?

Mr. SHAPIRO [continuing]. Subject of some controversy as to what the connection is between what happens on the sun in regard to its weather and what happens on the earth in regard to its weather. This is still a subject of considerable controversy.

But we have some programs designed to try to get some fundamental data from other stars that might help us understand our own sun and its behavior better.

I might add just one point to what Secretary Adams said. Because of our current understanding of the universe as having arisen from an extremely energetic, gigantic explosion, looking out with telescopes we look back in time, we have some indirect handles on extremes of conditions of matter and energy that cannot be achieved on the earth.

So, for example, many, many physicists have now gone into astrophysics to study what happens to matter and energy at extreme conditions that can't be achieved in any conceivable terrestrial laboratory.

Mr. REGULA. Thank you, Mr. Chairman.

Mr. YATES. Thank you both.

SAO'S EDUCATION PROGRAM

Mr. Atkins?

Mr. ATKINS. Thank you, Mr. Chairman.

I believe you have originated a program with the Watertown schools where you are going in and I guess you have actually developed curriculum material to use fundamental understanding of astronomy to teach mathematics and give kids an understanding of mathematical concepts. I don't see in your presentation that you are looking for any support for that program.

Mr. SHAPIRO. That program, at present, is supported almost exclusively by the National Science Foundation, and somewhat with Smithsonian trust funds. So we have not applied through the Federal allocation process through the Smithsonian budget for funds for this program.

Mr. ATKINS. Do you expect to see an expansion of that program into other school systems?

Mr. SHAPIRO. Yes. In fact, this current academic year we have had materials tested now in 18 schools distributed in 13 States around the country, and we expect to continue and develop a full-year course which will be widely available throughout the country.

Mr. ATKINS. In light of your findings, I guess you did some survey work on the understanding of students about the very basic principles of astronomy, and I guess you did your studies with Harvard students, as well, and you discovered a sort of massive level of ignorance and misunderstanding. Are you doing—

Mr. YATES. At Harvard?

Mr. ATKINS. Believe it or not.

Mr. SHAPIRO. We have produced a film called "A Private Universe," which starts out at the Harvard graduation, where we interview these new graduates of all sizes, shapes, and so forth, all very intelligent, all very articulate, and every single one of them is completely wrong in their answers. It is really quite sad.

One of the questions asked is: Why is it warmer in the summer and colder in the winter? And it is very interesting to see these students articulate the answer in a slightly condescending way, and not one of them understands it at all. [Laughter.]

In fact, Leon Lederman was very impressed with that film.

Mr. ATKINS. But it would seem that you are in a position where you could serve an enormous educational function, in addition to your school work, in just the fact that as I look through the newspapers, the discoveries that you have are less and less understandable to me and to other people. There doesn't seem to be a mechanism to sort of explain what you are doing and what the significance of that is. Do you have some kind of effort under way to do that? It would seem that support for your research is, to some extent, dependent on public understanding.

Mr. SHAPIRO. We got into the education program primarily because I was turned off by the high school science texts, which pack an enormous number of concepts and an enormous number of new technical terms that it is beyond the capability of virtually every student to comprehend and almost every teacher.

So our philosophy in this program is to concentrate on a few fundamental principles that can be applied very widely so that the

student gets exposed to the same principle in different contexts—many astronomical—so that eventually the theory is that they will really understand something, rather than being exposed to much more and have understood absolutely nothing.

It remains to be seen how effective this technique is. It sounds reasonable to me on the surface, but I have enough experience now to know what sounds reasonable and what works are not always that closely coupled.

Mr. ATKINS. Maybe the concept could work in Congress. It seems we increasingly know less and less about more and more.

Thank you.

Mr. YATES. Thank you.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

Next on the list of show and tell projects, we have Dr. Rubinoff, Director of the Smithsonian Tropical Research Institute in Panama.

Hi, Dr. Rubinoff.

Mr. RUBINOFF. Hi, Mr. Yates.

I've asked for a few minutes to give an example for the Committee of a way that we can sometimes acquire unexpected results for the common good from just basic questions about biology that you start to look at.

DAY-FLYING MOTH, URANIA

The theme is serendipity of tropical research, and the example I wanted to cite is a case of a day-flying moth, *urania*, which at times will have tremendously dense migrations throughout Central and South America. We have been watching this for some time. One of my colleagues, Neal Smith, has been studying this.

The density is such that the illustration on the front panel is representative of the kinds of numbers you can see—500 or 600 passing in a minute. It is enough to be a problem for your vision while driving.

The migrations are periodic, and this is a graph showing the densities throughout this century. Every five or six years there is a migration—occasionally a very, very big flight. Some years there is nothing at all.

Dr. Smith was curious about this and tried to explain why these migrations are so big some years and not present at other times.

He started to look into the host plant, the plant that the moth eats when it is a caterpillar, and this is the plant that is called *Omphalia*, and it occurs exactly the same place that the moth does in these tropical zones of the world—principally in Central and South America, but also in some other parts of Asia and Africa.

This is the stage of the moth's life cycle that controls what I am about to talk about. The larva feeds on the leaves of the plant, and it turns out that the plant can respond to this predation by producing compounds which affect the life of the moth.

What it is doing is producing compounds that mimic sugars that are anti-metabolites, things which affect the enzymes in the gut and the body of the moth and its ability to deal with its sugar metabolism.

I won't even pronounce these because I can't do it very well and no one is going to remember them anyway. [Laughter.]

If you look at spectrographs of the plant, this is six individual plants of *Omphalia* taken from six different places in Panama. What we found is that there are lots of variations in the presence of these active compounds—this particular yellow one, for example, DMJ, which is found in very great density in some places and not at all in others.

The next thing that they have done is take one plant of *Omphalia*, cut it up and plant it in similar soils so you have clones and simulate the effect of predation by the moths by scraping the leaves or by just taking a paper puncher and punching holes in it.

The results of that are that these four plants are genetically identical—they are just clones, cuttings from one that are planted four times—and by altering the treatment physically by how many holes you punch in it from a paper punch you could stimulate production of different compounds.

These compounds are found to be effective as—this is the serendipitous nature of discovery—they affect sugar metabolism, which is fairly rare in the plant kingdom. Plant biochemistry has been going on a lot longer than human biochemistry in terms of our studies of these processes.

There are currently five active areas of research based upon these plant compounds, four of them involving human afflictions—obesity, diabetes, cancer, and AIDS. In the case of AIDS, these compounds affect the polysaccharide coating, on the outside of the AIDS virus. It doesn't kill the virus, but it prevents it from attaching to cells. This research is actively being pursued.

The other thing it does is act as an——

Mr. YATES. When will that AIDS research be completed?

Mr. RUBINOFF. I can't answer that. There have been several publications on it. It has only been studied so far in vitro. They know it is not very toxic if you give large amounts to a mouse. Whether it is going to be effective, I can't say.

But the lesson here—well, the other example I wanted to give is that it also acts as anti-feedant. And so in cases of locust epidemic, if you put a very small concentration of this in your field it confuses the locusts and they don't understand that they are on food anymore and they just fly away. So it may have utility as a repellent.

The interesting thing about this from our point of view is that you can see that if you go through a forest in Brazil and take samples of plants—looking for biologically-active compounds, as many of the drug companies are doing—if you pick a plant at any one time and place you may miss very exciting compounds. If you pick the lower leaves when the active predation of the plant is on the upper leaves you may miss something important that the plant has.

The point I'm trying to make is that only through research by biologists who can work in the field on a continuous basis can we get some of these answers and fully exploit these opportunities.

I want to show this is not an isolated case and tell you about another case which we had experienced some years ago.

LEAF-CUTTER ANT

Those of you who have been in gardens in the tropics may have seen this ant. This is the leaf-cutter ant, also called parasol ant. They have huge nests with millions and millions of individuals. They can clear your garden in a night, and they can also clear a tree in a forest.

When they clear a tree, they take the leaves out into a big nest in the ground where they grow fungi—mushrooms that they feed to their larvae. They don't feed on the leaves directly.

Once they clear a tree you would think they'd move to the next tree. This is what we would predict by our general understanding of animal behavior. Generally animals don't work harder than they have to, but sometimes these ants will leave a wide path around certain trees to some that are much further away.

In looking at that example we found some years ago that they are deliberately avoiding trees that have fungicidal properties. If they take leaves of those trees down into the nest, they are going to kill off their fungus gardens.

In one of those compounds discovered in the tree that these ants were avoiding, there is now a patent pending for human application of its fungicidal properties.

Often the insects will point you to solutions to problems that we have, whereas our own methods might be much more costly.

KILLER BEES

Mr. YATES. Why didn't you stop the killer bees? [Laughter.]

Mr. RUBINOFF. We tried.

Mr. YATES. Did you really?

Mr. RUBINOFF. We studied them. We knew they were coming.

Mr. YATES. They're coming.

Mr. RUBINOFF. I don't think we ever promised you we'd stop them. We said we'd learn more about them, and we did.

Mr. YATES. "Time" magazine says they are on their way up through Mexico into the United States.

Mr. RUBINOFF. I think they're probably going to be here this year.

Mr. YATES. It said late 1989.

Mr. RUBINOFF. But as a result of the—

Mr. YATES. So don't call on the Smithsonian Institution to stop them?

Mr. RUBINOFF. You funded a bee biologist some years ago. As a result of him being employed before the African bee arrived in Panama, we were able to set up a number of experiments which have been very important in explaining how the Africanized bee affects native bee populations and their ability to pollinate. These studies are very important for understanding the future of the plants in the countries the bees are invading.

In addition, they also have set up public health programs to deal with the danger of these things.

There was a death two weeks ago in the Panama Canal Zone due to a recreational boat getting too close to a nest of Africanized bees. The person who was stung either was hypersensitive or just—

Mr. YATES. I don't understand what happened. If you started that research and it seemed to be moving in the right direction, why was it stopped?

Mr. RUBINOFF. It's not. It is ongoing.

Mr. YATES. It's ongoing? But not totally effective?

Mr. RUBINOFF. Well, we were never in a position to stop them their migration. We were trying to find out—

Mr. YATES. Trying to find the queens. You were trying to stop them by exterminating the queens, I think.

Mr. RUBINOFF. No. We had no extermination component in our program.

Mr. YATES. Well, somebody was trying to pick out the queens, and, as a result, they hoped to stop the breeding.

Mr. ADAMS. I think it has just been shown—I saw an article, I believe, in "Nature" last week—that there can be multiple queens in a given colony, so it is going to be much more difficult than people thought.

Mr. YATES. Are you still working on the African bee?

Mr. RUBINOFF. Yes. We have one person who is very active.

Mr. YATES. What is he doing?

Mr. RUBINOFF. African bees are very aggressive towards other social insects. They are particularly aggressive in competition for sites for nests in forests, and our fear was that if they—and this was based on some work in Venezuela, a very casual observation of years ago—that if they were effective in driving out the native pollinators, and if they then didn't take on the role that the native pollinators had of keeping trees pollinated, then those plant species might become extinct. And so that's the kind of research that we are pursuing at the moment.

Mr. YATES. Thank you.

Mr. RUBINOFF. Thank you.

POLITICAL STATUS OF THE SMITHSONIAN TROPICAL RESEARCH INSTITUTE

Mr. YATES. I have one last question, Dr. Rubinoff. What is your political status down there? What happens when the United States turns over control of the Canal?

Mr. RUBINOFF. The political status of the Smithsonian has been uncoupled from the Treaty by our international mission status granted by the Republic of Panama. Our situation can be renegotiated without limit of time, so we anticipate continuing on after the 1999 termination of the Panama Canal Treaty.

Mr. YATES. I notice that in the Board meeting minutes of January 30, 1989, page 107, it says,

There is, however, one area where STRI employees face possible direct adverse action because of the April 8, 1988, Executive Order of President Reagan. This order prevents STRI from paying rents and withheld taxes to the current government. Consequently, STRI's Panamanian citizen employees and some U.S. citizen employees who are tax liable to the government of Panama are being threatened, under existing laws, with having their property seized as tax delinquents.

The Department of Taxation of the Ministry of the Treasury has already published lists of individuals employed by the Panama Canal Commission, the U.S. Army, Texaco, Kodak, and Eastern Airlines, who face fiscal actions.

The Panama Canal Commission has announced a program authorizing agency payment of car rentals for employees who may have their vehicles confiscated. So far, no threats have been made against either STRI or its employees, although STRI

is in arrears on the payment of rents to the Ministry of Housing for various government-owned residences that the Institute administers.

Is that a real problem?

Mr. RUBINOFF. Well, it is a real threat. I think the statement there is absolutely correct. So far STRI has not been directly threatened. I think we enjoy a special status or charmed life, perhaps. I think the Administration of the Republic of Panama is leaving us alone, understanding that our mission cannot be interrupted as a diplomatic mission can be. They can burn their files and come back in three weeks and start all over again. Our long-term research cannot, and they are leaving us alone.

We are \$50,000 in arrears in housing that we rent. We have a number of employees—I imagine it is several hundred thousand dollars now—from whom their withheld income tax is paid into the Federal Reserve Bank escrow account. However, they have made no threats against any of our employees.

Our construction programs, as you know, are going on very well. I brought two photographs. This is the Tupper Program, which is about 85 or 90 percent completed. We anticipate occupying that this summer. This is an area at Barro Colorado Island showing, in not very much detail from that aerial photograph, the construction of the new dormitories and the conference/dining center on Barro Colorado Island.

These construction programs are going forward uninterrupted and I think that the interest of the Smithsonian in continuing long-term research there is apparent to the Government of Panama. Continuation of projects like those in our Master Plan illustrates STRI's commitment to long-term research in this area. Of course, we pay the private contractors for the construction and not the government.

Mr. YATES. Mr. Regula?

Mr. REGULA. I have two questions.

Can the conditions in Panama be replicated elsewhere where necessary in terms of research? Secondly, do we have some type of lease or long-term commitment that protects your rights in this construction?

Mr. RUBINOFF. Yes. We could replicate the research. What we cannot do is build the base of 65 years of research which has been occurring by the United States and the Smithsonian and other organizations in that area. The ability to build on other people's research is not something that can be replicated without a similar length of time or effort.

I think, given the understanding of how important the tropics is to global processes, I think it is very strange, indeed, that the United States has only one Federally-supported research station such as this in the tropics.

Mr. REGULA. Do you have leases? What arrangements do you have?

Mr. RUBINOFF. We have leases. We operate Barro Colorado Island and the adjacent area under an international agreement that was signed by President Roosevelt in 1940 for the United States, and subsequently ratified by every nation in this hemisphere. It is a hemispheric convention under the auspices of the OAS.

For land use in this particular area to change, Panama would have to abrogate that agreement with the OAS. It is not a bilateral arrangement.

Other arrangements are renewable at our desire. We have a number of agreements with the government and its independent agencies. Everything we are doing is covered by certain agreements without limit of time. They are up to us to renew when they are up.

EXCHANGE OF SCIENTIFIC INFORMATION

Mr. REGULA. Do you have a sharing arrangement on your research similar to what we have at Whipple? Do you have scientists come in from other countries and, in turn, yours go to other areas?

Mr. RUBINOFF. Very much so. I think so far this year we have had 176 visiting scientists from 19 countries around the world.

Mr. REGULA. I assume you publish freely everything you develop?

Mr. RUBINOFF. Yes, sir, we do. Last year, there were 200 books and publications from the Institute. You have one right there.

Mr. YATES. This is one of them: *The Ecological Effects of a Major Oil Spill on Panamanian Coastal Marine Communities*.

In 1986, more than eight million liters of crude oil spilled into a complex region of mangroves, seagrasses, and coral reefs just east of the Caribbean entrance to the Panama Canal.

This was the largest recorded spill into coastal habitats in the tropical Americas. Many populations of plants and animals in both oiled and unoiled sites had been studied previously, thereby providing an unprecedented measure of ecological variation before the spill.

Documentation of the spread of oil and its biological effects began immediately. Intertidal mangroves, seagrasses, algae, and associated invertebrates were covered by oil and died soon after.

More surprisingly, there was also extensive mortality of shallow subtidal reef corals and infauna of seagrass beds. After one and a half years, only some organisms in areas exposed to the open sea have recovered.

Thank you very much, Dr. Rubinoff.

Mr. RUBINOFF. Thank you.

NATIONAL AIR AND SPACE MUSEUM

Mr. YATES. Now we have the National Air and Space Museum, Dr. Harwit.

LANDSAT IMAGES OF THE SAHARA DESERT

Mr. HARWIT. I wanted to show some work that had been done by Dr. Patricia Jacobberger at the museum. She has been interested in desertification—spreading of deserts—in different parts of the world. In particular, she has studied a region around Timbuktu.

The work she does makes use of the family of Landsat satellites. She has been looking at that region because there was an extensive drought that started around 1978 until 1986.

Here is a view from Landsat which was obtained in 1976. It is a false color, instead of real color image, but the colors are actually quite indicative in terms of what we normally would consider seeing in an aerial photograph. This is the Niger River Basin here showing moisture, and you see moisture in swamps all along this area down here.

The picture derived from the Landsat data covers an area that is about 20 miles by 20 miles—about 30 kilometers.

The brown spot in here is the city of Timbuktu, which is surrounded by garden areas around here. You see some desert areas in an arc around it.

By 1985, looking at the same region one finds that there is a stark contrast. The river basin has almost totally receded. There are none of these ponds or swamps left. The city is still here. It is still surrounded by a small area of green. But the desert structure has shifted and increased over a period of just ten years because of this arid period.

Mr. YATES. What is the date of that photograph?

Mr. HARWIT. This is 1985. This is 1976. They were taken in the same winter season, so it is not a matter of time of year.

In obtaining pictures like this, one has to take the digital data, which just comes down and is recorded on magnetic tapes as numbers, and process it. The processing requires you to go into the area, itself, and study the local conditions and to understand what these digital data actually mean.

So Pat Jacobberger has gone to Mali a number of times, and here she has a picture that she took from the ground of the region just north of the city looking at it. You can see that this whole area here has been denuded. You see parts of Timbuktu in the background.

She starts out with the Landsat pictures. She goes into the region. The type of sand that you see here is very, very fine. She collected it from different areas in order to be able to see what these digitized pictures actually mean in terms of the denuding of the land mass there.

Eventually these findings get published in journals. In this particular case, Pat went a step further. She had the publication translated into French and has been in contact with the people in the government of Mali to try to explain to them what is happening, and also the city officials in Timbuktu to try to help them to deal with the problem.

The sand has also been analyzed in conjunction with the Natural History Museum, where they have the equipment to test it for organic substance. As you can guess, there is not very much organic material in here.

Mr. YATES. What can be done to stop the desert from growing, besides getting water from somewhere?

Mr. HARWIT. Well, there is the water problem. But one of the accelerating mechanisms has been an overgrazing. You can see already in the earlier pictures that there were some areas of land, starting out in an arc here.

What happens is that if the cattle overgraze, then eventually the root system dies off as well, because the plant has no way to photosynthesize and sustain itself. So once the root system dies away, then the soil is no longer held together. This particular area of the world is marked by dunes that originally were covered by a very thin layer of solid grasslands and where trees could grow.

Once you loosen up that topsoil by removing the root system by overgrazing, then the wind and occasional rains, which can be quite heavy, can just blow away the topsoil.

Mr. YATES. What were the animals that were overgrazing? Sheep?

Mr. HARWIT. Cattle. I'm not quite sure what the cattle is around there. I suspect sheep, because of——

Mr. YATES. Sheep are supposed to pull up the plant by the root, I think, as opposed to cattle?

Mr. ROBINSON. Largely goats, sir. I would think these are goats rather than sheep.

Mr. YATES. Do they pull up the roots too?

Mr. ROBINSON. Yes.

Mr. YATES. I was thinking that this is a lesson for what is happening to some of our overgrazed lands in the West.

Mr. HARWIT. Part of all this, in part, is two-fold: One, that one can study from space, individual regions like this and learn lessons about what is going on in different parts of the world from test cases that you run in extreme places; the other important lesson to be drawn from here, which I think is particularly germane now, is that you require the contrast of ten years of work to obtain this kind of data.

If we were to switch off the Landsat satellites now, as has been threatened, this type of study could simply not go on.

Mr. YATES. Why wouldn't it have been better to take that picture five years ago to show the beginning of the drought?

Mr. HARWIT. We have it before the drought started.

Mr. YATES. That's right. You had it in 1976.

Mr. HARWIT. That's right, and this drought started in 1978. There was no way to predict that drought.

Mr. YATES. Thanks, Dr. Harwit. We appreciate it very much.

Roger Kennedy, with the American History Museum. Roger, what are your goodies?

Mr. KENNEDY. Mr. Chairman, there are a couple of things over there which we can open up right now or at your discretion.

Mr. YATES. Why don't we look at them later?

Mr. KENNEDY. Yes.

NATIONAL MUSEUM OF NATURAL HISTORY/MUSEUM OF MAN

Mr. YATES. Frank Talbot?

RED DIAMOND

Mr. TALBOT. We have a couple of things. Would you care to see them now?

Mr. YATES. Let's look at them later and try to finish the budget first.

Thank you very much.

You have a red diamond?

Mr. TALBOT. Yes. The only red diamond——

Mr. YATES. In captivity? [Laughter.]

Mr. TALBOT. It came down with Security, sir.

Mr. YATES. Okay. Is it valuable?

Mr. TALBOT. It is immensely valuable.

Mr. YATES. Is it really? Then show it to us now. [Laughter.]

Mr. TALBOT. That would be helpful because the security guards can take care of it.

Mr. YATES. Right. Same reason we saw the red panda. The red diamond keeps company with the red panda.

Mr. TALBOT. We didn't orchestrate this together, but they are equally valuable.

Sir, red diamonds are extremely rare. Colored diamonds, themselves, only occur once in every 250,000 carats or so, and they are usually browns or yellows. There are some wonderful blue ones, and we have some superb examples.

But red ones are virtually unknown. We know of only one that is in public hands, and that is this one. For the rest, we know that some have been found, but they have disappeared in private collections, so this is the only one that you will ever see, unless you know one of those lucky people.

Mr. YATES. How big is it?

Mr. TALBOT. Nobody knows what makes them red, because we have never dared to take a piece since we only have one and there are no others that we can touch.

Mr. YATES. How many carats is it?

Mr. TALBOT. That's five carats. You can handle it. It is pretty strong.

Mr. YATES. I'm trying to see a red color. It looks black.

Mr. TALBOT. Just dark red. If you hold it in the appropriate light, you would see beautiful deep red.

Mr. YATES. If you look at it from this way you can see a deep, deep red.

Mr. TALBOT. It seems to have stopped with the staff. [Laughter.]

Mr. YATES. Thanks very much.

EMPEROR'S SLIT SHELL

Mr. TALBOT. The other one is something, if I may show you now?

Mr. YATES. Sure.

Mr. TALBOT. Just to show you an example—and I've done it quite deliberately, because last year the slit shell collection came to us and had some 7,000 specimens, and this was one of the rarities. Some of these are so rare, this particular type of beast with this tremendous slit go back about five hundred million years. Although it looks like an ordinary top shell you might find in a half-tide pool, it, in fact, is extremely rare and unusual. It comes from about 300 feet in tropical regions. One of them is called the Emperor's Slit Shell, for instance.

That's an exhalent slit. That's where some of the exhaled water goes. It has two gills instead of the normal one gill that more advanced shells have.

I brought it to indicate the constant inflow of material to the Smithsonian. We add, in Natural History, about one million specimens a year. Some of those are our own collecting, and some of those are serendipitous.

Mr. YATES. You add a million a year? Do you add more than Roger Kennedy does?

Mr. TALBOT. I would say many times more, but Roger had better speak for himself.

Mr. YATES. I keep seeing photographs of the acquisitions.

Roger, I didn't mean to take the stage away from you.

Mr. KENNEDY. No, sir. That's all right. You have other things that you want to get on to, I'm sure. We'll be glad to do that later.

Mr. YATES. Thanks, Roger.

THE HISTORY OF COOPER-HEWITT MUSEUM

Mr. YATES. I had a nice, long talk with Ms. Pilgrim yesterday in my office. I am very impressed with Ms. Pilgrim regarding Cooper-Hewitt.

Ms. Pilgrim, can you come up to the table? You may want to respond to some of the things.

We will go into the history of Cooper-Hewitt. I read from Part 7 of the House hearings of the 95th Congress, 1978, page 551. It says that after the Coopers Union Museum had floundered around for several years trying to find somebody to give it some stability in New York and some funds, they came to the Smithsonian, and the Smithsonian said, "Well, if you can't find anybody else, come back to us."

They couldn't find anybody else, and they came back to the Smithsonian.

In January 1965, the Committee to Save the Cooper Union Museum wrote to the Smithsonian Board of Regents and said they had not been able to find anybody. And then—and I read from the hearing record,

The Smithsonian Regents decided that the preservation of the Cooper Union Museum was a proper Smithsonian concern, and in January 1965, authorized negotiations for the transfer of the Museum to the Smithsonian.

Acquisition of the Museum was to be conditioned on adequate assurance of sufficient funds from private sources to provide for the continuing operation of the Museum in New York without burden to the public and private resources of the Smithsonian.

Negotiations between the Smithsonian and the Cooper Union lasted until October 1967. An agreement was signed and later validated by the New York State Supreme Court in May 1968. The Smithsonian took control of the Museum on July 1, 1968.

I have asked Judge Powers to come forward with the agreement and the court order.

Judge Powers, do you want to sit right down over there?

Mr. POWERS. Okay.

Mr. YATES. Thank you very much.

Now, did you get a chance to examine these, Judge Powers?

Mr. POWERS. Yes.

Mr. YATES. Is there anything in there that requires that the Cooper-Hewitt Museum, itself, pays for its operating expenses in the agreement or the court order?

Mr. POWERS. No, sir. The court order, which is attached there, simply approves the agreement. That's one page there. In the agreement, on pages 4 and 5, you have the paragraph 6, which says, "The New Museum will be maintained in the City of New York." That's what it says. It will be maintained unless, for reasons of financial or operational necessity, it can't be done.

And then seven discusses—

Mr. YATES. Before you leave that, I think this is of some significance.

No significant portion of a collection of the New Museum will be removed permanently from the City of New York except for reasons of financial or operational necessity or because of a fundamental change of conditions in the City of New York

affecting the usefulness of this museum of the decorative arts and design in that city.

So it has to stay up there apparently, right?

Mr. POWERS. We put in "financial necessity" as the chance that it wouldn't have enough money to run it there. "Except for reasons of financial or operational necessity."

Mr. YATES. All right.

Mr. POWERS. So we are not bound to maintain it forever if there isn't enough money.

Mr. YATES. Except for the fact that I cannot conceive of the Smithsonian not having enough money to maintain one of its museums.

Mr. POWERS. Well, with the help of this committee, I think that's true.

THE ENDOWMENT

Mr. YATES. Well what about the endowment?

Mr. ADAMS. The endowment may look large, Mr. Chairman, but, of course, you have to remember that much of that is restricted in various ways for purposes that don't make it generally available.

Mr. YATES. How much is the unrestricted endowment?

Mr. ADAMS. We can ask Ms. Leven.

Mr. YATES. Ms. Leven?

Ms. LEVEN. About \$80 million.

Mr. YATES. Well, \$80 million is a pretty good start. Go ahead.

Mr. POWERS. Now, on page five, paragraph seven, you'll see what the situation was at the time of this agreement in 1968.

Mr. YATES. I'll read paragraph seven,

The Smithsonian represents that it has pledged for the support of the New Museum in an amount in excess of \$800,000, and further represents that additional funds will be necessary to assure the successful establishment of the New Museum. In order to help meet the need for such additional funds, Cooper Union will transfer from its general funds to the Smithsonian the sum of \$100,000 each calendar year for three years commencing with the calendar year in which this Agreement becomes effective, such funds to be used by the Smithsonian for the New Museum.

And that's all it says?

Mr. POWERS. That's all there is in the agreement. Yes.

Now, Mr. Chairman, in June of 1985, the Secretary addressed a letter to you all about the situation and the history of the Cooper-Hewitt which includes a reference to the funding and charts which show how the funding has progressed since the time of the agreement. I don't know whether you—

Mr. YATES. I think probably I ought to keep these for the Committee's use.

COOPER-HEWITT MUSEUM FUNDING

Mr. POWERS. I think this will be a useful document—the Secretary's letter to you on June 12, 1985, describing the history of the Cooper-Hewitt Museum and the funding thereof, Federal and non-Federal.

Mr. YATES. That may go into the record.

Mr. POWERS. Would you like to have that?

Mr. YATES. Yes, please.

[The information follows:]



SMITHSONIAN INSTITUTION
Washington, D.C. 20560
U.S.A.

June 12, 1985

Honorable Sidney R. Yates
Chairman
Subcommittee on Interior
Committee on Appropriations
U. S. House of Representatives
Washington, D. C. 20515

Dear Mr. Chairman:

In response to your concerns about the Cooper-Hewitt Museum expressed during the course of hearings on the Smithsonian's FY 1986 budget request, I thought it would be helpful to recapitulate some of the Museum's history as I understand it, to share with you observations about its activities, and to invite your reactions to our view of its future development.

The Smithsonian's Board of Regents acquired the Cooper Union Museum under the same statutory authority (20 U.S.C., sections 41 to 57) with which the Institution arranged for the construction of the Castle, established its basic scholarly research activities, and created the U. S. National Museum -- which was later diversified by the Board into such units as the Museum of Natural History, the Museum of History and Technology, the National Collection of Fine Arts, and the like. Over the past two decades the creation of altogether new bureaus at the Smithsonian has more routinely followed the enactment of specific authorizing legislation -- for example, the Hirshhorn Museum and the Museum of African Art. In this context, the acquisition of the Cooper Union Museum in 1968 and renaming it the Cooper-Hewitt Museum were not unauthorized actions on the part of the Smithsonian, but fell on the cusp of change in the preferred method of proceeding with new initiatives. It has been instructive for me to discover that this acquisition was one of the factors that led to the Regents adoption in 1977 of a policy of seeking specific authorizations for new programs involving the use of Federal funds.

The material you quoted from the 1977 GAO Report, which was issued less than six months after the Museum's opening to the public in the Carnegie Mansion, accurately reflects, I am

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convinced, the understandings, as well as the intentions, of the Institution when it assumed responsibility for the collections in 1968. It does not, however, reflect the instances in which those understandings were not fulfilled or in which they were exceeded. Furthermore, I think it important to add to the record the lessons gained from the experience of operating a major public museum with comprehensive exhibition and education programs, with collections nearly twice as large as initially estimated, and with its home a significant national landmark property adapted for museum use.

From the vantage point of the present I am struck by the presumption of the past that the Museum could be managed in a manner that seems so disengaged and so lacking in any special vision of the kind of museum it would be. The ideas that it would be "supported by the community of interests which it served" without definition or documentation of that community and that "direct and indirect costs to the Smithsonian would be kept to the minimum necessary to maintain administrative control and policy direction..." appear to deny the responsibility the Institution assumed. However, those ideas must have seemed reasonable at the time, particularly since the pledges of private support were substantial and there was, at least at the beginning, the prospect of "business as usual" because the collections remained at the Cooper Union during the first years of Smithsonian control.

The Cooper Union fulfilled its commitments to the Institution, although the endowment funds that were transferred and estimated initially at \$300,000, actually totalled somewhat less than that amount. Another financial disappointment occurred when the Committee to Save the Cooper Union Museum, which had been formed by Henry Francis duPont of Winterthur in 1963, was unable to fulfill its 1967 commitment. At that time it pledged \$200,000 a year for four years to the Smithsonian, but the death of Mr. duPont in 1969 left it without sufficient resources to meet the obligation.

Of more fundamental consequence in the Museum's evolution than the anticipated gifts that did not materialize was the unanticipated gift that did. The lease and then the outright transfer in 1972 of the Carnegie Mansion to the Smithsonian retrospectively seems to have been of far greater impact on the Cooper-Hewitt than may have been apparent at the time. Having control of the property, the current value of which is estimated at \$25,000,000, enabled the Institution not only to separate the collections physically from the Cooper Union, but also to establish a new and recognizable identity, as well as a program, for the Museum that encompassed them.

Thus, it seems to me that probably from 1968, but certainly from 1972, the Cooper-Hewitt Museum and the property it occupies were, and should have been considered, a Smithsonian entity in much the same manner as the Zoo or the Portrait Gallery. Its

distance from the Mall is only a matter of degree; while greater than that of either of the units just named, it is not so great as that of the Astrophysical Observatory. However, like the Observatory, which is richer for its resonance with the astronomical community in Cambridge, the Cooper-Hewitt multiplies its impact by its interactions with the design world and related museum interests in New York.

The primary reason that the Museum was viewed as a somewhat distant Smithsonian relative seems to have been the earnest, but unrealistic, management policy, as well as the equally earnest, but naive, hope that the Museum could be a credit to the Smithsonian without becoming a burden on its resources. Clearly, responsibility for large and unique collections, as well as for a valuable piece of real estate, entails obligations far beyond "a minimum necessary to maintain administrative control and policy direction." Under any circumstances, it is unlikely that such responsibilities can be supported, and it is questionable whether they should be, by some non-specific "community of interests."

Despite such difficult beginnings, the Cooper-Hewitt has succeeded handsomely. Up-dating the 1977 GAO Report reveals the substantial support provided by the community of interests represented by Federal appropriations, the Smithsonian itself, and private benefactors aggressively cultivated by the Museum. As expressed in Table I, the record is, as I think you will agree, impressive to say the least.

Similarly impressive are the programmatic achievements of the Cooper-Hewitt in the nearly nine years that it has been open to the public. In its first year it welcomed 212,000 people, more visitors than had seen the collections in their seventy year history as a department of the Cooper Union. Attendance figures for fiscal years 1977-1984 are provided in Table II.

Since its opening the Museum has presented 109 exhibitions, as well as 23 satellite shows throughout New York City at the time it opened. Most have been organized by the Museum's staff and many have drawn from the Cooper-Hewitt's rich and varied collections. Virtually without exception these exhibitions have been well received, widely reviewed, and critically acclaimed. Their liveliness and intelligence have been key to establishing the Museum's reputation for imaginative presentations. Table III is a schedule of those exhibitions through Fiscal Year 1984.

The Museum's award-winning publications program includes conservation advisory bulletins, exhibition catalogues, collection handbooks, works on contemporary design issues, and the multi-volume Smithsonian Illustrated Library of Antiques which surveys their design as well as their history. Two recent Cooper-Hewitt publications, produced with non-Federal funds, received the President's Award for Design Excellence in Government.

The Cooper-Hewitt's education program includes lectures, internships, workshops, and seminars; its most distinctive feature is the Master of Arts program offered in cooperation with the Parsons School of Design and accredited by the New York State Board of Regents. The only degree program anywhere in the history of European decorative arts, it draws heavily on the curatorial staff and the collections in its courses, all of which are conducted at the Museum.

The Cooper-Hewitt collections had originally been estimated at approximately 100,000 items. However, the five-year inventory program has established that, in fact, items in the permanent collections alone total more than 165,000. This represents the third largest aggregation in the Smithsonian and is more than twice as large in number as the combined holdings of all of our other art museums. The collections are among the finest of their kind in the world, cover an extensive range of media and styles, and are an active resource for the scholarly study and commercial application of design. Table IV is a narrative description of highlights of the collections administered by the Cooper-Hewitt's five curatorial departments and its library.

All of this acknowledges that, while the Museum may have come to the Smithsonian under somewhat unusual circumstances, the Institution and the Nation are incalculably richer for it. "Business as usual" in 1968 could have meant continuation of a low-profile research/library function for specialized scholarly and professional audiences. No one who looked at the European style of the organization's traditional operation then could have or would have predicted the popularity and vitality it would achieve as one of our most innovative and unorthodox museums. Business as a Smithsonian museum inevitably brought opportunities and responsibilities that the Cooper Union Museum had never been able to address: educational programs, conservation of the collections, important temporary exhibitions, and ambitious publications addressing the many arts of design.

The Museum today is an international force with a vision and a voice unduplicated in this country or in Europe, serving a growing audience that expects to be challenged and informed in a distinctive fashion. This transformation of the Museum's identity and the definition of its more broadly based public mission have clearly won impressive critical attention and professional esteem.

In acknowledging the Museum's history and learning from it, however, we must also move beyond it and accept that the Cooper-Hewitt is a major part of the Smithsonian and must be treated as such. That the Institution has done so is reflected in its acceptance of active responsibility for the Museum's programs, collections, and real property. It is also reflected in nearly \$22,000,000 in trust funds raised and expended on behalf of the Cooper-Hewitt between 1969 and the present.

- 5 -

Several problems remain, one of which concerns parity of the Cooper-Hewitt with other Smithsonian art museums and another of which requires a clearer understanding between the Congress and the Institution about the uses of Federal and non-Federal funds on its behalf.

The Cooper-Hewitt and the National Portrait Gallery have total operating budgets that are within about 10% of one another. Both are off-Mall units occupying historic landmark buildings. The Portrait Gallery's visitor figures for FY 1984 are ten to fifteen percent higher than the Cooper-Hewitt's, but it does not charge admission; its collections number about 7% of the Cooper-Hewitt's. The following table shows FY 1985 operating levels of the two organizations:

(\$000)	<u>Federal</u>	<u>FTE</u>	<u>Non-Federal</u>	<u>FTE</u>	<u>TOTAL</u>
C-H	\$ 890	25	\$2,522	24	\$3,412
NPG	3,386	82	353	1	3,739

I am aware of some of the history behind these figures, as I am of the fact that there are apples and oranges in the comparison, but I offer it to you as an example of the kind of management problem with which the Institution must contend in the present circumstances.

The Smithsonian's budget request for FY 1985 attempted a modest shift in the Cooper-Hewitt's Federal to non-Federal ratio. It was a shift thoroughly in keeping with your quotation from the justification material on the FY 1976 request: "...appropriated funds should be insofar as possible limited to the protection and preservation of the collections and property." It was also in keeping with the statement made in support of the FY 1978 request: "Acquisition of objects for the collections, exhibitions, and special projects will continue to be financed by private funds."

The thought you expressed at the hearing - "we are going to have to get a whole set of definitions of what we mean by the costs because of the prospect of cost sharing..." is in consonance with my own. As it seems to me that we are already sharing costs, I would hope this exposition might offer at least a partial basis for dialogue on those definitions.

With respect to the proposed renovation and expansion of the Cooper-Hewitt, the minutes of the Regents meeting of September 17, 1984 gave some indication of where the Board seemed to be heading. It certainly would have been appropriate to write you explicitly then about what was envisioned, but you will understand that that was also the day I assumed my responsibilities for the Institution and my focus on this issue was not as clear then as it is now.

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The action at the January meeting has now been embodied in H.R.1609, introduced by Messrs. Conte, Boland, Mineta, and Green on March 20 and referred to the Committee on House Administration. In proposing a shared approach to financing the expansion and improvement of the Cooper-Hewitt's physical plant we are echoing the present Federal/non-Federal partnership that is reflected in the Museum's operating budget.

Although the building program will create significant additional spaces for exhibition and education programs, a dramatically enhanced ability to care for and to conserve the Museum's collections is expected to be its most important outcome. Existing storage and environmental systems in the Miller town house are in a state where accreditation by the American Association of Museums probably could not be won for the Cooper-Hewitt and it has, therefore, not been sought.

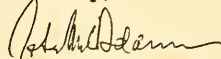
With collections and programs of major importance to the study and practice of design, the Cooper-Hewitt is, indeed, the National Museum of Design. One aspect of the pending legislation would provide a statutory designation thereof.

Fulfillment of the Museum's promise is dependent on this next stage in its development. A capital fund-raising drive is necessary; participation by the Congress is, in our opinion, justified. We will welcome the opportunity to testify on the pending bill and, if enacted, on the required appropriations. I believe our case is strong.

I look forward to an early opportunity for discussing these ideas with you and for sharing in your perspective on the Museum.

With best personal regards,

Sincerely,



Robert McC. Adams
Secretary

Enclosures

TABLE I

COOPER-HEWITT OPERATING AND BUILDING FUNDS

(\$000)

	<u>Appropriated</u>	<u>Non-Appropriated</u> ^{1/}	<u>TOTAL</u>
<u>OPERATING FUNDS</u> ^{1/}			
FY 1969 - T.Q. (Per 1977 GAO Report)	\$1,271	\$2,917	\$4,188
FY 1977	415	1,452	1,867
FY 1978	349	1,323	1,672
FY 1979	467	1,434	1,901
FY 1980	629	1,502	2,131
FY 1981	702	1,464	2,166
FY 1982	733	1,543	2,276
FY 1983	805	2,275	3,080
FY 1984	843	2,055	2,898
FY 1985 (Estimate)	873	2,522	3,395
<u>BUILDING FUNDS</u> ^{2/}			
FY 1969 - T.Q. (Per 1977 GAO Report)	\$159.0	\$2,461.9 ^{4/}	\$2,620.9
FY 1977	42.0	198.0	240.0
FY 1978	38.0	50.0	88.0
FY 1979	57.0	---	57.0
FY 1980	225.0	104.0	329.0
FY 1981	55.0	175.0	230.0
FY 1982	85.0	31.0	116.0
FY 1983	100.0	163.0	263.0
FY 1984	20.0	32.0	52.0
FY 1985 (Estimate)	320.0	200.0+	520.0+

^{1/}Please see attached Appendix A

^{2/}For FY 1977 - 85 reflects funds applied

^{3/}For FY 1977 - 85 reflects funds received

^{4/}To this might be added the building itself, valued in 1972 at \$12 million and now estimated at \$25 million.

NON-APPROPRIATED SOURCES OF OPERATING FUNDS
(\$000)

<u>Fiscal Year</u>	<u>Unrestricted</u>		<u>Restricted</u>	<u>Federal Grants & Contracts</u>	<u>TOTAL</u>
	<u>General</u>	<u>Special Purpose</u>			
1977	37	---	1,399	16	1,452
1978	363	21	900	39	1,323
1979	302	690	346	96	1,434
1980	329	636	482	55	1,502
1981	364	788	287	25	1,464
1982	365	787	337	54	1,543
1983	527	1,151	549	48	2,275
1984	739	1,022	195	99	2,055
1985(Estimate)	717	1,023	732	50	2,522

TABLE II

COOPER-HEWITT VISITORS

(By Fiscal Year)

1977	212,000
1978	120,000
1979	150,000
1980	134,671
1981	146,925
1982	166,778
1983	216,720
1984	131,690
1985*	64,822

*First Seven Months

APPROPRIATIONS FOR THE COOPER-HEWITT MUSEUM

Mr. YATES. We have established the history of Cooper-Hewitt. The question I was leading up to was whether, if Cooper-Hewitt needs appropriations, as it does, for its operation and for its construction—operations, particularly—in view of that agreement, can we provide the appropriations without some kind of legislative rescission of the agreement that has taken place?

I don't know, and I don't know whether Judge Powers knows, whether any legislative rescission has taken place of that original agreement taking care of the expenses of Cooper-Hewitt.

Mr. POWERS. That agreement is still in effect, of course, and the court decree has not been disturbed. We said that—

Mr. YATES. But the court decree did not disturb the agreement?

Mr. POWERS. No.

Mr. YATES. So you do have the same agreement that was in existence which said: "funds from private sources to provide for the continuing operation of the museum in New York without burden to the public or private resources of the Smithsonian." That is still in existence, so that we—do I understand, or am I wrong in a conclusion that we, in this Appropriation Committee, or in an authorizing Committee, would be well advised to rescind that—

Mr. POWERS. I don't think—

Mr. YATES [continuing]. In order to provide the authority for making appropriations to Cooper-Hewitt?

Mr. POWERS. I don't think it is a question of rescission. That agreement does not bind this Committee.

In that letter which I gave you from 1985, it explains the history of funding, both from appropriations and the trust fund, since the beginning of the Cooper-Hewitt Museum.

I'm sure the Committee is perfectly free to appropriate or not appropriate whatever funds it deems necessary and useful.

Mr. YATES. So you think that we need to pay no attention to the agreement that was made by the Secretary and affirmed by the regents?

Mr. POWERS. No. I don't think it is material at this point.

Mr. ANDERSON. Mr. Chairman, if I might wander into legal waters—

Mr. YATES. Please do.

Mr. ANDERSON [continuing]. At some risk, perhaps the operative word is "burden." If it is not burdensome to this Subcommittee to continue appropriations to the Cooper-Hewitt, and if it is not burdensome to the Institution to continue providing the kinds of trust funds that we have—and I think the fact that we are providing them means that manifestly they are not burdensome—we have a solution at hand.

Mr. YATES. I keep reading about all the burdens that you have—financial burdens.

Mr. ADAMS. I think the difficulty, Mr. Chairman, is that there was a representation made at the time that Cooper-Hewitt was acquired, that there would be no burden to the taxpayers. On the other hand, there has been, for a good many years now, an appropriation for the support of Cooper-Hewitt so that clearly the Rubicon was crossed a good many years ago.

Mr. YATES. Well, Rubicons are crossed. The question is whether they are crossed legally. They may have been crossed without knowledge of that agreement, and then when the agreement pops up you have to face it. We now have that staring us in the face, and we have the judge's legal opinion. Maybe I'll call the general counsel of GAO and ask him.

In either event, I don't see a great problem. If it is considered that clarification language is necessary, I don't think it amounts to anything. In my mind, at least, it is a formality, at best, and it can be done if it is deemed necessary to do it.

It has always been burdensome. In my conversation with Ms. Pilgrim yesterday it was very much on her mind, and it has been on your mind. It has been on everybody's mind, and I think perhaps we ought to meet it and just end it once and for all, and perhaps we'll do that this year.

I just wanted to see what the legal status of it was. We didn't have the agreement, we didn't have the court order, and I didn't know whether that throws it into action. It now appears it has not.

COOPER-HEWITT MUSEUM NEEDS

All right. Now that you are free to ask for appropriations—
[Laughter.]

You want to tell us what you need as long as we have you up here, and we're making the rounds of all the museums?

Ms. PILGRIM. Well, do you want to know what was in the budget that has been cut out, or what I truly believe we need? I was not involved in the preparation of the budget. I have been in my present position for four months.

Mr. YATES. Having been there four months, do you really know what you truly need?

Ms. PILGRIM. I have a fair idea. Yes, sir.

Mr. YATES. Well, proceed as you wish.

Ms. PILGRIM. Well, because of the history of the Institution, walking into the Institution there are certain professional needs that are quite obvious to me. One huge area, of course, would be the area of education, which is of great concern to me.

Mr. YATES. Let me review the bidding for just a moment. You bid \$1,760,000 to Mr. Adams, and Mr. Adams cut you by \$350,000 immediately, so that you started out with kind of a deficit there. And then you go to OMB, and OMB cut you another \$100,000. So you have lost about \$450,000 in the budget process.

Now, what was cut out that you need? What is represented by the \$450,000 that was eliminated from the budget? Were you part of the original budget request?

Ms. PILGRIM. No, I wasn't.

Mr. YATES. You were not. Do you have an assistant here who knows?

Ms. PILGRIM. I do.

Mr. YATES. Who is that? Come on up here.

Ms. PILGRIM. I'd like to introduce Linda Dunne, the administrator of Cooper-Hewitt.

Mr. YATES. Ms. Dunne, we are glad to have you here. Go ahead.

Ms. DUNNE. In the 1990 request there was, for the fourth year in a row, a request for building management funds, supplies and materials of \$100,000. In addition to that, there were several positions that were requested. Those were also cut.

Mr. YATES. How much were those?

Ms. DUNNE. There were \$35,000 for an assistant curator of decorative arts; \$25,000 for an accounting technician; and, another \$52,000 for an educator—

Mr. YATES. How badly are you hurt by the loss of money?

Ms. DUNNE. Quite a bit.

Ms. PILGRIM. Tremendously. In the first priority call for the budget for 1991, I have asked for 22 positions over a two-year period, and I see that as an essential need for the organization just to do the things that we are trying to do at present.

Mr. YATES. What else do you want to tell us?

Ms. PILGRIM. The base for the maintenance of the building has been a continual problem. For four years running now, there has been money put into the budget and it has been cut.

I think one of the problems that we have to contend with, not being in Washington, is the fact that there are many services which we don't get to take advantage of, such as horticultural, snow cleaning, supplies like toilet paper. We have to foot those bills, ourselves.

There is also—

Mr. YATES. Why do you have to foot those, yourself? Why isn't Mr. Adams more generous?

Ms. PILGRIM. I think it is the logistics of being outside of Washington.

Mr. YATES. Don't you talk to Mr. Adams?

Ms. PILGRIM. Yes, I do talk to Mr. Adams.

Mr. YATES. And you don't ask him for money for those various items?

Ms. PILGRIM. Not directly for the toilet paper. Indirectly, yes.

Mr. YATES. Anything else you want to tell us about your needs?

Ms. PILGRIM. We have some very—

Mr. YATES. You went into a long story with me yesterday about what you hope to do in terms of acquiring some buildings for remodeling and rehabilitating, and I thought you ought to tell it for the record today.

Ms. PILGRIM. It is true that we are in desperate need of expansion of space. We are in an historic house—the Carnegie Mansion—which is a wonderful house, but doesn't work necessarily well as a public institution or museum. We do have people in bathrooms, and we have severe problems with storage conditions. So it has been a plan for quite a while for the museum to expand the facilities, and there is an opportunity at the moment for us to take a first step in that master plan process.

We will need additional operating and renovation costs of \$380,000 for that proposed acquisition.

Mr. YATES. Anything you want to expand, please put in the record.

Thank you very much.

Ms. PILGRIM. Thank you, Mr. Chairman.

[The information follows:]

COOPER-HEWITT MUSEUM BUDGET REQUIREMENTS

Base Needs.—For FY 1990, the Cooper-Hewitt Museum requested \$85,000 in building and facilities support and \$35,000 for an assistant curator of decorative arts. The Museum's plant consists of two buildings and a garden which have received national landmark status. It has been over ten years since Cooper-Hewitt received any increase in Federal support for building-related expenses. The increased costs of doing business in New York City has consistently eroded our base. There is only one permanent curator in the Decorative Arts Department. The collection, which numbers 15,000 objects, is largely inaccessible due to lack of staff and inadequate study/storage space. A second permanent museum professional in the department will aid researchers as well as assume collections management responsibilities.

Expansion Plans.—For FY 1990, the Cooper-Hewitt will need an additional \$377,000 for operating and renovation costs for the proposed acquisition of the building immediately adjacent to the existing facility. This building is the first phase of a master plan to enlarge the Museum. This expansion will provide Cooper-Hewitt with much needed space for exhibitions, storage, and offices, along with technical facilities such as a receiving entrance, loading dock, freight elevator, and auditorium.

NATIONAL MUSEUM OF NATURAL HISTORY NEEDS

Mr. YATES. Now we have the National Museum of Natural History. Frank, are you prepared to tell us what your needs are?

Mr. TALBOT. Yes, sir.

Mr. YATES. You started out with a request to Mr. Adams of \$30,355,000. Mr. Adams cut you by almost \$1.5 million. Then he sent you on to OMB, which cut you by almost another \$1.5 million. Are those cuts hurtful?

Mr. TALBOT. Yes, sir, there are some hurtful cuts there, Mr. Chairman—three particular ones. I wonder if I could start off in a rather broader vein?

Mr. YATES. Sure. You may do as you wish.

Mr. TALBOT. That's possible?

Mr. YATES. Sure. Tell us the story in your own way.

Mr. TALBOT. Thank you.

NATURAL HISTORY EXHIBITS

I am a very new director. As everyone in this room will know, the Smithsonian has outstanding staff quality, and that has been just a tremendous privilege to be involved.

Mr. YATES. The Committee agrees with you on that.

Mr. TALBOT. Thank you. It is exceptional, and it is a great privilege for me to be there.

The other side of the coin—the physical, rather than the human resources—has caused the existing staff enormous concern. Being here only a short time—I think I'm in my ninth week—I was faced with a great number of problems, and there is no question, I think, that tremendous improvement is needed in how we tell the story of science to the public.

Most of those exhibits go back about 30 or 40 years. They are totally out of date. Many scientific concepts—again, as many in this room will be fully aware—are just not embodied in the display halls. In other words, science has changed. It has more than doubled in the last 40 years, and we just don't display new concepts.

So we are very worried that, in fact, we are out of date and we are not doing the job we should be doing, and it is worrisome.

To give you an example, we know now that the continents slide about on the surface of the earth. In fact, we have even recently measured actual sliding and we know rates of sliding. This explains, of course, not only the present way in which the continents are related to each other, but it also explains about fauna and flora and why they are distributed as they are. And why, for example, in Antarctica we have got massive trees and many animals that are cold-temperate animals rather than the present fauna, which is very different.

What this whole theory does is make sense of the surface of the earth. We just don't tell that story correctly.

Another example is early man. We have pushed back our own origins two million years with recent discoveries—wonderful things like Lucy, the First Lady. Our own "Hall of Man" is totally out of date.

We have an outstanding young scientist who wants to upgrade it, but we need resources to do it.

There has also been a revolution—a quiet revolution, if you like—of how we should exhibit things, that we teach better with hands-on and interactive exhibits work better. We need exhibits that can change, and we need exhibits that challenge you and make you think—punch at you a little bit. We've got much better museum techniques, including electronic techniques.

But I guess even more important and worrying to me is that we should be explaining about global change to the seven million or so visitors every year, and we don't do that. We have scientists who work in these areas. Somebody is working on sea levels, for instance, to measure low-lying City of Cairo where there are 55 million people. He's got measurements which, because of the area, have gone back in his research for decades, but we know sea levels and water levels there which go back five thousand years because of the scribes of Egypt. So there we have a story in which he can actually make predictions on change and help greatly. Dr. Stanley is working in that area.

We have got people who work on the antifouling paint tributyltin, for instance, and the impact on mollusks. We don't show any of these changes.

Mr. YATES. Why don't you put that in the record?

Mr. TALBOT. I'll do that.

[The information follows:]

Submission of Remarks Prepared for Hearing on
FY 1990 Smithsonian Budget Request

Mr. Chairman:

I am Frank Talbot, and I have been newly appointed Director of the National Museum of Natural History.

As you know, the staff quality is extremely high, and it is a privilege to be working with them.

But regretfully great improvement is needed in how the Museum tells the story of science to the public. The constructions of the large majority of the exhibits date back thirty to forty years, and many of the scientific concepts and attitudes are seriously out of date. Since those exhibits have been put up, scientific knowledge has more than doubled, and we have developed totally new concepts of how our world works. For instance, we now have proved that the continents slide about on the earth's surface, and we have measured how fast they move. This extraordinary fact explains why most animals and plants are found where they are, and, for example, why temperate fossils including massive trees are found in Antarctica. It suddenly makes sense of the surface of our earth. We tell little of this wonderful story.

We have also found intriguing fossils that push our own origins back another 2 million years in Africa...Unfortunately our early man hall is totally out of date.

There has also been a quiet revolution of how we should exhibit things...That we teach science better with hands on, interactive exhibits, with exhibits that can change... And exhibits that challenge a little and make you think. We also have much better museum techniques.

And even more important than any of this is that we should be explaining about global change to our 7 million annual visitors--and we do not do so. We have scientists working on sea level changes in major low-lying cities (where global warming will have huge effect); and on the high number of species in the great moist forests of the tropics, which are being so quickly lost. But their work and its implications is not addressed in our display halls.

This presents the staff and myself with a great challenge to bring the exhibits up to date, and to make the national Museum again a leader among United States and world museums and also to face the very serious challenge of science education.

I think you are aware, sir, that the HVAC, the heating, ventilation and air conditioning, needs replacement in the Natural History Building. Over the next ten years, as replacement occurs, each individual space and laboratory throughout the entire building has to be vacated for an extended period. Two hundred thirty scientists and their staffs, and over 3,000 annual visiting scientists, use the national collections on a continuous basis, working on everything from the illegal importation of plant and animal species that could threaten agriculture or native wildlife, to species diversity. The building is stuffed to over-capacity with people.... We have crammed them into smaller and smaller spaces by dividing rooms. To use the display halls as a staging area--moving people and the collections they are working on into and out of the halls as the HVAC goes through each space--would close down many of the public exhibits for a ten year period, which we do not think sensible. Nor can we find a rental building with appropriate facilities to continue the scientific activity and to protect these national treasures.

But we can create the necessary staging space for all our moves during the HVAC renovations by building in the east court and roofing it, and use the space for decompression of the laboratory, office, and collection areas after that time. We are told that this would cost less than a free standing building because no siding, waterproofing, etc. is needed. We would relocate the functions that currently occupy the east court space, such as the chiller plant, cooling towers, greenhouse, osteoprep lab, emergency generator and craft services shops.

We therefore need to renovate the building, and renovate the exhibits....And with careful programming we can use the HVAC renovations to our advantage, upgrading exhibits and laboratories as each space is renovated.

The Smithsonian has been planning the HVAC project for several years and is currently re-evaluating the schedule and cost at the request of our Regents to define the most cost efficient sequence of work. Although this new plan is not yet complete, we have a preliminary cost estimate from the architectural/engineering firm that suggests that this work might cost in the range of \$125 - 130 million. I've only just arrived so I wasn't part of the earlier planning process, and this estimate doesn't incorporate new ideas I've had which might make the whole process less disruptive to the Museum's activities. We expect to finish the planning of the HVAC project this year, and we're going to begin construction with \$10 million requested in the FY 1990 budget.

Over the approximate 10 year period, the total renovation of the exhibits can be done in lock-step with the HVAC project, for something in the range of \$70 million in federal funds (in FY 89 dollars). This includes a first estimate of a staging building in the east court space. We would add \$25 million for exhibits from funds raised privately by the Museum over this time.

I've sketched out how costs of this magnitude might be spread across the next ten years to accomplish a major portion of this renovation. I believe that with these resources we could totally change the National Museum over the decade, make it the most exciting and innovative museum, the world leader in its mission of science education, and a showplace we would be proud of.

We need to start urgently on both exhibits and the staging building, but funds are not in the FY 1990 budget. We need \$4.3 million to begin design of the staging building in concert with the HVAC project and to plan and begin implementation of the exhibits reinstallation program.

COMPREHENSIVE IMPROVEMENT PLAN (CIP)

	Phase 1. (5 years)					Phase 2. (5 years)					FY 90-99 Total
	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	
HVAC	10.0	14.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	128.0
East Court Building	1.0	23.0									24.0
Exhibit Hall Replacement, Federal	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25.0
Exhibit Hall Physical Upgrade and Content Update	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.0
Research Office Renovation (smart building)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.0
Collection Management Space Renovation			0.8	0.7	0.7	0.7					2.9
Inventory Control of Collection Moves	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.0
Specialized Storage Including Compactors			3.0	2.0	2.0	1.0					8.0
Greenhouse Replacement (at MSC)			0.95								0.95
Environmental Units (at MSC) (skel. prep.)			0.5								0.5
Total by Year	14.3	41.75	19.3	19.1	19.0	18.0	17.0	16.3	16.3	16.3	197.35

FEDERAL

HVAC = 128.00

EAST COURT STAGING BUILDING = 24.00

EXHIBITS AND COLLECTIONS = 45.35

TRUST (50% EXHIBITS COST) = 25.00

TOTAL = 222.35

FOOTNOTES: These numbers are the best estimates available at the time, and are being refined as planning proceeds. With the exception of the HVAC figures, all dollars are 1989 estimates with no escalation factor.

Costs for relocating the functions currently occupying the East Court Space (such as the chiller plant, cooling tower, emergency generator, and the craft services shop) have not been estimated.

3/16/89

NATURAL HISTORY BUILDING RENOVATION

Mr. YATES. And why don't you tell us now how much money you want?

Mr. TALBOT. Right, sir. I'll do that.

Well, you will have heard, I think, last year. I was making a speech. I'll take it back. It's not the right thing to do, but it has worried me so much. You must excuse me.

Mr. YATES. Yes, I know. You and I have talked about this.

Mr. TALBOT. The HVAC is being changed, and——

Mr. YATES. The what?

Mr. TALBOT. The heating, air conditioning, and ventilation system which is very bad in the building. It is being upgraded over a ten-year period. You have \$10 million in the current budget as a start for this.

Mr. YATES. What is the total cost on that?

Mr. TALBOT. It is about \$128 million. And it has a huge effect on us.

Mr. YATES. Did you say \$128 million?

Mr. TALBOT. Over a decade.

Mr. YATES. That's the cost of the new Indian Museum. Which is more important?

Mr. TALBOT. Well, are you asking me? [Laughter.]

Mr. YATES. Go ahead.

Mr. TALBOT. Our problem is one of——

Mr. YATES. You need a new heating unit. What else?

Mr. TALBOT. That's on the way, I gather.

Mr. YATES. You need new dioramas and new displays?

Mr. TALBOT. That's a problem.

Mr. YATES. How much money do you need for that?

Mr. TALBOT. Well, the problem, sir, is that——

Mr. YATES. Do you need a study of that first?

Mr. TALBOT. No. I have the number.

Mr. YATES. You have the number? What's the number?

Mr. TALBOT. Well, I can say that we would change the exhibits over the same ten-year period for \$73 million, much less than the HVAC, and we will add to that another \$25 million, which we privately raise. We'd like to relate the HVAC to changes that occur in the displays and elsewhere in the building.

We are also crammed, so part of that \$73 million, which sounds high, is an internal building. The problem is that we have scientists just crammed inside the building, and we halve rooms and halve them again.

What we need to do is to either get an off-site building and take those scientists out while the HVAC is working through the building, because each space has to be vacated, or——

Mr. YATES. What do you propose to do? Are you going to add a wing, for example?

Mr. TALBOT. We thought of just building only inside a court.

Mr. YATES. What does that do to your architecture?

Mr. TALBOT. Nothing from the outside, but it gives us a staging building so we can then move people into that.

Mr. YATES. And that's the \$73 million?

Mr. TALBOT. That is \$23 million of the \$73 million.

Mr. YATES. Okay. What additional amount do you have?

Mr. TALBOT. That addition of \$73 million would enable us to really change the museum around.

Mr. YATES. Is that in this budget?

Mr. ANDERSON. The first increment of the heating, ventilating, and air conditioning is in the budget.

Mr. YATES. Is part of the \$73 million in this budget?

Mr. TALBOT. None of the \$73 million is in the budget.

Mr. YATES. None of the \$73 million?

Mr. TALBOT. We would be able to get moving with \$4.3 million in this budget; we just don't have that.

Mr. YATES. And did you ask Mr. Adams for it?

Mr. TALBOT. I came too late to ask Mr. Adams. I think that was the problem. I was not here when this budget was put together.

Mr. YATES. I don't think you ought to ask us until you clear it with Mr. Adams.

Mr. ADAMS. I'm enthusiastically in support of it, but the notion emerged only in the last weeks. Dr. Talbot has been studying this since he came nine weeks ago, and this solution to a very difficult problem didn't emerge immediately. But now I think it seems clear that he has a key to a lock that we didn't quite know how to unlock.

Mr. YATES. The only problem you're going to have is that you're going to have to compete with others for some money. While he is enthusiastic about this, he may not be as enthusiastic when he hears some of the other requests and he goes after the Indian Museum. So you may have a problem.

Of course, you're going to get the Indian Museum, aren't you?

Mr. TALBOT. It would relate with us very closely.

Mr. YATES. You don't know the answer to that question.

Mr. ADAMS. I think we will have an agreement by the end of this week, and possibly by the end of the afternoon.

Mr. YATES. Do you have any other financial requests?

Mr. TALBOT. No. There are some line items which were cut which were on the budget which were important to us, and perhaps I could just put those in the record.

Mr. YATES. Could you do that?

Mr. TALBOT. Yes.

Mr. YATES. Thank you very much.

Mr. TALBOT. Thank you very much, sir.

[The information follows:]

Supplemental information prepared by Dr. Frank Talbot,
Director, National Museum of Natural History,
in response to the FY 1990 Budget Hearing

Pursuant to my testimony before you during the Smithsonian's budget hearings on March 16, I would like to submit for the record the utmost important requests for increase for the National Museum of Natural History/Museum of Man that did not make it through the budgetary process.

In the public programs area, we have three priorities.

Associate Director for Public Programs (1 position and \$85,000): The primary responsibility of this position will be to update, integrate and strengthen the whole NMNH/MOM exhibits and education programs to enhance the total visitor experience.

Quincentenary Exhibit (1 position and \$585,000): The Quincentenary exhibition, "Seeds of Change," is scheduled to open on October 12, 1991. While the Museum is proceeding with a major fund-raising effort to raise \$3.5 million needed to install the 13,000 square foot exhibit, and continues to hold symposia on changes in the Americas after 1492, we must have funds to hire a registrar to handle the loans, shipment and care of all the specimens, and to move forward with a final design contract. An increase of \$585,000 will provide a total federal funding base of \$715,000 for the Museum's Quincentenary activities.

Native American Hall Updating (\$100,000): The Museum requests an additional \$100,000 to continue to renew the two permanent Native American exhibition hall.

In addition to the Native American Hall renewal, one other request relates to Native American issues:

Native American Collection Documentation (1 positions and \$73,000): Funds are required to document the Native American Collections in the Department of Anthropology, to enable us to make informed and timely decisions in response to reburial and repatriation requests of American Indian people.

The Museum's two highest research priorities for additional funding are:

Evolution of Ecosystems (5 positions and \$300,000): Through studies on the evolution of terrestrial, marine and island ecosystems, NMNH/MOM staff seek to understand the evolution of these biotas, their response to past environmental crises, and the ways that species achieve diversity, distribute themselves and adapt.

Human Ecological History (1 position and \$77,000): The Museum also plans to establish an innovative research program in the long-term dynamics of human adaptations to the environment, to help us see ahead and protect the future course of mankind.

NATIONAL MUSEUM OF AMERICAN HISTORY NEEDS

Mr. YATES. Roger, I think you're up now.

Mr. KENNEDY. Thank you, sir.

I would like to stress two program increases that are in the budget and two program increases that we would like that are not in the budget.

Mr. YATES. Okay.

STORAGE SPACE RENTAL

Mr. KENNEDY. The first two that are in the budget are \$430,000 for storage space rental at the Fullerton facility. Collections are there because, as we change our place around and rebuild it and do the HVAC business that Frank's got a problem with, too, it displaces objects. You've got to put them some place.

In the budget already has been an additional storage facility. The only thing wrong with it is that it doesn't have any racking and other equipment, and there is nobody in it. That is what that \$430,000 is for.

SPECIAL EMPLOYMENT INITIATIVE

The second item that is a program increase in the budget is \$212,000 to increase the capacity of the bureau to deal with the full diversity of the American experience. It is to get more people quickly on hand who, themselves, represent the diversity of that experience, so that everybody benefits from their presence. It is not an intention merely to satisfy any hiring requirements; it is to provide the American people with a fuller sense of their own experience. You can only do that if you have people who are more representative of that experience.

There are five workyears and \$212,000 in the budget for that action. There are specific people in mind that will use that money and we, of course, want to do more of that, as your last hearing suggested that we should.

AMERICAN HISTORY MUSEUM'S COLLECTION INVENTORY

Not in the budget—and I'd just like quickly to refer to two things I think need doing. One of them is the most boring of all possible subjects. It comes back to this committee year after year, and I suspect will for another decade, and that is inventory completion. We don't want to spend much time on it and would like to submit the material for the record on it.

[Additional information follows:]

Collections Inventory Needs at the National Museum of American History

The Museum of American History reached the 1983 target date of the Congressionally-mandated Smithsonian inventory, having encountered severe obstacles to full completion of the task. Asbestos contaminated offsite storage facilities still preclude anything other than gross descriptions there; current building retrofitting at the Museum itself from 1987-1994 has deflected many staff from collections documentation efforts to collections movement in order to accommodate construction; the enormity and complexity of this unprecedented inventory project could not have been anticipated in 1978, and continues to demand the creation of original systems and computer solutions and the cooperation of large numbers of staff. Still, much has been accomplished: the completion of a "shelf inventory" which gives a basic description of all the museum's aggregate collections; the formation of an automated Local Collections Information System (LCIS), unique in Smithsonian museums; and substantial investment in the Smithsonian's automated Collections Information System (CIS), now in development.

At this point in 1989, the National Museum of American History has taken stock of its inventory efforts, its current circumstances, and the inventory needs which remain and has concluded that the program must have a renewed commitment in funding to fully achieve the goals set forth in 1978.

The attached document outlines a \$495,000 annual budget as the first part of a nine-year program to achieve collections accountability at the Museum. Total cost of this enhanced effort will be almost \$4,000,000 over the nine-year period.

The first three collections management activities listed--reducing backlogs in the departments with Office of the Registrar support and LCIS training and assistance to LCIS users--are of the utmost importance. These activities ensure that our collections information is accessible and up to date, thus providing a basic tool for conducting all our other collections-related activities, including exhibits, research, and planned deaccessioning. The cost of those items will be \$151,000 the first year.

In our past requests for CIS support, we have requested resources for data entry which would also help us with eliminating recordkeeping backlogs; these requests have not been fully funded. Therefore, the additional resources requested on the attached budget also support the CIS efforts while attacking our most immediate problems.

COLLECTIONS MANAGEMENT PROPOSED INCREASE

13 workyears

\$495,000 for FY 90 and \$410,000 for FY 91 - FY 98 = \$3,775K

FY 90

<u>Item</u>	<u>Unit</u>	<u>W/Y</u>	<u>Cost</u>
Reduce acc. and inventory maintenance backlogs. Keep up with current accessions/inventory. Assist with Master Plan recordkeeping.	Social & Cultural Hist. Science & Technology	2 x GS-7 2 x GS-7	\$101,000
Accessioning and loan support for backlog reduction.	Office of Registrar	1 x GS-7	25,000
LCIS training and assistance to users (to CIS in FY 92)	Office of Registrar	1 x GS-7	25,000
Data entry for master plan	NNC	1 x GS-5	20,000
Data entry for inventory/master plan backlog	NPC	1 x GS-5	20,000
Organize and catalog Eckhardt collection	NPC	1 x GS-9	31,000
Master plan work on foreign (NPC requests 2 positions)	NPC	1 x GS-9	31,000
Inventory maintenance and limited refinement	Silver Hill	3 x GS-7	76,000
Copy records on microfilm or other medium (\$10,000 per year thereafter)			<u>65,000</u>
TOTAL			394,000
Additional funds needed to fill 20 existing workyears* (16 funded out of existing allocation)			<u>101,000</u>
GRAND TOTAL			\$495,000

4 workyears to be assigned to S&C (1), S&T (1), Silver Hill (2)

Mr. YATES. I'm in favor of inventory completion. Tell us about it. Who should I ask? I was going to ask about how your inventory is coming along. I thought you had completed it. We gave you a lot of money to complete the inventory, and now you haven't completed it?

Mr. KENNEDY. No, sir. You do, indeed, give us a lot of money across the Institution, and you give our bureau a lot, too. What happens is that at the end of the total process, when it filters its way all the way through, the fact is that with regard to the whole Institution—and, in particular, our place—we are barely staying steady.

The truth also is that with respect to our particular place, though everybody has got the problem, it would cost another half a million dollars a year, or at least—unhappy, but true—13 people on staff for another decade to get full control and use of the national collections in our place, alone. That has been true since we started talking about this eight years ago. It is still true.

The aggregates of personnel costs, as they rise, and the appropriations process, as it works out to the end of the line, means that there never is quite enough to do what we tell you we want to do.

Mr. YATES. Is this because of acquisitions?

Mr. KENNEDY. No, sir, it is really not. We've got a pretty good handle on the descriptions of what we own. That has been achieved. But that is spread out into innumerable pieces of paper and computer systems. It will take at least the next four or five years simply to get that material collated and in usable form that you can—

Mr. YATES. Can scholars go to your place and find these things?

Mr. KENNEDY. They would have to have a road map to the places into which the data has been amassed in order to do that.

We've done a great deal with the money you have given us, but because every year it gets trimmed some at the end of the line, I just want to be very clear that we tell you it isn't done and it isn't done right.

Mr. YATES. Is that true in all of the museums?

Mr. KENNEDY. Yes, sir. I am pretty sure—I can't speak with expert knowledge of any place but my own, and maybe not there, but yes, I think the answer is yes.

Mr. ANDERSON. I would say, Mr. Chairman, that many of Roger's departments or even a division within the museum have responsibilities for collections that are larger than some of the entire collections of the art museums.

So really what you are talking about is a collectivity of museums under the rubric of the National Museum of American History, each of those divisions having, itself, a very small staff compared to the staff of art museums, again, to use that as a comparison. They just don't have enough to get on top of the collections.

Now, I am happy to say the art museums are on top of their collections. I think you'll hear that from each of the Directors who is here. But the three largest collections—the Cooper-Hewitt, the Museum of American History, and the Museum of Natural History—are still running to try to catch up.

Mr. KENNEDY. Could I speak to your sotto voce comment, there, because it is probably the most germane thing one could comment on. What are these people doing? Because in each of these—

Mr. YATES. What are which people doing?

Mr. KENNEDY. Within each division there are a number of people who are working there. Now, those people are currently, because of the way this has to work, doing inventory. But they are also doing all the other things they do, and the public needs to know a little more about what that is. I'll try to be quick about it.

There are 100,000 or more requests that come to us from the public requesting information every year. That's a lot of telephone calls and a lot of letters. It is the kind of thing that many other offices get, too, but we are expected to respond, and it is the very same people that are trying to work at reconsiderations of our history so they can present those reconsiderations to the public in exhibit form, public programs, and the kind of outreach stuff that we, like Irwin Shapiro, should be doing a great deal more of.

We should be relating better to school and university systems. We try, but it is still those same bodies. So they are trying to count the stuff, understand what the stuff is, respond to inquiries, produce exhibits, and they are also expected to be scholars producing scholarly work.

That means that the way to do this is to have people on the staff that don't do anything else than inventory. You have provided us with some of those. This is the hardest conceivable thing to argue for through this system—

Mr. YATES. At this time.

Mr. KENNEDY. Yes, sir. All the way to the end of the system.

JAZZ PERFORMANCES AT THE SMITHSONIAN

Mr. YATES. All right. And you have one more item?

Mr. KENNEDY. Yes. Over there is an ambulatory harmonica, which I do not propose to get out for you. It is simply a walking stick with a harmonica at the end of it, which I would have used if we had spent time on "show and tell" to suggest that in this country we have a tradition of popular participation in music. We don't just sit passively in concert halls inertly. We are a musical people. We participate in our national music.

We take jazz, which is a component of that, exceedingly seriously in our work. Thanks to you, we recently got the Ellington collection. We also are acquiring private funds to establish the National Jazz Masterworks, the fundamental text of the great jazz masterworks in print so that people can, in universities and colleges, take that art form seriously. Unless it is in print it isn't real for universities and colleges.

Mr. YATES. You need money for that?

Mr. KENNEDY. For that second aspect, no, sir. I don't think so. I think we'll get the jazz masterworks printing and collating process done privately, though we may come back to you next year if we can't hack it.

Mr. YATES. What's your relationship with Ralph Rinzler on this?

Mr. KENNEDY. Cozy. [Laughter.]

Mr. YATES. I knew that he was interested.

Mr. KENNEDY. We talk a lot. He has done one major benefit, which he can talk about.

Mr. YATES. He is in charge of the jazz program?

Mr. KENNEDY. No, sir. We are all interested in that subject, but we talk a lot.

Records and those auditory mechanisms—he has had his big, highly successful benefit. We intend to lay one on, too, which is just in the interest of live performance and jazz.

I'd like to submit for your information—also in response to some inquiries from other people in Congress—a suggestion that we begin getting immediately at live performance of jazz on the premises to a greater degree than we now do.

Mr. YATES. Your premises?

Mr. KENNEDY. Yes, sir. It doesn't necessarily have to be a Smithsonian organism that makes the music or produces it or, indeed, pays for all of it. Indeed, this may be an opportunity in which we provide the venue and other entities, such as corporations, individuals, and the two Endowments, might finally come together to produce an outcome we have talked about for some years.

This does not have to be a Smithsonian-owned venture. It should be, because we've got the foot traffic, a Smithsonian-owned venue.

Mr. YATES. All right. Good point.

DOUBLEDAY LECTURES

What happened to your Doubleday lectures?

Mr. KENNEDY. Doubleday was acquired by a distinguished European publishing house, and the enthusiasm for the presentation of American music under those circumstances waned somewhat. [Laughter.]

Mr. YATES. Thank you.

Mr. KENNEDY. Thank you, sir.

PROGRAM FUNDS FOR MUSEUMS

Mr. YATES. I think that I should have called Mr. Freudenheim first before I went into the lesser figures.

Assistant Secretary Freudenheim, do you have any money you want?

Mr. FREUDENHEIM. Our funds are requested through them.

Mr. YATES. So this procedure meets with your approval?

Mr. FREUDENHEIM. This procedure meets with my approval except, of course, the numbers that are in there aren't adequate for them.

Mr. YATES. What does that mean? Do you mean they're not giving their full wish list?

Mr. FREUDENHEIM. They're asking for more than we can give them, and, in addition to that, the numbers that came out of OMB weren't adequate for us, either. So we've got a bunch of not-terribly-happy bureau directors coming to the table.

Mr. YATES. Roger seemed happy, and Frank was happy.

Mr. FREUDENHEIM. Yes. They are representing figures that we have laid before you.

Mr. YATES. Are they unhappy with OMB's reductions or with the Smithsonian's?

Mr. FREUDENHEIM. I think their problem is in not having adequate program funds—virtually no program funds—come through from OMB. That's very problematic. It means that we get a very long list of requests from the various bureaus, and then they get sorted down to a smaller list which goes into OMB in terms of programmatic increases, and those increases didn't come through at all. So it is a great problem.

PROGRAMMATIC BUDGET REDUCTIONS AT NATURAL HISTORY

Mr. YATES. Can you give us examples of the programmatic increases which were cut?

Mr. FREUDENHEIM. Well, to cite the one that is at the top of our list, the American Indian Hall at Natural History, which is a great priority for the Museum and for the Institution—

Mr. YATES. Is that being held up because of your impending purchase of the new museum?

Mr. FREUDENHEIM. No. It is simply—

Mr. YATES. It has to be done in any event.

Mr. FREUDENHEIM. The museum really—I should let Dr. Talbot tell this. He'd really have to continue upgrading his exhibitions, as he was saying.

Mr. YATES. I can understand that. But what will your relationship to the American Indian be like after you acquire the Heye museum?

Mr. TALBOT. There was a suggestion that we should add considerably to our exhibits before the Heye collection, specifically in the Indian area. When the Heye collection became obviously very close, as it is now, I cut that suggestion.

In other words, it didn't seem sensible for us to put in something brand new, but we still have two halls which are totally out-of-date, and that is a very severe problem for us.

Mr. YATES. That doesn't include the Indian Hall to which Mr. Freudenheim referred?

Mr. TALBOT. Those are the two halls to which he referred. They need upgrading. Last year we got—

Mr. YATES. They need upgrading.

Mr. TALBOT. We sought \$100,000 last year in regard to this and we started upgrading. This year we sought another \$100,000, and it was cut by OMB.

Mr. YATES. Are you halfway done yet?

Mr. TALBOT. No. One quarter.

Mr. YATES. A quarter of the way done.

Mr. TALBOT. We have a long way to go.

To do a new hall, like the Gem Hall, for instance, is \$6 million. Here we have two halls of out-of-date Indian material. We have closed some up because they were so bad. They were demeaning to both the people that they were portraying and to ourselves for portraying them in that way. We closed them, and we need those funds to continue opening them and improving them.

Mr. ADAMS. Mr. Chairman, I would like to insert here that the two collections complement one another, rather than compete with one another.

The collection of the Heye Foundation consisted—

Mr. YATES. Will that be by itself?

Mr. ADAMS. That will be by itself.

Mr. YATES. And you have the Smithsonian collection with Frank?

Mr. ADAMS. Yes. But the further point is that the collection that is in the Museum of Natural History is a very strong archaeological collection, in particular. It has strong ethnographic materials, too.

The Heye Foundation collection is a collection primarily of American Indian art and ethnographic materials.

REPATRIATION OF SKELETAL REMAINS

Mr. YATES. What does this mean? In your statement you said that you had started to reach agreement with Indian tribes for the return to them of the bones of their ancestors. You have agreed with one tribe.

Mr. ADAMS. That's right.

Mr. YATES. Are you making agreements with other tribes? Do you need money for that?

Mr. ADAMS. This is a process that will continue for a long time. I would not say "endlessly," but certainly for many years.

Mr. YATES. But you have an agreement?

Mr. ADAMS. I think we need to outline the situation at more length, perhaps, but the position that the Smithsonian is currently taking is that where we can identify descendants or where descendants come forward and we can ascertain from the existing records that they are descendants of individuals in the collections, they have an absolute right to reclaim those materials and to do with them as they choose.

That is a category that is rather small, but as you move to the edges of it, you get into situations where it is ambiguous, as, for example, in the case of an individual who belongs to a certain tribe—because the remains came from a burial ground of that tribe in the 19th century—but we can't identify with certainty who the individual is, and therefore we can't be certain of who the descendants are.

We will be moving through our records and trying to handle questions like that, and in this process we are going to be returning some indefinite number of skeletons as that process moves ahead. It is very time-consuming, and it will cost a great deal of money before we are done.

Mr. YATES. Is there money in this budget for it?

Mr. TALBOT. There was \$73,000 in the Natural History budget which was cut by OMB.

Mr. YATES. I see.

Tom, have you completed your statement?

Mr. FREUDENHEIM. No. I was citing as examples things that didn't come through in the OMB budget.

SMITHSONIAN TRAVELING EXHIBITION SERVICE

Another important example is the request we had for additional funds for SITES, which we are trying very hard to get on a better, more solid financial basis so the exhibitions that SITES sends out

can be made more available at more reasonable cost to smaller exhibitors, and so that we can service better minority and multi-cultural requests that we have and do more exhibitions in that realm, enabling SITES to make those acquisitions especially available to smaller exhibitors that simply can't afford the kinds of fees that we charge for bigger exhibitions.

That, again, was in a request that we had for a couple hundred thousand dollars. It did not come through.

COLLECTION INFORMATION SYSTEM

I would also cite the collection information system, which kind of dovetails with Roger's discussion of the inventory problem, which remains an ongoing problem that you and I have talked about. It is in the nature of this kind of institution, and many of our bureaus have needs there. We are meeting those needs.

My office made it a priority a couple of years ago to put more money into that, and we are getting a great deal of progress in that field.

Mary Case, the Registrar for the Smithsonian, has really done a wonderful job in pushing that forward, but it is very expensive. It is always going to be very expensive, and we are always going to need a lot of support there.

It is not very interesting, in some ways, but it underpins the whole Institution's collection process. It is something we have to get used to seeing big numbers for in the budget request.

Mr. YATES. Okay. Anything else?

Mr. FREUDENHEIM. No, I guess that's it.

REPORT ON AFRO-AMERICAN MUSEUM

Mr. YATES. I meant to ask Roger a question in connection with the Afro-American Museum. I also had a question on the employment of your top-level people. I think this report was filed in January, 1989.

[The "Report to House Subcommittee on Appropriations on Afro-American Museum" was submitted for the Committee's files.]

AFRO-AMERICAN MUSEUM

Mr. YATES. As I remember your statement on the Afro-American Museum, there was a question raised as to whether the proper place for the Afro-American Museum should not be a new wing of the Museum of American History. Have you come to any conclusions on this yet?

Mr. ADAMS. No. We have not.

Mr. YATES. Do you have room at the American History Museum, or would you have—

Mr. KENNEDY. Mr. Chairman, there may be two kinds of answers to that. That question might break into two pieces. The answer to your inquiry in both cases is no.

Mr. YATES. The answer is no. You don't have space on your grounds or in your museum?

Mr. KENNEDY. There are two things that I would assume we want to do here. One of them is to find an adequate way of stating the unique experience of Afro-Americans. The second is to state

the relationship between Afro-Americans and the rest of us, because their story is inter-related with ours in a way that, in fact, determines the peculiar qualities of American history.

So there are two things here. It seems to me—and I'm speaking only for myself—that both things are important. There has to be a space that is found that adequately demonstrates the particular contributions of Afro-Americans to our story. Taken by itself, however, that does not adequately represent either the sorrows or the triumphs of our efforts to get along with each other as a multi-cultural society over 300 years. Both things are, to put it mildly, understated in the national history museums and historical houses and localities around the country. We need to do both.

Therefore, if I were asked if we had space for either of those adequately, I would say we are banging away at the latter. We are banging away at trying to show in everything we do that it is a multi-cultural society, and should keep on doing that in everything we do about the 18th, 19th, and 20th centuries, and be very sure we've got staff to do that.

But there also are important areas not just for Afro-Americans, but for others, in which their unique contributions are singled out, stressed, and emphasized. And we don't have space for that, either.

So the answer to your question is no and no.

Mr. ADAMS. Can I continue with that answer?

Mr. YATES. You may, indeed, in just a moment. I want to address this point. I had the impression that you had land surrounding your museum?

Mr. KENNEDY. Yes, sir.

Mr. YATES. Could that be used for a large wing that would encompass both of the objectives that you have stated so eloquently?

Mr. KENNEDY. Yes. With respect to land area and expansion room, the answer is yes—particularly to the west end where there is a particularly conspicuous—and conspicuous is important here—area that would work. Yes.

Mr. YATES. Dr. Adams?

Mr. ADAMS. I think we should make it clear that while the Museum of American History is centrally concerned with this question, it, in fact, reaches into almost all of our museums. It is as important that the representation of the African-American experience appear in the art museums and the Museum of American Art and the Hirshhorn and the National Portrait Gallery as it is that it appears in the museum devoted to American history.

I think it is an obligation of the Institution—that's the point I'm trying to make—not simply to Roger Kennedy and his own bureau, to move ahead in this respect. We, in fact, have a long way to go as we say in this report, which involved meetings with large numbers of staff and quite a lot of time.

Perhaps I should add also that my understanding is that a bill was to have been introduced yesterday or today by Representative Lewis which grows out of discussions carried on by the Congressional Black Caucus, who are also concerned in this area. I have not seen a copy of that bill and I don't know what it says, but that is another example of the concern that is fairly general, I think, for the Smithsonian to address itself to the kinds of problems that are referred to in that report.

I think it would be premature for us to close on the form of the representation that we provide, whether it is through an extension on the American History Museum or in some other form, and I'm sure we will be interacting with members of the Congressional Black Caucus and also—and this is very important—with members of the Association of Afro-American Museums.

Mr. YATES. I think perhaps it might be well to wait and see what happens.

Mr. ADAMS. Very good.

Mr. YATES. Thank you.

Mr. Anderson, did you want to say something?

Mr. ANDERSON. I might add, Mr. Chairman, that in order for us to take activities in this area to the next logical stage, it would be very useful, although these monies are not in the budget that OMB has allowed us to present to you, if it could be found for us to have perhaps \$200,000 in order to undertake the kinds of studies and conversations and networking that would be required to begin to put some flesh on these bones.

Mr. YATES. Might I propose to recess now until 1:00. Did you have any questions before I recess?

[No response.]

Mr. YATES. Great. Let's come back at 1:00.

AFTERNOON SESSION

NATIONAL AIR AND SPACE MUSEUM

Mr. YATES. The hearing will come to order.

Mr. Harwit, would you like to tell us about the National Air and Space Museum? Do you need any money?

Mr. HARWIT. Losing money.

Mr. YATES. You're losing money? You mean OMB has had a heavy hand on you?

Mr. HARWIT. Well, we got a lot of zeroes there, Mr. Chairman.

Mr. YATES. Let's take a look and see what happened.

You asked Mr. Adams for \$11,285,000, and Mr. Adams cut you by \$1 million. And then you went to OMB, and OMB didn't do too bad, did they? They cut you \$300,000.

Mr. HARWIT. The fact is that we were getting none of the things that we had asked for at all.

Mr. YATES. From whom? From Mr. Adams?

Mr. HARWIT. No. After OMB got done with us.

Mr. YATES. Like what? What do you need?

SPACE MODIFICATION NEEDS

Mr. HARWIT. Actually, Mr. Chairman, let me step back a little bit.

Because of some cuts in last year's 1989 budget, there are things that we had asked for in the 1990 budget that we really cannot use until those earlier needs are satisfied.

There is a request in the 1990 budget this year for \$320,000 in Minor Construction, Alterations and Modifications funds to refurbish space that was vacated when the new cafeteria was built adjacent to the museum. We have space on the third floor of the build-

ing now which amounts to roughly 15 percent of the third floor space which is available for offices.

Our staff is, at the moment, so tightly cramped that we really can't add the positions we had asked for in the 1990 budget until we have space to move the people into.

Mr. YATES. Where are you going to get the space?

Mr. HARWIT. The space is there. In the 1989 budget, the Institution had asked for \$520,000 in Alterations and Modifications funds which, because of some oversight—there was some lack of communication about a study that had been conducted by the Museum and the Institution to see how that space could be rebuilt into office space.

That information didn't come to the Congress until after the request for \$520,000 was turned down. The Institution then asked to be permitted to take \$1 million, which was the cut which had been asked for, and reallocate it so that a certain amount of money could be made available for refurbishing of this cafeteria space. That amounts to \$215,000, and the museum, itself, out of discretionary funds has said it would put in \$90,000.

But we need another \$320,000 before we start working, to give us a total of a little over \$600,000 to do the work of putting in the offices so that our staff can move in and work efficiently.

Mr. YATES. Does Mr. Adams let you keep the money you make from the restaurant?

Mr. HARWIT. A fraction of it we keep.

Mr. YATES. Only a fraction of it?

Ms. LEVEN. The rest goes to pay off the loan that we took to build the restaurant.

Mr. YATES. And then what happens to it?

Ms. LEVEN. When the loan is paid off, the money not shared with Mr. Harwit will go into general, unrestricted funds.

Mr. YATES. What happens to poor Mr. Harwit then?

Ms. LEVEN. We will continue to give him about 10 percent of the royalties we receive.

Mr. YATES. I see. Does he have anything to say about it?

Ms. LEVEN. About the amount?

Mr. YATES. What he is to receive.

Ms. LEVEN. No. It is a fixed amount that we give each one of the museums that houses a restaurant.

Mr. YATES. Really? You share that?

Ms. LEVEN. Yes.

Mr. YATES. Do you? You mean Roger gets some, too?

Mr. KENNEDY. Not from Martin's.

Ms. LEVEN. Not from Martin's, but from his own restaurant.

Mr. YATES. And his stores?

Ms. LEVEN. And his stores.

Mr. YATES. Can he keep the money he makes in his stores?

Ms. LEVEN. Not all of it, but a percentage of it.

Mr. YATES. How much?

Ms. LEVEN. About 30 percent.

Mr. YATES. And Mr. Harwit can keep 30 percent of his?

Ms. LEVEN. And so can Dr. Talbot and—

Mr. YATES. And you still need money in addition to that, Mr. Harwit? [Laughter.]

Mr. HARWIT. Now there is, in the 1990 budget, under Alterations and Modifications, \$320,000, already earmarked for the Air and Space Museum, and I would like to beg for that rather than to beg for some of the items that we had asked for which were denied because—

Mr. YATES. What was denied?

Mr. HARWIT. We had asked for a curator for the space history program. We had a number of—

Mr. YATES. But you have no place to put these people until you—

Mr. HARWIT. We have no place to put these people.

Mr. YATES. I see. So if we don't give you the money for the rehabilitation, then you can't hire the people, and we save money, right? [Laughter.]

Mr. HARWIT. No. We just can't get the work done.

For us it would be important that the Institution's request for these Alterations and Modifications funds for 1990 be honored as much as possible.

Mr. YATES. You want the rehabilitation more than anything else?

Mr. HARWIT. We need that more than anything else.

AIRPLANE RESTORATION PROGRAM

The only part of the request that we could have used was for two people, and this would only be for \$36,000, out at Garber where we are having a workforce which consists of aging restoration people, and we had asked for—

Mr. YATES. Old what? Say that again.

Mr. HARWIT. People close to retirement whose skills need to be transferred to younger people. It is a real problem.

Mr. YATES. How do you do that? Is this what you call "cloning"? [Laughter.]

Mr. HARWIT. Well, we haven't tried that yet. Maybe Michael Robinson could help me out.

We had asked for a restoration apprentice program where the skills of old-timers who know how to restore airplanes would be transferred to youngsters coming out of the trade schools so that we could keep the capabilities and the skills that have been learned over many years—we feel we are the foremost restoration program on airplane and spacecraft in the Nation and probably the world. But some of those skills may disappear. In fact, we have had quite a number of abrupt retirements of people who are entitled to retirement.

What we'd like to make sure of is that we can bring youngsters in who can learn these skills and help us out over the next few years.

Mr. YATES. How much money do you need for that?

Mr. HARWIT. We were asking for \$36,000.

NATIONAL AIR AND SPACE MUSEUM EXTENSION

Mr. YATES. Tell us about what is happening to the extension of the Air and Space Museum either at Dulles or at BWI or wherever.

Mr. HARWIT. Well, we have been given authority by the Regents to examine two sites—one at the Baltimore Washington International, and the other one at the Dulles International Airport—to see what the soil is like out there, drainage, various physical characteristics of the sites, to study the visitorships that we might expect, transportation that might be available, proximity to downtown, and what kind of clientele we would be attracting.

We have by now selected an architectural firm, which will start working on April 3, to look at the sites and to run some of these inquiries. That report is due to the Regents by the end of August for the September meeting in a preliminary fashion, and a final report will be ready for them at the end of the calendar year.

Mr. YATES. Do you know as yet what the details of the offers are for Dulles and BWI?

Mr. HARWIT. We are working out the details. The Secretary and I have met with both Governor Baliles and Governor Schaefer of Virginia and Maryland respectively. Both have been highly forthcoming as far as the land is concerned, as far as the staff that they have made available to us to study demographic questions, and aid that we could get from their Highway Departments and access highways for visitors to come, and so forth.

Money is a separate question. They have not defined a clear-cut financial support system, although the Governor of Maryland has appointed a group that would help us to identify potential donors and help us in raising money.

Mr. YATES. Then that is still to come about?

Mr. HARWIT. That is still coming about.

A principal problem that we have is that we do worry about the question of whether we would be serving the city, itself, adequately at these two sites because of transportation problems.

We have made some additional inquiries to see whether there might be a possibility of finding a site within the City of Washington that might be accessible to runways of major airports by barge, and it is not clear at all that it would be successful. We are not at all decided whether it would even be worthwhile getting an architectural firm to look at one of those sites. But we still want to pursue that quietly in order to assure ourselves that we haven't overlooked any ways that we might serve not only the Nation, but also the City.

Mr. YATES. Thank you, Dr. Harwit.

NATIONAL PORTRAIT GALLERY BUDGET NEEDS

National Portrait Gallery, Alan Fern. Where are you?

Hi, Alan. Let's look at this.

You've got a relatively moderate budget, and yet Mr. Adams took one hack out of it. You wanted \$4,562,000, and he only gave you \$4,386,000. OMB cut you by another \$80,000. How do you feel? Kind of poor?

Mr. FERN. Oh, yes. Downtrodden.

Mr. YATES. Do these cuts represent any losses to you?

Mr. FERN. Yes. Because two of the cuts are not in glamor areas at all, but clerical and technical people who work in our design and production and our education department, it is going to be hard for

those people to keep up with the work they have to do without going into a lot of overtime. That's the way we have been doing it now.

I think they would feel very well-supported if they were able to get these helpers in their offices.

The other area is a little more difficult to deal with. It is tied, a little bit, to the need we have to find collection storage space and improve the collection storage space, both inside the building and outside. We are sort of looking forward to the issue that you have elsewhere in the hearing documents about the termination of the lease at 1111 North Capital Street. We have a little space in there. We have to know what we can do with those collections that are growing.

Mr. YATES. What's going to happen to the old Tariff Building?

Mr. FERN. I'm glad you asked that question, Mr. Chairman. I don't know. Of course, it is in the great bin of architectural projects that we have.

In the current budget we have \$1 million—

Mr. YATES. Have you asked Mr. Anderson what he intends to do about that?

Mr. FERN. No.

Mr. YATES. I think maybe you should. [Laughter.]

Mr. FERN. We do have \$1.7 million in the current budget for furthering the architectural planning, but that was cut back from \$3 million by OMB.

Mr. YATES. Do you have to go to 1111 North Capital Street if Mr. Anderson is able to fix up the Tariff Building for you?

Mr. FERN. Others would have to. We might be able to stay away.

Mr. YATES. Isn't the old Tariff Building primarily for your organization?

Mr. FERN. Mine, the Museum of American Art, and Archives of American Art—all three.

Mr. YATES. What has the American Art Museum got to do with that? Just storage?

Mr. FERN. No, no. It is in the legislation, indeed, and we agree with it, that there should be some public access areas there. There will be exhibition spaces as we now see the building. We hope there will be an auditorium built there, which we don't have. And then there will be library and research collection spaces, both behind the scenes and for scholars who come in.

Mr. YATES. So how critical are the losses? How much money do you need?

Mr. FERN. Well, myself, I think if we could have the items that the OMB and Smithsonian denied us, we would be very, very happy—especially if we could get the work areas and the \$65,000 that we were asking for clerical and technical support.

The other thing that is important to me is that we, as expeditiously as possible, decide how we are going to proceed in the Tariff Commission Building—the Old General Post Office.

NATIONAL PORTRAIT GALLERY ACQUISITIONS

Mr. YATES. Question: What do you do about acquisitions? Do you have enough money? Is it your turn this year to spend money?

Mr. FERN. I always seem to be able to spend money for acquisitions and go beyond it so we have to go to private sources. In past years, we have been asking for increases. I want one day to reach \$500,000 a year. That request seemed less important to me to press forward on this year than the clerical and technical people and the collection storage.

Mr. YATES. Were you able to acquire anything? What were you able to acquire last year?

Mr. FERN. We got some good things. I suppose the most delightful pieces in the past two fiscal years were the Benjamin Franklin and the portrait of Edward Hicks painting the "Peaceable Kingdom" with the Bible open in the background.

Mr. YATES. Oh, yes.

Mr. FERN. This year we are about to acquire—we have promised to acquire, and I am trying to raise the money—a Smibert of Bishop Berkeley, who finally tried to set up a college in Bermuda, and was important in Yale's background.

Mr. YATES. Then Yale ought to give you the money for it.

Mr. FERN. They ought to give us the picture, but, unfortunately, they like the picture they already have, so they're not.

Mr. YATES. I see.

Mr. FERN. This is a very fine Smibert. They don't come up very much.

And we're working on a couple of other things, like a contemporary group of Avedon photographs that——

Mr. YATES. To acquire?

Mr. FERN. To acquire.

Mr. YATES. Will they give them to you?

Mr. FERN. No. But he will sell them.

Mr. YATES. These are all portraits?

Mr. FERN. Yes.

Mr. YATES. Thank you.

Mr. FERN. Thank you.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

Mr. YATES. The Hirshhorn Museum, Mr. Demetrian.

We greet you, Mr. Demetrian. Have you looked around your museum here?

Mr. DEMETRION. Yes. Quite wonderful. I wish some of it were up front here, but I have peripheral vision.

Mr. YATES. I like that wall, myself.

Let's see how you did. You asked Mr. Adams for \$3,556,000—my god, you are a favorite of Mr. Adams. You got the full amount that you asked him for.

Mr. DEMETRION. We got the full amount, Mr. Chairman, but I must say that this year we have been in a mode of reassessing our situation vis a vis the need for a new building.

Mr. YATES. A new building?

Mr. DEMETRION. Yes.

Mr. YATES. You mean the——

Mr. DEMETRION. I mean an addition.

Mr. YATES. Where are you going to put it?

Mr. DEMETRION. That's part of the problem. I should tell you that we have pressed forward to the extent of contracting with an archi-

tectural firm in Cambridge, and they came up with a particular scheme which was presented to the NCPC and to the Fine Arts Commission. It got knocked down at both places because the building was not symmetrical. That was a requirement.

Mr. YATES. Do you mean it has to be circular?

Mr. DEMETRION. No. It doesn't have to be circular, but it has to be symmetrical according to the axis on Eighth Street, which doesn't exist. [Laughter.]

It is the axis from the Archives to the Hirshhorn, and then on the other side on to the American Art and National Portrait Gallery.

Because of lack of symmetry, though, the plan was knocked down.

The architects formulated another scheme. One of the problems that any architectural firm will have with that particular site is that it is a very small site. The building is circular, which makes it very, very difficult to add on to, and so the architects have had some problem.

We told them, in effect, to just lay off and we will all rest on this for a while because it did take quite a bit of energy from all of us. But I do think that the needs are still there.

Mr. YATES. How many square feet do you need?

Mr. DEMETRION. We need approximately 120,000 square feet.

Mr. YATES. Where are you going to get the money to do it?

Mr. DEMETRION. That's why we're here, Mr. Congressman. We would hope that we would be able to raise, from the private sector, a significant part of that amount—maybe half of it. And we would hope that the Congress would appropriate funds for the remaining half. But we have to get a plan that is viable first, and we hope to do that.

Mr. YATES. Where will you put it? Where your sculpture garden is?

Mr. DEMETRION. No, we would not put it where the sculpture garden is. The sculpture garden is an extremely important part of our facility, and it definitely would not go there.

We've given consideration to putting it underground. That's one possibility. Another possibility would be to wrap around the present structure. Yet another would be to fill in the donut, as it were.

Mr. YATES. What about putting it on top?

Mr. DEMETRION. I think that might be a problem. I believe there is a regulation of some sort as to how high we can go on the Mall. There is a ceiling height.

Mr. YATES. There is a ceiling height, but your building doesn't look as though it is that high.

Mr. DEMETRION. It is fairly close.

Mr. REISS. There are also structural problems.

Mr. YATES. Well that I can understand. Can you go on the sides of it?

Mr. DEMETRION. On one side. The original plan that the architect had come up with was to put the structure on the Seventh Street side of the building. The problem with that is that it was the asymmetrical part that was objected to.

The architect was unable to put another structure on the other side because of structural problems on the other side. There is a tunnel that leads between A & I and our own museum, and there are some real problems there.

Mr. YATES. Do you have any other needs besides space?

Mr. DEMETRION. Yes.

HIRSHHORN MUSEUM ACQUISITIONS

Mr. YATES. What about acquisitions?

Mr. DEMETRION. I have always felt that acquisitions is, in many ways, one of the main reasons for being a museum. I think one of our problems in the past—maybe it is a tactical problem. I don't know—is that we have tended to ask for rather modest increases for acquisitions. We were cut \$100,000 several years ago, before I came to the museum, in our acquisition fund, and our thought has been to bring it back up to that level.

I think, however, in the future, if we are going to be a viable institution, if we are going to be able to collect works of art for the nation in an important way, there is going to have to be a greater commitment for collections, for acquisitions, than there has been in the past.

Mr. YATES. But it will cost you as much for a new painting as it would to build your building.

Mr. DEMETRION. I understand that. But the collection, perhaps—I mean, it is a balance that has to be maintained somehow, but I don't think—

Mr. YATES. Are you still de-accessioning?

Mr. DEMETRION. We are de-accessioning, and we are doing it, I think, fairly aggressively, but I hope judiciously, as well.

Mr. YATES. Well, the newspapers indicated that—at least Paul Richard's article—that you were doing it judiciously. Incidentally, congratulations on the exhibit.

Mr. DEMETRION. Thank you.

Mr. YATES. I don't suppose Carter Brown was pleased to see that.

Mr. DEMETRION. I can't speak to that. [Laughter.]

I think the review would have been even more glowing had we had an additional \$100,000 or \$1 million. [Laughter.]

I think we have been stunted, as it were, and I say this knowing full well that this is a problem with all museums, and particularly with art museums.

As you are well aware, the price of art has escalated to the point where it has become extremely difficult for institutions such as ours to compete.

The Hirshhorn is fortunate, in one way, in being a museum with a very heavy emphasis on contemporary art. We are able, in relative terms, to buy things which are not hugely expensive. We are kind of a laboratory, in a way. We will make mistakes in terms of what we buy. Plenty of things we buy I suspect will not hold up over the long run, but I would hope that many of them will, as well, and that the national art collection will be enhanced because of that.

Mr. YATES. Well, I think you are making a real contribution to that.

You didn't tell me any amount of money.

Mr. DEMETRION. I have in mind to ask for \$1 million next year for acquisitions.

Mr. YATES. Next year?

Mr. DEMETRION. Yes.

Mr. YATES. Well, we'll see you next year.

Mr. DEMETRION. I'd rather be said "no" to for \$1 million than for \$100,000.

Mr. YATES. Thanks.

Mr. REGULA, did you want to ask any questions?

Mr. REGULA. I don't have \$1 million.

Mr. YATES. Neither does he.

ARTHUR M. SACKLER GALLERY

We will now hear from Mr. Beach, the Sackler Gallery.

You didn't fare as well as Mr. Demetrion. Mr. Adams cut you by about \$600,000, and then OMB cut you by another \$200,000. What does that do to you?

Mr. BEACH. Well, it certainly——

Mr. REGULA. Excuse me. Were these cuts from 1989 that you are talking about?

Mr. YATES. No. The initial one was his request to Mr. Adams.

Mr. REGULA. The cut you're talking about——

Mr. YATES. This is the budget he filed with the Smithsonian at the top level for FY 1990. It has nothing to do with the appropriation last year.

Mr. REGULA. Okay.

Mr. YATES. So Mr. Adams cut you, and you were cut as you went through the process?

Mr. BEACH. He did, which effectively removed all of what we thought were new initiatives for this year.

Mr. YATES. Well, he's a conservative.

Does it hurt?

Mr. BEACH. Of course it hurts. I think there——

Mr. YATES. Tell us how it hurts.

Mr. BEACH. There are two things, and if I can speak both to the Sackler Gallery and to the Freer Gallery, which have essentially separate problems in this regard.

With the Sackler Gallery, I think that we have found our public is very broad, including the Asian constituency in the Washington area and nationally, and we have not been able to really respond to those people in ways that we should, either in collections development or even in educational programs and educational material.

So we have large areas of Asia that we do not effectively represent, even though in some cases the governments of those countries have made substantial contributions towards the building.

I think, again, through educational programs and through acquisitions, we must be more fair to the people of Asia, overall, than we are able to be at present.

Mr. YATES. Tell us about your problems. Are you having problems with acquisitions?

Mr. BEACH. Well, every museum has problems with acquisitions, of course. We have no Federal funds for acquisitions.

Mr. YATES. I thought you had a pool from which various museums take a share.

Mr. BEACH. That's right. That's the Regents' Acquisition Program, which we do draw from, and that is our major reliable source for acquisitions for the Sackler Gallery.

Mr. YATES. How much was available?

Mr. BEACH. About \$800,000 over a five-year period.

Mr. YATES. Were you able to make any acquisitions?

Mr. BEACH. We did with the first amount of that money. We came in at the end of one year—the Sackler was established—and that was spent towards the collection of Persian things which are now up and on exhibition.

Mr. YATES. I saw you on television with that.

Mr. BEACH. I'm afraid so.

And the second year we drew from it to make a very important Japanese acquisition. In fact, we wanted to have a statement about our interest in Japan which was not otherwise in the Sackler collection, and we did that with that fund.

Mr. YATES. I see. Well, do you have a request of this Committee?

Mr. BEACH. We do. As I hear all of these other requests I am reminded of the fact that we do have on exhibition in the Gallery, after all, the show of Persian miniatures. And we are coming with what I think, in relation to other budgets, is a rather miniature series of requests. But, if I may say so, I hope that they will be looked at with the same kind of scrutiny that our public is looking at the miniatures that are up on exhibition.

Mr. YATES. There is no doubt about it. We will give it a miniature result, too, I'm afraid. [Laughter.]

Mr. BEACH. At least it fits the request. But we have asked for some funding, for example, for publications. This is not for scholarly publications, but for educational publications for the general public to alert people and to teach people about things that have to do with Asia that they do not get otherwise.

Mr. YATES. Tell us how much you need?

Mr. BEACH. We need \$50,000.

Mr. YATES. Getting away easy.

Mr. BEACH. We have also asked for some additional staff to help build up the Japanese area as a kind of support area in the sense of a territorial assistant. That was one job position, as well, and I think that was \$30,000.

Mr. REGULA. Would you yield, Mr. Chairman.

Mr. YATES. Sure. Mr. Regula?

Mr. REGULA. The Japanese have been quite generous in art donations. Wouldn't they be interested in funding some of these?

Mr. BEACH. We are trying very hard, I assure you.

Mr. YATES. Generous in art donation?

Mr. REGULA. Well, acquisitions, but I think in the general grants, too, from what I read.

Mr. YATES. Have they?

Mr. BEACH. We operate, as any museum that is newly formed does, by needing to have a positive image for ourself, and it will take it some years to do that. We are certainly working very closely with the Japanese on a number of projects, but I think, however

optimistic we might be, we would not expect a major windfall from Japan right in the first two years of our existence.

Mr. REGULA. This \$50,000 shouldn't be too bad.

Mr. BEACH. That would be very helpful.

Mr. YATES. Thank you.

FREER GALLERY OF ART

Mr. BEACH. May I speak for the Freer, also?

Mr. YATES. I thought you had.

Mr. BEACH. No, because the Freer has a separate set of problems, and that has to do with the Freer reopening, because, as you know, the Freer is now under renovation, so it is not—

Mr. YATES. Putting your basement in?

Mr. BEACH. Putting our basement in. What we need is to develop some funds for the reinstallation of the collection safely, efficiently, thoughtfully. We had asked for two positions for that of museum technicians, which is, in fact, a very highly-specialized work of knowing how to handle very fragile objects and how to deal with them with the kind of quality that is necessary to reinstall and keep the exhibition program going at the Freer in the kind of "renewed Freer".

And then we need some funds also towards the exhibition installation.

Mr. YATES. How much money is that?

Mr. BEACH. For exhibition installation, we had asked for about \$357,000, and for museum technicians it was \$50,000.

Mr. YATES. Tell me what the area is over which you have jurisdiction? Do you, for example, have jurisdiction over New Guinea art?

Mr. BEACH. No. The South Sea areas are not ours. We are the Asian continent going out into Japan and the Indonesian Islands, but we do not extend beyond that.

Mr. YATES. And you go into the Middle East, as well?

Mr. BEACH. That's right. In our interpretation, that is part of Asia.

Mr. YATES. Mr. Regula?

Mr. REGULA. No further questions.

Mr. YATES. Thank you very much.

NO-YEAR FUNDING FOR EXHIBITION PREPARATION

Mr. BEACH. May I make one other statement?

Mr. YATES. Yes.

Mr. BEACH. That has to do with the fact that one of the major problems for all museums, again—especially when we do not have collections and we must fill out with exhibitions, for example, where we do not have collections, such as with the Japanese—the cost of those exhibitions and planning those exhibitions and the complications of them get more and more severe, as I know you are aware.

We had prepared a statement that had to do with an argument for no-year funding, or at least no-year funding for part of the funding for exhibition preparation, which I would be delighted to give you. It is an area I think which would allow so much more

flexibility and efficiency—financial efficiency and physical efficiency—that it is an area that I hope you would be willing to consider.

Mr. YATES. We will be very glad to consider it.

Mr. BEACH. Thank you.

Mr. YATES. Thank you very much.

[The information follows:]

SUPPORTING STATEMENT
NO-YEAR FEDERAL FUNDS PROPOSAL, EXHIBITIONS PROGRAM

ARTHUR M. SACKLER GALLERY AND FREER GALLERY OF ART

PREFACE

In his 1989 statement before the Subcommittee on Interior and Related Agencies of the United State Senate, Secretary Adams discusses the "...unavoidable reality of the Federal deficits..." and expresses his hopes for the "...opportunity to discuss creative ways to allocate more effectively our current resource base." Additionally, the Secretary expresses the hope that Congress will approve no-year funding for collections acquisition and exhibition design and installation.

We present in this overview a fuller discussion of the environment and circumstances which make this latitude in exhibition-related spending desirable.

EXHIBITIONS AT THE ARTHUR M. SACKLER GALLERY
AND THE FREER GALLERY OF ART

The role of exhibitions at the two Smithsonian museums for Asian art is pivotal. Exhibitions at other Smithsonian museums very often present cultures with which many people are at least slightly familiar. Both the Freer and Sackler galleries - through works of art - introduce many Smithsonian visitors to the world of Asia for the first time. This exposure is destined to become increasingly important in the coming decades as the cultural relationship between East and West becomes more interwoven with and inseparable from our daily lives.

EXHIBITION DEVELOPMENT

The development and presentation of exhibitions have become increasingly complex over the past decade. Negotiations surrounding the lending and borrowing of works of art and the agreements and commitments which facilitate such loans are growing ever more intricate. Meaningful scholarship which may lead to the development of an exhibition is time consuming and can change course several times during research, leading to results different from those originally anticipated. The development of meaningful concepts for exhibitions which follow scholarly research continues to become more complex as we strive to address such issues as multi-level learning and our responsibilities in serving broader audiences. The physical design, construction and installation of exhibitions - especially with works of art - has spawned an entire profession whose members orchestrate such diverse issues as electronic and physical security, conservation and preservation

of objects, and the impact of context on learning, to name but a few.

The development and presentation of exhibitions are essentially creative processes. Even under the most controlled circumstances, exhibition development is now so complex, involving so many diverse disciplines and points of view, that schedules are continually being modified. The current system of Federal appropriation does not recognize or support this complexity. If approved, Secretary Adams's proposal for no-year Federal funds for exhibition development and presentation should allow great strides towards the necessary flexibility in funding which is already built into other aspects of the exhibition process.

PRECEDENTS

Currently the National Gallery of Art has Federal funds for exhibitions which are appropriated on a no-year basis. The Smithsonian through its own (trust-funded) Special Exhibitions Fund, recognizing the amount of time necessary to produce a significant exhibition, allows one year for the expenditure of funds in the "Planning" category and an additional three years in the "Implementation" category - a total of four years from planning through presentation.

SUMMARY

We strongly support and endorse this proposal and the wisdom of those who have chosen to diligently pursue this initiative. We at the Sackler and Freer galleries feel that flexibility in the timing of the expenditure of exhibition funds can have a significant positive impact on the quality of our exhibitions and on what we can accomplish with static Federal resources.

February 24, 1989

ARCHIVES OF AMERICAN ART

Mr. YATES. Archives of American Art, Susan Hamilton? How many years have you been coming here, Susan?

Ms. HAMILTON. Nearly 20, although I've missed the last 7 years.

Mr. YATES. Let's see how you fared. You didn't do too bad here. Mr. Adams cut you by about \$200,000, and OMB cut you by about another \$60,000. Does that let you work?

Ms. HAMILTON. At least. We're worth at least that much.

Mr. YATES. No. I asked if that lets you work.

Ms. HAMILTON. Oh, does that let us work? I'm sorry. Yes, but barely. There were some important things that—

Mr. YATES. Like what? What are you missing that you need?

Ms. HAMILTON. One of the difficulties for the Archives, I think, is that it is really people-intensive. We can't do the work that we do without personnel.

One of our major needs, and one of the things that we were seeking, was a professional archivist for the New York operation. We do not have—

Mr. YATES. What are the New York operations?

Ms. HAMILTON. The New York regional center—it's our largest collecting center and our largest research center. More than half of the collections that come into the Archives every year come in through New York. We're talking of a range of between 300,000 to 450,000 items a year—a lot of material.

What also comes in through New York tends to be the largest collections, because we're talking about gallery records, the papers of major artists and major scholars. They tend to be big collections, sometimes as many as 80 to 85 boxes.

In addition, the material tends to be among the most valuable and the most important that comes in because it is for major figures and major activities in the art world.

We do not, at this point, and have never had, a professional archivist in that center. That has meant that we have a staff that is incapable of handling that material, and it has to come to Washington, which is already overloaded with handling the material from all over the rest of the country, quite literally.

When material like that comes in and we can't get to it, it doesn't get processed, it doesn't get arranged, it doesn't get preserved—

Mr. YATES. How much of a backlog do you have?

Ms. HAMILTON [continuing]. Doesn't get described. I think that we're probably back about 450 running feet of material that needs—that would be some 375,000 items right now in New York that need working on.

Mr. YATES. How much money do you need?

Ms. HAMILTON. The position that we are asking for would cost about \$40,000.

Mr. YATES. And this is for New York?

Ms. HAMILTON. This is for New York. And with a professional archivist who could cope with large collections and work with that material there and direct the technical staff that are not professionals but could work with the material under direction, I think it

would help us to move more quickly through this material so that it can become accessible for research.

Mr. YATES. Where is your material stored?

Ms. HAMILTON. We have just moved in New York in the last year into the Equitable Center, and we now have a very good storage facility there which will hold about 820 running feet.

Mr. YATES. Where are you headquartered? Is it in New York?

Ms. HAMILTON. The administrative headquarters have been in New York. The Directors have tended to be in New York. We have been experimenting back and forth between Washington and New York.

The papers are housed in Washington.

Mr. YATES. I thought that the Smithsonian did not want you to move around. I knew Mr. Ripley had taken a position that he didn't want any more New York operations. I don't know whether Mr. Adams didn't once say that, too. He wanted to have everyone combined around here.

Ms. HAMILTON. Well, the Archives have been in New York long before even Cooper-Hewitt came aboard. That had been its headquarters office before it became part of—

Mr. YATES. I had the impression that you were moving it from New York to Washington.

Ms. HAMILTON. I am. The new Director will be in New York, but I am moving back to Washington.

Mr. YATES. I see. All right. Thank you.

Ms. HAMILTON. You are welcome.

Mr. YATES. Mr. Regula, any questions?

Mr. REGULA. No questions.

NATIONAL MUSEUM OF AMERICAN ART

Mr. YATES. Apparently I omitted the National Museum of American Art, Ms. Broun.

Sorry about that. I didn't mean to overlook you.

Ms. BROUN. That's all right.

Mr. YATES. You're new? No, you've been there, but now you're Acting Director?

Ms. BROUN. I've been at the Museum since October of 1983, but I have been Acting Director since last August.

Mr. YATES. You're the National Museum of American Art. You have asked Mr. Adams for \$6,123,000. He didn't cut you too much. You were cut to \$5,887,000. OMB cut you about \$200,000. Are you hurt badly?

Ms. BROUN. We are, actually, because we have absolutely no room for any kind of program initiatives next year.

Mr. YATES. No what?

Ms. BROUN. No room for any growth or new initiatives next year, and we had several areas in which we were eager to expand.

Mr. YATES. Every new Director seems to say they have no room.

Ms. BROUN. Space is one of our issues, and also funding for positions. Although we had requested funding for several areas that were of interest and crucial to the Museum, the cuts that hurt us the most, I think, were the ones in the area of public education and research on the collection. We have only one full-time museum ed-

ucator on our staff, and she's a person who was hired last summer under the minority hiring program, a new initiative at the Smithsonian. We were very eager to expand on that by hiring another person this year in order to try to increase the dissemination of information throughout the Nation about the Museum.

I guess I was struck by the number of my science colleagues this morning who brought in charts, graphs, films, and color photos and seemed to recognize, at least implicitly, the very special kind of knowledge that the people get from visual objects—a knowledge which is quite rich in significance and very different from verbal learning. We would like to be able to do a lot more with the collections we have, which we think are quite special.

Mr. YATES. Do you have any posters? Do you have a store?

Ms. BROWN. As a matter of fact, I have a poster on the way to you from our "Man Ray" exhibition, and we have the catalogue cover image in a poster. When I looked around this room and saw how we were losing the poster competition, I made a mental note to send you one of ours.

Mr. YATES. Good for you. I'd love to have that to join the others that are up here. What are you sending us?

Ms. BROWN. We're sending you an image that is the same as the one on the cover of the catalogue titled "Perpetual Motif: The Art of Man Ray." That is the catalogue on the table before you.

Mr. YATES. Oh, how nice.

Ms. BROWN. It will show you how people feel when they come in and plead with you at these hearings, right? [Laughter.]

Mr. YATES. I was just going to say that this looks like a Smithsonian museum director.

Ms. BROWN. Right. [Laughter.] Tears and all.

If I could, though, I would like to explain that, although we would be interested in having funds for all of the things that we had requested, I feel that these positions are the ones that are most crucial because they reflect my understanding of how I think art museums need to reposition themselves strategically for the 1990s. I think there are a lot of changes going on, and, in some ways, the landscape of the art world is shifting as much as the deserts in Mali, and as rapidly.

Mr. YATES. That's picturesque.

Ms. BROWN. Well, there are some really alarming things happening. I know some of my colleagues have touched on it, too.

Mr. YATES. What is happening that is alarming?

Ms. BROWN. One is the rapidly escalating prices in the field that almost put museum directors out of the competition for great objects.

DOMESTIC INDEMNIFICATION

Mr. YATES. I think I must have asked you this question in previous years, but I'll ask it again. Are any of your objects insured?

Ms. BROWN. Our objects are insured by coverage arranged through the Smithsonian but only when we send them out on loan and they leave our premises.

Mr. YATES. Is that true of all your museums, Mr. Anderson?

Mr. ANDERSON. We self-insure, Mr. Chairman, when our objects are on our own premises under our own control. On the other hand, when they are loaned out elsewhere, we make sure that they are covered by insurance, just as we make sure that, when we are borrowing somebody else's objects and when they are on our premises outside of the lender's control, we have those objects insured while they are with us.

But for our own materials under our own roof, we deem ourselves to be self-insured, in part, due to the good efforts of people like Mike League, the Director of our Office of Plant Services, and Bob Burke, the Director of our Office of Protection Services.

Mr. YATES. You must have a horrendously increasing insurance bill.

Mr. ANDERSON. We have a very adept Director of Risk Management at the Smithsonian in the person of Phillip Babcock, who is, I think, with everybody's gratitude, able to keep our premiums to a manageable level, although they do escalate sharply year to year.

Ms. BROUN. May I speak to that?

Mr. YATES. Sure.

Ms. BROUN. I think that insurance premiums are one of the major clouds on the horizon, not so much for our collections, but because of the effect they have on planning for exhibitions.

As art prices have gone through the ceiling, especially for American art and impressionism and certain other areas, we find it is almost impossible to plan effectively for an exhibition over a three-year period. For example, we are doing a Louis Comfort Tiffany show, and the value of the objects has more than tripled since our initial budget estimates were drawn up. Japanese collectors have entered the market for Tiffany in a big way.

Mr. YATES. How long?

Ms. BROUN. We began planning this exhibit two and a half years ago when we did our first estimates, and now the insurance has more than tripled since then because of the huge escalation of the values in the auction market. Now Japanese collectors are paying more than \$1 million per lamp.

Mr. YATES. Did you say \$1 million per lamp?

Ms. BROUN. Absolutely.

Mr. YATES. That's only for the Wisteria?

Ms. BROUN. They're finding more and more blossoms to their taste. [Laughter.]

I would hope, in fact, one thing that perhaps the NEA or Congress might consider is planning a new program of indemnification for domestic loans that would be patterned on the ones for foreign loans.

Mr. YATES. I looked into that a couple of years ago. I think I may have consulted Mr. Babcock, because at that time we had been requested to raise the level of insurance for imported art objects.

Ms. BROUN. Right.

Mr. YATES. And the consensus was that it was almost impossible to deal with domestic insurance for these shows.

Ms. BROUN. Why?

Mr. YATES. Somebody is holding a hand up.

Mr. DEMETRION. Great Britain does it.

Mr. YATES. Great Britain? I would think it would be a good idea, except I forget—is Mr. Babcock here by any chance?

Ms. BROWN. We can put him in touch with you.

Mr. YATES. I think it is important, because I know that this is the way it is. That's fine for you, but what about the private museums? Would they be part of this, too?

I think part of the problem was the fact that a distinction was to be drawn between public museums and private museums as far as domestic shows were concerned. There was some—I don't remember fully, because some years have gone by, and I don't remember what the objections were, but in view of what you and Mr. Demettrion—I assume all museum directors are in accord on this. Roger nods his head. Alan, you too?

Mr. FERN. Absolutely.

Ms. LEVEN. We have been thinking through this issue as we watch the valuations go up and try to accommodate all of our museums.

Mr. YATES. I'd like to see it. Perhaps we can put something into legislation.

Ms. LEVEN. I think it does require that.

Mr. YATES. Jim?

Mr. DEMETRION. Just one other thing that—

Mr. YATES. Ms. Broun, will you yield to Mr. Demettrion?

Ms. BROWN. Absolutely.

Mr. DEMETRION. I'm sorry.

Mr. YATES. That's all right.

Mr. DEMETRION. Just something to back up what Dr. Broun had said. Our museum organized an exhibition of Giacometti's work which opened at the Hirshhorn last October.

Mr. YATES. And a very good exhibit.

Mr. DEMETRION. Thank you. One of the loans which we had made arrangements for 20 months before the exhibition opened was insured by a large midwestern museum in your neck of the woods for \$350,000.

Six months before the exhibition opened, another cast of that same sculpture sold at auction for \$3,850,000. That's exactly 11 times—

Mr. YATES. The one I didn't buy in 1957.

Mr. DEMETRION. That's the one. [Laughter.]

That's a 1,100 percent increase in a 20-month period.

Ms. BROWN. It also means that we can't plan accurate budgets at the time we apply for grants for exhibitions; then when the budgets are inadequate the funders don't understand why. It plays havoc with the whole process of planning.

Mr. YATES. Let me ask a question. In your domestic shows, how many objects have been lost?

Ms. BROWN. Almost never is an object lost. There is some damage sometimes.

Mr. YATES. There's damage.

Ms. BROWN. But rarely a total loss.

Mr. YATES. I think the record for the indemnity program was that there was only one object that was lost in all the years that we have indemnified.

Ms. BROUN. Right. It is very rare to lose an object or to have it—

Mr. YATES. Or to have it damaged, except by vandalism possibly.

Ms. BROUN. Right.

Mr. YATES. That's a very good suggestion, Dr. Broun. I'm glad you made it. Have Mr. Babcock prepare something and submit it to us.

Ms. BROUN. We would be very grateful for that help.

[The requested information has been submitted for the Committee's files.]

COLLECTING CRISIS IN MUSEUMS

That is certainly one cloud on the horizon—the inability to buy—I just brought this along, the March, 1989, issue of *Art News*, because there is a cover story on the collecting crisis in museums. It has quotations from all the museum directors around the country on this subject. We are buying continuously in areas like folk art, photography, and crafts where we can still find good values. But there are huge areas of our program—19th and 20th century painting and sculpture—where we really are not able to seek the kinds of museum-quality works we feel we should have.

Mr. YATES. Do you deaccession?

Ms. BROUN. We do deaccession, although in the last year, because of the absence of a permanent director, we have taken a rather cautious approach. In the deaccession of 81 objects, we have realized \$1,800.

Mr. YATES. Really?

Ms. BROUN. So we have not made a lot of money in the last year, but we did before.

Mr. YATES. Was that at auction?

Ms. BROUN. Yes. Always at public auction. First we always give other Smithsonian museums an opportunity to acquire our works at no charge, and we then sell what is not absorbed elsewhere in the Institution.

In addition to the problem of buying works, we find that our donations have come down to a mere trickle. In terms of valuation, last year we took in about ten percent of the value in donations that we had in 1986, and this is a trend that apparently is continuing. The Art Dealers' Association of America says it is doing 49 percent fewer appraisals this year.

What it seems to mean, to me, is that our collections will become increasingly static as we are less and less able to buy art or to receive donations, and our ability to hold the audiences that were brought to museums in the last generation is also threatened by the difficulty of arranging major exhibitions. So I think we need to do a lot more with what we have, and to me the key to that challenge is educational programming.

Mr. YATES. Thank you very much.

Ms. BROUN. Thank you.

NATIONAL MUSEUM OF AFRICAN ART

Mr. YATES. The National Museum of African Art, Sylvia Williams.

Sylvia, glad to see you again.

Ms. WILLIAMS. Nice to see you.

Mr. YATES. Let's see how you did.

You didn't do too badly. You lost \$100,000 from Mr. Adams.

Ms. WILLIAMS. That's \$130,000.

Mr. YATES. Then OMB——

Ms. WILLIAMS. I beg your pardon. Yes, \$100,000.

Mr. YATES. OMB cut \$130,000?

Ms. WILLIAMS. Yes.

Mr. YATES. How badly are you hurt?

Ms. WILLIAMS. I think you have heard the litany from several Directors already, Mr. Chairman, and that is about acquisitions, and that does hurt. It does hurt when you are a new institution that has an audience that is expanding, interested, excited. That audience has expectations.

I think, personally, we are reaching a serious point in the art world as to whether museums are in the market at all. But the fact remains that in the field of African art one can still, for a little while longer, continue to move if you have some resources. The Museum does seek contributions from the private sector, but it also helps if we can keep our Federal acquisition base at a level where we can be responsive.

We need to be responsive, also, to research. The objects are the primary target for all research in art museums, and we must be able to move here and there.

Mr. YATES. Sylvia, how much are you hurt by the cuts, other than in acquisition?

Ms. WILLIAMS. It is a difficult year. I understand that. I think our other request for publications we can struggle through on where we are.

Mr. YATES. Anything else you want to tell us?

Ms. WILLIAMS. No. I think it has been a good year. We'll see how this one turns out.

Mr. YATES. Thank you, Sylvia.

ANACOSTIA MUSEUM

Anacostia Museum?

Sir, please come up to the table. I remember your testimony last year. It gave rise to a great amount of activity on the part of the Smithsonian leadership, and we touched on it a few minutes ago and it still hasn't been resolved as to the status of the Afro-American Museum. I take it that we will be getting the report in the future, so we'll just have to wait for that.

You were cut \$400,000 by Mr. Adams, and OMB cut you \$100,000 more.

Mr. KINARD. Right.

Mr. YATES. Are you hurt?

Mr. KINARD. Well, that was for acquisition. While I spoke to you last year, it was not about the National African American Museum, at all. It was about the Anacostia Museum.

Mr. YATES. But that led to the Afro-American Museum, and we talked about that. I remember what you said about Anacostia. You wanted to move it away from Anacostia, as I remember it.

Mr. KINARD. No, I wanted to move it.

Mr. YATES. What did you want to do?

Mr. KINARD. Remember we had the discussion about Poplar Point?

Mr. YATES. Yes.

Mr. KINARD. Which is in Anacostia. It was not to move it out of Anacostia.

Mr. YATES. Yes.

Mr. KINARD. Yes.

Mr. YATES. They wanted to move you to Poplar Point.

Mr. KINARD. No. I proposed that we move it to Poplar Point.

Mr. YATES. Tell me what we wanted to do, then. You are objecting to something.

Mr. KINARD. It is not that I am objecting to something. It was my testimony to you last year—

Mr. YATES. Maybe I ought to read it again.

Mr. KINARD [continuing]. Was with reference to the development of the Anacostia Museum, not a National Museum of African American History, though that entered into the subject.

Mr. YATES. Right.

Mr. KINARD. I explained to you what the problem was.

Mr. YATES. Right. You'd rather have that developed. Yes.

Mr. KINARD. I explained to you what the problem was about poor self-images and people shooting each other in the head and crime in the streets and the whole problem of collecting. It has been a situation where—

Mr. YATES. I remember now.

Mr. KINARD. The problem is that the two have been made twins—the National African American Museum and Anacostia—when it ought not be.

Mr. YATES. I agree.

Mr. KINARD. Except that we haven't sorted it out.

Mr. YATES. I'm sorry that I didn't remember it. I should have remembered, Mr. Kinard.

Here's what you said at last year's hearing, page 156.

Let me speak to you on my own behalf, sir. I look upon you in this particular instance as a court of last resort. I have been trying to develop the Anacostia Museum and have been able to bring it along to a certain point. It is a small baby, as far as I'm concerned. It was convenient. It was interesting to start something in a ghetto. A ghetto operation as it were. But a ghetto operation for 20 long years?

Indecision, and indecisiveness about the black American's role in this country—in 20 long years? I have tried to demonstrate to my colleagues by working within the system, being what you would call passive, conservative, and not wanting to anger them in any significant way, for fear they would do nothing.

I, myself, admit to you that this has been my behavioral pattern by design, for fear I would anger them and they would do nothing.

So, I'm trying to say to you—

And you were talking to me—

I've tried to show my colleagues that this museum could make leaps light years ahead. It could help a whole lot of people—black people, white people, and all people—to understand that all of us are one people. We belong to a Nation.

The black American has made significant contributions to the development of this country. It ought to be recognized in a museum that reflects the culture.

I apologize to you, Mr. Kinard, because it is directly opposite to what I thought it was. You want Anacostia developed.

Mr. KINARD. Exactly.

Mr. YATES. Okay. Where is that today?

Mr. KINARD. No place. The same place we left it at this table last year.

Mr. YATES. All right.

Mr. KINARD. As far as I am concerned.

Mr. YATES. All right. And what ought we to be doing? Should I ask the leadership on that question?

What do you want to do with Anacostia, fellows?

Mr. ADAMS. You'll find a discussion of that in the report that has been submitted.

Mr. YATES. I see that in the report. I'm reading from the Report to the House Subcommittee on Appropriations on Afro-American Museum dated January 25, 1989, page 2, Executive Summary Number Five:

The Anacostia Museum has a distinctive history and purpose, and is not a facility that should be thought of as disappearing if and when a National Museum of African American History and Culture comes into existence in central Washington.

The same committee from whom advice will be sought concerning the possible location and mandate of the latter will be asked for its advice as to the future of the Anacostia Museum.

Then you go into a discussion of it.

In other words, the development of the Anacostia Museum is on kind of a two-track development with the Afro-American Museum. Is that what you are saying?

Mr. ADAMS. I think the essential point was that, after going through the discussions that I spoke of earlier, John Kinard's insistence that this be viewed as an independent problem and not as a subsidiary aspect of a decision on the African-American Museum is a position that we are also holding. It has a special function in Anacostia, and should be maintained no matter what the time schedule is or what the decision is with regard to that national museum.

Mr. YATES. Do you have plans for Anacostia?

Mr. ADAMS. No. Clearly there will need to be detailed planning that would be part of the effort that goes forward when we have some more clear understanding of how this report has been received.

Mr. YATES. As Mr. Kinard says, another year has gone by, and we're still waiting for the development. When will we be able to tell Mr. Kinard something?

Mr. ADAMS. My hope would be that your reaction to this report would presently be made available to us, and at that point, assuming that the general direction that is outlined there is one that you think is appropriate, we would somehow find the money which, as Mr. Anderson indicated before lunch, is not, at the moment, in the 1990 budget, to move ahead with the recommendations that are contained there that looks toward the formation of that committee, looks toward the formation of a bureau that would be concerned with the new museum, looks forward to discussions beginning with the African American Museum Association, and looks forward to a number of steps that are outlined there.

Mr. YATES. Well, as one reads this report one gains the impression that not much will be changed in the Anacostia Museum. Page 11:

The likelihood is that the Anacostia Museum will continue to strengthen its ties with its community by developing innovative new programs, while closely coordinating its exhibition and research activities with those of both the National Museum of American History and a new African American bureau or museum.

And then you wind up by saying,

The essential point is that the Anacostia Museum, while quite small, maintains—and should continue to maintain—its own distinctive program and creatively growing relationship to a particular community.

That doesn't look, as I interpret it, to a significant expansion of that museum.

Mr. ADAMS. It doesn't look to major expansion. It certainly looks to some continuing expansion of functions, and maybe some expansion of size. There is nothing that pins that down in any way because I don't think we can do that at this point. We haven't—

ANACOSTIA MUSEUM MASTER PLAN

Mr. YATES. Mr. Kinard, do you have any kind of a plan?

Mr. KINARD. Well, I indicated to you in past testimony that we had, in the 1989 and 1990 budget, \$200,000 for each fiscal year for a master plan development, but that money was taken away. Nothing reasonably—

Mr. YATES. That money was taken away by OMB?

Mr. KINARD. No.

Mr. YATES. By the department?

Mr. KINARD. Right.

Mr. YATES. Okay.

Mr. KINARD. We've had no opportunity since that time to have funds made available to us to do anything like master planning. Since that time, everything has been put into an arena of a discussion of having to discuss this and talk about that. The National African-American Museum has been tied to the Anacostia Museum, which has been tied to the problem of minority employment, when all of them ought to be separate entities and dealt with separately. I don't want to be tied to the National African American Museum.

Mr. YATES. All right. I can understand that. I will keep that in mind.

I read to you from the Justification, page 149,

Future Space Development of the Museum: In May 1987, the Anacostia Museum opened its new public exhibition and education facilities at Fort Stanton Park. The expanded facility provides better visitor service, including off-street parking, and houses formerly dispersed museum programs. The Museum soon will initiate a master plan to determine the long-range space needs for its research, exhibition, and public service programs.

That's what you wanted?

Mr. KINARD. Exactly.

Mr. YATES. And how did this get into this Justification if you're not going to do it? Or are you going to do it? "The Museum soon will initiate a master plan." Are you asking for money for that master plan?

Mr. ANDERSON. I don't know the answer to that, Mr. Chairman. What page are you reading from?

Mr. YATES. Page 149.

Mr. ANDERSON. It is in the facility section of the budget?

Mr. YATES. Page 149, wherever that is.

Mr. ANDERSON. That's a question, then, that ought to be directed to Mr. Kinard with regard to his intent for the use of base resources that you already appropriated for the Anacostia Museum.

Mr. YATES. Did you submit a request for funds for your master plan this year?

Mr. KINARD. No, sir.

Mr. YATES. All right. How much does a master plan cost?

Mr. ANDERSON. The range is infinite, Mr. Chairman, depending on what—

Mr. KINARD. I'd say about \$200,000 over two fiscal years.

Mr. YATES. Depending on how you want to develop it.

Mr. KINARD. That would dictate to us how we want to develop it.

Mr. ANDERSON. A master plan could entail architectural studies, or it could entail, first, a more full description of the program offerings around which one would then want to design a building.

Mr. KINARD. Dual master planning—program and architecture.

Mr. YATES. What do the Regents want to do? Maybe that's the question. Has this been submitted to the Regents?

Mr. ANDERSON. No.

Mr. YATES. Can you submit it to the Regents?

Mr. ANDERSON. I'd be delighted to.

Mr. YATES. Apparently that sentence means something, doesn't it, or it wouldn't be in there?

Mr. ANDERSON. It is Mr. Kinard's prose. I don't know—

Mr. YATES. His prose?

Mr. ANDERSON. Yes.

Mr. YATES. But isn't it your Justification?

Mr. ANDERSON. It is the Justification for the entire Institution, made up of its constituent parts.

Mr. YATES. Is there a whole of the constituent parts?

Mr. ANDERSON. Sometimes.

Mr. YATES. I think that Mr. Adams takes responsibility for this budget, too.

Mr. ADAMS. Let me make a suggestion that—this is hazarding a guess as to what the Regents' position would be, having attended that discussion—

Mr. YATES. Has it been discussed with the Regents?

Mr. ADAMS. No, but there has been a discussion of the whole book. The point I want to go on to make is that the Regents will very likely say that the position of realism for the Institution is to get itself in place with regard to the fairly larger objective of what should be done about an African American Museum. In light of that—not that the other is subordinated to it in terms of function, but in light of that decision, to then take up the question of planning at Anacostia.

Mr. YATES. I think you ought to let the Regents know about this.

Mr. ADAMS. I agree.

Mr. YATES. See whether or not the Regents would approve that sentence that is in the budget for a master plan. We'll see what the Regents say. They have to decide.

Mr. YATES. What else do you want to tell us, Mr. Kinard.

Mr. KINARD. Only that, as I indicated to you last year, you have seemed to help us sort out this whole business of minority interest.

Mr. YATES. I'm trying to sort it out. I'm sorry that I got lost in this one. I thought that this was going to be an evolution into the Afro-American Museum, and apparently I went off on the wrong track, judging by your testimony last year. I thought we would have gotten an answer to your request. It is something that I think you have to work out with Mr. Adams and the Regents.

Mr. KINARD. I think he and I will do that.

Mr. YATES. All right.

Mr. KINARD. So I thank you for allowing me—

Mr. YATES. On the contrary. I'm sorry that I apparently misconstrued it along the line.

Mr. KINARD. Well, I'm thankful.

Mr. YATES. All right.

Mr. ANDERSON. I think it would be a mistake, Mr. Chairman, not to note the extraordinarily successful exhibition that the Anacostia Museum opened this past year, "Climbing Jacob's Ladder," which will be touring the country—starting when, John?

Mr. KINARD. The end of this year.

Mr. YATES. I think we ought to see that and mention it for the record.

CONSERVATION ANALYTICAL LABORATORY

Conservation Analytical Laboratory. Mr. Van Zelst? Please come forward.

What is a Conservation Analytical Laboratory? This is the first time you've been at the table, isn't it?

Mr. VAN ZELST. Yes, sir.

Mr. YATES. We're very glad to see you.

Let's see how you fared with Mr. Adams. You lost \$100,000 from Mr. Adams, and OMB said that was enough of a cut.

Tell me what you do?

Mr. VAN ZELST. The Conservation Analytical Laboratory—it is not difficult to describe what we are doing. It is a laboratory which strives to be a research and training center for technical studies and conservation and preservation of museum collections.

Mr. YATES. Of museum collections?

Mr. VAN ZELST. Yes. So we are working at an understanding of what happens when an object in a museum collection deteriorates and—

Mr. YATES. You're a conservator expert?

Mr. VAN ZELST. I'm a chemist. My staff consists of scientists: chemists, archaeologists, art historians, and conservators.

Mr. YATES. Now, you're the one who makes sure that the mats on the museum's etchings and drawings are made of rag paper, right?

Mr. VAN ZELST. That's really the responsibility of the museum, itself, but the museum can come to us and ask us if we can give them advice.

Mr. YATES. And do they come to you and ask for advice?

Mr. VAN ZELST. They do come to us for advice.

Mr. YATES. They do. Okay. Now, do you give them advice on the preservation of all of their objects?

Mr. VAN ZELST. In principle, yes.

Mr. YATES. Do you also do that for Mr. Kennedy's American objects—the wood, metal?

Mr. VAN ZELST. Yes.

Mr. YATES. What do you do about sculptures? What do you do about Mr. Demetrion's sculpture garden and the pollution in the air?

Mr. VAN ZELST. Mr. Demetrion has an excellent maintenance program for his sculpture garden.

Mr. YATES. There's no pitting of the sculpture?

Mr. VAN ZELST. No. It's in very good shape.

Mr. YATES. Isn't that wonderful. And what about the—oh, you have nothing to do with the National Gallery of Art?

Mr. VAN ZELST. We work very closely together with the National Gallery of Art.

Mr. YATES. What about—

Mr. VAN ZELST. We have joint programs.

Mr. YATES. Do we have to worry about pollution and sculptures in the Washington area?

Mr. VAN ZELST. Yes, sir. It is a very serious problem.

Mr. YATES. Very serious problem. How do you protect Mr. Demetrion's—should I have asked Mr. Demetrion how they protect the sculptures? I have to find out what the Park Service does.

Mr. VAN ZELST. There is a difference in approach between different institutions. At the Hirshhorn, which turns out to be a very effective approach, it is a program of fairly regular maintenance, which means that at least twice a year the sculptures are inspected, cleaned, and are provided with a protective wax coating.

Mr. YATES. How are they cleaned?

Mr. VAN ZELST. With very mild soap and water.

Mr. YATES. Just soap and water. And then they are waxed?

Mr. VAN ZELST. Waxed.

Mr. YATES. And that protects the sculptures?

Mr. VAN ZELST. If you do that regularly enough, it is fine. They are a very good example—

Mr. YATES. That's metal. What do you do with wood?

Mr. VAN ZELST. Outside wood?

Mr. YATES. Yes. Or inside wood. What do you do with wood, and African sculpture?

Mr. VAN ZELST. Inside it is not so much of a problem if the museum maintains proper climate control and the condition of the climate control is appropriate for the object. For most organic materials, if you can maintain very stable climatic conditions—around 50 percent relative humidity and 70 degrees Fahrenheit—then you should prevent most problems.

Mr. YATES. And do the museums have that?

Mr. VAN ZELST. Many—

Mr. YATES. Are you protecting George Washington's wooden teeth?

Mr. KENNEDY. If we had them, sir, we would.

Mr. YATES. You don't have them? Who has George Washington's wooden teeth? I thought you had them.

Mr. KENNEDY. No, sir. [Laughter.]

Mr. YATES. Somebody has them. He does, doesn't he?

Mr. KENNEDY. Sir, we'd like to submit a report on them. [Laughter.]

Mr. YATES. Well, are you hurt by the loss of money?

Mr. VAN ZELST. To a certain extent.

Mr. YATES. You want to hire a conservator or something?

Mr. VAN ZELST. Well, it is one of the programs which we want to start—in fact, have started. Let me explain. Our research work is largely interdisciplinary in nature, clearly, between scientists, on one side, and the people in the museum field, the humanities, on the other. That means that we are really very sensitive to developments in other areas and have to be able to react to those. This is where it happens.

For instance, if something happens in biochemistry, which has had tremendous developments in the last years which can now be translated and used and applied to the study of archaeological materials, then we have to have somewhere the versatility to be able to step in and act—after all, we are a premier institution in this field. We have to keep our reputation up and we have to investigate it.

We have to be able, in the first place, to take a good look at it and see if it is a good idea or not. But if you think it is a good idea, you have to be able to start working and playing in this field.

We are a rather young institution. CAL has only about six years now in this business. As a result, we have a young staff and young programs, and any reprogramming then becomes very difficult.

In a case like this, where we had to reprogram in order to start the biogeochemistry, which I happen to think, and my staff happens to think, is of absolutely ultimate concern to the Smithsonian and its collections, that hurts in other fields.

CLIMATE CONTROL

Mr. YATES. Are all the buildings actually air conditioned between the levels that you say are required in order to protect the wooden objects?

Mr. VAN ZELST. Not really. You don't have to necessarily air condition the whole building. In fact, in many cases it might not be such a very good idea. One of the problems that buildings have is that—

Mr. YATES. You put the objects in glass cases or something?

Mr. VAN ZELST. You could put them in protective cases.

Mr. YATES. Roger, did you want to say something?

Mr. KENNEDY. Just that one of the things that has been in your budget every year, under the R & R budget, is this HVAC business, and it has to do with this question. How do you take care of the heating and air conditioning and all that stuff? Some of it works out in your public display areas where you keep things at a proper temperature, and some of what is buried in that big budget has to do with what happens behind the scenes, too.

Mr. YATES. Right. The Committee has insisted that we try to preserve the art objects. May the Committee accept the position by the Smithsonian that they are being protected by proper air conditioning?

Mr. ADAMS. There are some whole buildings that have no climate control. The Arts and Industries building, for example, cannot be heated in a controlled manner.

Mr. YATES. What kind of objects do you have in Arts and Industries?

Mr. ADAMS. We have the remains of the Philadelphia 1876 Centennial Exhibition, and those objects, fortunately, are not of a character that presents great problem within that area.

Mr. YATES. Are those the only objects in the building?

Mr. ADAMS. I believe so. If there are other objects, they also have that character.

PHOTOGRAPHIC COLLECTIONS

Mr. YATES. Don't you have a photographic collection in that building?

Mr. ADAMS. No.

Mr. YATES. I thought you used to have it in that building.

Mr. ANDERSON. Our central Office of Photographic Services used to have a color lab, if you will, in that building, but it was moved.

Mr. YATES. Roger?

Mr. KENNEDY. Mr. Chairman, what may be in your memory is the discussion we had some years back about the condition of the photographic archives. There are a number of them. Some of them were in Silver Hill under asbestos and very bad climatic conditions. That is also one of the things that has been in your budget recurrently.

Mr. YATES. Have those bad conditions been corrected?

Mr. KENNEDY. They are being corrected. There is still a lot of material that is important that is still under asbestos, still improperly cared for, and we deal with it every year with the repair budget that comes in.

Mr. YATES. When the Library of Congress came in to another subcommittee for its appropriation—another subcommittee of which I am a Member—it brought photographic negatives that were in almost a total state of deterioration, that had crumbled and crinkled. Do you have collections of negatives?

Mr. KENNEDY. Yes, sir.

Mr. YATES. And what are you doing to protect those?

Mr. KENNEDY. I'm sure that other museums, as well as ours, have that, but perhaps I should concede to an expert in the subject.

Mr. VAN ZELST. The problem with these photographic materials, Mr. Chairman, is that the conservation of photographic materials is a very difficult issue at this moment because we really don't know enough yet about the properties of the materials. This is one of the reasons why our laboratory, two years ago, started a new program specifically researching the property of photographic materials and the long-term deterioration mechanisms.

Mr. YATES. Yes, but they are going ahead with preserving them. The Library of Congress—

Mr. VAN ZELST. They're not really treating them. What people are doing at this moment is mainly re-housing the collections—putting them in better storage envelopes. A large part of the problem

is that photographic materials have been stored in very inadequate storage envelopes and conditions.

Mr. YATES. What are they doing with nitrate?

Mr. VAN ZELST. At this moment, put it in a very cold vault and—

Mr. YATES. They're converting it some way.

Mr. VAN ZELST. Yes. But you cannot save cellulose nitrate film.

Mr. YATES. Well, they're trying to put it on some other kind of film.

Mr. VAN ZELST. Yes. Copy it, sir.

Mr. KENNEDY. Excuse me. There are two programs here: One is reproduction, and the other is conservation of those that can be conserved over a little longer time. But you are correct, that these are essentially perishable commodities, and they will go, so you have got to reproduce them, which is what I think the Library of Congress is talking to you about. It is also what the AFI is probably talking to others about. We, also, have a lot of documentary film of that sort where the problem is identical. You've got to reproduce what you own before it disappears, and then try to keep it from disappearing as long as you can.

DETERIORATION OF BOOKS AND PAPER MATERIAL

Mr. YATES. We have just given \$8 million to the National Endowment for the Humanities in FY 1989 to be the lead agency in attacking the problem of book and paper brittling deterioration and trying to preserve the nation's memory. The Library of Congress also is one of the leaders in that.

It occurs to me the Smithsonian must have enormous quantities of paper and paper objects that it wants to save. What are you doing to save the paper objects? Are your paper objects brittling?

Mr. ADAMS. They are, indeed.

Mr. YATES. What are you doing about it?

Mr. ADAMS. You might hear from Vija Karklins, director of the library, to hear what the conditions are and what the activities are.

The problem is accentuated by the fact that many of these are rare monographic materials that are under intensive use, particularly in the Natural History Museum.

Mr. YATES. Come on up, Ms. Karklins.

PRESERVATION/REPLACEMENT PROGRAM

Are you part of the restoration initiative? Tell us what you are doing to save the paper objects.

Ms. KARKLINS. Unfortunately, not that much. We should have been into our third year of the replacement program by 1990.

Mr. YATES. Replacement? What do you mean by "replacement"?

Ms. KARKLINS. By "replacement" I mean that it would be a combination of efforts of microfilming or miniaturization of and purchasing reprints of those books that cannot be saved.

Mr. YATES. How many such books do you have?

Ms. KARKLINS. Probably about 300,000; however, not all of those need to be replaced.

Mr. YATES. How many of them need to be replaced?

Ms. KARKLINS. I would say that we have a total of about 980,000 books or volumes. Of those, 30 percent are in an acidic state, and,

therefore, they would have to be either microfilmed by us—and they would only address those items which are unique to the Smithsonian. The others would have to be purchased from those institutions that are also doing microfilming programs.

Mr. YATES. Are you doing that?

Ms. KARKLINS. We haven't had the funding for that.

Mr. YATES. Have you asked for it?

Ms. KARKLINS. Yes, we have.

Mr. YATES. And who knocked it out?

Ms. KARKLINS. I think it didn't get very far.

Mr. YATES. Don't tell me Mr. Adams knocked it out.

Ms. KARKLINS. Unfortunately, yes. We asked for a very modest amount. We only asked for \$40,000.

Mr. YATES. How can you do your job with only \$40,000? Don't you think this is a problem? What are you going to do about it?

Mr. ANDERSON. One thing that maybe could be set straight for the record concerning the cuts that have been attributed to Mr. Adams is that the other end of Pennsylvania Avenue gives us a planning figure each year, and in order to preserve some semblance of credibility with the Office of Management and Budget, we feel obliged to present them a series of requests that is within ball park distance of honoring the kind of planning estimate they have provided the Institution.

In other words, even though we are not part of the Administration, we're governed by the Administration.

Mr. YATES. Why don't you ask us for it?

Mr. ANDERSON. We are in the process of doing that at each hearing, Mr. Chairman.

Mr. YATES. But I don't remember you coming in and asking me for money to save her books or your books or your papers.

Mr. ANDERSON. Deacidification has been on the table since Paul Perrot's time, going back 15 years.

Mr. YATES. How much money did you ask for? Did we knock it out?

Mr. ANDERSON. We'd be happy to go back and reconstruct the record. I'm sure you haven't, Mr. Chairman.

Mr. YATES. I know we haven't. I think it is of extreme importance. That's why we're putting so much money into the Humanities. We've got a concerted national effort going on of all the libraries in the country. Are you a part of that?

Ms. KARKLINS. No, we are not, because we are not eligible for the NEH funding.

Mr. YATES. It isn't a question of NEH funding or getting grants; it is a question of working with them in the whole process. The Library of Congress has got a new plant being constructed down in Texas or Louisiana which will deacidify books.

Ms. KARKLINS. Yes. That's different. The 30 percent that I mentioned are beyond that state.

Mr. YATES. These are ones that have to be——

Ms. KARKLINS. Replaced. We have our own book conservator. We have a book conservation laboratory, and the conservator does cooperate and collaborate closely with the Library of Congress, and it would be a part of that, but that would not take care of the brittle books.

Mr. YATES. The brittle books have to be——

Ms. KARKLINS. They are beyond the deacidification stage.

Mr. YATES. That's right, but you have to take pictures of them.

Ms. KARKLINS. That's right.

Mr. YATES. Put them on film.

Ms. KARKLINS. That's right.

Mr. YATES. Well, are you doing it?

Ms. KARKLINS. No. We don't have any funding for this. We do——

Mr. YATES. How important are the books.

Ms. KARKLINS. We do a very modest project with a commercial publisher, so we would be doing about 2,000 volumes of international expositions. We do supply the——

Mr. YATES. Over how long a period?

Ms. KARKLINS. Well, this will take about two years. We are well into it.

Mr. YATES. Two thousand out of 300,000?

Ms. KARKLINS. That's right.

Mr. YATES. How much money do you need?

Mr. KENNEDY. May I make a comment?

Mr. YATES. One thing before you do. Ms. Karklins, are you in charge of all the Smithsonian libraries?

Ms. KARKLINS. Yes. Temporarily I am. I am the Acting Director.

Mr. YATES. The question is: He has a library at Natural History, and Roger has a library at American History, and Alan has a——

Mr. FERN. We're independent.

Mr. YATES. You're independent. But there are all these libraries, and all of you are in the same situation, are you not?

Ms. KARKLINS. We have 14 branch libraries for which we are responsible including Mr. Talbot's and Mr. Kennedy's libraries.

Mr. YATES. But how important are your books?

Ms. KARKLINS. Very important. Extremely important.

Mr. YATES. Well, then why don't we take care of them? Why hasn't somebody asked for the money that you need? Why don't you give us a program?

LIBRARY AUTOMATION

Ms. KARKLINS. As important as this is and as painful as this is, when my turn came, I was going to speak about another subject which is even more painful.

Mr. YATES. What's that?

Ms. KARKLINS. That's automation.

Mr. YATES. Automation of what?

Ms. KARKLINS. Automation of all of our operations. We have abandoned the quill pen and the catalog cards, and we have closed the card catalog. Our only access to our collections is on-line. That is how we catalog. That is how researchers——

Mr. YATES. What does "on-line" mean?

Ms. KARKLINS. On-line means you can go to a terminal and push a few keys and access the records of——

Mr. YATES. Isn't that all you need?

Ms. KARKLINS. That's not all. We have it, but we can't pay for it. In 1990, we will be running out of money.

Mr. YATES. You lease them?

Ms. KARKLINS. No.

Mr. YATES. What do you mean you can't pay for it?

Ms. KARKLINS. We have bought it, but it is run by the Institution. It is an internal cost center. Through 1989, the end of this year, we have an agreement with the Office of Information Resource Management for an unrealistically modest price. As of 1990, we will have to pay the full cost, which includes operators—

Mr. YATES. Full cost of what?

Ms. KARKLINS. Of operating the system, which includes operators and—

Mr. YATES. How much money is involved?

Ms. KARKLINS. In 1990, we would need, for the libraries, alone, \$400,000 to pay for it.

Mr. YATES. Is there money in the budget for it?

Ms. KARKLINS. No.

Mr. YATES. Why didn't you put the money in the budget?

Ms. KARKLINS. In 1990 we asked for an unrealistic figure of \$150,000. It didn't go forward.

Mr. YATES. What do you want us to do on this Committee? We ought to be doing something, shouldn't we?

[The information follows:]

AUTOMATION

The Smithsonian Institution Libraries requires \$314,000 to continue the use of the Smithsonian Institution Bibliographic Information System (SIBIS). An additional \$26,000 is required for non-library users of SIBIS. The Libraries use over 76% of the system and its reliance on SIBIS has passed the point of no return. Without SIBIS, or a similar system at similar cost, the Libraries and other major SIBIS users could no longer provide access to the collections in their care.

SIBIS has been operational since 1984. Initially planned and designed for library operations, the system was wisely implemented to include archives and special research files, such as the Inventory of American Sculpture. The most important function of the system is to provide access to researchers within and outside the Institution to a data base of almost 444,000 records, representing as many books, documents and objects in the Institution's collections. In addition the system is used for cataloging, indexing, inventory and circulation control, on-line requests for new acquisitions, journal renewals, fund control, on-line communication with accounting, and generation of management reports. The system is managed and operated by the Institution's Office of Information Resource Management (OIRM) as a cost center. The previously agreed upon payment scale by members to the cost center no longer meets the increased costs of the successful and rapidly growing system, and is due to expire by the end of FY '89. The Institution has purchased the hardware on which the system runs; ongoing expenses include payments to the vendor for maintenance of hardware and software, more storage and more disk drives for increased number of records, more terminals for additional users and functions, and computer operators and programmers to meet additional demands. To cover SIBIS costs for the Libraries and other users, a \$340,000 addition to the base, with a 15% per annum increase for system enhancements and expansion is requested.

BOOK DETERIORATION

Mr. ANDERSON. I think we have heard Ms. Karklins say that, from her professional point of view, the more urgent of the two, if one had to pick, is the computer system, because that is the sole access to the information base.

Mr. YATES. That's fine. You push a button and it says you've got the book and you look for the book and it's falling apart. [Laughter.]

Ms. KARKLINS. But if—

Mr. YATES. Why is that more important?

Mr. ANDERSON. I'm sure she would also tell you that there are various stages of acid problems with the volumes. Those that are the most critical—

Mr. YATES. There's no question about that. There are some that are more deteriorated than others. But she says there are 300,000 volumes in that condition out of 900,000—in varying conditions of deterioration.

Mr. ADAMS. But it isn't as if all these were unique volumes. These are volumes which can be reconstructed from microfilms in other libraries, as well as here.

Mr. YATES. That's the point. If there is no threat, if you're telling me there is no threat to your volumes, then we'll end the subject right there.

Mr. ADAMS. I'm not saying that.

Mr. YATES. She is telling me there is a threat to your volumes. You are now saying that some of these volumes are not important.

Mr. ADAMS. I'm saying that there is a threat, but one can't go from those aggregate figures to the full extent of the threat.

Let me enter in, if I might, at this point into some aggregates that may be meaningful here. The total volume of requests from all of the bureaus that came to the Smithsonian for increases in the budget amounted to some \$27 million. The target figure that the OMB gave us to shoot for was \$2 million. We submitted to OMB, having had to cut to get within the ball park, as Mr. Anderson said, some \$12 million of requests, and out of that came, from OMB, as a submission to the Congress, \$3 million worth. We got \$1 million extra by having gone back to OMB.

Mr. YATES. But now, before the Appropriations Committee—you are not before OMB.

Mr. ADAMS. I understand.

CONSERVATION OF PAPER DOCUMENTS AND BOOKS

Mr. YATES. The question is: How important is it to this country's best interest that you save the Smithsonian's papers and books? I don't know about your papers. She is talking about books. What about your papers and documents?

What about you, Roger? Haven't you got literally hundreds of documents?

Mr. KENNEDY. Mr. Chairman, let me say in candor to you that I think you are getting not a false picture, but a somewhat distorted picture.

Mr. YATES. Give me the true picture.

Mr. KENNEDY. I'll try.

In all of these bureaus, everybody has got paper of one sort or another. Some of it is books, some of it is graphic art. We have 25,000 prints in our Graphic Arts Division.

Every one of these bureaus, within its base that you give us every year, has some money for conservation. Much of that may be regarded as fairly primitive, but we do our own conservation work, including work on paper.

Mr. YATES. Are you saying then, Roger, that these are not threatened?

Mr. KENNEDY. No, sir. It's just that I want to be sure, in the first place, that you understand that a chunk of the money you are already giving us goes to paper conservation. That's the first point.

In the second place, all of us have libraries, some of which are deteriorating very slowly over time and can get tended in time. Some of that material is either genuine, rare books that are being cared for as rare books and very special, that's one category. And then there is a batch of other material which is not being tended under special circumstances, though it will ultimately deteriorate, of course, and stuff that you're already taking care of out of your regular budget.

Mr. YATES. Are you saying, Roger, that the only papers that are very important to preserve are the rare books?

Mr. KENNEDY. No. I'm not saying that.

Mr. YATES. You are putting the rare books in a class and saying you take care of those?

Mr. KENNEDY. Not quite that either, I'm afraid. It's that in many of the bureaus, there is a sort of rare book vault, so to speak, with some of it accessible to the public, some of it not. That's another category in reasonably decent shape.

Ms. KARLINS. If I may interject, the rare books were generally published before 1830 when the paper became acidic, so they are not—

Mr. KENNEDY. Put that category aside. But it exists. Now you have the whole question of what you are going to do for ordinary library books, some of which the Secretary has suggested overlap with others.

Mr. YATES. But wait a minute, Roger. When you use the term "ordinary library books" are you diminishing the problem?

Mr. KENNEDY. No, sir. In years past—

Mr. YATES. Who selects them? This is the argument I had with you before.

Mr. KENNEDY. They had grave difficulty understanding the necessity for the American literary classics, into which you put money 12 years ago, and they now understand that they exist.

Mr. YATES. Who designates the books that should be preserved? Do you have somebody designating the books that should be preserved?

Mr. KENNEDY. In every subdiscipline in scholarship there will be people qualified to make those kinds of recommendations.

Mr. YATES. Is that being done?

Mr. KENNEDY. I think so.

Mr. YATES. Is it being done in the Museum of American History?

Mr. KENNEDY. Yes, but in response to your earlier inquiry, what hasn't happened yet is that we have not, in the aggregate, come to you with a request for paper conservation, which would include books, I should think, and that's what Mr. Anderson said he is going to give you.

Mr. YATES. When are you going to give it to me?

Mr. ANDERSON. As soon as we can marshal it together, Mr. Chairman.

Mr. YATES. Well, that's 1995?

Mr. ANDERSON. No. I should think it would be before the end of next month.

CONDITION OF LIBRARY BOOKS

Mr. ADAMS. Mr. Chairman?

Mr. YATES. Mr. Adams.

Mr. ADAMS. It seems to me that the analogy that may be useful here is one that you are familiar with—deferred maintenance. You complain a lot about our roofs, and we do, indeed, then go back and put extra money into them and fix them up and so on, but the roofs are continuously deteriorating. The decisions that are being made with regard to the maintenance of major facilities are decisions that are always conditioned by the other budgetary pressures that exist.

The effect of deferred maintenance is that, in fact, you go along with some slight further destruction by postponing it for a year, but you are making those decisions under budgetary constraints.

Mr. YATES. I don't find that analogy appropriate, Mr. Adams. I think you can live without a roof, but it would be terrible not to have some of these books preserved.

Mr. ADAMS. But the books don't disappear like that in a year. Deferred maintenance—

Mr. YATES. You should see some of the books the Library of Congress brought in. They would just crumble. You couldn't even take pictures of them.

I don't know what the state of your books is. Do you know what the state of your books is?

Mr. ADAMS. I have certainly seen some that were badly in need of—

Mr. YATES. Sure. Of course you have.

Ms. KARKLINS. We have done a study and we have tested our books, and the 30 percent brittleness is accurate.

Mr. YATES. How many are totally destroyed?

Ms. KARKLINS. We don't know. But I have seen many that are so brittle that they are beyond use or restoration.

Mr. YATES. Any important books?

Ms. KARKLINS. I'm sure there are many important books.

DETERMINATION OF ITEMS FOR PRESERVATION

Mr. YATES. Should there be some committee that decides which books you ought to save?

Alan Fern?

Mr. FERN. Mr. Chairman, there is a committee which is commissioned on preservation under the—

Mr. YATES. I know.

Mr. FERN. They are just convening a—

Mr. YATES. I know. They are the ones we are working with on that.

Mr. FERN. There are convening groups of people in the history of art and in history, which is just going on now, so that a national forum where we will know that there are unconserved titles or unconserved collections will soon be possible under Pat Battin's direction.

Mr. YATES. Well, it won't soon be possible, Alan. That's the initiative that I was talking about. They are organized. Where does that leave the Smithsonian?

Mr. FERN. It is a question of the Smithsonian's priorities about what they must conserve. It can best be dealt with—the Smithsonian knows where they have items which are, so to speak, unique in the United States, and where those objects are otherwise being taken care of, so that we have to be able to know—we're not just talking rare books. I have—

Mr. YATES. I know. The rare books are off to the side.

Mr. FERN. Anything where we may have some objects that are not duplicated in other American research collections are obviously going to be the first priority for us. But we are not going to be able to know that until the group has made a little progress and used the materials the Library of Congress already has—the national Register of Microform Masters, and so on—which will help us to know where things are besides the copy we may have.

Mr. YATES. Besides the copy you have.

Mr. FERN. Yes.

Mr. YATES. The Pat Battin group is depending upon librarians in their special libraries to tell them what books they have decided to preserve.

Ms. KARKLINS. And we have access to those records. For instance, we can access the Research Libraries Group data base, and they indicate which books are put aside for being microfilmed.

We are also familiar with the microfilm indices which we search to avoid duplicating any effort.

Mr. YATES. That's fine, but how? Do you have people who are designating which ones are going to be microfilmed and which ones are—

Ms. KARKLINS. Once the program is set in motion—

Mr. YATES. But you don't have any money to start in motion, do you?

Ms. KARKLINS. That's exactly my point.

Mr. ADAMS. Mr. Chairman, in addition to librarians and administrators, there are users of books, and users of books, when they come as Smithsonian employees, are not cheap. They complain. If there are books that are in particularly bad shape, those books are the ones about which something is done on an ad hoc basis. It isn't that there is nothing that happens in this area. There is, after all, another constituency that is vocal and interested in the preservation of these things.

So it isn't a problem that is just being left completely in limbo during this period.

REQUEST FOR TECHNICIAN AND FILMING

Mr. YATES. The impression I have is that it is in limbo because the money that she wants, she can't get, so she can't start on that. You haven't asked for it. You haven't asked us for it yet. I'm trying to find out how much money you want in order to take care of your problem. I don't know whether you have analyzed the problem clearly.

Ms. KARKLINS. We can't start that quickly. In 1990, all we asked for is \$40,000.

Mr. YATES. What would you use the \$40,000 for?

Ms. KARKLINS. I would get a technician and spend the rest of the money for filming.

Mr. YATES. Who would decide which books you would save?

Ms. KARKLINS. We would decide it jointly with the curators and the researchers. We work very closely, both for selection and for preservation as well as for—

Mr. YATES. And how many of the books would you do that for? All 300,000 volumes?

Ms. KARKLINS. That would be \$23,000. It wouldn't do very many books at about \$150 per volume. But you have to start some place.

AMERICAN HISTORY MUSEUM'S PAPER COLLECTION

Mr. EVELYN. I'm Douglas Evelyn, Roger Kennedy's deputy. Our conservation laboratory has surveyed our paper collections—including the Warsaw Collection, the Business Americana Advertising Collections—and has estimated the cost of properly housing them and doing additional conservation treatment. We were asked—

Mr. YATES. Wait a minute. Please come up to the table so we will be better able to record you.

Mr. EVELYN. We were asked by the Senate in fiscal year 1988 what the difficulty was with our collections. Our Conservation Lab has surveyed the collection of photographs, prints, advertising materials, and has begun a re-housing program with resources available.

In response to the Senate's question about the physical care of our collections, we estimated that to treat and rehouse all collections that we have surveyed, over a period of years it would total \$12 million.

I don't know whether other bureaus were asked that same question at the same time, but I think we have done work in the individual museums to survey our paper holdings, and that we ought to be able to put together some type of answer.

Mr. YATES. That was done for the American History Museum. Shouldn't there be a master plan for all your museums?

Mr. ANDERSON. Sounds like a very good idea, Mr. Chairman.

FUNDING OF CONSERVATION/PRESERVATION PROGRAM

Mr. YATES. What do you want to do with Ms. Karklins? Do you want to give her some money?

Mr. ANDERSON. Her request is on the table, I believe.

Mr. ADAMS. Let's say that we support that request.

Mr. YATES. That's \$40,000, isn't it, Ms. Karklins?

Ms. KARKLINS. For 1990. That would make it—

Mr. YATES. That won't do very much. Don't you need some money to even organize this thing? American History has started.

Roger, do you know how much money will you spend for this? Do you know? Should I ask your deputy?

Mr. KENNEDY. I think what you've got there, sir, is a report to a question which is a list of things and an estimate. It is not a description of money actually spent. It says this is what it would cost you to do it. It doesn't say this is what we did.

Mr. YATES. And what have you done?

Mr. KENNEDY. I think that to give you an honest response to that inquiry would mean that you'd have to squeeze out of each of the innumerable divisions in a place like ours how much they spent on the paper portion of their conservation, and that would be some number.

Mr. YATES. You have 12?

Mr. EVELYN. Maximum, 25. That kind of money—\$25,000 to \$50,000.

Mr. YATES. To do what?

Mr. EVELYN. For re-housing and paper conservation.

Mr. YATES. Would this take care of your problem?

Mr. KENNEDY. No, no.

Mr. YATES. What would take care of your problem?

Mr. KENNEDY. That is what he's going to tell you, I think.

SERIALS AND SCIENTIFIC JOURNALS

Mr. ROBINSON. As a person who uses the library as a scientist, this is just one aspect of the huge problem that we have in every bureau. The fact is that not only do we need to preserve these rare books, but we have not got enough money to buy the serials and scientific journals to keep up-to-date in the research field. Absolutely nowhere in the Smithsonian is there enough money for that.

In each bureau you turn to, you will get this story because clearly knowledge is escalating at an incredible rate, and the budget is not matching it for anybody.

Mr. YATES. Can I ask each of the museum directors, then, to put a piece in the record as to what their needs are in this respect?

Mr. ADAMS. Are you also asking for the cost of new serials and materials that are not being purchased?

Mr. YATES. Sure.

[The information follows:]

BOOKS AND JOURNALS

SIL requests \$206,000 in fiscal year 1990 to counter severe inflation in the cost of scholarly journals and books and to restore SIL's purchasing power to the fiscal year 1985 level. External economic factors, including a 42 percent decline in the American dollar since 1985, have forced inflation in subscription rates for scholarly journals to rise far higher than the percentage for other consumer goods. The average subscription price for SIL journals rose from \$107 in 1985 to \$155 in 1988, a 45 percent increase. Subscriptions for many scientific journals have more than doubled. For example, the "Journal of Experimental Marine Biology and Ecology" cost \$760 in 1986; by 1988, the subscription price had reached \$1,247, an increase of 64 percent. "Earth and Planetary Science Letters," which cost \$451 in 1986, rose 58 percent to \$935 in fiscal year 1988.

Inflation also affects the purchases of scholarly books. Academic/scholarly books are more expensive than collegiate or trade publications because of their specialized nature and small audiences. The Library Materials Price Index Committee of the American Library Association tracks book pricing trends and has noted that academic book prices have risen between 8 and 10 percent annually since 1986, a far higher rate than in many other goods and services.

SIL has made significant efforts to reduce costs. In September 1987, SIL staff joined with SI curators and researchers in an indepth review of journal subscriptions to identify nonessential subscriptions. As a result, SIL cancelled journals costing \$39,000, which created gaps in the collections that are expensive and virtually impossible to fill, even by interlibrary loan. Since rising costs have made it difficult to support renewals of existing subscriptions, SIL was forced to implement a freeze on new subscriptions. This is causing hardships, especially for newly hired staff who

are pursuing new fields of study in subjects, such as molecular biology, for which SIL has not already developed collections.

NITRATE MOVIE FILM AT THE AIR AND SPACE MUSEUM

Mr. HARWIT. Mr. Chairman, our problem is that we have 800,000 feet of the nitrate film that was talked about before which preserves irreplaceable historical material on early aviation, and we have estimated the cost of transferring those at \$500,000. I was wondering whether, if you are asking for library things, this, which is very much—

Mr. YATES. How important is it?

Mr. HARWIT. I think it is very important because it actually shows things that we can only, in the museum, picture in a static form. This is actually performing in flight, and you see the erratic flights of many of the early crew members, and you get an idea of how successful or how unsuccessful they were.

Mr. YATES. Are there copies of these somewhere?

Mr. HARWIT. No. These are original Movietone pictures of events that took place in the early—

Mr. YATES. People who have testified before our committee have indicated that the nitrate film not only was deteriorating, but it may even explode. So should you be preserving that?

Mr. HARWIT. We'd like to. And if you are asking for our needs as far as libraries are concerned, I was wondering whether we could throw it in.

Mr. YATES. You can throw that in. [Laughter.]

[CLERK'S NOTE.—A separate funding request for nitrate film preservation has not been provided to the Committee. However, the Smithsonian submits the following information:]

CAMPAIGN TO SAVE HISTORIC NEWSFILMS UNDERWAY AT NATIONAL AIR AND SPACE MUSEUM

A campaign to save more than 800,000 feet of historic aviation newsreel footage from the 1920s has been launched by the Smithsonian's National Air and Space Museum and the University of South Carolina in Columbia.

The footage (outtakes not used in the final piece—about 90 percent of the film taken) was shot by cameramen of the Fox Film Co., later Fox-Movietone News, from 1919-34. Most of the silent film from 1919-27, and much of the later sound film, had never been out of its original can until recently. Much of the footage is unduplicated anywhere.

Currently, the film is on highly volatile, 35mm nitrate stock, subject to deterioration. (Until 1950, black-and-white newsreel film used a base of cellulose nitrate.) After the aviation footage is transferred to safety film, museum officials plan to incorporate the footage into exhibitions and, along with USC, will make a videotape version available to the public.

Fox News was started in 1919, providing theatergoers with a brief, pictorial summary of the news. By 1922, the company boasted 1,008 cameramen stationed worldwide. Production centers were established in London, Paris, Munich and Sydney. Twice a week until late 1963, newsreels of approximately 10 minutes in length were produced and distributed. The outtakes were placed in cans and stored in vaults.

From 1919-27, Fox News footage was silent. In May 1927, beginning with Lindbergh's record-breaking New York-to-Paris flight, Fox News unveiled its Movietone optical sound system and changed its name to Fox-Movietone News.

When Fox News/Movietone News cameramen filmed an event, they submitted a "dope sheet," containing a detailed memo of the subject, conditions and amount of film used and a scene-by-scene analysis. News clippings, programs and press releases were included as part of the report. The "dope sheets" will be available for researchers used as well.

For more information call or write: Patricia A. Woodside, National Air and Space Museum, Washington, D.C. 20560.

Mr. YATES. It occurs to me that even though you have already come through OMB, I don't know whether you have ever told OMB about that problem.

Mr. HARWIT. We have actually tried to raise that money from private donors, and have found that donors are not that interested in preserving. They are much more interested in using their funds to support exhibitions.

Mr. YATES. I think the Museum Directors ought to put into their record the preservation needs.

[The "Interim Plan for Preservation of Brittle Books and Documentary Research Resources" follows:]

INTERIM PLAN FOR PRESERVATION OF BRITTLE BOOKS
AND DOCUMENTARY RESEARCH RESOURCES

INTRODUCTION

The Smithsonian is a national institution committed to preserving the legacy of our diverse American culture. With the generous support of the Congress, the Institution has sought for many years to conserve and preserve the man-made artifacts and natural specimens it holds in public trust. These familiar objects, often exhibited in the national museums, represent only a portion of the cultural inheritance passed down from one generation to the next. Documents are also a significant part of this national heritage. Along with objects, documents form the basis of our knowledge of civilization, and deepen our understanding of the world.

In addition to being a national museum, the Smithsonian is a national research center and, as such, its object collections are both supported and complemented by the documentary research resources it maintains. These resources include books and serial publications, paper documents and photographs, millions of feet of motion picture film, many thousands of hours of sound and video recordings, and myriad paper-based ephemera such as theater tickets, advertising copy, broadsides, and popular sheet music. These materials are inherently vulnerable in that their chemical disintegration is accelerated by handling, exposure to ultraviolet light, fluctuations in temperature and humidity, infestations of mold and vermin, and gaseous--or particulate--pollution. In addition, most books printed after 1850 were printed, and many documents written and typed, on highly acidic paper that decomposes more rapidly than the high rag-content paper used before that time.

Only within the last decade has there been widespread national recognition of the silent crisis represented by the deterioration of these works on paper, and the inestimable loss to humankind that will occur unless a large-scale preservation effort is launched and accomplished.

For some years, the Institution has employed both paper and book conservators in restoring and stabilizing works of art on paper, rare books, and paper artifacts, so that these can be studied and exhibited safely. In addition, the Smithsonian's Conservation Analytical Laboratory (CAL) has several programs aimed at obtaining further improvements in the way that the Smithsonian and other museums worldwide care for their paper collections. The scientists and conservators engaged in the relevant research programs either seek to deepen our understanding of the processes involved in the deterioration of

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paper--and the parameters influencing these processes--or aim at developing new and improved treatment technologies for instable and deteriorated paper objects.

In addition to generating new knowledge which influences the way in which conservators in the Smithsonian bureaus, and elsewhere, care for the paper artifacts in the collections, CAL also provides active technical assistance to the Smithsonian museums.

The degree to which any given document, or groups of documents (i.e., collection), must be protected from the dangers that accelerate their deterioration varies according to their material composition, as well as their intrinsic historical value as an original item of primary evidence for research and exhibition. The present condition of these materials at the Smithsonian differs widely, as do the circumstances under which they are stored, exhibited, and handled. Before any document is displayed, it is carefully cleaned and conserved, and is often encapsulated in mylar, to then be exhibited only in light from which ultra-violet radiation has been filtered.

Facilities reports of exhibition spaces provide assurance that, to the extent possible, temperature, humidity, and ambient air quality conditions do not pose hazards that might imperil the items. Historically, most documentary materials at the Smithsonian have not been stored in exhibition quality space since their intrinsic value was often thought to be less than that of three-dimensional objects and specimens. Thus, these materials have frequently been subject to less than optimal environmental conditions. As the Smithsonian develops its future programs in this area, increased attention will be paid to providing improved storage conditions for these research resources. Since no adequate and cost-effective solutions have emerged for the long-term preservation of photographs, films, and other documentary media, the most suitable, proximate solution is to place them in improved storage envelopes; including when appropriate a cold storage environment.

At the hearing before the Subcommittee, numerous witnesses testified to the variety of materials currently held by the Institution, and the important distinctions that must be made in preserving the different categories. This following plan addresses two major areas in which we feel Smithsonian collections are most threatened, as well as those in which the Institution can make progress through existing preservation needs. These two critical areas are brittle books and archival materials. We will not ignore preservation needs in other media, but believe, that these other needs, on balance, require less urgent attention than those mentioned previously.

Treatment of Brittle Books

In order to highlight the problem of brittle books, the Commission on Preservation and Access of the Council of Library Resources (a distinguished group of academics, librarians, and cultural administrators) has sponsored a number of activities which seek to involve the scholarly community and the public in examining and publicizing the plight of brittle books. As the Subcommittee knows, the Library of Congress, the National Archives and Records Administration, the National Endowment for the Humanities, and other entities are engaged in similar efforts focusing on critical research resources. The Smithsonian, in its concern for the artifacts of material culture, specimens of the natural world, and works of art, is aware of the danger posed to its own considerable documentary research resources, and is fully committed to joining its partners nationwide in this enterprise.

In 1985-86, the Smithsonian Institution Libraries (SIL) conducted a survey of the condition of its collections as part of a year-long preservation planning program. The survey indicated that at least 30% of its books are brittle, particularly those books in SIL's nationally distinguished, and comprehensive, collection of works in the field of natural history. These figures are comparable to those resulting from similar surveys conducted by other research libraries in recent years.

In FY90, the SIL, using the new funding proposed below, would embark on a long-range program to preserve the brittle books within all Smithsonian collections that are of continuing value to the support of Smithsonian research programs, particularly those that are unique or of special significance to the Smithsonian, and for which SIL is a known national repository. The SIL will concentrate on those books relating to natural history, aviation history, and the history of science and technology, but will not confine itself to these areas alone. It will also focus on volumes concerned with other subjects that are unique or of special significance to the Institution.

The SIL program will be well placed within, and coordinated with, other national preservation planning efforts. Currently little attention is being directed to preserving materials in the sciences, and virtually none to the field of natural history. Stanford University has initiated a modest effort toward preserving history of science materials, concentrating largely on the physical sciences. The University of Chicago is planning to preserve its history of technology collection, with emphasis on building and household arts, industrial arts, and domestic science. SIL staff have been in touch with these institutions to ensure that SIL's plans are compatible with, rather than duplicative of, these projects. Commercial micropublishers have

produced film collections of trade catalogues, principally in the decorative arts and in agriculture, but there are many subjects which have been left untouched. All other preservation efforts within the past decade have focused almost entirely on humanities materials, since the primary federal funding agent to date has been the National Endowment for the Humanities.

The Commission on Preservation and Access has served as a catalyst for projects to assist institutions. The Commission has established scholarly advisory committees in history, art, and philosophy to look at scholarly use of research resources, but has not, as of yet, begun an examination of the sciences. A 1987 report to the Commission by Martin M. Cummings, former Director of the National Library of Medicine, states that approximately one-third of all recent federally-funded research articles are in the field of life sciences. Only in the disciplines of medicine and agriculture is there systematic preservation attention given to the life sciences. The Institution, through the SIL, can begin to fill a significant gap and make an important contribution to this national preservation effort.

The SIL is well-positioned to carry out a Brittle Books Program. Its Book Conservation Laboratory is capable of training technicians in the necessary procedures required for handling brittle books, and in deacidifying, encapsulating, repairing, and rebinding those that must be retained in their original form. Microfilming will preserve the information content of books, but cannot adequately reproduce illustrations or color plates needed for research or exhibition. Accordingly, these items must be stabilized and retained in the collections in their original form.

For FY90 an amount of \$162,600 will be required to begin this program. The principal method of preservation will be microfilming. While this filming will be contracted, SIL requires staff to identify, gather, search, and prepare volumes for filming, and to assure quality control of the microfilms produced. SIL staff would also need to search national data bases and consult with appropriate organizations to ensure their work remains coordinated with efforts made by other research libraries. With an initial four positions deemed critical for this type of work, SIL estimates that, in the first year, it can process 4,000 items of the 300,000 volumes estimated to need eventual remedial attention. In FY91, the addition of one position and \$50,000 will allow the program to process 6,000 volumes a year thereafter. This program will ensure the preservation of all brittle books in Smithsonian

collections, including those from units not formally a part of the SIL system.

The Smithsonian believes that its Libraries are well-positioned to launch this new program. IN FY88, SIL redirected a position to hire a preservation administrator, who is establishing policies and procedures for a preservation microfilming program. SIL also contracted with a commercial micropublisher to microfilm a small collection of publications. This project is currently serving as a pilot to test procedures for handling brittle materials. Thus far, approximately 300 volumes have been filmed satisfactorily.

Documentary Research Resources

There are significant differences between books and other forms of documentary research resources. For instance, there is a widespread lack of uniformity in material composition from one document to another, and among pages within the same collection folder, to say nothing of the variations throughout a collection or within hundreds of collections. Each of several thousand pages within a major collection requires idiosyncratic examination, analysis, and treatment, and mass treatments are inappropriate. Furthermore, photographic processes, particularly those before the 1960s, offer such a wide range of chemical variations that few experts recognize them all, and even fewer are able to prescribe remedies for deterioration. To date, no magnetic tape or disk recording medium has convinced preservation experts that it can last indefinitely (longer than one hundred years), and the variety of playback mechanisms that are already lost places many in jeopardy. Therefore, the Institution believes that a separate but complementary approach must be taken for materials other than books.

Given the magnitude of the task, the Institution must apply a "triage" model to non-book documentary research resources. As we encounter them in the normal course of research and exhibition, we will continue to identify items requiring critical conservation in order to restore their durability. We will also proceed, as we have in the past, to conserve such items through the application of existing resources but will also solicit the Subcommittee's support for increased resources in these areas over the next decade. Comparable surveys of documentary resources by organizations such as the National Archives and Records Administration indicate that imminent danger to collections falls to less than 1% of holdings. While we do not have a comparable figure, we suspect the situation is similar within the Institution. Thus, the challenge to the Smithsonian

is to undertake intermediate programs to keep the impending danger to a minimum through adequate advanced maintenance. What is required for this proper maintenance is: 1) appropriate housing (folders, sleeves, boxes, etc.) and; 2) stable environmental conditions so that, once preservation and conservation are accomplished, they are not immediately undone by conditions that accelerate inherent deterioration. Meeting the first of these objectives requires large-scale application of staff and materials; meeting the second demands expensive laboratory-class buildings, not the low-cost alternative of warehousing.

Accordingly, we must work with the Subcommittee to identify specific opportunities, in the short- and long-term, for improvement of both storage and housing conditions, as well as providing off-site storage facilities of a quality comparable to that which we now afford objects.

Further, we should concentrate, in the short run, on planning and funding projects designed to identify, organize, and preserve significant whole collections of Smithsonian documentary research resources, in order to make them more widely available to the scholarly community and lay public. Longer-term efforts should focus on providing a dedicated central facility for a master archives and libraries building, with proper HVAC systems and technical services for cleaning and repairing documents; microfilming; copying photographs, motion picture films, and magnetic tapes; and employing new technologies, such as optical scanning and optical digital storage and retrieval of document images.

Our immediate request in support of these non-book research resources is for a further \$151,000 in order to hire a preservation planning administrator and three technicians in FY90. The administrator and technicians will be responsible for assessing the needs of more than a dozen archives, and document collection centers; analyzing the results of the assessments, and preparing specific preservation plans for each archive and document collection center. The Administrator will report to the Assistant Secretary for Research, and will be responsible for developing a long-range plan and identifying priority projects for future budget initiatives, in a fashion similar to that performed by the Smithsonian Registrar for object collections. The scope of these individuals' duties will be sufficiently broad to ensure access to, and interaction with, all appropriate internal and external organizations concerned with preserving documentary research resources. Working with support offices of the Institution, such as the Office of Information Resource Management, and the Office of Design and Construction, the

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preservation planning administrator will assure better coordination in meeting challenges which require the active participation of these units.

A second immediate step in this process is to identify critical needs for immediate conservation and microform copying of documents through a competitive peer review process, linked to national professional expertise and concerns outside the Smithsonian. A model already exists within the National Endowment for the Humanities through their Research Resources Program. Given the scope and the significance of documentary research resources in the Smithsonian, a similar internal competitive grant program should be developed. Proposals will be considered from all units of the Institution that house significant documentary resources. The aim of such a program should be to support projects which facilitate research in the arts, sciences, and history through the organization and preservation of significant Smithsonian archival collections. The Institution would convene a panel of distinguished scholars, archivists, and conservators from the outside to evaluate these proposals competitively. A centralized and competitive pool of moneys would ensure that issues of conservation and preservation of documentary research resources are examined, and priorities set, across the Institution. The external committee would serve not only as an expert appraiser of project proposals, but would also offer a central Institutional mechanism for strategic distribution of scarce resources. In addition, the external panel, drawn from other research institutions, would help place these internal Smithsonian proposals in the larger national context.

The initial level of this further support for the Research Resources Program is requested at \$400,000. This would allow enough flexibility to provide multi-year grants for particularly complex projects, and leave sufficient resources for those which can be completed within the budget year. Using the expertise of the proposed preservation planning administrator and technicians, in addition to previous collections assessments, immediate use could be made of the entire sum.

The Smithsonian recognizes that its problems in this area are a reflection of a broader national issue, and believes that it is vital to develop a program that is linked to other programs. With our own internal preservation planning staff, and the presence of an external advisory committee, we should ensure that, over time, both the Institution's and the Nation's needs are considered and met. The challenge confronting us is one with no fixed deadline, and with a continually growing and evolving quantity and variety of materials needing attention.

Preservation is not a discrete project, but an organic function. Older materials, once preserved, must be monitored and re-treated periodically in order to maintain their durability. Living with deteriorating materials will be with us throughout the course of time. We can never eliminate the problem, but we can minimize it, and we can strive for better ways in which to make our significant documents endure for future generations. It is important that we make this start if we are to fulfill our stewardship responsibilities. With the support of the Subcommittee, and the cooperation of other national institutions, the Smithsonian is prepared to meet this challenge.

The Smithsonian is approaching the challenge of preservation of its brittle books and documentary research resources as a long-term, on-going assignment, requiring several phased approaches. It is our belief that a moderate growth program will allow us to analyze our needs thoroughly, and plan the most effective use of the resources made available. SIL's program provides a major initiative on the issue of brittle books, and is one that can be launched successfully within the funding outlined. If supported by the Subcommittee, the further proposal to hire a preservation planning administrator and staff to analyze documentary research resources will allow the Institution to present comprehensive plans of needs in future years. At the same time, the creation of a Smithsonian Research Resources Program will permit the Institution to make a modest start in preserving these important but long neglected collections.

We are confident that with the support of the Subcommittee, significant progress can be made in these important areas.

Attachment OneBUDGET SUMMARYBrittle Books Program:

Personnel Compensation	\$ 68,000
Personnel Benefits	21,000
Equipment	23,600
Supplies, Materials, Contracts, and Other Costs	<u>50,000</u>
	\$ <u>162,600</u>

Documentary Research Resources Program:

Personnel Compensation	\$ 114,000
Personnel Benefits	37,000
Equipment	100,000
Supplies, Materials, Contrasts, and Other Costs	<u>300,000</u>
	\$ <u>551,000</u>

GRAND TOTAL.....	\$ <u>713,600</u>
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PRESERVATION PROGRAMS

Mr. YATES. It seems to me that we are launched, in other agencies, upon the preservation of materials that are deemed necessary to protect the memory of civilization. I don't know whether or not the Smithsonian has any of that material. I assume it has, and if it has, you ought to be organizing it. You ought to be organizing for its preservation, and that's what I'm trying to do.

Mr. ANDERSON. The analogy that comes to mind, Mr. Chairman, is that of medical triage. There are decisions being made every day—

Mr. YATES. Which shall live and which shall die. That's right.

Mr. ANDERSON. Which need attention first, I think, is the rule of thumb at question.

Mr. YATES. That's right. How do you propose to do it?

Mr. ANDERSON. It is being coped with every day in each of our bureaus and offices. There are discretionary monies available to all of our Directors that they apply towards whatever seems to be the most pressing need of the moment.

Mr. YATES. How many Directors have applied it to this purpose?

Mr. ANDERSON. That's a very good question.

Mr. YATES. Any Directors want to say they have applied any of this money for that purpose?

Mr. KENNEDY. We have.

Mr. YATES. You have? How much money have you applied?

Mr. KENNEDY. About \$50,000 each year.

RARE BOOK STORAGE

Mr. TALBOT. Mr. Chairman, can I comment?

Mr. YATES. If Roger will yield to you.

Mr. KENNEDY. I'll yield.

Mr. TALBOT. Thank you. I just wanted to pull back the rare books, because I was asked by Ms. Karklins to find space in the Natural History Building for a new storage area for rare books which was properly air conditioned and humidity-controlled, and I can't do it. There is no space.

We have said that we would try. We had a look. We can't do it. There is literally no space.

So we have said that the new building which we want to put inside the ground floor will count for space for—

Mr. YATES. Is what you're saying, then, that Ms. Karklins' rare books have no homes where they are being properly taken care of?

Mr. TALBOT. That's what she told us.

Ms. KARKLINS. Those that are in the Natural History Building, yes, they are dispersed throughout the departments and they are not secure, nor are they under environmental control.

Mr. YATES. Then what you are saying, Ms. Karklins, is that the rare books are not being properly taken care of.

Ms. KARKLINS. In that particular museum. In other museums we do have rare book facilities, but those are full. Also, we do not want to move the Natural History rare books from the building because they are not just show pieces, but they are used for everyday research.

Mr. YATES. What do you want to do?

Mr. ANDERSON. I'd like to present you with a report, Mr. Chairman.

Mr. YATES. I want a plan. I'd rather have a plan than a report.

Mr. ANDERSON. A report with a plan in it.

Mr. YATES. All right. Rare books, I assumed, were being taken care of. But that's not the fact, now. At least in Natural History rare books are not being taken care of.

Mr. ANDERSON. There is some useful, interesting tension between the information content—

Mr. YATES. I think you ought to tell me the full truth here.

Mr. ANDERSON [continuing]. The information content of the book, on the one hand, and its existence as an object, in its own right, on the other hand. I think the former has tended to predominate in the opinion that people have had toward rare books in the Natural History Museum. They are important because of their utility for everyday research, as Ms. Karklins was saying.

Mr. YATES. Does that qualify as a rare book? I thought a rare book was one that is no longer in print or available.

Ms. KARKLINS. That is true. But it is also used for research, and they are rare for several reasons, because they are unique and often very expensive.

REQUEST FOR PRESERVATION AND CONSERVATION PLAN

Mr. YATES. I think we've spent enough time on this. I don't think the Smithsonian is doing nearly enough. We want to help you preserve your collection, and this is a very important part of it—paper objects and the other parts of it.

How long do you want to prepare a plan? Do you want 30 days?

Mr. ANDERSON. I think that's probably the minimum required.

Mr. YATES. I think it is, too. How much time do you want? Thirty-five days? [Laughter.]

Mr. ANDERSON. If you have a deadline, sir, we'd be happy to meet it.

Mr. YATES. I think we ought to—if you give us a plan, I would think we would want to know what the costs are, and I think we would want to get started on that. So prepare something with your Museum Directors as to what they consider to be very important. They're going to have to make a survey the same way they made an inventory on what has to be saved.

LOCATION OF CURATORIAL DEPARTMENT LIBRARIES

Mr. ADAMS. Mr. Chairman, recognizing that the waters are muddy, I do think there is one further element to be introduced, and that concerns Natural History. The manner in which the Library is fragmented in Natural History is, from the point of view, certainly, of any librarian, insane.

As was pointed out, it is not in climate-controlled or secure positions. It is divided up by department.

The point I want to make is that this reflects the decisions that have been made in practice by the conservators and the curators who use those books that those books are so important to have at hand that they would not let them go.

I tried very hard for a whole year to work toward a central library where these conditions would be possible, recognizing that this placed them at greater risk, none of the departments were willing to see their books migrate to a properly-controlled facility, the kind that obviously is necessary.

Mr. YATES. Why don't you be a dictator and tell them to do it?

Mr. ADAMS. That's easy to say and hard to do. The books are, in fact, serving as the tools of identification in most of the systematics that is going on.

Mr. YATES. How many such books are there? How many books would you not be willing to put into a central library?

Mr. TALBOT. If I could say something, the way these departments work is that an individual department would try to get all books that relate to insects, for example, and all periodicals. If it covers more than one discipline, then those go to the central area. This is tradition in museums. It makes for efficient working research. I would fight tooth and nail, as a Museum Director, not to be dictated to.

Mr. YATES. Not to be dictated to? Why don't you take pictures of the books then and move the original book to your central library?

Ms. KARKLINS. Colored plates are very important for research. They sometimes need to be next to the microscope.

Mr. ADAMS. This is not a simple matter.

PRESERVATION AND CONSERVATION PLAN

Mr. YATES. Come up with a plan.

Mr. Regula?

Mr. REGULA. It seems to me if we have competent people in each of these agencies that they are in a position to make some judgments as to what is worth preserving, like when I clean out the office. I think to formulate a plan and specify books is an expensive operation with manpower and other things, and maybe——

Mr. YATES. How else are you going to do it?

Mr. REGULA. Maybe a better way would be to have a budgeted amount to the department——

Mr. YATES. That's what I'm trying to find out.

Mr. REGULA. I understand. But give them an opportunity to reflect on the preservation of books on a daily basis as they work with these, and they can determine which books are in need of preservation and are worthy of preservation.

Mr. YATES. The plan that I think he is going to do is to ask the Museum Directors what they want to do about saving these things and how much it will cost, which is exactly what you want them to do.

Mr. REGULA. I think it ought to be macro and not micro; otherwise, it is an enormous task if you start——

Mr. ADAMS. A bottomup approach rather than the top-down. I do think that is a more appropriate way to work. Make the money available at the point where the users and the librarians immediately in charge can see what the needs are.

Mr. YATES. This is true, but the money request comes from the top, not the bottom.

Mr. ADAMS. This makes it possible to have a one-page plan and not a——

Mr. YATES. Come on. It's impossible to get a one-page plan.

Mr. REGULA. I think it ought to be macro in its nature rather than for them to get into a lot of detail, because it seems to me you work with books on a daily basis, and as you are confronted with a need, that should be addressed. But to try to go through thousands of books and make a judgment to the point of formulating——

Mr. YATES. That goes against what they are trying to do in our Humanities. They are trying to find out what books ought to be saved.

Ms. KARKLINS. We can do samples and come up with a percentage.

Mr. YATES. At any rate, come up with the best plan that you can.

Mr. ADAMS. One last word, Mr. Chairman?

Mr. YATES. I hope.

Mr. ADAMS. For the moment. It should be recognized that the Smithsonian's library is not a resource comparable to the Library of Congress. It is comparable, in fact, in terms of the number of volumes, to the Kent State Library.

Mr. YATES. To what?

Mr. ADAMS. It is comparable, in terms of the number of volumes, to the Library of Kent State University in Ohio. It is obviously very strong in the areas of individual departments, major concerns, but not a library that represents one of the great treasurehouses of the western world.

Mr. YATES. If you don't want to save the books, that's all right.

Mr. ADAMS. I didn't say we didn't want to save them.

Mr. YATES. What about your papers and documents?

Mr. ADAMS. We want to do it selectively.

Mr. YATES. Office of Exhibits Central? Oh, Ms. Fort isn't here.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

Smithsonian Institution Traveling Exhibition Service, Ms. Anna Cohn.

Hello, Ms. Cohn.

Ms. COHN. Hello, Mr. Chairman.

Mr. YATES. Anna, how did you make out? You started with \$1,285,000, and that was reduced by almost \$600,000 by Mr. Adams and OMB, down to \$708,000. Are you hurting?

Ms. COHN. We are hurting.

Mr. YATES. Where are you hurting, and how much money do you need?

Ms. COHN. I want to direct comments to two areas very briefly. The first is in direct response to your question, "Where are you hurting?" in relation to the 1990 budget. The answer to that question is: The \$202,000 that you see as having been turned down by OMB was a critical infusion of funds to enable SITES to reduce the rental fee costs of exhibitions that it circulates to the Nation, particularly to smaller, economically fragile institutions.

We cannot, for example, circulate the Anacostia Museum's traveling version of "Climbing Jacob's Ladder" to a small museum in a

rural community and expect that museum to be able to fund fees in excess of \$1,000, in addition to shipping costs.

That \$202,000 was a commitment internally on the part of the Institution to ensure that, at least for a body of critical SITES exhibitions addressing under-represented audiences and minority concerns, subjects, and special interests, we would have the opportunity to reduce participation fees and, therefore, increase the total number of institutions benefiting from the program. That is where we are hurting in the 1990 budget.

But we are having difficulties in areas far-exceeding the 1990 budget, and these areas are difficult to identify, so I bring them up here, if I may, for the record, because they pertain far more than the 1990 budget to SITES' overall well-being.

My primary concern for SITES, and I think it is shared by my colleagues throughout the Institution, is that we have had a highly ill-defined and long-standing budgetary arrangement that has changed abruptly every ten years.

SITES initially, beginning in 1952, was an income-producing agency. It had, at best, a limited number of very good years in which it not only made money but, indeed, made a profit over and above its expenses.

Mr. YATES. Are you like the Smithsonian restaurants?

Ms. COHN. I wish. [Laughter.]

I wish we were like the Smithsonian restaurants.

Mr. YATES. I mean in being a money-maker for the Smithsonian?

Ms. COHN. No. We are not a profit-making enterprise in that sense, but we are set up to break even. Budgetarily we are set up to have, at year's end, a match between the expenses we incurred to produce exhibitions and the income we took in from renting those expeditions to break even. That is not occurring. It is not occurring for factors that are too complex to lay out here.

This is a serious problem now—particularly as we encounter an internal mandate at the Smithsonian, and one that you have supported tenaciously, which is that we reach parts of the Nation that no other group can reach, the under-represented and smaller museums.

Mr. YATES. How many places did you send exhibits last year?

Ms. COHN. Last year we sent exhibits to more than 600 places of a very diverse character—museums covering all subject matter, from the arts to the humanities to the natural sciences—to community centers, schools, office buildings, headquarters buildings, parks, zoos, aquaria, university galleries.

Mr. YATES. How do you get your requests? Do you get them from the museums? Do museums tell you what they want you to send out and you then help them?

Ms. COHN. We get them in several ways. We receive direct requests from within the Smithsonian, either from Smithsonian management or from the individual bureau directors, requesting SITES' participation in circulating, at large, a program that has been generated for Washington viewing, or we receive requests directly from museums across the Nation and from individuals interested in promoting a specific exhibition idea.

All of those ideas, be they internal, or be they coming from the outside, are put before a fairly stringent, and I think increasingly

strong, review process that involves looking at an exhibit from a financial point of view, from a thematic point of view, from a travel-capability point of view, and other criteria, and it is on that basis that we select what will tour the country and globe.

Mr. YATES. Do you lose objects when you send them out?

Ms. COHN. Have we ever lost an object, Linda?

Ms. BELL. Yes, we have.

Ms. COHN. Have we lost more than one?

Ms. BELL. Not lost, but damage has occurred.

Mr. YATES. You mean in shipment, or at the—

Ms. BELL. In shipment or in handling at the individual museums.

Mr. YATES. Are your objects insured?

Ms. COHN. Yes.

Mr. YATES. That's good. So there is no loss if they are insured.

Ms. COHN. No.

Mr. YATES. Well, so in order to send "Jacob's Ladder" you need \$200,000?

Ms. COHN. We need \$200,000 in order to send "Jacob's Ladder" for \$963 in places across the country, but we wouldn't mind \$1.6 million in the near future in order to establish for ourselves a baseline operating budget.

Mr. YATES. What does that mean?

Ms. COHN. A baseline operating budget means that we will not need, as an agency, to recover primarily from rental fees the costs that we need to expend in order to produce exhibitions.

Currently the bulk of our operating budget comes from funds we need to raise or from the rental fee income generated when we send an exhibition on the road.

Mr. YATES. Well, put some of that in the record.

Ms. COHN. I will.

[The information follows:]

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

SITES was established in 1952 as a self-supporting, Smithsonian outreach program. Its initial exhibitions — large-scale, artifact-intensive shows — were funded by a short-term, State Department subsidy for international cultural exchange, and by rental fees charged to host museums. The State Department subsidy ended in 1962.

SITES' ability to support its own operating expenses began to erode as early as 1965. Already by that time, the cost of producing exhibitions and related products — educational and publicity materials, publications, and information about artifact documentation, packing, shipping, installation, security, and international loan procedures — demanded a level of financial support that no longer could be sustained by rental fee income alone.

Over time, increasingly large subsidies from within the Smithsonian were needed to help SITES meet its expenses from year-to-year. Only during the 1976 Bicentennial — when a unique combination of thematic focus and much-increased Federal support enabled SITES to double its staff and program offerings — did the organization experience a temporary resurgence as a self-supporting, administrative operation.

SITES also emerged from 1976 with a new public profile. Easy-to-install poster panel shows had come to replace object-based, international exhibitions, and audiences in smaller museums and university galleries, libraries, schools and community centers supplanted SITES' original constituencies in major regional art museums. SITES exhibitions now were being viewed by three four million people in all fifty states.

The treadmill that led to SITES' current deficit actually began with SITES' success during the Bicentennial. In effect, only with a large number of exhibitions (some 200 shows filled the program schedule at the end of 1976) could SITES maintain its much-enlarged staff, yet only with a large staff could SITES continue to produce new program offerings.

Compounding this treadmill were SITES' efforts during most of the 1980's — a time when private museums were in fact more capable than ever of organizing and traveling their own "blockbuster" shows — to revive its original role in circulating high-cost, large-scale international exhibitions. The very programs that seemed to excite corporate interest, generating the corporate dollars SITES now needed to support its ever-growing operating costs, undercut the organization's ability to respond to the needs of smaller institutions that SITES had served fully during the Bicentennial year.

Now, after years of unchecked growth, the Smithsonian's administration has mandated SITES to stabilize its administrative operations, and to develop new and innovative strategies for reaching segments of the museum community that have not been able to afford its programs.

How well SITES succeeds at this challenge will depend in part on its self-discipline in implementing alternative financial systems and program formats. Ultimately, however, SITES' financial stability and its viability as a key Smithsonian outreach service will depend on the affordability of its exhibitions.

So long as SITES must recover the majority of its operating costs from exhibition rental fees, it will continue to lose audiences and its competitive edge within the museum community. A dramatic infusion of Federal funds -- funds that annually would cover at least that portion of SITES' operating expenses detailed on the attached sheets -- would help SITES to maintain and increase its services to the five million or more viewers that share in the Smithsonian's resources through exhibitions on view beyond the National Mall.

DETAIL OF \$1.6 MILLION REQUEST FOR INCREASE TO FEDERAL BASE, SITES

1. Salaries and Benefits: \$829,000

For full-time, permanent staff positions currently paid for by participation fees charged to exhibitors. The most critical, yet most expensive aspect of SITES total operations. Without a federal subsidy of these positions, this \$829,000 cost must be passed on to exhibitors or requested, through outside fundraising, in the form of prohibitive overhead rates and indirect costs. The salaries and benefits included here cover personnel in SITES' exhibition and publications marketing divisions, and SITES' public affairs staff, exhibition coordinators, registrars, publications editing and production staff, education specialists, clerical and administrative assistance.

2. Shipping: \$100,000

For increases in exhibition shipping costs due to unanticipated bookings at international locations, or to the extension of especially popular exhibition tours. Also intended to subsidize exhibition shipping costs to economically fragile institutions that cannot afford full cost of shipment, and to help defray unanticipated increases in shipping costs that occur when size of exhibition is enlarged, or fragility of objects is determined during final artifact selection process (a factor unknown at the early planning/budgeting stage of exhibitions, which takes place 4-6 years in advance of beginning of tour).

3. Publications Production: \$50,000

For subvention to provide, at reduced prices or at no cost, catalogues and other publications accompanying tours of Smithsonian collections, or exhibitions involving minority audiences or themes that address critical public concerns. Exhibitors targeted to receive reduced-price publications would include minority institutions, special audiences and economically fragile museums.

4. Exhibition Production: \$30,000

For emergency replacement of damaged crates, or for re-crating of damaged artifacts that need to be refurbished or returned to lenders. Also includes replacement of text, title and artifact labels, damaged frames, mats, and panels, and reinforcement of display props and models that wear during long-term tours.

5. Insurance: \$21,000

To cover lenders' increases of object values caused by fluctuations in art market after an exhibition's rental fee and tour itinerary have been established.

6. Travel: \$75,000

For travel to potential exhibit sites to provide technical assistance in proper exhibition techniques and exhibition standards involving climate control, security, storage; also to educate exhibitors in education techniques and interpretive possibilities for local audiences; to facilitate participation of exhibitors during the early stages of exhibition concept and design. Also to allow SITES to participate in professional conferences to disseminate information on programs and exhibition methods (American Association of Museums annual and regional meetings; African-American Museum Association; regional State Humanities Councils conferences; professional training seminars). In addition, would provide emergency travel for registrars and/or conservators when problems arise during exhibition tours.

7. Shipping (non-artifact): \$50,000

For shipping educational brochures and other materials, including advance publicity and photographs, text panels and labels. Includes overnight mail services for education and interpretive materials at mid-tour, when exhibition information often is added or concept of presentation changed in response to audience and exhibitor needs. Also includes emergency deliveries of exhibition contracts, letters of agreement, loan forms, and catalogue manuscripts to authors.

8. Research and Development: \$75,000

For site visits by staff to evaluate new exhibition possibilities that might be suitable for touring by SITES; also for travel and per diem charged by consultant scholars working with SITES on new exhibition ideas and formats. Would enable SITES staff to investigate and research non-object exhibition possibilities such as film services, and the circulation of software programs that would allow museums on the field to mount their own exhibitions using materials from their collections.

9. Promotional Publications: \$80,000

For production of annual catalogue covering SITES' exhibitions and publications, and of SITES' quarterly newsletter. Also to produce guides and instructional publications offering technical assistance on how to develop exhibition concepts, mount exhibitions, create regional outreach activities, involve local communities in traveling exhibition projects, train teachers in subject matter areas related to Smithsonian shows, etc.

10. Printing: \$15,000

For editing and printing of SITES publications that are not to be sold. Includes handout brochures, exhibition checklists, gallery guides, registration and installation guidelines, public relations information, educational program information, and a limited number of complimentary copies of exhibition catalogues that are distributed to exhibitors.

11. Rent, Communications, Storage: \$25,000

For rental of Smithsonian's mainframe computer services, SITES' local area computer network service and overall computer maintenance. Also includes emergency storage of exhibition hardware and objects when tours or shipments are interrupted (by lengthy intervals between showings when host museums are located in same geographical region, cancelled bookings, inclement weather delaying shipments, etc.)

12. Equipment/Computers: \$95,000

For specialized software required to schedule and track exhibitions, monitor publications marketing and inventory, upgrade and/or add to computer hardware and cabling.

13. Supplies: \$75,000

For office supplies, printed stationery, computer cartridges, disks, and paper, shipping boxes and tubes for publication shipping.

14. Fulfillment: \$20,000

Subvention for publications storage and mailing services for SITES publications that are not to be sold. Includes increased number of handout brochures, gallery guides, promotional publications announcing SITES exhibitions, and catalogues provided to economically disadvantaged exhibitors.

15. Staff Training: \$10,000

Continuing professional education for SITES staff in computer software and usage, personnel management, survey research methods.

16. Photography: \$50,000

For photographs and transparencies used by exhibitors' to promote SITES exhibitions locally, and in SITES' fundraising proposals and object condition reports.

Mr. YATES. Mr. Regula?

Mr. REGULA. No questions.

NEEDS IN RESEARCH BUREAUS

Mr. YATES. Now we have the Assistant Secretary for Research, Mr. Hoffmann.

Do you have any requests, Mr. Hoffmann?

Let's see how you were treated. You lost about \$200,000 in your immediate office.

Mr. HOFFMANN. It depends on what set of figures you are looking at, of course.

Mr. YATES. I'll take yours. Which do you want?

Mr. HOFFMANN. By that, what I mean is that much of what has been said so far directly impinges upon the research operations of the Institution. In fact, I had planned, prior to being preempted, to raise the issue of the library and of the concerns with the shortfall on the automated cataloging and information retrieval system, concerns on preservation, and other items like that, but we certainly have exhausted that topic.

Mr. YATES. Why were you going to do that?

Mr. HOFFMANN. Because the libraries are a part of my responsibility.

Mr. YATES. Do you know how much you need? I asked Mr. Anderson for a plan. Need I ask for one, or do you already know?

Mr. HOFFMANN. What we need to do is to gather together the needs of the various library units throughout the Institution, most of which, though not all, are a part of the SI library system, and bundle these together into a comprehensive plan.

The request that you saw in the budget for \$40,000 to begin to augment the microfilming was only for the central library operation; however, there is a much broader issue there of both microfilming and other kinds of paper conservation activities throughout the other bureaus.

So I would prefer to cooperate in developing this plan with Mr. Anderson.

Mr. YATES. I think you ought to put in the record everything you want to tell us.

SMITHSONIAN INSTITUTION ARCHIVES

Mr. HOFFMANN. In that connection, another unit under my supervision is the Smithsonian Institution Archives. It, obviously, also has—and it has not yet been mentioned—major concerns. One of these is simply referred to as “archives modernization.”

The Smithsonian Institution Archives, because of the growth of the Institution itself, the growth of other institutions with which we correspond, is faced by an increasing deluge of paper simply in terms of the institutional documents, themselves.

Here, too, in order to keep pace, to preserve the essential records of the Institution, we need to pay more attention to issues such as appropriate housing of the documents, appropriate cataloging so they can be retrieved, and, finally, certain questions of preservation of materials.

COLUMBUS QUINCENTENARY

All of these are time-critical, in a sense. There is one that is under my office that is also time-critical, and that is the Institution's Columbus Quincentenary Programs. These too are decentralized in the sense that most of our bureaus have their own quincentenary planning. They intend to produce various kinds of exhibitions, symposia, scholarly works, public education programs.

If we are to accomplish a credible and valuable quincentenary program, we must be able to continue the planning we have begun. We can't postpone the celebration, obviously; therefore, this, it seems to me, is something that is quite critical to the Institution.

Mr. YATES. The minimal figure I have under that, is that you need something like \$1,123,000 for that purpose.

Mr. HOFFMANN. That is the amount that we requested for the Fiscal Year 1990 budget, which was then struck from the budget.

There is also, in the central Office of Quincentenary Programs, a request for \$127,000 to allow for the coordination of all of these bureau activities.

TROPICAL RESEARCH INSTITUTE'S NEEDS

The only other thing that I think I would point to here, in terms of cuts from our budget, that is going to have a major, immediate impact upon our activity, is the loss of funds to equip and staff the new laboratories at the Tropical Research Institute. Those——

Mr. YATES. Is this under "Major Scientific Instrumentation"?

Mr. HOFFMANN. No this is under the "Tropical Research Institute's Scientific Equipment Replacement and Acquisition Program, and Barro Colorado Island Laboratory Staffing and Equipment." It is the second of those two items that is of particular importance.

As Dr. Rubinoff mentioned, the construction is on schedule down there. We will have fine, new laboratory buildings, but we will lack the funds with which to equip and staff them, so that, for the time being, they will be nowhere at capacity in terms of the ability of scholars to do research, which——

Mr. YATES. Please put into the record a statement reflecting your needs.

Mr. HOFFMANN. Okay.

Mr. YATES. Thank you.

[The information follows:]

NEEDS FOR THE RESEARCH AREAS

Listed below are the highest priorities for the research area. All of these items were cut by OMB and their restitution is critical. I have presented these items in priority order. In addition, I reiterate my support for the Quincentenary Program and the necessity to have a \$1.123 million increase for this line item in addition to a \$127,000 increase for the Central Office of Quincentenary Planning.

		<u>FTE</u>	<u>AMOUNT</u> <u>(\$000s)</u>
1.	STRI Staffing and equipping a new research laboratory on Barro Colorado Island.	2	250
2.	NZP Staffing and exhibit and plant materials to support current programs and expansion of new biopark theme.	4	191
3.	SERC Security and maintenance staff for protection and care of various research sites/facilities at Edgewater.	2	58
4.	OAS/R Diving Officer to enforce scientific diving policies, regulations, and procedures for SI bureaus.	1	70
5.	SIL To purchase essential research journals and books whose costs are increasing at rates beyond normal inflation.	0	150
6.	SIA To provide programming services and staff training to automate survey reports, stack management, accessions, and reference services.	2	80
		<hr/>	<hr/>
		11	799

NATIONAL ZOOLOGICAL PARK

Mr. YATES. Now we have the National Zoological Park.

It has been a long time, Mr. Robinson.

Mr. ROBINSON. It reminds me of that poem about the last lesson on Friday afternoon and the restlessness of the class, and the fact that most of the people are falling asleep by this stage.

Mr. YATES. But they will be awake when they hear your testimony. [Laughter.]

Mr. ROBINSON. I'd like to draw attention to the fact, if I may beg your indulgence, that it is the year of our 100th birthday, and usually on one's birthday a little tolerance is shown about what one is allowed to say, and I hope you'll—

Mr. YATES. Yes. Should we sing "Happy Birthday to You"?

Mr. ROBINSON. Would that be a precedent, sir?

Mr. YATES. It would be a precedent for zoos.

Mr. ROBINSON. It makes us the oldest existing bureau of the Smithsonian Institution, and I think perhaps the noblest, with that prejudice on my part.

If I could speak very quickly just to say what I wanted to say—

Mr. YATES. Have you been hurt by the budget so far?

Mr. ROBINSON. Yes, but I wanted to make an altruistic statement before I made a selfish one, if I may.

Mr. YATES. Please do.

Mr. ROBINSON. And then perhaps call upon your altruism.

I think, looking back over 100 years—because this is the end of the first 100 years—the really significant thing is the rate at which progress has taken place since we were founded in 1889. So many things have happened, and so much accumulation—scientific and technological progress.

When we were founded, there were about 40 automobiles in the area, there was no radio, humankind had not flown, we hadn't reached the planets, hadn't killed 30 million people in wars, hadn't split the atom, hadn't discovered the genetic code—any of these.

And now we are making progress at an incredibly accelerating rate, and what is going to happen in the next 100 years is really, in a sense, the responsibility for us, at the Smithsonian, to preserve for posterity. It is an enormous responsibility. There are going to be more aspects of our history in the next 100 years than we could conceive now, just as in 1889 we couldn't conceive what happened over the last 100 years.

Mr. YATES. I agree.

Mr. ROBINSON. That's going to put an enormous responsibility on this Committee to fund the Smithsonian so that it can meet those challenges.

Mr. YATES. I have trouble dragging requests for money out of Mr. Anderson. [Laughter.]

Mr. ROBINSON. And it seems to me when you were talking earlier about the preservation of information and paper and books, there is another kind of information that is perhaps even more significant, and that is the information in the genetic code of that red panda that we brought this morning, which is absolutely irreplaceable.

If you destroyed the original of that Gauguin, which is incredibly more luminous than that reproduction of it—

Mr. YATES. That's the best we could do. [Laughter.]

Mr. ROBINSON. We don't seem to be able to make good reproductions. But somebody could recreate it almost as well as the original, but nobody could recreate that panda if it were destroyed forever.

Mr. YATES. We take that same position with Fish and Wildlife Service. We're trying to get them to ask for more money for the endangered species program. We're having a little difficulty there. Go ahead.

Mr. ROBINSON. In a sense, that is a plea for what we are doing and what Ira at the Tropical Research Institute is doing. What he talked about this morning, I think, is probably the most exciting scientific thing I have heard in a long time, other planets notwithstanding, because it seems to me that we learn that in the tropics there are the possibilities for all kinds of things that could benefit humankind—the effects of the caterpillar on the tropical plant produced a compound which is a potential cure for AIDS and for my overweight condition and all kinds of things like that. That really puts an emphasis on what we at the Smithsonian are uniquely able to do for the living world and for consciousness about the plight of the tropics and things like that.

So that's the altruistic pitch.

The selfish pitch is that when our budget was cut this year, we lost some positions for scientists, including a comparative physiologist, and it so happens that we have a brilliant comparative physiologist on our staff at the moment as a student working with us who is about to be seduced by a zoo in Chicago to leave the National Zoo—

Mr. YATES. You're letting me down.

Mr. ROBINSON [continuing]. And join them. If you put back that money into our budget we can save him from Chicago. [Laughter.]

Mr. YATES. Brookfield or Lincoln Park Zoo?

Mr. ROBINSON. I shouldn't mention that for the record, sir, but I will tell you off the record.

Mr. YATES. What monetary requests do you have, less altruistically.

Mr. ROBINSON. One of the things that was cut from our construction budget was the landscaping for our new central walkway through the zoo, which would transform it from being just a pedestrian walk into an area planted with thousands of interesting and exciting plants to create the ambience of a very beautiful setting.

If some of that money could be restored, we would be extraordinarily pleased.

But we'd really like to keep our physiologist.

Mr. YATES. I'll keep that in mind.

Thank you very much.

Mr. Regula has some questions.

CONSIDERATION OF ADMISSION FEES

Mr. REGULA. I happen to be a fan of user fees, and it seems to me that some modest charges would be in order that you could plough

back into landscaping and all the things that make the zoo a more attractive place.

Mr. YATES. There ought to be one remnant of one endangered species. I guess that is an endangered species—all the Smithsonian museums who charge no entrance fees. All over the country we are now starting to charge our parks and our forests and every place for user fees. Wouldn't it be nice to have the Smithsonian as a relic of what used to be, Ralph, with—

Mr. REGULA. No.

Mr. YATES [continuing]. No charge? [Applause.]

Mr. REGULA. I don't know whether they are for or against me. [Laughter.]

I think that a modest user fee would not be injurious to anybody. The money would go to your budget to enhance the things that you need. I don't think the public would have any problem. I heard the same arguments on the parks, and we find that there is no objection to having increased the fees. Actually, in many instances their voluntary contributions have gone up at the same time the fees have gone up.

I'd like your reaction to it, because that is a great facility. I don't get free admission at the Cleveland Zoo.

Mr. ROBINSON. My own personal opinion—and this may not represent the opinion of the Smithsonian—is that in an increasingly urbanized society with a lot of disadvantaged people whose only hope of getting out of the city into a green place and clean air, is in seeing exciting and beautiful animals and plants, it would be a mistake to charge and keep out those people who now enjoy our zoo—not just as a zoo, but as a place to jog, a place to sit, a place to read, a place to contemplate, and a place to learn about the living world.

Even a modest fee would prevent a large portion of the people from the immediate area—

Mr. REGULA. Then should we subsidize the Cleveland Zoo?

Mr. ROBINSON. The Cleveland Zoo should.

Mr. REGULA. Wait a minute. This is a federal zoo. It is not a Washington, D.C. zoo. If we're going to provide, at the Federal taxpayer's expense, a facility for those in this community, why not in Cleveland? And that's not in my district. It is a city with just as much—

Mr. YATES. Who owns it?

Mr. REGULA. The city.

Mr. YATES. That's not Federal, then.

Mr. REGULA. No.

Mr. YATES. I thought you said it was.

Mr. REGULA. No, I said this is a Federal zoo.

Mr. YATES. That's right.

Mr. REGULA. But the suggestion is that we should maintain it with Federal tax dollars for a population that is selectively here. If that is the case, should we not provide the same thing in the way of a subsidy to the Cleveland Zoo so that the underprivileged can go there and jog and see all these exotic animals?

Mr. YATES. Cleveland ought to do it.

Mr. REGULA. No, no. The Federal taxpayer should do it because Cleveland ought to be treated the same as Washington, D.C.

Mr. ADAMS. Mr. Regula, can I respond to that?

Mr. REGULA. Sure.

Mr. ADAMS. I would share Mr. Robinson's idealistic view, but there is another, more practical level of concern that ought to be mentioned.

We get mixed signals in Washington. I would be unable to come up with the number right off-hand, but there certainly has been something on the order of a score of your colleagues in the Congress who have assured me that if the Smithsonian ever started introducing admission fees, they would see that the amount of money gained by those fees was taken away from the budget.

Mr. REGULA. I realize that I may be in the minority. I was in the minority regarding the National Parks. But we're going to be in an era of short rations, and there is a lot of need. It seems to me that the public ought to participate, and I suspect that a good portion of those people that you are describing have Nike \$100 shoes on when they are jogging, and so they can afford \$1 to get into the place to visit the facilities.

The end result will be that we will limit, ultimately because of the budgetary constraints, the opportunities that we might otherwise provide. I think it is something to think about.

I know there is a difference of opinion here, but people are revising their thinking. I heard all these arguments on National Park fees a few years back, and we did it, and everybody adjusted, and it is working very well.

Mr. ROBINSON. Just another argument, if I could make, that we are moving from being a conventional zoo dealing only with the animal world to becoming a biological park and integrating with the rest of the Smithsonian, cross-referencing our exhibits. We just hung the flying pterodactyl that Air & Space produced, so we are becoming part, in our programs, of this greater Institution.

I think it would be invidious to seize upon the Zoo as something that should charge fees, and the rest of the Smithsonian, of which it is an integral part, be a free facility. We are no different intellectually, in my opinion. We are not just a place for kids.

Mr. YATES. Did you want to make a comment?

Mr. ANDERSON. Briefly, sir.

One of the interesting and imaginative analogies that I heard that stuck in my mind compared the free access to the Smithsonian to free access to the voting place. Both really are exercises in citizenship, and to charge at the Smithsonian would be like re-instituting a poll tax.

Mr. REGULA. Well, that's fine, but I think we're going to have a tough time doing everything that ought to be done.

Mr. YATES. Not with your help, Ralph.

I wanted to point out to you the latest addition to our room, that picture near the clock. Isn't that a handsome picture of your puffins?

Mr. ROBINSON. Very nice, but that's the National Aquarium, sir, and not the National Zoo. [Laughter.]

Mr. YATES. It's actually by somebody in the Fish and Wildlife Service who took it up in Maine. It is a very handsome picture.

Mr. ROBINSON. I'd like to take the occasion to present you with a button celebrating our birthday.

Mr. REGULA. Do I get a button?

Mr. KENNEDY. What are you going to pay for it? [Laughter.]

CANOPY BIOLOGY AT THE TROPICAL RESEARCH INSTITUTE

Mr. YATES. Did you have anything further to say, Mr. Rubinoff?

Mr. RUBINOFF. Just one issue, if I can raise it.

Mr. YATES. In two seconds? I wanted to get to Mr. — as a matter of fact, I thought I'd be through long before this, but it has been so interesting.

What did you want to tell us?

Mr. RUBINOFF. One item which we had in the budget speaks to several issues that I think are of interest to the Nation now. One is the issue of how many organisms cohabit this earth with us. There is a question of whether there are 3 or 30 million species living on earth. The other is the question of global processes.

We had in our budget a request for a tower crane—one of these construction cranes—which seems to us the only way to conveniently access the canopy of a tropical forest, one of the least understood areas remaining on this planet. It is inaccessible, and therefore has never been studied properly.

I speak to the species issue because one scientist has projected that there may be 30 million organisms on this earth, largely based on the number of insects that you can get out of tropical trees by poisoning the top of a tree with an insecticide.

With a crane such as this, we would be in a position to do non-destructive monitoring. A 30 million species estimate is based upon a one-time destructive sampling method. Given the kinds of processes we know of, where organisms are seasonal and fluctuating annually, I think we can get a much better picture of the diversity of that environment in terms of sheer numbers of organisms in the tropics.

The second, of course, is in the terms of the physiological processes. If really interested in how much carbon dioxide is tied up by a tropical forest, we have to get into it at the canopy level where the principal activity is in order to study it.

Mr. YATES. How much money is involved?

Mr. RUBINOFF. We asked for \$700,000 for that.

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

Mr. Correll, we haven't called on you. Did you want to say something?

Mr. CORRELL. Yes, please.

Mr. YATES. Come on up.

Mr. Correll, how much money do you want? You were cut \$350,000 in the process.

Mr. CORRELL. Mr. Chairman, our Center is an environmental research center, and it is growing rapidly. We are now occupying the Senator Mathias Building, which the Congress so kindly provided. We have similar problems that some other people mentioned in taking care of our facilities. We had requested to both the Smithsonian and OMB several support people to help take care of the fa-

cilities, and that amounted to three positions and \$81,000 in this budget.

I realize things are very tight, but we were told yesterday by the Institution that they could no longer provide us central facility support from Washington, and we would have to provide our own in the future. We don't have adequate facility support, so I bring that to your attention.

One other item is that we have a creature called Igor. It's not quite as cuddly as a red panda, but it is great. It is a computer, and we are afraid it is going to die in a few years, and we asked for funds to replace it when it gets a little bit too arthritic. Those were also cut.

We would like to point out that in planning for these extensive electronic instruments that we do need to plan ahead, and we would like to bring it to your attention that we do need to replace our computer as soon as possible, and that was \$100,000.

Mr. YATES. Thank you.

Mr. CORRELL. Thank you.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

Mr. YATES. Dr. Shapiro, have you spoken enough or do you want to say some more?

Mr. SHAPIRO. Some thought I spoke too much; also I see the lateness of the hour.

Mr. YATES. No. But do you have any monetary request that you should—do you want to put it in the record?

Mr. SHAPIRO. I don't think it is necessary to put any requests in the record.

Mr. YATES. Okay. Thank you.

Mr. SHAPIRO. I would pass on that.

Mr. YATES. Major scientific instrumentation? That's your telescope and that's what you described?

Mr. SHAPIRO. Right.

Mr. YATES. Was there any money cut from that?

Mr. SHAPIRO. Yes.

Mr. YATES. But you don't need it?

Mr. SHAPIRO. I wouldn't say that. It slowed down our progress, but we are making steady progress and I hope we can continue to make it.

Mr. YATES. Right.

FACILITIES REPAIR AND RESTORATION BACKLOG

Mr. Siegle, we ought to call on you for a discussion of your facilities. You've been waiting patiently all day long.

In a nutshell, how much money do you want that Mr. Adams hasn't given you?

Mr. SIEGLE. Mr. Chairman, the amount of money that is in the budget represents the highest priority projects that we are allowed to ask for within OMB's target.

Mr. YATES. Do you have any other projects than highest priority projects?

Mr. SIEGLE. We have \$195 million in the backlog, besides what is in the FY 1989 budget. For 1990, we have requested \$26 million

worth of projects to reduce the backlog. A lot of it is in the HVAC area that you were talking about. In fact, 75 percent of it is in that area.

We went into OMB with a request for \$35 million to whittle away at the backlog over about an eight- to ten-year period. We got \$26 million.

Mr. YATES. What happened to your PCB transformers? Are they all cured?

Mr. SIEGLE. We have a contract with Westinghouse. They are on schedule for all being out of the buildings this fall. That is about one year before the EPA deadline of getting the PCB transformers out. It is all on track.

Mr. YATES. Any critical health and safety matters that have to be taken care of for which there is no money in this budget?

Mr. SIEGLE. No, sir, because the first priority is that category, so whatever comes up we do that first and the rest of the projects slide out to future years..

Mr. YATES. If you want to say something else would you put it in the record for us?

Mr. SIEGLE. Yes, sir, I will.

Mr. YATES. Thank you.

Mr. SIEGLE. Thank you.

[The information follows:]

ADDITIONAL REQUIREMENTS FOR REPAIR AND RESTORATION FUNDING

The Institution has previously advised the Congress of the need to accelerate repairs and life safety modifications to our buildings. We have repeatedly requested increased resources from the Office of Management and Budget (OMB), but so far funding allowances have fallen far short of requirements. The Smithsonian must have a steady funding level of \$35 million over the next 8-10 years, if it is to eliminate this backlog of repair work and gain control of the deterioration process of buildings.

A comprehensive inspection program has generated a list of work required to bring the Institution's buildings up to an acceptable level of repair and code compliance. The 1989 listing of the backlog of this work totals \$195 million. Despite increased funding in the Repair and Restoration of Buildings account in recent years (to \$19 million in FY 1988 and \$20 million in FY 1989), the backlog has only been reduced by \$21 million in the last two years, from the \$216 million total of the 1987 listing. The net backlog reduction is offset by the addition of projects not identified earlier and by cost increases to existing projects caused by worsened conditions since the problem was previously assessed. Inflation in the cost of construction also increases the cost of correcting the backlog each year projects remain unfunded.

The Institution urgently needs increased funding levels in the R&R account to eliminate the backlog of essential maintenance and repair. With consistent annual resources of approximately \$35 million, the Smithsonian estimates that it can eliminate the backlog within eight to ten years. If funding levels remain at the FY 1990 request level (\$26 million), it might take as long as fifteen years to correct the backlog. The delay in eliminating the backlog of repairs poses an unacceptable risk to the operating integrity and future preservation of the Institution's aging physical plant.

PROTECTION SERVICES

Mr. YATES. Mr. Burke?

How are the guards?

Mr. BURKE. I knew it. [Laughter.]

Mr. YATES. The Bible says, "The last shall be first."

Mr. BURKE. Mr. Yates, about ten years ago you saved me, and I'm here asking for help.

Mr. YATES. Okay.

Mr. BURKE. I've had some serious troubles in Panama this year, and I had to dig into my pocket to help Ira down there with more contract guards, etc., so I'm going to have to beg that I get my base cleared up and straightened up.

Mr. YATES. Tell me how much you need to get to first base.

Mr. BURKE. I'm going to need about \$100,000 just for Panama.

My second problem is the City of Washington. Things aren't getting any better around here. We've had more incidents of vandalism and people problems in our museums that I attribute to general problems in the city.

Mr. YATES. Have you had vandalism in your museums?

Mr. BURKE. Yes, we have.

Mr. YATES. Have you? What has been hurt?

Mr. BURKE. We had about 25 cases of vandalism against art, most of it very minor, but it occurred. There were about 18 cases in the Hirshhorn over a short period of time.

I need better guard coverage.

Mr. YATES. How much money do you need?

Mr. BURKE. I asked the Institution for 25 positions and \$568,000. They asked OMB for 10 positions and \$340,000. OMB gave me nothing. I'm back here like I was ten years ago asking for help.

Mr. YATES. What happens to your museums if you don't get help? I'm looking at the museum directors. None of them have said that they needed guards. Are they leaving that up to you?

Mr. BURKE. Yes, they are. Now, I must say that the museum administration bails me out at the end of every year with overtime. I'm using a lot of guard overtime—night guards to do day guard work, etc.—to try to man the museum galleries so that we can keep them open, but I'm still short in my base.

Mr. YATES. You want how much money?

Mr. BURKE. I need about \$568,000 and 25 positions.

Mr. YATES. What will you settle for? [Laughter.]

Mr. BURKE. Ten positions and \$340,000. That's critical. That's what we went to OMB for.

Mr. YATES. Any particular museums critical?

Mr. BURKE. Very critical at both the Sackler and the African Art Museum—the new museums. We grossly underestimated our guard needs when we opened those two new museums based on the initial drawings that showed a lot of open space. When they redesigned them and made cul de sacs and two floors, we were short of guards.

We asked for ten guards in the 1989 budget. Of the 20 we needed, we got 10. We asked for the other ten this year and they were turned down by OMB. So ten would be good.

Mr. YATES. Thank you.

Mr. BURKE. Thank you.

Mr. YATES. Mr. Regula?

Mr. REGULA. Tell me about the nature of your vandalism. Is this young people? You must observe some.

Mr. YATES. Any stolen objects?

Mr. BURKE. We have had one stolen object this year from the collection. It was a bear claw from the Natural History Museum. So we have had one thing stolen.

We think that most of our vandalism might have been from internal dissident employees. We can't prove it, but when we made some personnel moves, we stopped the vandalism.

Mr. REGULA. So there was no particular—well, it was obviously concentrated in one museum.

Mr. BURKE. Most of it concentrated in the Hirshhorn.

Mr. REGULA. And you haven't had any problems otherwise?

Mr. BURKE. What I call "normal problems." Yes, we've had a problem here and a problem there. Just last week we had a two-inch slash, which is the biggest vandalism incident we have had in a long time, at the Museum of American Art. It was a knife slash in a gallery that should have had more guards.

Mr. REGULA. That's not bad, given the amount of traffic that you have.

Mr. BURKE. It's not bad.

Mr. REGULA. How is the zoo? Do you have any problem up there?

Mr. BURKE. I don't directly supervise the security for the zoo. Mike?

Mr. ROBINSON. We have a very good police force. There are break-ins because we have cars parked, and things like that. But, generally speaking, we have had a good year.

Mr. REGULA. Thank you.

Mr. YATES. Thank you.

Mr. BURKE. Thank you, sir.

MUSEUM OF THE AMERICAN INDIAN

Mr. YATES. Mr. Adams, you haven't said a word. I want to ask you a specific question, if I may.

I look at the article in the newspaper about the Indian Museum. It says the cost is \$150 million. Isn't it more likely to be \$200 million before you're through? Do you know what the New York costs are likely to be?

Mr. ADAMS. I think we're in better shape with regards to knowledge of the New York costs than we are here in Washington, because in order to go forward with the introduction of a bill, we need to produce a formal agreement with New York.

Mr. YATES. Do you have it yet?

Mr. ADAMS. Last evening, we understand the Board of Trustees of the Museum of the American Indian signed an agreement, and we are expecting to receive, as I think I said earlier, by the end of this week—they may already have been signed—letters of commitment from Governor Cuomo and the Mayor of the City of New York. So we are on the point of having those understandings in place, and those necessarily involve commitments of funds and a rather full set of arrangements.

Mr. YATES. What threatens the funds for payment to New York—City or State?

Mr. ADAMS. The City and the State have jointly agreed to put up \$8 million or one-third of the cost of renovation, whichever is less, from each of them.

Mr. YATES. Of the Custom House?

Mr. ADAMS. Yes. But in order to formalize those agreements, we have had to deal in considerable detail with the space and with many other issues, so that I think we can be fairly precise there.

It is not possible, at this point, to be precise about the cost in Washington because we haven't begun to really amass those in a way that is credible.

In addition to the sort of basic space cost that we could make at least a roundhouse guess at, the phasing of the construction will have an effect on the cost. We need to have—I would imagine that our most urgent priority is to have constructed a building out at Suitland that will permit the collection to be brought down here, and for conservation of the collection to begin to go forward. We don't know what those conservation needs are. We don't really know how that can all be timed. So I would hesitate to put any figures in the record at this point.

Mr. YATES. Well, I think that, if my memory serves me correctly, the Smithsonian paid half of the construction of the Air & Space Museum—\$37.5 million.

Mr. ADAMS. The Quadrangle, I think.

Mr. YATES. The Quadrangle. Yes. Do you contemplate the Smithsonian paying half of the cost of this?

Mr. ADAMS. You will understand that I haven't gone around volunteering a number in this respect.

Mr. YATES. I know that. That's why I'm asking you the question.

Mr. ADAMS. I contemplate that we would be required to come up with private funds for some considerable share of the construction.

I think that the enthusiasm for this project, nationwide, is very high, and I think that we should be able to do so, but I certainly don't want to mention any numbers at the moment.

Mr. YATES. What else would you like to tell us for the record before we close?

CUSTOM HOUSE RENOVATION COSTS

Mr. REGULA. Mr. Chairman, I have some questions.

Mr. YATES. Mr. Regula?

Mr. REGULA. Do I understand you correctly that you are estimating the cost of redoing the Custom House as a museum at \$24 million?

Mr. ADAMS. That is in the right ball park. It might be somewhat less. It might be somewhat more.

Mr. REGULA. I would suggest, having visited it recently, it would be somewhat more. I was rather interested that New York has a lesser number—not just one-third, but one-third or \$8 million, whichever is the lesser number. That's not fair. They should, at the very least, be in for a one-half.

Mr. ADAMS. Well, it is one-third each from the City and the State, so that, in fact, New York would be providing two thirds.

Mr. REGULA. Is that \$8 million a minimum or a maximum for each?

Mr. ADAMS. It's a maximum for each, so that it is probably two-thirds of the cost.

Mr. REGULA. I don't think you'll ever get it done for \$24 million, but I suppose time will tell.

MUSEUM OF THE AMERICAN INDIAN NEW YORK FACILITY

How about the operating costs? That's the real big one. That goes on forever.

Mr. ADAMS. That goes on forever. You're quite right.

Perhaps I can make public a letter and attachment from Governor Cuomo, which I have here somewhere. This is the language which I think is comparable to the agreement from New York City:

"In order to help establish a museum facility at the Custom House in New York City as provided in the Memorandum of Understanding, I agree, (1) to propose appropriations in the 1990-91 Executive Budget to fund the design, construction, and renovation of the space in the Custom House to be used by the Museum as outlined in the option paper, to the extent of the lesser of \$8 million or an amount equal to one-third of the cost of such design, construction, and renovation, with the understanding that all three sources of funding for the project will be assessed in equal amounts as the project is completed, and (2) to treat applications by the Institution to the New York State Council on the Arts and/or to other appropriate State agencies for support for programs to be conducted by the Museum in New York as though they had been made by a local cultural institution except grants for general operating support for the museum."

That last phrase addresses itself to your question. What they say, in effect, is that they are willing to provide program support.

Mr. REGULA. But not operating?

Mr. ADAMS. Not operating support.

Mr. REGULA. And, of course, that's just a letter, a proposed agreement? That's nothing binding?

Mr. ADAMS. Nothing is binding in the agreement unless these terms are on there.

Mr. REGULA. My guess is that we'd have to think in terms of the Federal government and/or the Smithsonian being responsible for 100 percent of the operating costs. Governor Cuomo is not going to be Governor forever, even if he were to want to do that.

Mr. ADAMS. I think you're correct, sir.

Mr. REGULA. What have you estimated the operating costs to be?

Mr. ADAMS. Well, we have a paper, but I'm not sure those are sufficiently detailed.

Mr. REGULA. But isn't it very important, before you embark on something like this, to know what you're going to be spending?

Mr. ADAMS. But relative to the total size of the project, the cost of operations in New York is only a very small part. The total cost of operations of the complex in Washington is likely to be on the order of \$25 million annually.

Mr. REGULA. For the display here?

Mr. ADAMS. Yes. The great bulk of the space and collections would be here.

Mr. REGULA. Well, I think that makes a proper locale, because it serves all the Nation here. New York is a much more selective audience, and I think you're setting a bad precedent. What if Chicago has a unique collection? Are we going to put an outreach museum in Chicago or Cleveland or Los Angeles? If they come to you and say they have a unique collection of hispanic materials in Los Angeles and it is required that some of it stay there, would you recommend that the Smithsonian have a facility in Los Angeles?

Mr. ADAMS. Well, there are unique collections, and then there are other unique collections, and I don't think that we are making any precedent, whatever, with regard to our responsibility to take

on whole, unique collections. I think this one has a special appeal and is of a quality and in a field that makes it particularly appropriate for us to do so.

Mr. REGULA. I agree with you from the standpoint of what is coming here, because I think the American public is fascinated by the Indian lore and the history. What comes here makes sense. But I really have a problem with the notion of starting something in New York for which they are not willing to take much financial responsibility—a total of \$16 million. All you've got on paper is \$16 million, and the operating costs there will be enormously more than you might think, as I look at that building and do just a ball park analysis.

I don't think there will be a very great flow of people. It is poorly located for a museum. It is in Wall Street. There is no parking. I can't see a great amount of traffic. I just think you're committing yourself to something that will debilitate your ability to really do the job here in the Nation's Capital.

Mr. ADAMS. I think I have two responses to that. First of all, you are aware that we are talking about one floor in the Custom Building?

Mr. REGULA. Well, I understand. But what is the balance going to be used for, then?

Mr. ADAMS. It is being converted by GSA—the upper two floors—to bankruptcy courts, the—

Mr. REGULA. They're there now.

Mr. ADAMS. And the intervening floors to government purposes other than our own.

Mr. REGULA. The whole thing ought to be courts for GSA, and they'd like to have it, and I think we're taking on a white elephant.

Mr. ADAMS. Let me pursue the main point I wanted to make. This was a negotiation—and a difficult and prolonged one.

Mr. REGULA. I understand that.

Mr. ADAMS. It is not the case that any of the parties involved got what they sought. We would probably not have preferred that location. We would have made other arrangements altogether. New York had the collection. It has the possibility in its hands of tying that collection up indefinitely in New York, and it seemed more and more clear to us that this is exactly what would happen.

They were hoping to have the whole of the Custom House devoted to the collection, or at least to have a facility that was of equal size with the one in Washington.

We have obviously had to make an agreement which, in varying degrees, all parties are somewhat reluctant about, but about which we are satisfied is the best agreement we could make between the parties that were involved.

I think that's all I can say. It does represent a cost. It does represent a continuing burden of fund-raising that we will have to face. But I think that the opportunities of having that collection in Washington and the scope of programs that it opens up for us with American Indians is so great that this risk and this burden are just—

Mr. REGULA. You're really saying you are willing to pay the price of New York to get the balance in Washington?

Mr. ADAMS. I would say so. I see this collection as being of such an extraordinary quality and scope that it can contribute something to American Indian life, as well as to the national understanding of the American Indian's past, that is really truly unique and transformative.

I think that this is an area where, since the very beginning, the Smithsonian has had a central part to play. It has been a central concern of ours, and therefore I think we are prepared to carry that burden. Yes.

Mr. REGULA. Well, I have a concern. I note you are 10 percent above last year's budget, and I look here at the National Parks and they are 15 percent below. They serve more people than the Smithsonian by far, and a much broader cross-section because it is an outreach across the country.

I look at the Forest Service. It is down almost 10 percent and you are up 10 percent.

As we have to resolve the priority choices here at the point of mark-up, I have to be concerned about the fact that we are, in terms of priority judgments, saying to people who enjoy the National Parks—and they have health and safety problems and it is a very valuable asset in terms of a resource, just as what you deal with—that they should have 15 percent under 1989, whereas you should have 10 percent above 1989.

Now, I'm not sure how you make that case in terms of a priority judgment.

As we continue down the road, I think this difficulty of adding any amount will become increasingly more challenging, given the needs of the public lands, to say nothing of trust territories and so on, and that's why I raise the question of user fees, that's why I raise the question of taking on the additional financial burden which I believe will be substantial in providing a museum that has a rather localized impact because, one, the national visitor tends to come to Washington.

The people that go to New York City go for a different experience. That, coupled with the location of the Custom House, I think will result in the per visitor cost being inordinately high, and will ultimately have to debilitate our ability to do what we need to do here as visitations increase.

I know this summer, just through my own office, we had a very substantial increase in the number of visitors, which means you must be having a substantial increase in the number of visitors. Yet, we're going to be confronted throughout this decade and into the next century with a very difficult problem of trying to provide adequate resources. And so I think we need to start thinking about how we meet that challenge.

Mr. ADAMS. I completely understand that this is a decision that Congress is going to have to make. I think you should understand that we are presenting this to the Congress in the hopes that a choice is made along the lines that we suggest. We're not at all certain that it will be, but that doesn't mean that we shouldn't bring it up.

I should point out, also, that the numbers involved here are not small. This building would be located between the Air & Space Museum, which is the most visited—

Mr. REGULA. I'm not talking about the Washington building.

Mr. ADAMS. But the price of getting the Washington museum is that you must compromise with the people who have the collection.

Now, you can say that in the end, New York will go belly-up and you'll get the collection, anyway, and that is a possibility, and if people choose to vote on that possibility, then they will vote this down and this agreement will become just a piece of paper and the matter may arise again under better terms. That's a choice that you and your colleagues have to make, and we can't make for you.

I would say that, pursuing a line that Mr. Yates raised a few minutes ago, some indication of the way in which the country regards this museum may very well be the amount of private funds that we can raise toward the construction of a museum in Washington, and that may give you a clue—

Mr. REGULA. I don't think you'll have a problem here.

Mr. ADAMS. I don't think we will either.

Mr. REGULA. But I guess the bottom line is I think we're paying too high a price to the New York City "community" to get that collection, and I suspect they would take a much lesser amount, and I guess I'm thinking maybe the negotiations cost us too much.

I believe that it would receive much greater visitation if it were up town and maybe in a part of another building like some of your other facilities, rather than the Custom House.

Mr. ADAMS. You're preaching to the choir, I'm afraid, Mr. Regula.

Mr. REGULA. Well, how can we help you make that happen?

Mr. ADAMS. We will undoubtedly be having this conversation again not long in the future when—

Mr. YATES. Could you find a substitute for the Custom House? Maybe that would help.

Mr. ADAMS. At the moment I don't think we could, because New York has developed a consistent position, which is that the Custom House is the only choice.

If this version were not to find support in the Congress, that position might change. I can't predict that.

But yours is the issue that we recognize you must raise. All I can say is that I think you should not underestimate the transformative power of that collection in this city as part of a program that reaches out among American Indians.

Mr. REGULA. I am not challenging what is happening here. All I am raising is the question of the price we're paying to do it with New York.

Mr. ADAMS. I understand your point.

Mr. REGULA. Okay.

INTERN PROGRAM

Just an aside: I just discovered yesterday you have an intern program for high school seniors and juniors. I think it is a great idea. I'm a big booster of intern programs, and didn't know it was out there at all. I hope you have more of these programs where you get young people—high school and college, and I know you do college students, too—an opportunity to get, as we do in our offices, a taste of what you are doing. It provides a future base for people not only

in your Institution, but all across the country. I just want to say I strongly support what you are doing in the intern outreach program.

Mr. ADAMS. Something along those lines is part of our very definite plans for this museum if it does come to Washington with regard to American Indians. In order for the collection to travel, whether through SITES or through its own traveling exhibition program, there need to be many American Indians trained as conservators and cultural historians and archivists and so on, and I think that is one of the most exciting plans we have for this.

Mr. REGULA. Thank you, Mr. Chairman.

PUBLIC SERVICE

Mr. YATES. Mr. Rinzler, I should have called on you. Could you put your remarks in the record?

Mr. RINZLER. Yes, sir.

Mr. YATES. That would be fine.

[The information follows:]

Public Service Budget Needs

The first priority for Public Service is for \$58,000 (2 workyears, salary and benefits for 2 conference assistants); \$10,000 for equipment; and \$8,000 for supplies and services. The Office of Conference Services was established in FY 1988 to provide a professional staff that would assist the sponsoring research or curatorial departments in the Institution in planning and conducting scholarly exchanges throughout the year.

As a leading international research institution, the Smithsonian sponsors a large number of meetings each year. Previously, each bureau sponsored its own meetings (conferences, seminars, and symposia).

The office was established with funding for a Director. Office space, equipment and supplies have been shared with the Office of International Activities. Currently, the Office of Conference Services has scheduled 24 conferences for fiscal year 1989 and the demand and success of this office has been overwhelming.

Priority Number 2 is for \$25,000 for automation services. The Visitor Information and Associates Reception Center must move to a completely automated system to record volunteer hours, visitors statistics and public inquiry data. Maintenance contracts and additional software systems are needed for existing computers.

Priority Number 3 is a request for \$28,000 (salary and benefits for a clerk typist) and \$8,000 for public service announcements. Radio and television spots have proved successful in reaching minority audiences from local communities. Specific minority communities will be targeted for radio and television spots as well as minority publications.

Priority Number 4 would provide salary and benefits for a Handicap Coordinator (GS 9), one work year, \$30,000; and \$34,000 for maintenance service contracts for computers, printing of publications and purchase of equipment. The Office of Elementary and Secondary Educational will emphasize outreach to the disabled, teachers and students in ethnically diverse communities.

Priority Number 5 provides a full time secretary (1 workyear, \$35,000) for the Deputy Assistant Secretary for Media Affairs.

Priority Number 6 is cultural conservation research in the Office of Folklife Programs (\$50,000). Scholars, communities and public officials have become aware of the threatened integrity and continuity of many traditional cultures. World patterns of economic control, environmental destruction, centralized media, and the spread of mass commercial culture continually affect and change long-lived traditions.

Priority Number 7 would create an Electronic Data Publishing Program within the Smithsonian Institution Press. Funding of this program would include salary and benefits for 2 workyears (grades 11 and 9) and \$58,000, plus \$8,000 for printing expenses. This program will increase the accuracy of SI research data bases and enable the SI Press to utilize highly developed technology.

Priority Number 8 requests 1 workyear and \$25,000 for salary and benefits of a clerk typist. The National Science Resources Center was established in 1987 and disseminates science teaching materials to elementary and secondary schools across the country. Clerical support is needed to ensure regular distribution to wider audiences on a national level.

EXTERNAL AFFAIRS

Mr. YATES. Mr. Lovejoy, I should have called on you. Would you like to say something, or would you like to put your remarks in the record?

Mr. LOVEJOY. One thing I'd like to say right here is that one of our newest people, Deputy Assistant Secretary for External Affairs, somehow didn't end up in your list of biographies—Alice Burnette.

Mr. YATES. Her biography will be included with the others in the record.

ADMINISTRATION

Mr. Jameson? I can't imagine a hearing going by without you having uttered a word.

Mr. JAMESON. I've got good news for you.

Mr. YATES. Do you want to put it in the record?

If it is good news, tell it to Mr. Regula. [Laughter.]

SUMMER HOURS

Mr. JAMESON. We will have summer hours this year. We're going to start a half-hour earlier in the morning to catch all those people who are waiting on our steps who can't get into other tourist places that early.

Mr. YATES. Good for you.

Mr. JAMESON. We're going to start at 9:30 and go until 7:30.

Mr. YATES. And you don't charge them, do you?

Mr. JAMESON. No, sir.

Mr. YATES. That's good.

MINORITIES AND WOMEN

Now, I have one more subject, of course, and that is the minorities program—minorities and women. I think you have done very well on that. Did you want to say something?

Mr. ANDERSON. I'd be happy to say something. Our budget, on pages 23, 24, and 25, lays out the resources that OMB has agreed we can present to this Committee for support of these initiatives.

I'm happy to say that, with regard to the "upward mobility" program that we have presented to your Committee, we have done a survey internally to see how many of our deserving staff we would have positions for were funds available for an "upward mobility" program to move people out of technical positions into professional ones. There are more than 50 that have been identified by the respective bureaus and offices against the request of 10.

Mr. YATES. In last year's budget we itemized the numbers of women and minority individuals in upper-echelon jobs at the Smithsonian. Do you want to put into the record a statement that shows how that has been changed?

Mr. ANDERSON. I'd be happy to, sir.

Mr. YATES. Thank you.

[The information follows:]

[The Smithsonian Institution has submitted the second semi-annual Equal Opportunity Report to the Subcommittee.]

CLOSING REMARKS

Mr. YATES. Mr. Adams?

Mr. ADAMS. I just have a final observation on the way that these hearings have gone. I'd like to bring up very briefly that it seems to me that, of course, there has been a litany of further needs that has been presented by almost every person who has spoken. These are real needs or real opportunities, and difficult choices have been made in presenting the suggestions that are in the budget you have. The choices are partly by us and partly by OMB.

The point I want to make is one that affects the mode of forward-planning within the Smithsonian, itself. One could say, as you hear of this enormous array of needs and opportunities with regard to what we already have, that we ought not to be venturing further, but that we ought to stop right here and try to cover what we've got.

I would like to make a personal statement, in a sense, as to how I view that question, because I think that would be a tragic mistake.

It seems to me the other things that we have heard here that have accompanied the existing needs or programmatic possibilities are the enormous questions that are multiplying. Take the question of global change and species extinction, and so on. Take the question of how in the world we are to accommodate the next generation, or, in fact, several generations of air and space vehicles which consummate American leadership in this important field in the next 50 years or so.

One of the things that leads us to retain our list of possibilities, which may raise the same question that Mr. Regula has raised as to where the money is going to come from, is that these are things that sustain a vision in this country, and that seems to me to justify our doing everything we can to at least try to develop such institutions.

That is equally true of the Museum of the American Indian. I think it can contribute to the reconciliation of American Indian communities with the terrible circumstances under which they have been kept for many years, and with their place in American society in a way that nothing else could.

It seems to me that our African American program has the same set of responsibilities to face.

Again, therefore, we are proceeding with planning without knowing where the funds would come from or when they will come, but I think that we have to proceed in that expansive mode—

Mr. YATES. I agree.

Mr. ADAMS [continuing]. Without knowing that we can, indeed, support all of the things that are within our present program. And, in fact, we know we can't. The list of requirements for keeping the buildings intact, alone, is more than we can support.

Mr. YATES. I agree with that. I would like for you to place in the record, if you would, just as you did some years ago, a list of what the Smithsonian's construction needs are and what you estimate the cost to be and what your other needs are that you consider of primary importance and what you anticipate the cost of them to be.

That carries out what you just said.
Mr. ADAMS. Thank you.
[The information follows:]

PROJECTED MAJOR EXPANSION REQUIREMENTS

Listed below are the Institution's major construction projects as presented in this year's Five Year Prospectus, as well as other projects that are now under consideration. Construction and other costs are not available at this time. Currently, the Institution is studying each program and construction project proposal in order to assess full cost implications and future budget priorities. It is anticipated that a long-range major construction plan will be available for review and inclusion in the next Five Year Prospectus.

Administrative Office Building
 Administrative Service Center
 Air and Space Museum Extension
 American History Auditorium Expansion
 Art and History Collections Storage at Suitland
 Cooper-Hewitt: Fox House and Miller House Renovation
 General Post Office Building Renovation
 Hirshhorn Museum Expansion
 Museum of the American Indian
 National Zoological Park: Rock Creek Redevelopment and
 Front Royal Conservation Research Center Improvements
 Natural History East Court Infill
 Permanent Anacostia Museum at Poplar Point
 Tropical Research Institute: Tivoli Maintenance Facility



SMITHSONIAN INSTITUTION

Washington, D.C. 20560
U.S.A.

March 27, 1989

Honorable Sidney R. Yates
Chairman, Subcommittee on
Interior and Related Agencies
U. S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

At our hearing last week, you asked each bureau director to describe his/her most important unfunded FY 1990 needs. I thought it would be beneficial to offer you my assessment of the needs most worthy of immediate attention.

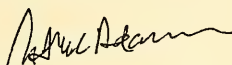
On the attached pages, you will find a series of lists from each Assistant Secretary that outline, in priority order, the most important unfunded requirements for FY 1990 from the vantage point of central management. The combined total of the lists is \$4,037,000. I should point out that this total does not include the needs for the Quincentenary celebration as outlined in my March 3, 1989 letter to you or the transition, planning, and initial operating costs for the proposed National Museum of the American Indian, since we are still in the process of calculating these. While there are many new program initiatives that the Smithsonian, and each respective bureau director, would like to undertake, we limited our focus here to existing programs that need basic reinforcement. We feel that responsible management dictates that the Institution put such infrastructure requirements ahead of new program initiatives.

As you review this list, I would like to offer two potential options for covering a portion of the cost of these items. In our FY 1990 budget request, we allocated \$3,675,000 to cover the proposed initiation of direct water/sewer payments to the District of Columbia. Currently, the government budgets these costs in a lump-sum appropriation to the District on behalf of all federal users. If Congress again rejects the proposed budgetary approach for water/sewer costs, as it has for the last two years, \$3,675,000 would become available to you. In the absence of the proposed change, the Institution would have certainly applied this amount instead to its Quincentenary programs and the items on the attached lists.

Second, the Institution has recently identified an amount of \$362,000 in its FY 1990 budget that it would request that you redirect to these unbudgeted needs. The Office of Personnel Management has now approved a new salary scale for security guard positions, effective March 12, 1989. The final approved scale provides a lesser salary increase than we requested. Consequently, the Institution has revised downward its cost estimate. The net requirement for FY 1990 is \$1,363,000, or \$362,000 less than our FY 1990 budget request before you.

Let me close by again saying how very much we appreciate your continued interest in our programs. We stand ready to answer any questions that you or your staff may have about the enclosed materials.

Sincerely,



Robert McC. Adams
Secretary

Attachment

SMITHSONIAN INSTITUTION

 March 15, 1989

 Salaries and Expenses

ASSISTANT SECRETARY: RESEARCH

PRIORITY NO.	BUREAU OR OFFICE NAME	PURPOSE OF FUNDING	FTE \$(000s)
1.	Tropical Research Center	Staffing and equipping a new research laboratory on Barro Colorado Island.	2 250
2.	National Zoological Park	Staffing and exhibit and plant materials to support current programs and expansion of new biopark theme.	4 191
3.	Environmental Research Center	Security and maintenance staff for protection and care of various research sites/facilities at Edgewater.	2 58
4.	Ofc. of Asst. Secty. for Research	Diving officer to enforce scientific diving policies, regulations, and procedures for SI bureaus.	1 70
5.	Smithsonian Institution Libraries	To purchase essential research journals and books whose costs are increasing at rates beyond normal inflation.	0 150
6.	Smithsonian Institution Archives	To provide programming services and staff training to automate survey reports, stack management, accessions, and reference services.	2 80
			----- 11 799
			----- =====

SMITHSONIAN INSTITUTION

Salaries and Expenses

Page 2

ASSISTANT SECRETARY: MUSEUMS

PRIORITY NO.	BUREAU OR OFFICE NAME	PURPOSE OF FUNDING	FTE	\$(000s)
1.	Natl. Museum of Natural History	To revitalize the Native American Exhibition Hall and remount with objects never before exhibited.	0	100
2.	Natl. Museum of American Art	Curator of 19th-century art to bolster the programs of the Painting and Sculpture Department.	1	73
3.	Traveling Exhibition Service	Participation fee subsidy and minority outreach exhibition support for audiences nationwide.	5	202
4.	Cooper-Hewitt Museum	Buildings and facilities support to maintain a national landmark, small conservatory, garden, and parking lot.	0	85
5.	Cooper-Hewitt Museum	Operating costs for planned building acquisition.	0	377
6.	Office of Exhibits Central	To manage, fabricate, and install "neutral" exhibition space for servicing SI bureaus, especially SITES.	4	120
7.	Quadrangle Building Manager	Support for maintenance and housekeeping requirements of the Quad previously underestimated.	6	129
8.	Office of Horticulture	Support staff to better maintain Smithsonian grounds and interior arrangements at the Smithsonian.	4	120

MUSEUMS cont. Page 3

PRIORITY NO.	BUREAU OR OFFICE NAME	PURPOSE OF FUNDING	FTE	\$(000s)
9.	Office of Museum Programs	Strengthen training functions (minority component) and enhance information resources to the museum community.	2	60
10.	Natl. Museum of Natural History	Collection documentation of Native American remains to facilitate response to requests for repatriation.	1	73
11.	Natl. Air and Space Museum	Transfer of inventory data to the new IBM computer resulting in a complete, master inventory list.	1	60
12.	Natl. Museum of Natural History	System design and maintenance to document collections transactions, such as loans, exchanges and accessions.	0	125
13.	Natl. Museum of American History	To convert 1.3 million records to the Institution's CIS on the IBM system from the Honeywell system.	2	111
14.	Ofc. Assistant Secretary for Museums	African-American Program to negotiate guidelines for collecting; maintain relationships with collecting groups; and establish nationwide call for materials.	2	155
15.		Museum of the American Indian program planning, transition and initial operating costs. (Cost estimates yet to be completed.)	-	-
17.	Natl. Museum of Natural History	"Seeds of Change," a Quincentenary exhibition 13,000 sq.ft. in size, will present changes in the Americas after 1492	1	385

29 2,175-----

SMITHSONIAN INSTITUTION

Salaries and Expenses

ASSISTANT SECRETARY: PUBLIC SERVICE

PRIORITY NO.	BUREAU OR OFFICE NAME	PURPOSE OF FUNDING	FTE	\$(000s)
1.	Office of Conference Services	To assist sponsoring research or curatorial departments at the SI in planning and conducting conferences, seminars, and symposia.	2	58
2.	Visitor Inform. and Reception Ctr.	To provide preventive maintenance, parts, and technical support costs for office automation equipment.	0	25
3.	Office of Public Affairs	To expand current programs to encourage Asian and Native American populations to participate in SI activities.	1	28
4.	Ofc. Assist. Secty. for Public Svc.	Clerical services for the Assistant Secretary.	1	25
5.	Ofc. Elementary and Secondary Ed.	To expand outreach efforts to the disabled, to teachers and students in ethnically diverse communities.	1	64
6.	Smithsonian Institution Press	To create an electronic publishing program to increase the accuracy of Smithsonian research databases.	2	66
7.	Office of Folklife Programs	To create a permanent historical record of minority community cultures before traditions disappear.	0	50
8.	Natl. Sciences Resources Center	Staff to catalog resource materials in the NSRC resource collection and to help develop an annotated information database.	1	25
			8	341

SMITHSONIAN INSTITUTION

 Salaries and Expenses

ASSISTANT SECRETARY: ADMINISTRATION

PRIORITY NO.	BUREAU OR OFFICE NAME	PURPOSE OF FUNDING	FTE	\$(000s)
1.	Office of Personnel Administration	Staff for delegated examining authority.	5	238
2.	Information Resource Management	Staff for Collection Information System to strengthen automated information for research and accountability.	5	239
3.	Office of Protection Services	Additional security coverage for the Quad building, adjacent garden, and Kiosk.	10	245
			20	722



SMITHSONIAN INSTITUTION

Washington, D.C. 20560
U.S.A.

March 3, 1989

Honorable Sidney R. Yates
Chairman, Subcommittee on
Interior and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

At last year's hearings you expressed much interest in minority representation and cultural diversity objectives at the Institution. I am taking the liberty of writing to you to put forth a related item that I believe you will find most interesting, namely the Smithsonian's commemoration of the Quincentenary of Columbus' first landing in the New World. As you know, we have set in motion several initiatives that address cultural diversity; our pan-Institutional Quincentenary programs not only address these issues but several others.

Overview of Planned Programs

Before I go any further, let me direct your attention to the enclosed red packet that illustrates our planned programs for the Quincentenary commemoration, many of which have benefited from the funding that you have provided since FY 1987. As you can see, we have devoted a great deal of effort to the planning and development of these programs. I should note that there are two other programs, for which planning began too late for their inclusion in the packet. The first of these is a planned exhibition at the National Air and Space Museum entitled "Where Next Columbus?," which will make the connection between those navigators of 1492 and contemporary space exploration. The second is a collaborative exhibition by the National Portrait Gallery and the National Museum of American Art which will explore the phenomenon of the world exposition, looking specifically at the Columbian Exposition of the last century. Additional complementary activities not listed in the packet include symposia, radio and television programs, recordings, publications and outreach projects -- well over one hundred in all.

Undertaking a pan-Institutional initiative of this magnitude has made us aware of the limitations of our ability, both intellectual and material, to relate the complex history of the last 500 years.

There is much research that scholars should have conducted years ago. In this sense, there has clearly been a very limited view of history, and it is certainly telling when our 142-year-old Institution is only now trying to offer a more American approach, rather than the longstanding Eurocentric one, to the last 500 years. Unfortunately, much of what we might have been able to tell by 1992 will have to wait until later.

Underlying Objectives

The Smithsonian's Quincentenary Program falls under the aegis of the Assistant Secretary for Research, but the Assistant Secretaries for Research, Public Service, External Affairs and Museums have been working together closely to ensure that standards by which to assess proposed programs are in place. The Assistant Secretaries have developed a set of guidelines to encourage interdisciplinary collaboration, both with scholars throughout the Institution and with scholars and institutions in other parts of the United States and abroad. The guidelines also encourage broad cultural representation through objectives for wider audience participation. We also want to take every opportunity to ensure that the Quincentenary does not focus solely on the past, but that it reflects contemporary societies and cultures that emerged as the result of the encounter between the Old World and the New World cultures in 1492.

The content of the programs and presentations that we are developing must reflect these guidelines and objectives. As an example of our approach, there are well over 60 representatives from Hispanic, Afro-American, Native American and other groups that work either full-time, part-time, serve on contract, or act as advisors on many of these projects. Scholars from all over the hemisphere have participated in symposia we have held thus far, and we anticipate the involvement of more as we approach 1992.

Research Approach

The Quincentenary also has served as a natural and logical impetus to draw together a more integrative, more international approach to the study of consequences of the Encounter. We are developing a newsletter that will deal with the Quincentenary and will elaborate on research and other issues of concern within the Institution, and describe those Quincentenary initiatives that have drawn us into a network that includes Spain, Portugal, Italy, and the countries of this Hemisphere. I recently hosted, at their request, a dinner for the Ibero-American ambassadors and the cultural attaches, at which prominent Hispanic leaders also were present. It was a working dinner meant to encourage collaboration with these countries and the U.S. Hispanic community. Commissioner Fuster from Puerto Rico and Congressman Esteban Torres, as well as other members of the Congressional Hispanic Caucus, are aware of our efforts. We hope to encourage more such interactions in the future.

We know that the Smithsonian's Quincentenary Program is unique among the numerous commemorations others are planning in the Western Hemisphere and abroad. We have presented our programs to over 22 countries. The enthusiasm about the range of academic disciplines and programmatic perspectives that the Institution accommodates is allowing for a broader and richer exploration of the scientific, cultural, artistic and historical implications of the Columbus voyages. In his statement before the Senate Committee on Foreign Relations, on January 17, 1989, then Secretary of State-Designate James Baker stressed the importance of the Quincentenary and suggested "we embark on a voyage of rediscovery -- of the Caribbean and of South America." At the Smithsonian, we are committed to understanding our neighbors in this hemisphere, and scientific and cultural initiatives are key in this process.

Future Directions

It is my hope that the programs we are developing for the Smithsonian Quincentenary commemoration will help to establish a permanent program focusing on the history and cultures of the Americas. In addition to the exhibitions and publications described in the enclosed packet, the Institution has initiated several programs that lend themselves to a permanent presence after the Columbus Quincentenary commemoration. They include the Program in Hispanic American History at the National Museum of American History, the American Indian Outreach Project, an "Institute of the Americas" and the Smithsonian Quincentenary Council of the Americas. Our Office of Quincentenary Planning is coordinating bureau-based planning for the last three of these initiatives. Let me tell you a bit about each of these initiatives.

The Program in Hispanic American History is specifically focused on the Latino population of this country. Scholarly and public symposia, musical programs, exhibitions, and related publications will focus on topics related to Hispanic culture and history. Similarly, the American Indian Outreach Project seeks to develop programs that will appeal to the interests of American Indian communities. In this case, however, we are planning to circulate exhibitions outside of Washington and to publish related materials for distribution to American Indian students.

We are now looking into the possibility of establishing an entity with the provisional title of "Institute of the Americas," which should facilitate a scholarly exchange concerning intellectual, cultural, ecological and other issues that affect this hemisphere. This issue-oriented approach can help to solve such problems as those we are presently witnessing concerning the exploitation of our natural and cultural resources. Non-Smithsonian scholars and policy makers will come to the Institution to pursue research in these fields and to share their ideas and perspectives with Smithsonian staff. We currently plan first to create a Quincentenary Council of the Americas in support of the Quincentenary and then found the

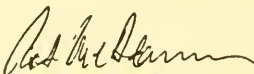
proposed "Institute." We are identifying prominent businessmen and scholars from the United States, Latin America and the Caribbean to serve on this Council. In this capacity, members will establish goals, identify problems and issues on which to focus, and help to raise money for the Institute.

Conclusion

With the Columbus Quincentenary fast approaching, FY 1990 is a critical year to ensure continued development of these programs. However, within the constraints of a "current services" budget, OMB disallowed requested funding totalling an additional \$1.123 million for FY 1990. The implications, naturally, are for reductions in the scope of our planned programs for the Quincentenary observance and a delay in implementing a permanent program on the history and cultures of the Americas.

Because of your continued interest in multi-cultural programming, minority representation and cultural diversity within the Institution, I have taken this opportunity to provide this status report on our Quincentenary programs. If you would like further information on these programs and their future funding requirements, I would be glad to arrange a more comprehensive presentation in person at your convenience. In the meantime, I have enclosed some attachments that I think you may find useful. I look forward to further discussion.

Sincerely,



Robert McC. Adams
Secretary

Attachments

cc: Honorable Robert C. Byrd

S M I T H S O N I A N I N S T I T U T I O N
C O L U M B U S Q U I N C E N T E N A R Y P R O G R A M S
P R O J E C T E D F E D E R A L F U N D I N G R E Q U I R E M E N T S F O R F Y 1 9 9 0

	FTE	\$000s
	----	-----
Tropical Research Institute		
* FY 1990 Cong. Request	0	0
* FY 1990 OMB Request	1	40
	----	-----
Additional Funding Required	1	40
Office of Museum Programs		
* FY 1990 Cong. Request	0	0
* FY 1990 OMB Request	0	0
	----	-----
Additional Funding Required	0	0
National Museum of Natural History		
* FY 1990 Cong. Request	1	130
* FY 1990 OMB Request	2	715
	----	-----
Additional Funding Required	1	585
National Air And Space Museum		
* FY 1990 Cong. Request	1	41
* FY 1990 OMB Request	1	47
	----	-----
Additional Funding Required	0	6
National Museum of American History		
* FY 1990 Cong. Request	2	125
* FY 1990 OMB Request	4	510
	----	-----
Additional Funding Required	2	385
National Museum of American Art		
* FY 1990 Cong. Request	0	25
* FY 1990 OMB Request	1	45
	----	-----
Additional Funding Required	1	20
National Portrait Gallery		
* FY 1990 Cong. Request	0	15
* FY 1990 OMB Request	0	15
	----	-----
Additional Funding Required	0	0
Hirshhorn Museum & Sculpture Garden		
* FY 1990 Cong. Request	0.5	20
* FY 1990 OMB Request	0.5	20
	----	-----
Additional Funding Required	0	0

S M I T H S O N I A N I N S T I T U T I O N
C O L U M B U S Q U I N C E N T E N A R Y P R O G R A M S
P R O J E C T E D F E D E R A L F U N D I N G R E Q U I R E M E N T S F O R F Y 1 9 9 0

	FTE	\$000s
	----	-----
Cooper-Hewitt Museum		
* FY 1990 Cong. Request	0	24
* FY 1990 OMB Request	0	24
	-----	-----
Additional Funding Required	0	0
Traveling Exhibition Service		
* FY 1990 Cong. Request	0	55
* FY 1990 OMB Request	0	55
	-----	-----
Additional Funding Required	0	0
Office of Quincentenary Planning		
* FY 1990 Cong. Request	0	50
* FY 1990 OMB Request	1	102
	-----	-----
Additional Funding Required	1	52
Office of Folklife Programs		
* FY 1990 Cong. Request	0	90
* FY 1990 OMB Request	1	125
	-----	-----
Additional Funding Required	1	35
Office of Interdisciplinary Studies		
* FY 1990 Cong. Request	0	0
* FY 1990 OMB Request	0	0
	-----	-----
Additional Funding Required	0	0
Office of Elementary & Secondary Educ.		
* FY 1990 Cong. Request	0	38
* FY 1990 OMB Request	0	38
	-----	-----
Additional Funding Required	0	0
TOTAL, QUINCENTENARY PROGRAMS		
* FY 1990 Cong. Request	4.5	613
* FY 1990 OMB Request	11.5	1,736
	-----	-----
Additional Funding Required	7.0	1,123

Mr. YATES. All right. With that, thank you all very much for coming here today.

[Questions and answers submitted for the record follow:]

Smithsonian Institution

Additional Committee Questions

Equal Opportunity Employment

Question 1: In November, the first semiannual report on equal opportunity initiatives was submitted to the Subcommittee. The report stated that the Smithsonian has made "limited but demonstrable progress in achieving cultural diversity in key grades, research, exhibitions and public programs". The budget also includes special employment initiatives related to increasing the Institution's diversity. How many of these 27 new positions will be filled in 1989? What are the costs related to these positions, and the source of funds?

Answer: The Smithsonian hired 14 of the 21 professional positions during FY 1988, and will hire the remaining seven during FY 1989. The six support staff positions will not be hired until FY 1990 with Congressional approval of the program. Interim funding for the 21 professional positions in FY 1988 and FY 1989 has come from funds for the new Federal Employee Retirement System (FERS). Since these funds were available to the Institution centrally, it withheld a portion of these funds to cover the cost of the new hires before allocating the remainder to bureaus and offices to cover FERS. By FY 1990 the Institution will need these funds for their original purpose.

Question 2: Can you provide specific examples of existing exhibitions that will be reinterpreted or new exhibitions planned that will address the contributions of women or minority groups? When will these changes occur? Do you have adequate funds to make these changes?

Answer: Throughout the Smithsonian, museums are paying increased attention to include the contributions of minorities and women in their permanent and special exhibitions. These changes fall in four categories: enriching current installations and exhibitions; planning exhibitions focussed on minority or women artists or of special interest to minorities and women; minority involvement in the development of more exhibition topics by embedding minority and women viewpoints in topics of general interest; and, the acquisition of materials made by or related to minorities and women. Examples of each of these categories follow, although this is not an exhaustive list.

I. ENRICHING CURRENT INSTALLATIONS AND EXHIBITIONS

The National Museum of American History highlighted the African American experience in "Field to Factory: Afro-American Migration 1915-1940", and the Japanese-American experience in "A More Perfect Union". An exhibition on Asian/Pacific Photography in recognition of Asian/Pacific American Heritage Week opens this Spring. At the

National Museum of Natural History, the "Crossroads to Continents: Cultures of Siberia and Alaska" exhibition completed its run here in April and will travel to five American cities and the Soviet Union. "Coyote: A Myth in the Making" features the contemporary work of Henry Fonseca, a Maidu Indian. The Anacostia Museum exhibit, "Climbing Jacob's Ladder: The Rise of Churches in Eastern American Cities, 1740-1877" is travelling to museums and other cultural institutions throughout the country. At the Hirshhorn Museum and Sculpture Garden, a one-man show by a Chinese sculptor, "Mel Chin", opened this year, while at the National Air and Space Museum, "Women in Helicopter Aviation" opened in 1988. "Purses, Pockets, Pouches" focuses on objects traditionally made or worn by women, at the Cooper Hewitt Museum.

There are also Smithsonian museums and offices which by virtue of their missions and historical realities do hold a special link to African American and Asian audiences, namely the National Museum of African Art and the Sackler Gallery of Art. The Smithsonian Institution Traveling Exhibition Service continually circulates exhibitions of special interest to minorities and women to museums and cultural institutions throughout the country. Among those are "The Long Road Up the Hill: Blacks in the U.S. Congress, 1870-1983"; "Sharing Traditions: Five Black Artists in 19th Century American Art"; "Plains Indian Art: Continuity and Change".

II. PLANNING EXHIBITIONS FOCUSED ON MINORITY OR WOMEN ARTISTS OR OF SPECIAL INTEREST TO MINORITIES AND WOMEN

At the National Museum of American History, an exhibition entitled "The Way to Independence: Memories of a Hidatsa Family, 1820-1940" details the experience of an Hidatsa family, the historical changes in their lives, and the lives of Northern Plains Indians, and will open April 1989; "American Encounters", opening 1992 as part of the Quincentenary celebration; "From Parlor to Politics: Women in the Progressive Era", a look at women at the turn of the century and their influence on the American political scene. At the National Museum of Natural History, a major effort entitled the "Seeds of Change" will include a major exhibition and a travelling version, and several symposiums and conferences, all focussing on the contact between the cultures of the native peoples of the New World and Europeans. The Native American Hall will undergo a complete renovation to update its presentations. "Stitched From the Soul" will contain quilts, weavings, and furniture made by African American slaves in the Ante-Bellum South, supplemented by photographs and diaries of the makers, due to open at the Renwick Gallery in 1989. The Hirshhorn Museum and Sculpture Garden will focus on several one-person shows in the coming years including: "Erika Beckman", a multi-media woman artist (1989); "Houston Conwill", an African American sculptor (1989); "Eva Hesse", a woman sculptress (1992); and "Martin Puryear", an African American sculptor (1992).

III. MINORITY INVOLVEMENT IN THE DEVELOPMENT OF MORE EXHIBITION TOPICS BY EMBEDDING MINORITY AND WOMEN VIEWPOINTS IN TOPICS OF GENERAL INTEREST

The National Portrait Gallery will feature an exhibition on the paintings of Weinoold Reiss, a German American portrait artist who painted American minorities, including American Indians and African Americans.

The National Air and Space Museum includes an EEO representative as a member of their exhibits committee.

IV. ACQUISITION OF MATERIAL MADE BY OR RELATED TO MINORITIES OR WOMEN

The National Museum of American History recently added the Duke Ellington Collection which includes original sheet music, correspondence, etc. to its collections. A special exhibition in honor of Duke Ellington will open in spring 1989 and will feature free public programs and concerts throughout April 1989.

No institution (the Smithsonian included) ever has enough money to do all the things it wishes to accomplish. Of special interest to the Smithsonian, and as a follow up to the program report which the Institution submitted to the Subcommittee, is the request for \$155,000 to establish an office to explore further the potential for a Museum of African American history, art, and culture on the mall, its relationship to the Anacostia Museum, and establishing the guidelines for collecting African American materials, and the choice of African American research topics within the Smithsonian.

Question 3: Please provide a more specific justification for the positions requested in the special initiative, as to their function or need within the specific organization where they will be placed.

Answer: The process through which the Smithsonian identified these positions stressed both the significance of establishing the Institution-wide program through the addition of these positions and the programmatic justification for each individual position. The Smithsonian's FY 1990 budget justification presents the general justification for the program, highlighting the major Institutional benefit that the Smithsonian will derive from a more culturally- and ethnically-diverse professional staff. The following information presents the programmatic justifications for each individual position:

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

Staff Scientists: Two half-time staff scientists for the Smithsonian Tropical Research Institute (STRI) will open new areas of research and enhance outreach in Panama. One of the scientists is an internationally known expert on the Flora of Panama. She provides

expert advice on plant systematics to permanent staff and visiting scientists and supervises the management of the STRI Herbarium. The other position is a bryologist who is currently working on the preparation of a flora of the mosses and related plants of Barro Colorado Island. The lower plants are an important element in the tropical forest ecosystem, but biologists have heretofore largely neglected them. Since STRI carries out its activities in a host country, maintaining good relationships with the local organizations is essential. Hiring locally helps to accomplish this goal. Both of the new half-time scientists are professors at the University of Panama. They have conducted joint STRI-University of Panama courses and have trained and channelled to STRI large number of Panamanian students who have worked as assistants and received fellowships for independent research.

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

Biologist: The biologist at the Smithsonian Environmental Research Center (SERC) will conduct research on estuarine parasitology. Some of the most important research problems on Chesapeake Bay revolve around parasitology. For example, the oysters in the Bay are suffering serious losses due to several species of parasites. Parasite life cycles in Chesapeake Bay are complex. The host for one stage may be an aquatic bird, while another stage lives in a fish or shellfish species. Since this aspect of estuarine ecology historically has not received adequate study on Chesapeake Bay, the addition of a biologist to this long-term interdisciplinary study will add a great deal to the overall value of the SERC research program.

NATIONAL ZOOLOGICAL PARK

Conservation Biologist: The conservation biologist position, assigned to the Conservation and Research Center at Front Royal, Virginia, will spend most of her time in Southeast Asia where she will foster collaboration between various Smithsonian bureaus and local government and non-government agencies. In particular, she will promote cooperation in ecological research and conservation education and training through public programs at national parks and zoos. Her presence will greatly accelerate Smithsonian research and conservation initiatives and bring about better coordination of activities by various Smithsonian research projects in that part of the world.

SMITHSONIAN INSTITUTION LIBRARIES

Reference Librarian: The reference librarian in the Natural Museum of American History (NMAH) provides advanced and comprehensive reference and bibliographic services to the users of the branch library. She performs a variety of professional services broadly categorized into research services, collection management and collections development policies. An important function of this

position is to assess the state of current collections, making recommendations for new materials and the deaccessioning of less relevant material. Recognizing the growth of scholarship in the area of Black History, this librarian will work with the extant collections within the NMAH branch and other relevant libraries to develop an overview of materials in order to assist administrators, scholars, students, government agencies, and members of the general public. The librarian will also interact with the NMAH staff to insure a sound basis for scholarship in Afro-American issues and, as requested suggest areas for research to be pursued.

NATIONAL MUSEUM OF NATURAL HISTORY

Botanists: The first botanist position will allow the Museum's Department of Botany to better care for its Caribbean plant collections. Although collections of Caribbean plants make up a significant part of the U.S. National Herbarium which the Department of Botany maintains, the Department has had no specialist on this flora since the early 1900s. Accumulations of general Caribbean collections which the Smithsonian has received for identification purposes also require attention by a specialist who knows this flora. The Caribbean specialist will also consult on botanical aspects of the Quincentenary exhibit, "Seeds of Change."

The second botanist position will expand the current research capabilities of the Museum's Department of Vertebrate Zoology. The reptile and amphibian collection of the Department of Vertebrate Zoology is among the best in the world, and the Department has superb facilities and preserved specimens for histological study of these groups of organisms. What it lacks, however, is a specialist who studies the important lizard fauna of the Southwest deserts and who combines the modern range of immunological, biochemical, and morphological methods in studies of amphibians and reptiles generally. A specialist in this area with modern approaches will make a major contribution to the current staff.

Marine Biologist: The Smithsonian Oceanographic Sorting Center's Benthic Invertebrate Section provides very important support to systematic biology through the sorting and distribution of marine specimens to more than a hundred systematists worldwide. As the Invertebrata consist of numerous large and complex groups of organisms, the hiring of a specialist in Crustacea, one of the major benthic invertebrate groups, allows the Center's current invertebrate specialist to focus on the other large groups.

Anthropologist: The Department of Anthropology has long recognized that material culture assemblages recovered from early Euro-American settlements hold the potential of yielding considerable new information regarding poorly documented aspects of our country's historical period. In establishing an anthropologist position in historical archaeology to complement present staff research of prehistoric cultures of the United States, the Museum will expand its archaeological research program in an important new direction, the

particular specialty being the archaeology of plantations during slavery. This research will support directly the planning for the Museum's Quincentenary exhibit, "Seeds of Change."

Geologist: The Department of Mineral Sciences has one of the world's best collections of minerals and ores, but current research efforts concentrate on detailed crystal-structure analysis and related laboratory studies. The department needs a mineralogist with training and experience in field geological and geochemical investigations of mineral deposits, especially pegmatites. Such a specialist also will be able to collect specimens in the course of fieldwork that will enrich the national collections with scientifically documented material for use by the entire research community.

Archeologist: The North American prehistoric archaeological collections of the Museum are large, diverse and of high quality, and the enquiries and loan requests increase each year. The establishment of a new North American archaeologist position builds on a major strength of the Department of Anthropology, in a discipline that is witnessing considerable growth.

NATIONAL MUSEUM OF AMERICAN HISTORY

Curator of Political History: The addition of a new curatorial position in the Division of Political History enables the Museum to bring to the Smithsonian a nationally-known scholar in African-American history. He is one of a dozen or so leaders of the Afro-American museum community, a scholar who has earned the respect of his peers and a curator who has repeatedly demonstrated his ability to communicate in writing, through exhibitions, and on film. He will come to the Museum at a time when it is establishing the scope, direction and goals of its evolving Afro-American programs. As a senior curator in the Division of Political History, he will be responsible for the General American History Collection (which includes objects related to the great men and women in America's political history. He will also be responsible for overseeing and developing the Museum's growing collection of materials relating to the Civil Rights movement, his research specialty being that of African-American history. He will also fulfill an important Museum role as a member of a team developing the permanent exhibition on life in Nineteenth Century America. Thus, the opportunity to bring on a well-respected scholar in African-American History coincides at this moment with the Museum's need to provide scope, direction and leadership in its African-American collections and research efforts.

Curator of the History of Biological Sciences: The Museum of American History does not now have any staff working in the area of the History of Biological Sciences. This is an important area of public concern in the 20th century, as it encompasses such subjects as DNA research and genetic engineering. The Museum plans to reorganize current curatorial divisions that study medical sciences and agriculture, along with this new position, into a Division of the

History of Biological Sciences, part of whose mandate will be to collect for the public trust the instrumentation and research equipment and materials that document the history-making advances in this field.

Director of the Program in Hispanic American History: This position coordinates the development and presentation of a wide variety of public programs for the Museum's recently-established Program in Hispanic American History. This new permanently-based research/programming effort will address three areas that the Museum's current activity does not fully meet: (1) to inform NMAH's present museum audience about the historic role of Hispanic culture in shaping the history of the United States; (2) to develop and maintain a new Hispanic audience for the Museum; and (3) to create research and professional opportunities for Hispanic American scholars at the Museum and to stimulate scholarly research and publication in the field of Hispanic American history by the Museum.

NATIONAL MUSEUM OF AMERICAN ART

Education Specialist: The education specialist position will help the Museum begin to redress a long-standing deficiency in the area of educational programming. During the past four years, the Museum has sacrificed part of its small educational programming office in order to support other fledgling programs then at a critical stage of development. This occurred at the moment that the Museum's exhibition policies were under internal review, so that it seemed reasonable to defer education until it resolved the direction of the exhibition program. The Museum largely curtailed educational programming except for such exceptional efforts as the intensive schedule of activities related to the "Sharing Traditions" and "Gene Davis" exhibitions (both supported by trust funds), and an occasional scholarly symposium.

Now the Museum has a firmly established policy in favor of fewer exhibitions, each of longer duration than before, each addressing significant issues and reaching major audiences. In order to face these significant issues and to reach larger audiences, the Museum will need a stronger educational and interpretative effort than we are now able to offer. Moreover, the extraordinary NMAA permanent collection has an even greater claim on our attentions; these objects deserve not only preservation and display, but also serious research and interpretation for our visitors. The Museum plans to highlight its permanent collection through a range of educational and public programs, including tours, films, lectures, workshops, family programs, discussion groups on American art, and other events. The Museum has sought to hire a minority candidate for this position who would, we believe, be especially good in working with local audiences and schools and attracting minority audiences to the Museum.

Curator: Though the collections of the National Museum of American Art do an adequate job of representing the cultural diversity of American artists, the Museum recognizes that it must do

more. The new curator position will assist the Museum in furthering the collection efforts to better reflect both the cultural diversity of artists of the present and the past and to better document the historical background which made this diversity possible.

NATIONAL PORTRAIT GALLERY

Public Program Coordinator: The new public program coordinator position will help the National Portrait Gallery develop and coordinate programs of symposia, lectures, films and performances to appeal to the Gallery's present audience as well as to ethnic groups which National Portrait Gallery programs have not previously served.

CONSERVATION ANALYTICAL LABORATORY

Art Historian: This position enables Cal to hire an art historian with professional training in paintings conservation who is coordinating inter-bureau research programs and developing a new initiative in art history. Traditionally the study of art history has relied heavily on the use of reproductions of paintings and other objects through the medium of photography. This program involves the enhanced use of studies of the objects themselves through the application of both old and new technologies which enable the art historian to gain new insights into the artist's work. This position enables CAL to build upon the projects already begun in collaboration with the National Museum of American Art for the study of two turn of the century American artists, Thomas Wilmer Dewing and Albert Pinkhan Ryder. Building upon its presently unique facility for the study of paintings through autoradiography, this position expands the program to incorporate the use of CAL's excellent equipment for technical examination, such as the scanning electron microscope, X-ray radiography, infra-red reflectography, as well as outstanding facilities for organic analysis of painting media. CAL's paintings conservation group includes two paintings conservators as well as interns from conservation training programs. Both conservators are contributing to the program of technical studies and the individual which CAL has hired for this art historian position can have a unique input and effect on this program because of her background in both conservation and art history.

OFFICE OF ASSISTANT SECRETARY FOR PUBLIC SERVICE

Media Specialist: The position of media specialist provides expertise as well as special sensitivity to cultural diversity considerations in all Smithsonian Public Service media activities. The specialist coordinates information about special need or interest groups including minorities, hearing and visually impaired so that technical staff can address those needs and interests in motion picture, television and radio productions and audio-visual presentations for exhibits. The media specialist also serves as the Institution's liaison with the media industries and identifies

educational audiences, with a particular emphasis on reaching audiences not currently served adequately.

Director, Office of Wider Audience Development: The position of director provides advice and assistance to Smithsonian managers in management policies that can be changed or improved to increase minority involvement in programs, exhibitions and other audience related activities. Responsibilities will include networking with culturally diverse institutions and organizations outside the Smithsonian to develop joint ventures. The director also develops periodic seminars for Smithsonian staff and specialists from cultural and educational organizations to explore in-depth pertinent themes of contemporary concern which bear on public interest.

OFFICE OF QUINCENTENARY PLANNING

Program Specialist: The program specialist position is responsible for the coordination and continued development of an internationally distributed Quincentenary quarterly that will be published in three languages - English, Spanish and Portuguese. Responsibilities include liaison with the editor, bureau coordinators and other contractors, and the identification of potential thematic areas and sources for articles. This position requires knowledge of the Smithsonian's pan-Institutional Columbus Quincentenary program; an ability to carry out research using a variety of sources; writing ability; knowledge of Spanish language; and knowledge of Latin American history and culture.

Concurrently, the program specialist is responsible for the development of a database with regard to contacts in Latin America from the academic, professional and business communities. These responsibilities serve to support the development of an Institute of the Americas that will facilitate academic exchanges upon the conclusion of the Columbus Quincentenary commemoration. In order to lay the foundation for the Institute, the Smithsonian is currently developing collaborative initiatives with Latin American institutions. The program specialist carries out the collection of English-language and Spanish-language materials and information from United States, Latin American, Caribbean and European institutions and resources on subjects related to the themes of the Quincentenary, assisting the Office of Quincentenary Planning in establishing a foundation for future programming that will reflect a broader representation of diverse cultures from throughout the Americas.

OFFICE OF INTERDISCIPLINARY STUDIES

Program Specialist: The position of program specialist will enable the Office of Interdisciplinary Studies to expand its traditional expertise in developing major symposia, colloquia and seminars to include new programs directed to minority audiences and to increase public awareness and understanding of other ethnic

American cultures. The Institution has already begun to develop new programs and symposia to attract wider audiences, including "Ethnic and Cultural Pluralism"; "Martin Luther King, Jr."; "Observance"; "Crossroads of Continents"; "Afro-Americans and the Evolution of a Living Constitution"; and "Research on Contemporary Cultures and Civilizations."

Question 4: In addition to the special employment initiative, in the amount of \$1,104,000, there is a request of \$450,000 for an upward mobility program. Is this a one-time only effort, or would you expect to continue this program each year?

Answer: This upward mobility program will be an ongoing equal employment opportunity program within the Institution. The FY 1990 request would establish a permanent central base of funding to support 10 upward mobility positions. The positions funded through this program would be monitored, and if for any reason a participant did not complete his or her training or left the Institution, then the funding for that particular position would return to the central pool and be used to support another upward mobility position. If the program is highly successful, the Institution may request additional funds in the future to expand the program.

Question 5: How many years of training does this initiative assume each participant will undertake before reaching the targeted grade level?

Answer: The amount of training necessary will vary with each position. Conceptually, the Institution assumes that the entry level of an upward mobility position will be around a grade 5 and that it will take from three to five years to progress through the training to attain the targeted grade level of 11 or 12.

Question 6: Nonappropriated sources of funding are summarized on p. 15. Which programs are receiving the increased funding from contracts and grants in FY 1989 (\$24 million, compared to \$18 million in 1988)?

Answer: The \$6 million increased funding for government grants and contracts in FY 1989 is attributable to the Smithsonian Astrophysical Observatory. The bulk of this increase is related to two projects, UVCS/SOHO (an ultraviolet camera jointly sponsored by NASA and the European Space Agency) and the High Resolution Camera (part of the instrumentation for NASA's AXAF program).

Uncontrollable Increases

Question 7: P. 26. There is a request of \$7,419,000 for uncontrollable increases in FY 1990.

According to the justification (p. 2), the Smithsonian is using part of its current services funding (inflation of non-personnel objects) for FY 1990 to cover the annualization of the January, 1989

pay raise. What impact is this reallocation of funds expected to have?

Answer: Because of the reallocation of funds to cover the January 1989 pay raise, the Institution will be forced to absorb inflationary costs experienced in non-personnel objects of expense. As in the past two years, bureaus and offices will continue to absorb these inflationary costs through managed personnel lapse, curtailed travel, and deferred purchases of supplies and equipment.

Question 8: Are you absorbing any costs in FY 1989 related to the pay raise, or other uncontrollable factors? If so, describe them, the amounts involved, and the source of funds.

Answer: During FY 1989, four major items that the Smithsonian must absorb are the partial-year costs of the January 1989 pay raise, \$4,312,000; the partial-year costs of the new salary upgrade for the security guards, \$869,000; interim funding for Special Employment Initiative positions, \$839,000; and full operation costs of the Smithsonian Institution Bibliographic Information System (SIBIS), \$350,000. (The Institution expects to make a request in FY 1991 for SIBIS base shortage as well as for expanded usage.) In addition, the Smithsonian Institution Libraries is faced in FY 1989 with extraordinary inflationary costs of scholarly journals and books. (Refer to the insert in the hearing record on "Books and Journals".)

The Smithsonian bureaus and offices are absorbing these uncontrollable costs in FY 1989 through the management of rehires, deferred hiring of new FY 1989 positions, and deferred purchases of supplies and equipment.

Question 9: What is the status of your request to the Office of Personnel Management for special salary rates for security guards? How much will this effort cost in FY 1989, and how are these costs being covered?

Answer: By a letter dated March 7, the Office of Personnel Management informed the Institution that it had approved the establishment of the special salary pay scale for security guards. This new pay scale took effect on March 12, 1989. The Smithsonian has estimated that the partial-year cost of this pay scale change for FY 1989 will be approximately \$900,000. For FY 1989, the Institution may have to absorb these costs by reprogramming funds from programmatic areas. For FY 1990, the Institution has requested the full-year funding for these costs in the budget request. (Based on the final version of the new pay scale which the Office of Personnel Management approved, the revised estimate of the full-year costs for FY 1990 is \$1.363 million, a decrease of \$362,000 from the initial estimate of \$1.725 million which is in the Institution's FY 1990 budget request.)

Question 10: What is the basis for the \$730,000 increase in projected costs for FERS? What is your current estimate of 1989 FERS costs, and how much in total is available to meet these costs?

Answer: The current estimate of FERS costs for FY 1990 is \$4.418 million, representing an increase of \$730,000 over the appropriated FY 1989 base funding level of \$3.688 million. FERS costs for FY 1989 are still projected at \$3.688 million. However, the Institution applied \$839,000 from the FERS appropriation (as a one-time measure) to initiate the Institution's Special Employment Initiative to increase the cultural and ethnic diversity in its professional staff.

Question 11: How was the \$2,230,000 restored in FY 1989, to be used for health insurance costs, special pay for guards, and FERS costs, allocated among these needs? What is the base amount for each of these needs in FY 1990?

Answer: The \$2,230,000 which the Conference Committee restored in the FY 1989 Appropriation allowed the Institution to provide funding as follows:

(\$000)	Spread of \$2,230	FY 1989 Base	FY 1990 Need	Difference
Health Benefits Increase	1,673	1,673	2,149	476
FERS	307	3,688 ¹	4,418	730
Guard Upgrade ²	0	0	1,363	1,363
SAO Equipment	250	500 ³	500	0

¹ Includes the \$839,000 applied to the Special Employment Initiative.

² The new approved salary scale for security guards became effective March 12, 1989. The final scale provides a lesser salary increase than reflected in the FY 1990 justification. The requirement for FY 1990 is \$1,363,000, or \$362,000 less than the FY 1990 budget request.

³ The \$250,000 from the \$2,230,000 restored by Congress together with \$250,000 appropriated directly to SAO provides a total of \$500,000 to restore SAO's equipment replacement program. The total that will be available in SAO's base for computer equipment in FY 1990 is not known at this time, due to a continuing erosion of that base by unfunded increases in salaries and benefits, primarily from promotions and quality steps. The total available will likely be less than the approximately \$800,000 that was available for computer equipment in FY 1989.

Question 12: There is an increase of \$3,347,000 requested for utilities, which reflects the inclusion in the Smithsonian budget for the first time of \$3,675,000 to pay for D.C. water and sewer costs. How was this amount determined?

Answer: The Smithsonian derived the FY 1990 estimate for water and sewer costs from information on actual consumption and costs figures compiled over a number of past years by the D.C. Government. Smithsonian staff used these trends of usage to estimate consumption for Smithsonian facilities in FY 1990. The D.C. Government also provided estimated FY 1990 rates which staff used to arrive at the total estimate of \$3,675,000.

Question 13: Why are electricity costs in 1989 about \$600,000 less than estimated last year? What is the basis for the assumed increase in the unit cost in 1990?

Answer: The current estimate for FY 1989 electricity costs is about \$600,000 less than estimated last year because the Smithsonian had actual figures for FY 1988 on which to base the more recent estimate. Last year we estimated FY 1988 costs about \$1 million higher than actual costs. Staff used this higher estimate of FY 1988 costs as the basis for the estimate for FY 1989 made last year. The actual FY 1988 costs were lower than estimated last year due to less consumption for the operation of the Quadrangle complex, continued delays in the full occupancy of the Museum Support Center, and the actual full year effect of the rate decrease for electricity which was effective in May 1987. Energy conservation measures which the Institution's Office of Plant Services implemented also contributed to savings in electricity during FY 1988. The Smithsonian's current cost estimates for FY 1989 build upon the actual FY 1988 costs and reflect those cost reducing actions which occurred in FY 1988.

The Smithsonian based the estimated unit cost shown for FY 1990 on a FY 1989 rate increase requested by PEPCO for the District of Columbia. The D.C. Public Service Commission subsequently rejected the rate increase in January 1989. In February 1989, however, the Maryland Public Service Commission approved two additional rate increases which were not reflected in the Institution's projections as we did not receive advance notification. These new rate increases will affect electricity costs for the Smithsonian's facilities in Maryland. One of these increases went into effect in February 1989 and the other becomes effective in June 1989. The Smithsonian believes that the unit cost estimate of \$.065 per kilowatt hour of consumption is a valid estimate based upon currently available information.

Question 14: When is the gas rate increase due to occur?

Answer: The Public Service Commission approved new rates effective October 29, 1988. The Institution learned of this approval in late January 1989, when it received its Washington Gas Company bill, covering service for October 1988.

Question 15: An increase of \$266,000 is requested for rent. Since both the House and Senate disagreed with the new allocation of rent costs between Federal and Trust accounts proposed last year, why are you proposing the same basis this year?

Answer: The Institution believed the new allocation was approved in conference, along with the restored funding for rent.

Question 16: Why are you showing the Federal costs for L'Enfant Plaza at \$901,000 in 1989, when the request last year was \$802,000?

Answer: In FY 1989, Congress approved funds for the Office of Design and Construction, Procurement and Property Management and Environmental Management and Safety to support management and technical costs associated with the enhancement of the Smithsonian's repairs and restoration programs. This funding included new positions, appropriate office space and associated support costs. The variance in the L'Enfant Plaza Federal rental costs reflects the base transfer of funds from these Facilities Services units to the central rent account for recently acquired office space.

Question 17: Why do the Trust costs at North Capitol St. decrease by 10%, while the Federal costs increase by the same percentage?

Answer: The FY 1990 Federal costs at North Capital Street recognize a change in space utilization. Specifically, 2,600 square feet formerly used by a business activity now houses Smithsonian Press Federal publications such as research monographs, technical and scientific series, educational pamphlets and informational leaflets.

Question 18: Why should the Federal costs in total increase by 13%, while Trust costs increase by only 2.7%?

Answer: Federal and Trust funds continue to share rent costs for administrative offices. However, the costs estimated for FY 1990 indicate changes in programmatic space utilization. The Trust fund contribution is reduced because the Air and Space Magazine will move from the Air and Space Museum into commercial space in April, thus ending their payment of rent for space occupied in a non-rented Smithsonian building. Also, rent for Project Discovery office space, previously paid from unrestricted Trust funds, is now paid by the Discovery Channel which recognizes this cooperative arrangement. During FY 1989, the Institution acquired additional space for management and technical support of the expanded repairs and restorations programs which significantly increases the Federal share of the central rent account. Without these support costs, the Federal increase is 6%.

Salaries and Expenses

Assistant Secretary for Research

Question 19: P. 33. The request for the Assistant Secretary for Research is \$1,242,000, an increase of \$9,000. Why is the 1989 base amount for personnel compensation \$110,000 less than the amount requested last year?

Answer: The FY 1989 base amount for personnel compensation is less than the amount requested last year due to conversion of one employee from full-time to half time, anticipated lapse from the retirement of one employee, and the resignation of one employee.

Question 20: Explain also the significant differences shown for the 1989 base for travel, printing, other services and supplies.

Answer: The differences shown for the FY 1989 base for travel, printing, other services, and supplies reflect redirection from personnel compensation and personnel benefits to support expense associated with the Smithsonian diving program, computer equipment, and pilot studies of possible joint programs with the University of Kenya and the University of Arizona.

Smithsonian Astrophysical Observatory

Question 21: P. 36. The request for the Smithsonian Astrophysical Observatory is \$11,172,000, an increase of \$256,000. There is also a related request (p. 72) for major scientific instrumentation of \$2,176,000, an increase of \$970,000. When were the receiver leader and technician, approved in FY 1988, hired?

Answer: The receiver leader was hired in late winter, and will move to Massachusetts and begin work full-time in early June 1989, at the end of his children's school year. SAO hired three persons part-time, instead of one technician full-time, as each of those hired provided special skills of technical support for our receiver scientist, beyond the level of capability of most technicians. The first of these three began work in August 1988, the second in November 1988, and the third in January 1989.

Question 22: What is the status of hiring the three positions approved in FY 1989?

Answer: To obtain the best match between project needs and available talent, SAO has hired a project leader, a technical leader, and a science leader. The project leader, from Austin, Texas, has an excellent background with broad relevant experience in contracting with industrial firms; he is expected to start full-time at SAO on or before 1 June 1989. The technical leader, a superb instrumentalist from Caltech, began work on the project at SAO full-time at the start of this fiscal year, October 1988. The science leader, from Harvard, started part-time this fiscal year and will transfer to full-time in June 1990. SAO will not fill the digital leader position this year.

Instead the technical leader will supervise a contractor who will carry out the required work. The software needs are now being handled by a part-time person, also working under the technical leader.

Question 23: When will a site for the submillimeter array be chosen?

Answer: The choice of a site is an integral part of the design study. We will select a site on or before completion of the design study, estimated to take a total of two years. We will make the technical part of the decision after the completion of an analysis of climatological, meteorological, and radiometric data on atmospheric opacity. Sufficient radiometric data are not now available, but, in cooperation with the National Radio Astronomy Observatory, we are currently preparing the relevant instrumentation to set up on Mauna Kea, Hawaii, to obtain these data.

Question 24: When will the design of the array be completed? What is the total estimated cost of the design expected to be?

Answer: The design study is expected to take about two years. Therefore, it should be completed in late 1990. The total cost of the design study is expected to be about \$2.5 million 1989 dollars.

Question 25: How exactly will the three positions requested in this budget assist in completing design of the array?

Answer: The mechanical engineer will work closely with potential contractors to evaluate the structural and thermal properties of the antenna designs under consideration, their relative costs and ease and reliability of manufacture. The receiver technician and the digital technician will assist the receiver leader and the technical leader, respectively, in developing and testing prototype devices and subsystems required for the array.

Question 26: For these positions, and all new positions requested in FY 1990, has any lapse rate been applied? Provide a table for all new positions showing the related workyear and salary costs.

Answer: The following is a list of the new positions the Smithsonian is requesting in the FY 1990 budget, with workyear and personnel cost information. The Institution has not applied any lapse rate for these positions. The Institution expects to hire all candidates for the Special Employment Initiative prior to the beginning of FY 1990.

April 1989

SMITHSONIAN INSTITUTION
NEW POSITIONS REQUESTED IN THE FY 1990 BUDGET

BUREAU/ POSITION TITLE	# of FTP Pos.	HIRE DATE	FUNDING REQUESTED IN THE	
			FY 1990 FTE	CONG. BUDGET \$ (000s)
RESEARCH =====				
ASTROPHYSICAL OBSERVATORY				
SUBMILLIMETER WAVELENGTH TELESCOPE ARRAY				
Mechanical Engineer	1	10/1/89	1.00	62
Receiver Technician	1	10/1/89	1.00	30
Digital Technician	1	10/1/89	1.00	30
	-----		-----	-----
TOTAL, SAO	3		3.00	122
TROPICAL RESEARCH INSTITUTE				
SPECIAL EMPLOYMENT INITIATIVES				
Staff Scientist (half-time pos.)	0 *	10/1/89	0.50	22
Staff Scientist (half-time pos.)	0 *	10/1/89	0.50	18
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TOTAL, STRI	0		1.00	40
ENVIRONMENTAL RESEARCH CENTER				
SPECIAL EMPLOYMENT INITIATIVES				
Biologist	1	10/1/89	1.00	52
Biological Science Technician	1	10/1/89	1.00	25
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TOTAL, SERC	2		2.00	77
NATIONAL ZOOLOGICAL PARK				
SPECIAL EMPLOYMENT INITIATIVES				
Conservation Biologist	1	10/1/89	1.00	44
SMITHSONIAN INSTITUTION LIBRARIES				
SPECIAL EMPLOYMENT INITIATIVES				
Reference Librarian	1	10/1/89	1.00	36
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TOTAL, RESEARCH	7		8.00	319

April 1989

SMITHSONIAN INSTITUTION
NEW POSITIONS REQUESTED IN THE FY 1990 BUDGET

BUREAU/ POSITION TITLE	# of FTP Pos.	HIRE DATE	FUNDING REQUESTED IN THE	
			FY 1990 FTE	CONG. BUDGET \$ (000s)

MUSEUMS				
=====				
NATIONAL MUSEUM OF NATURAL HISTORY				
SPECIAL EMPLOYMENT INITIATIVES				
Botanists (2 pos.)	2	10/1/89	2.00	72
Marine Biologist	1	10/1/89	1.00	36
Anthropologist	1	10/1/89	1.00	36
Geologist	1	10/1/89	1.00	36
Archeologist	1	10/1/89	1.00	44
Research Technicians	3	10/1/89	3.00	102
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TOTAL, NMNH	9		9.00	326
NATIONAL MUSEUM OF AMERICAN HISTORY				
SPECIAL EMPLOYMENT INITIATIVES				
Curator	1	10/1/89	1.00	62
Curator	1	10/1/89	1.00	44
Curator	1	10/1/89	1.00	36
Research Assts.	2	10/1/89	2.00	70
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TOTAL, NMAH	5		5.00	212
NATIONAL MUSEUM OF AMERICAN ART				
SPECIAL EMPLOYMENT INITIATIVES				
Education Specialist	1	10/1/89	1.00	36
Curator	1	10/1/89	1.00	44
	-----		-----	-----
TOTAL, NMAA	2		2.00	80
NATIONAL PORTRAIT GALLERY				
SPECIAL EMPLOYMENT INITIATIVES				
Public Program Coordinator	1	10/1/89	1.00	36
CONSERVATION ANALYTICAL LABORATORY				
SPECIAL EMPLOYMENT INITIATIVES				
Art Historian	1	10/1/89	1.00	44
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TOTAL, MUSEUMS	18		18.00	698

April 1989

SMITHSONIAN INSTITUTION
NEW POSITIONS REQUESTED IN THE FY 1990 BUDGET

BUREAU/ POSITION TITLE	# of FTP Pos.	HIRE DATE	FUNDING REQUESTED IN THE	
			FY 1990 CONG. BUDGET FTE	BUDGET \$ (000s)
PUBLIC SERVICE =====				
ASST. SECRETARY FOR PUBLIC SERVICE				
SPECIAL EMPLOYMENT INITIATIVES				
Media Specialist	1	10/1/89	1.00	62
Director, Committee for a Wider Audience	1	10/1/89	1.00	44
	----		----	----
TOTAL, PUBLIC SERVICE	2		2.00	106
INTERNATIONAL ACTIVITIES =====				
INTERNATIONAL CENTER/ OFFICE OF QUINCENTENARY PLANNING				
SPECIAL EMPLOYMENT INITIATIVES				
Program Specialist	1	10/1/89	1.00	36
	----		----	----
TOTAL, INTERNATIONAL ACTIVITIES	1		1.00	36
SPECIAL PROGRAMS =====				
OFFICE OF INTERDISCIPLINARY STUDIES				
SPECIAL EMPLOYMENT INITIATIVES				
Program Specialist	1	10/1/89	1.00	44
	----		----	----
TOTAL, SPECIAL PROGRAMS	1		1.00	44
ADMINISTRATION =====				
OFFICE OF ACCOUNTING AND FINANCIAL SERVICES				
System Accountant	1	10/1/89	1.00	44
System Accountant	1	10/1/89	1.00	30
Accountant	1	10/1/89	1.00	25
Accounting Technicians	4	10/1/89	4.00	88
Accounting Technicians (temp. pos.)	0 **	10/1/89	7.00	154
Records Library Clerk	1	10/1/89	1.00	20
	----		----	----
TOTAL, ACCOUNTING	8		15.00	361
OFFICE OF THE TREASURER				
Financial Analyst	1	10/1/89	1.00	44
OFFICE OF AUDITS & INVESTIGATIONS				
Criminal Investigator	1	10/1/89	1.00	36

April 1989

SMITHSONIAN INSTITUTION
NEW POSITIONS REQUESTED IN THE FY 1990 BUDGET

BUREAU/ POSITION TITLE	# of FTP Pos.	HIRE DATE	FUNDING REQUESTED IN THE	
			FY 1990 FTE	CONG. BUDGET \$ (000s)

OFFICE OF PROCUREMENT AND PROPERTY MANAGEMENT				
R&R SUPPORT				
Contract Specialist (construction negotiation)	1	10/1/89	1.00	52
SI UPWARD MOBILITY PROGRAM				
SPECIAL EMPLOYMENT INITIATIVES				
Upward Mobility Positions	5	10/1/89	5.00	228
Upward Mobility Positions	5	10/1/89	5.00	187
	-----		-----	-----
TOTAL, UPWARD MOBILITY PROGRAM	10		10.00	415
	-----		-----	-----
TOTAL, ADMINISTRATION	21		28.00	908
FACILITIES SERVICES				
=====				
OFFICE OF DESIGN & CONSTRUCTION				
R&R SUPPORT				
Supervisory Engineer/Architect	1	10/1/89	1.00	62
Senior Facilities Planner	1	10/1/89	1.00	44
Construction Cost Estimator	1	10/1/89	1.00	44
Electrical Engineer	1	10/1/89	1.00	44
Secretaries	2	10/1/89	2.00	40
	-----		-----	-----
TOTAL, ODC	6		6.00	234
	-----		-----	-----
TOTAL, FACILITIES SERVICES	6		6.00	234
	-----		-----	-----
TOTAL SMITHSONIAN	56		64.00	2,345

NOTES: * = Positions requested as half-time permanent positions, not full-time permanent positions.
** = Positions requested as full-time temporary positions, not full-time permanent positions.

Question 27: What is the basis for the amount of \$20,000 included in the request for space rental costs? Where is the space, and how large is it?

Answer: The space rental request of \$20,000 is for office and laboratory space needed for six staff who are working, or will be working in FY 1990, on the submillimeter array project. The space is, in part, in the buildings of the Harvard College Observatory and, in part, in a building rented by SAO and located across the street from the Observatory in Cambridge, Massachusetts. Typical offices for staff at SAO are about 150 square feet each; laboratory space in this case will be about 300 square feet. (The displaced SAO contract and grant activities are being moved to other, relatively nearby, rental quarters.)

Question 28: Last year, it was indicated an advisory committee was being formed to review the plans for and progress on the array as it develops. Has this committee been formed? If so, what reviews have been undertaken to date? Have any changes been made to your plans, as a result of such reviews?

Answer: The committee has been formed. The dozen members represent a variety of expertise and are from a variety of institutions, such as Caltech, Cambridge University (England), the Max Planck Institut fur Astrophysik and the University of Cologne (Federal Republic of Germany), the National Radio Astronomy Observatory, the University of Arizona, the University of California, Berkeley, and the University of Chicago. The first meeting, in January 1989, with the committee chairperson alone, took place at SAO and extended over two full days. This intensive review resulted in some potential improvements to our design plan, such as the possibility of achieving even longer baselines (i.e., obtaining higher angular resolution) by circumventing uneven terrain, and of utilizing a novel "pinch roller" design in the antenna drive mechanism to both simplify the design and eliminate backlash. Implementation of these possibilities should not affect significantly either the budget or the schedule of the project. The first meeting of the full committee is planned for late summer 1989 in Cambridge, Massachusetts.

Question 29: With regard to the conversion of the Multiple Mirror Telescope, have you been able to maintain the original schedule for this project? If not, what are the changes, and the impacts, if any?

Answer: The schedule for the project is so far being maintained fairly well. The completion date for the conversion is still estimated to be in 1994.

Question 30: Has the availability of the large facility at the University of Arizona to cast and polish the mirror been a factor, as discussed in last year's justification? What is the current status of this part of the project?

Answer: We expect the Mirror Laboratory at the University of Arizona to be available for the casting and polishing of the 6.5 meter diameter mirror for the conversion of the MMT. The casting date for this mirror is now tentatively set for December 1990. Subsequent polishing is expected to take about two years. So far, the Mirror Laboratory has had excellent success in casting two large mirrors, each 3.5 meters in diameter, and in polishing one mirror, 1.8 meters in diameter. There have been no failures since completion of the new casting furnace.

Question 31: Are you convinced that the difficulty in polishing this type of mirror will not be a problem?

Answer: No. However, experience so far in polishing a 1.8 meter diameter mirror has been extremely encouraging in demonstrating the capability of the new "stress-lap" technique which is being developed for polishing the large mirrors.

Question 32: Is it still expected that the Smithsonian's costs for this project might decrease, if the University succeeds in raising additional funds for this effort, as discussed last year?

Answer: SAO still expects that the Smithsonian's costs for the conversion of the MMT will decrease. The University of Arizona has continued to be quite successful in obtaining funds for developing its Mirror Laboratory for the casting and polishing of large mirrors. However, at this stage of the project, before the 6.5 meter diameter mirror has either been cast or polished, it would be imprudent to make any quantitative assessments on cost reductions.

Smithsonian Tropical Research Institute

Question 33: P. 45. The request for the Smithsonian Tropical Research Institute is \$5,664,000, a decrease of \$184,000 (related to the one-time costs of equipping the Tupper Center). What is the current date when the Tupper Center will come operational?

Answer: STRI anticipates that the Tupper Center will be fully operational in June 1989.

Question 34: Explain the 1989 base amount for equipment of \$561,000, compared to \$667,000 requested last year, since the Congressional reduction was \$50,000?

Answer: STRI was able to buy some equipment out of FY 1988 funds. Therefore STRI reduced equipment for FY 1989 accordingly in order to increase other important items such as research travel and training.

Question 35: How much is expected to be available for research in FY 1990 from the endowment set up with the insurance payment received from the oil company after the oil spill three years ago?

Answer: The Institution is allowing all interest from the endowment to accumulate in order to provide a matching research fund for a fund-raising endowment campaign beginning in FY 1990. Income on the endowment in FY 1990 is estimated at just under \$50,000.

Question 36: The justification discusses STRI's role in conservation and environmental education. What additional efforts has the Smithsonian in general, or STRI in particular, identified for addressing the issues of tropical deforestation and related concerns, such as global warming?

Answer: Within the Smithsonian as a whole, several groups of researchers are dealing with global-scale natural and human-induced environmental concerns. In order to coordinate the Institution's efforts, the Smithsonian has started a series of meetings among the individual researchers from the Smithsonian Tropical Research Institute (STRI), the Smithsonian Institution/Man and the Biosphere Program (SI/MAB), the National Zoological Park (NZP), the Smithsonian Environmental Research Center (SERC), the National Museum of Natural History (NMNH), and the National Air and Space Museum (NASM). The following efforts address the issues of tropical deforestation and related concerns, such as global warming:

Smithsonian Tropical Research Institute (STRI) -- Tropical habitats play a major role in global change. As the Nation's leading research institute for tropical biology, STRI has the mission, the capability, and the desire to increase its activities substantially in this area. STRI's plan has three main focuses:

Monitoring: STRI must expand its knowledge of the structure and natural variation of tropical habitats to track the effects of global change. STRI will extend its current long-term monitoring programs, both in Panama and internationally. STRI will also develop a major new program in forest canopy biology.

Mechanisms: To control global change, the processes by which it occurs must be understood. STRI will increase experimental studies of how greenhouse gases and associated factors affect plants and animals, and expand studies of paleoecology to discover how tropical communities responded to past environmental change.

Management: Deforestation is the paramount ecological crisis facing the tropics today. No research institution can reverse the socio-economic forces causing deforestation. However, STRI can and will increase its ability to protect current reserves, to aid local and regional governments in their attempts to preserve habitats, and to help develop technologies to allow rapid, successful reforestation.

Detailed plans for costing and implementation of the elements described above are attached.

ATTACHEMENT 1, QUESTION 36, HOUSE HEARINGS

A recent editorial in *Earthwatch* included a timely parable:

It is said that the Cumaeen sibyl offered nine books of prophecies to Tarquin the Proud, King of Rome. He refused her price as too high. She went away and burned three of the books and offered him six at the same price. He refused, so she burned three more. At last he grew frightened and paid for the remaining three books of prophecy the price she had asked for nine. We shall do the same with our environment. Whether it is the treasure of the rainforest, or the air we breathe, we shall someday pay whatever is asked for whatever is left.

By virtue of its charge for research in natural history, systematic biology, and tropical biology, the Smithsonian Institution is uniquely qualified and responsible among Federal agencies to help purchase the sibyl's books--to study and help find ways to mitigate the effects of global change caused by human activity.

As one of the world's leading centers for tropical biology, the Smithsonian Tropical Research Institute (STRI) already performs research with relevance to deforestation, global warming, and other aspects of global change. Given the urgency of these issues and the crucial role of the tropics, we believe that, as part of an overall Smithsonian initiative, STRI must expand its program substantially, both within the bureau and through interbureau collaboration.

The proposed expansion at STRI will augment existing research and create complementary subprograms in key areas where more expertise is needed. Our permanent base in the tropics and our multifaceted approach to tropical research makes STRI uniquely suited for such a venture.

We see three inter-linked areas in which STRI needs to enhance its research program in global change. These areas are monitoring, mechanisms, and management. In addition to making their own independent contributions, several of the studies in these areas will provide the kinds of data urgently needed to test and refine models of global change.

Monitoring

Any meaningful attempt to address global change must first characterize what is changing and how, as well as the changes are due to natural, cyclical events or to human behavior. Tropical environments are globally vital and are changing rapidly. Yet the tropics have traditionally suffered from a lack of major scientific attention by the Federal government, especially in comparison to areas such as biomedicine, space exploration, and high energy physics.

Little time remains to correct this deficiency. We must quickly determine structure and natural variation in tropical habitats to measure how they are changing through human activity, and to find ways to prevent or mitigate those changes. STRI, in conjunction with other Smithsonian bureaus, is well placed to address this need through new and augmented program elements.

Element 1: The Forest Canopy Access System. The tropical forest canopy is arguably the richest single habitat on Earth, yet its biology is more poorly understood than that of the depths of the oceans or the Antarctic. STRI wishes to implement a simple, well-tested, and robust technology to provide ready scientific access to the canopy (see answer to Subcommittee question 37).

This technology, which involves the novel use of tower construction cranes, promises to revolutionize the study of tropical forests just as SCUBA diving revolutionized the study of coral reefs. Among its many potential uses are characterization of biological diversity, seasonal and long-term changes in populations, the effects of disturbance, and ecological interactions of the kind that led to the biochemical discoveries Dr. Rubinoff discussed at the hearing, as well as physiological research to examine mechanisms and effects of global warming (see Mechanisms section).

Element 2: The International Forest Dynamics Project. In 1980, STRI established a permanent one-half square kilometer forest plot on BCI to begin an intensive, long-term study of the structure and dynamics of tropical forests. Major aims are to determine how individual plant species grow and reproduce in relation to the whole forest, and to make this information useful for tropical forest management, reforestation, and conservation.

STRI scientists designed the study so that similar plots could be set up in forests throughout the world, in collaboration with local scientists and agencies. The design is leading, for the first time in history, to truly comparable long-term studies of tropical forests in different countries. The establishment of temperate sites could also lead to meaningful comparisons of temperate and tropical habitats.

STRI helped the Forest Research Institute of Malaysia establish the first replicate plot in 1985. The first census revealed that the Malaysia site has more than twice the species (836) of trees and shrubs than the BCI plot (305) contains.

The India Institute of Science has recently established a third plot, and STRI is negotiating with other Asian countries that have expressed interest. STRI plans to provide training, coordination, and some direct support, and to serve as a clearinghouse for information on the various plots. A long-term goal is to establish a tightly-linked global network of plots, each with canopy access systems and ground-based physical monitoring supplemented by remote sensing (performed in conjunction with NASM).

STRI also wishes to initiate networks of small inventoried forest sites throughout several tropical regions to complement the intensive information found in Forest Dynamics Plots with extensive but less detailed information about larger areas.

Element 3: Physical Monitoring. The Environmental Sciences Program established physical monitoring programs at Barro Colorado and the Galeta Marine Laboratory. As STRI long-term biological research expands into other sites and countries, our investment in physical monitoring must increase as well. Science does not yet understand how tropical habitats respond to changes in physical parameters such as rainfall, temperature, sea level, and the mix of gases in the atmosphere. Only by expansion of our physical monitoring can we make the comparisons necessary to determine these responses.

We wish to establish long-term physical monitoring programs at the Naos Marine Laboratory, the San Blas Marine Station, and terrestrial sites such as Parque Soberania and the Fortuna cloud forest station. We wish to expand the monitoring of methane and other greenhouse gases now done in collaboration with scientists from the U.S. Geological Survey. We also wish to establish monitoring programs in conjunction with International Forest Dynamics Plots.

Element 4: Biological Monitoring. In addition to the programs described above, STRI seeks to expand long-term biological monitoring, as supported by ESP, to sites outside Barro Colorado and Galeta. Expanded long-term monitoring will establish a critical baseline and document future biological response to the ever more rapid global change predicted for the next century. For the San Blas and Eastern Pacific, we need to provide a sound funding base for marine monitoring programs that individual scientists have been supporting for several years. These programs will replace the database on natural variation that was terminated by the Galeta oil spill.

Mechanisms

To prepare for and deal effectively with global change, we must understand the mechanisms by which such change occurs. This requires forging links from small-scale to large-scale changes, both in space and in time. It involves study of how tropical systems responded to past change as well as how current systems function.

Element 5: Paleoecology. To understand and predict future global change we must have an integrated historical record of past environmental conditions on land and in the oceans. The record must include measures of physical and chemical conditions as well as the nature of predominant biological communities.

This combined approach will help to resolve contradictions between climatic reconstructions based on ocean or ice core data and those drawn from local terrestrial records. It will also permit us to examine the effects of human activity, a major agent of environmental change for at least the last 12,000 years.

STRI scientists are already performing several paleoecological investigations. These include the use of coral data to document shallow coastal conditions over the past millenium, reconstruction of terrestrial environments associated with human occupation of the region over the last twelve millenia, and study of the history of coastal marine communities and environments before, during, and after the closing of the Isthmus of Panama three million years ago.

We wish to expand the current program to develop an integrated approach examining past environmental and biological conditions in the tropical eastern Pacific, southern Caribbean, Isthmian and northern South American regions. We will document the record of past terrestrial environments and of human alteration of that environment using pollen, phytoliths, animal fossils, and traditional archaeological evidence. We will document the record of coastal environmental conditions as reflected in the composition of marine and uplifted sediments, their associated living and fossil biotic assemblages, and coral banding.

Element 6: Plant Responses to Atmospheric Change. Changes in atmospheric gases will affect plants in several ways. They include direct physiological influence as well as indirect effects such as changes in climate and levels of ultraviolet light. Elevated carbon dioxide increases photosynthesis and reduces plant respiration, evapotranspiration, senescence, and nitrogen demand in warm environments.

Despite their critical importance to the global environment, the consequences for tropical forests are absolutely unknown. We must determine how tropical systems will respond before we can make accurate predictions about global change.

STRI plans to expand its recent collaboration with the Smithsonian Environmental Research Center to study the effects of elevated carbon dioxide on wild species in the field, both on the ground and in the canopy, where most photosynthesis occurs in the forest. The canopy work will use the proposed Canopy Access System.

The overall program will involve methodological development, experimental studies, and modelling efforts. The first step is to develop effective methods for creating test atmospheres in the field. Experiments will then determine how vegetation in different ecosystems responds to rising levels of carbon dioxide and other changes. The modelling effort will permit experimental results to be used to address the larger questions of climate change.

Element 7: Ecological Consequences of Atmospheric Change. Rising carbon dioxide levels and other changes will almost certainly affect the ecological interactions among the highly interdependent plants and animals of the tropical forest. We know of no current program anywhere which studies these potentially critical effects. STRI will establish a program in ecological physiology to address these issues.

Management

Deforestation is the paramount ecological crisis facing the tropics today. It is an acute problem in Panama and therefore a serious problem for STRI. STRI cannot reverse the socio-economic forces causing deforestation, but we can increase our ability to protect current reserves, to help local and regional governments in their attempts to preserve habitats, and to develop technologies to allow rapid, successful reforestation.

Element 8: Protection of the Barro Colorado Nature Monument. As deforestation continues in Panama, poaching and other pressures will increase in the BCNM. STRI will respond to these pressures by increasing its protection efforts and expanding the West Bank buffer zone.

Element 9: Aiding Local and Regional Protection Efforts. STRI will expand its role in supporting the creation and protection of reserves, especially in areas where STRI scientists work, such as Parque Soberania, San Blas, Fortuna, and the Darien.

Element 10: Education and Training. STRI programs such as the Exxon Fellowships have helped train many Latin American biologists and resource managers. Other programs have increased local awareness of conservation issues. We plan to enhance these programs by expanding Third World fellowships, increasing educational outreach in Panama and regionally, and establishing a public arboretum at the Tivoli site. We will also co-host the Fourth Decennial World Parks Congress, to be held in Panama in 1992, and will sponsor workshops on the scientific use of parks and reserves.

Element 11: Reforestation. Tropical reforestation may slow or stop the massive species extinctions now occurring. It may also provide a partial solution to the accumulation of greenhouse gases. And it is critical for the proper operation of the Panama Canal and local economies. These both suffer from the degradation, beyond economic usefulness, of large areas of Panama (10-23%).

We need to develop the technologies to reforest compacted, eroded tropical soils. The techniques do not currently exist. We need to develop ways to use local trees instead of exotics, to save as many local forest species as possible, and to develop sustainable forests. We must also determine the effects of reforestation on key greenhouse gases, such as nitrous oxide and methane, and the consequences of reforestation for local hydrological cycles.

STRI plans to address these questions through appropriate reforestation experiments on selected small watersheds within the Panama Canal area. These studies will complement ongoing agro-forestry research and allow STRI to make significant contributions to the resolution of long-term environmental problems in tropical areas.

Implementation

Detailed plans for costing and implementation of the elements described above are under development. However, we estimate that the program we have described will require approximately twelve additional "fully-loaded" scientific staff, phased in over six years, as well as increased support for current scientists.

Smithsonian Institution/Man and the Biosphere Program (SI/MAB)--

In 1986 the Smithsonian Institution in cooperation with the UNESCO Man and the Biosphere Program started a joint program in biological diversity. The SI/MAB program is designed to create the in-country infrastructure that will provide training and research expertise in developing countries to address locally the problems of tropical deforestation and loss of biological diversity. From 1987 to the present, the SI/MAB program has provided intensive field training in tropical biology and ecology to over 140 participants in their host countries. The courses are conducted at field sites in the Amazon basin and other important tropical forest habitats. Training programs such as SI/MAB provide a pool of trained nationals that can develop and implement long-term conservation strategies.

The SI/MAB Program is expanding by 1) starting in one to two new developing countries every year; 2) working closely with each country during a two to three year start-up so that the program can eventually be run by local institutions; 3) providing support from regional and international researchers and educators already working with the program; and 4) the continuous strengthening of the network of information and data transfer among tropical countries. Thus, the present program is designed to keep running educational and research programs in Bolivia, Peru, and Ecuador, and add one to two Latin American countries a year for a total of 10 to 12 countries by 1996. Similar efforts have already started in Asia and Africa and the first training workshop is scheduled in India for early spring of 1990.

National Zoological Park (NZN) --

NZN is actively engaged at several levels in publicizing the effects of tropical deforestation and educating a broad spectrum of people about global environmental/climatological problems. These matters are stressed in the public activities of Zoo scientists as well as in public exhibits (the Amazonia exhibit will be an innovative educational display focussing entirely on tropical environments and problems of global change and species loss). In addition, the NZN is on the frontline in efforts to save endangered species through ex situ breeding, embryo transplantation, surrogate motherhood, and artificial insemination. NZN has pioneered methods of reintroducing endangered species--a key to efficient conservation. The Zoo also has an extensive training program focused on wildlife managers and zoo staff from the Third World. This training is conducted in the U.S.A., and in Asia, Latin America, and Africa.

Smithsonian Environmental Research Center (SERC) --

SERC is conducting research on the dynamics of the ozone layer which affects the temperature of the stratosphere. SERC is also carrying out research on the impacts of increasing carbon dioxide on plant communities. This includes measurements of the rates of carbon dioxide uptake and emission over time. Another project measures rates of emission of nitrous oxide as affected by agricultural runoff. In addition, analysis of long-term ultraviolet radiation measurements is undertaken.

National Museum of Natural History (NMNH) -- The Museum conducts a number of programs in South America aimed at increasing our knowledge of tropical forest ecosystems and how to conserve them. Studies of lowland tropical forest ecosystems have been underway in the Amazon Basin in Brazil and Peru for some years with support from the Smithsonian's International Environmental Sciences Program.

In 1987, the Museum began a major new program, Biological Diversity, in Tropical Latin America (BIOLAT). The Museum established permanent study sites and baseline plots in tropical forest areas in Peru and Bolivia. Biological inventories have started, and the Institution has conducted field training courses for in-country scientists and students (see SI/MAB). The ultimate objective is to understand the diversity and dynamics of tropical forests and how to minimize deforestation and its effects. The training programs include not only basic science but also conservation strategies and alternatives to deforestation. The plan is to expand the network of permanent sites to other countries throughout tropical America. The Museum will conduct reconnaissance work toward the establishment on one or more sites in Ecuador in 1989.

The new biodiversity initiatives of the Museum also include a major project to study the biota of the Guianas in northern South America. The Museum has already conducted several seasons of field work here, and excellent working relationships exist with local institutions, particularly the University of British Guiana in Georgetown. The Guianas have some of the most extensive rain forest still intact in the American tropics. As in the other countries, a main thrust of the collaborative work is the training of indigenous scientists and conservationists.

These projects are all complementary to the work at STRI, and the Museum cooperates with STRI in the study of tropical forests, deforestation, and the consequences for global change.

National Air and Space Museum (NASM) -- NASM and the National Aeronautics and Space Administration's (NASA) Goddard Space Flight Center have submitted a joint proposal for funding to enable construction of a large-scale mosaic of the Amazon Basin using historical and recent remote-sensing images. This mosaic will provide the basis for estimating the amount of deforestation that has occurred over the last decade, with an accuracy exceeding that available from field studies.

The results of this research will not only provide the first accurate estimate of deforestation, but will also provide a graphic depiction of the problem. Discussions are underway concerning a NASM/STRI exhibition on the environmental effects of deforestation.

Other Activities -- In January 1989 the Smithsonian Institution exhibition, Tropical Rainforests: A Disappearing Treasure began a four-year tour to 14 American cities. Smithsonian staff are working

with educators in the museums, science centers and botanical gardens that will receive the exhibition to plan educational programs on tropical deforestation and related environmental issues.

In May 1989, the Smithsonian will co-sponsor a public symposium, the Forum on Global Change and Our Common Future with the National Academy of Sciences, American Association for the Advancement of Science, U.S. Man and the Biosphere Program and Sigma Xi. The two-day program will feature prominent scientists, policymakers and other experts discussing the scientific basis of stratospheric ozone depletion, greenhouse effect, acid deposition, tropical deforestation, and potential policy responses to these pressing problems. The Forum will be an unprecedented opportunity for the public to participate in discussions on causes, consequences and solutions to global change.

Question 37: Are there specific efforts that could be undertaken in FY 1990? If so provide details of these proposals, including costs.

Answer: The following efforts could be undertaken in FY 1990:

Smithsonian Tropical Research Institute (STRI) -- There are three specific areas in which STRI could make significant contributions toward the need for further understanding of the issues of deforestation and global warming in FY 1990.

1. Climatology: For many years STRI has monitored long-term fluctuations in the physical and biological conditions in tropical forests and coral reefs. Individual scientists engaged in these projects have attempted to correlate causal relationships between changes in physical parameters with fluctuations in the biological systems. For the most part, these efforts have focused upon specific interactions. We have not had the services of specialists who could examine the system as a whole. More importantly we need a scientist who is capable of analyzing and interpreting the biogenic inputs of tropical ecosystems into global climate equations.

Climatologist/Hydrologist GS-14	
with benefits and allowances.....	\$72,000
Technicians and data processor 2 @ \$ 29,000.....	58,000
Mini-computer.....	75,000
	<hr/>
	\$205,000

2. Anthropology: Deforestation and other habitat destruction as a result of human influence represent the single largest threat to human societies in tropical areas. But human influence is not new in the tropics. Humans have been an essential component of tropical habitats for thousands of years. We therefore must employ a scientist to document the history of deforestation and to relate it to regional social history and politics. Without this perspective, ecologists will never completely understand the process of

deforestation and certainly will be incapable of recommending effective methods for its amelioration.

Ecological Anthropologist.....	\$58,000
Technician.....	29,000
	<hr/>
	\$87,000

3. Canopy Access System: Of all the habitats on Earth, the least studied and least well understood is the upper canopy of the endangered tropical rain forests. Biologists know little about the forest canopy because no safe, efficient technique exists for reaching this layer of the forest. STRI proposes to develop and implement a forest canopy access system that will remedy this critical deficiency in our knowledge of a key natural resource.

This system will revolutionize the scientific understanding of tropical forests in the same way that SCUBA diving revolutionized marine biology. It will lead to an explosion of knowledge about the diversity and abundance of forest species and their interactions and will vastly improve estimates of global biodiversity.

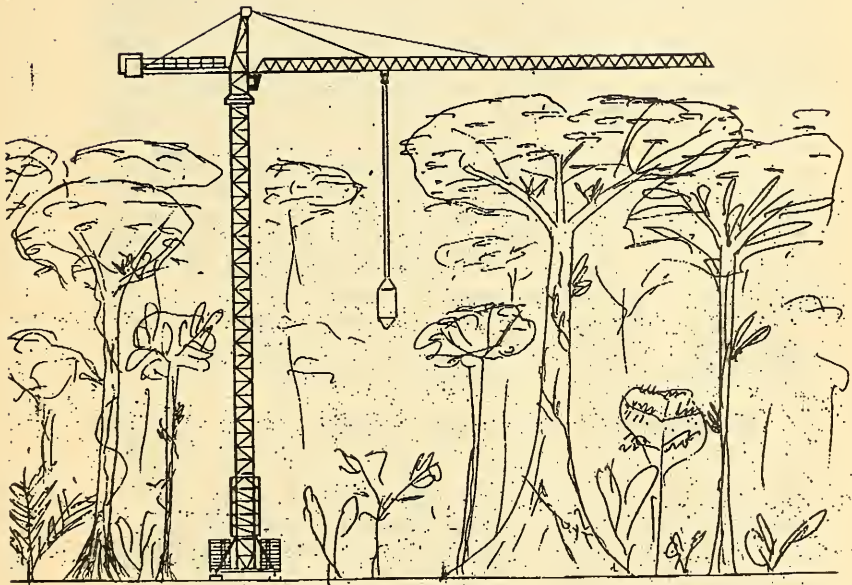
STRI's forest canopy access system will consist of a commercially available construction crane erected in the BCNM forest. A trained crane operator will have overall control, but the scientist will be able to position the gondola within the canopy by remote control, thereby gaining precise access to research subjects.

Tropical deforestation contributes substantially to rising atmospheric levels of carbon dioxide, a major contributor to global warming. However, the precise mechanisms by which intact forests handle this gas are poorly understood. The proposed access system will permit us to bring our laboratory instruments directly into the canopy, so that we can address key questions, such as how does variation in the structure and physiology of canopy trees affect the transfer between forest and atmosphere of key factors like heat, water vapor, carbon dioxide, and oxygen? The data acquired with the system will provide critical input for global climatic equations.

Forest Eco-physiologist GS-14	
with benefits and allowances.....	\$ 72,000
Crane purchase.....	165,000
Shipping, installation, service.....	92,000
Crane operators (3 shifts).....	44,000
	<hr/>
	\$373,000*

* Testimony on 16 March presented figure of \$700,00 for two cranes. We feel a pilot study with a single crane would be prudent. Attached is a diagram of the crane for the forest canopy access system.

ATTACHMENT I - QUESTION 37 - HOUSE HEARINGS



Smithsonian Institution/Man and the Biosphere Program (SI/MAB)

-- The estimated cost to implement the biological diversity program to provide training and research expertise in 10 - 12 Latin American countries between 1990-1996 is \$2,900,000. The SI is preparing a detailed proposal, to be co-sponsored by a group of international organizations. The most critical element for 1990-1991 is the hiring of a full-time program manager and a full-time educator for the program. For 1990 we require approximately \$240,000 to run the program in four countries.

National Zoological Park (NZN) -- NZN has identified the need for developing a program in cryobiological banking of embryos, ova and sperm (\$77,000). The cryobiology program will develop techniques for saving endangered species by banking sperm, ova and embryos. NZN is already a leader in producing offspring by using surrogate mothers to produce young animals. Hiring an additional conservation biologist (\$44,000); and extending animal facilities at the Conservation and Research Center, Front Royal, will provide for the breeding of the Black-footed ferret and other animals (\$230,000). NZN has been chosen as a breeding site for the critically endangered Black-footed ferret. These funds will help produce animals of this species for the eventual repopulation of suitable U. S. areas. The Third World Wildlife Managers Training Program is addressed in the Zoo's R&R request for money to upgrade and repair the Conference Center at Front Royal (request for funding is included in NZN's R&R request for Front Royal). The major educational supplement to the Amazonia exhibit, the Tropical Rainforest/Global Change Information Gallery, will be constructed only when funds are raised privately. It could be opened at the same time as the exhibit if appropriated funds (\$4,500,000) were available in FY 1990. The Amazonia gallery will serve as a major environmental education and orientation center for Zoo visitors, specialist groups of wildlife managers and conservationists from this country and around the world, and for the orientation of political and community leaders. Its subject matter will encompass tropical forest and river systems, global change and Smithsonian efforts in research and habitat restoration. Additionally it will focus on the BioDiversity crisis. This will help to promote awareness, concern and involvement.

Smithsonian Environmental Research Center (SERC) -- In FY 1990, SERC could initiate an effort to establish a comparative study of the interactions of forests with carbon dioxide in the atmosphere. Carbon dioxide uptake and release rates would be measured at both STRI and at SERC. This would be a phased research program development. In FY 1989, these two bureaus are conducting pilot exploratory work at STRI. In FY 1990, an instrumented research tower could be built on Barro Colorado Island at STRI; a comparable tower already is in use at SERC. An amount of \$150,000 would allow purchase and construction of the tower, instrumentation, and the costs for travel and staffing to carry out the research. Two FTE's are included in these costs, one at STRI and one at SERC (GS-9, environmental engineer).

National Museum of Natural History (NMNH) -- Opportunities now exist to extend studies in FY 1990 to a series of permanent plots established in Amazonia by the World Wildlife Fund. The Museum will inventory the biological diversity of these plots, and study the biological dynamics of forest fragmentation. Brazilian colleagues and students will train here to conduct other similar studies throughout Amazonia. The aim of all of these efforts is to learn what the consequences of deforestation are and to develop the knowledge and expertise to help minimize deforestation and its effects, and to restore damaged forests. NMNH will request \$250,000 in FY 1991 to support this effort.

National Air and Space Museum (NASM) -- The suitability of remote sensing applications to deforestation, ozone depletion, and potential effects of global warming is established in numerous scientific studies. Data obtained by satellites allow precise measurement of the extent of surface disturbance, and using archival Landsat and other data, allow estimates of the rate of change. In the FY 1990 budget, NASM requested funding for both a scientific computer systems analyst and a remote sensing scientist, but these two positions were deleted from the budget request prior to submission to Congress. The two positions are necessary to strengthen efforts in global-scale environmental studies, and provide expertise for exhibits that deal with global-scale phenomena. Costs for these two positions (GS-12 level) are \$88,000.

Question 38: Is STRI providing any funding to the iguana management project, now located in Costa Rica?

Answer: No. The iguana project is funded through private grants directly to the Universidad Nacional de Heredia in Costa Rica and the Pro Iguana Verde Foundation.

Smithsonian Environmental Research Center

Question 39: p. The request for the Smithsonian Environmental Research Center is \$1,442,000, an increase of \$90,000. Why are the 1989 base costs for personnel compensation \$220,000 higher than last years request, while equipment has decreased from \$284,000 to \$128,000?

Answer: The projection for FY 1989 in last year's request did not cover the already committed personnel compensation cost of on-board employees. A redirection from other object classes (supplies and equipment) helped to cover this shortfall.

Question 40: Has the new guard position, for which funds were added in 1989, been filled yet?

Answer: The new SERC guard position is funded for three quarters of FY 1989. The position is currently advertised with a closing date of April 13, 1989. The lapsed money from this position has covered overtime costs of our one existing guard.

Question 41: What plans does the Smithsonian have to address land acquisition needs for SERC?

Answer: There are approximately 2,000 acres on the watershed surrounding SERC that are not protected. SERC will cooperate with local county, state, conservation and citizen groups to prevent the development of these 2,000 acres, and to have them remain agriculture and forest lands to further the on-going research at SERC. Where necessary and possible, SERC will protect these properties with legal covenants or by outright purchase if funds are available.

National Zoological Park

Question 42: p. 55. The request for the National Zoological Park is \$14,638,000, an increase of \$240,000. Explain the addition of \$15,000 to the 1989 base for collection acquisition. Where did these funds come from, and how will they be used?

Answer: The \$15,000 is not an increase to our FY 1989 base. In past years funds to support acquisitions were included in the detail of federal funding under equipment (object class 31). In the FY 1989 budget request, the \$15,000 is reflected under collection acquisitions. In FY 1990, the funds will be used to purchase animals such as wallabies, red kangaroos, and birds for the Australian Pavilion exhibit.

Question 43: The issue of Zoo police pay was discussed at the January Board meeting (p. 57). Has the proposed legislation raising Zoo police pay been submitted to the Congress?

Answer: The Board of Regents has approved the Zoo police pay, and has asked its Congressional members to introduce and support the legislation. The Institution expects that the legislation will be introduced shortly.

Question 44: If this legislation is passed, what impact would it have on your budget request? Provide details for the record.

Answer: The impact of the proposed pay raise would be minimal. There are 21 employees who would receive pay raises. The total cost will be approximately \$14,000 per year.

Question 45: According to the budget, the NZP is proposing to establish a Genetic Resource Bank which will rely on the developing field of cryobiology. When will this Bank be established? What are the costs to establish and to maintain it, and what is the source of these funds?

Answer: The Genetic Resource Bank will freeze-preserve sperm, eggs and embryos to help maintain the biodiversity of rare and threatened animal populations. This bank will begin operation on a limited basis later this year at the Zoo's new veterinary research hospital in Washington, D.C. A short-term fellowship for a PhD

crybiologist is funded by NZP trust funds to begin to develop the Bank. The program will be fully operational as soon as core funding is available. Most of the necessary facilities and major equipment are available. The need is for federal funding to support the continuance of the specialist position and other core requirements including (1) a biotechnician to conduct basic laboratory activities; and (2) a yearly budget for specialized cryopreservation equipment (\$20,000) and laboratory supplies (\$20,000). Once the Zoo has established the core program, we expect that monies for growth and expansion will be generated through funding from federal and private sources. The conservation biology mission of the Genetic Resource Bank should be highly attractive to national and international funding sources.

Question 46: The animal conservation and propagation program is discussed on p. 59. How much of the Zoo's budget is allocated to this effort? Is this amount adequate to meet the needs in this area?

Answer: While wildlife and environmental conservation is addressed by various zoo activities, the Zoo's Conservation and Research Center is the department with a major responsibility for conservation programs. In FY 1989 the Zoo allocated \$1,492,000 to operate the Center. Of this amount, \$777,000 is used to support conservation and propagation programs. This amount is not adequate to meet the needs for management and conservation of all endangered species.

Question 47: Where will the overseas conservation extension officer be located? What is cost of this position, and the source of funds?

Answer: The International Conservation Officer, Dr. Martha S. Fujita, will spend 9 months per year in Southeast Asia, a "hotspot" of biodiversity, where ecological stability is being threatened by widespread deforestation. Dr. Fujita plans to divide her time by spending 3 months in each of the following countries: Thailand, Malaysia, and Indonesia. She will foster collaboration between various Smithsonian bureaus and local government and non-government agencies. The cost of this position for FY 1989 is estimated at \$44,000 and it is one of the 27 new positions identified within the Special Employment Initiatives section of the Institution's budget request.

Question 48: Which are the seven endangered species for which Zoo staff are responsible on a national or international level?

Answer: The seven endangered species are the golden lion tamarin; Eld's deer; Bali mynah; Guam rail; maned wolf; Matschie's tree kangaroo; and red panda. The National Zoo is coordinating the Species Survival Plans (SSPs) and studbooks for these species. In addition, the National Zoo actively participates in 21 SSP programs of the American Association of Zoological Parks and Aquariums.

Question 49: How much is being spent for training zookeepers in other countries in captive breeding? Could more be done in this area?

Answer: NZP spends about \$120,000 per year to train zookeepers and Third World wildlife managers and conservation staff. The demand for the curriculum (targeted to mid-level managers) is greater than funding now permits. Much more can and should be done in this area. Our request for a Conservation Biologist (as part of the Special Employment Initiative program) will help expand the programs.

Assistant Secretary for Museums

Question 50 & 51: P. 79. The request for the Assistant Secretary for Museums is \$1,168,000, a decrease of \$491,000. When will the new Experimental Gallery in the Arts and Industries Building be installed? Are any Federal funds being dedicated to this effort? If so, identify them.

Answer: The Institution will install the Experimental Gallery as soon as the renovation of the Arts and Industries Building is complete and the Institution can remove and return the exhibitions that are currently installed in one wing to either their owners or to the appropriate Smithsonian storage areas. The current portion of this project is funded by private funds and a grant from the Smithsonian Special Exhibition Fund. The Institution has recruited a project director to start in May. Part of the project director's task will be to raise more project funds from the private sector.

National Museum of Natural History

Question 52: P. 82. The request for the National Museum of Natural History is \$27,573,000, an increase of \$660,000. What is the status of the planning for the Visions of the Americas exhibition hall Native American life? What will be accomplished in FY 1989, and what is planned for 1990?

Answer: The plans for a completely new National Museum of the American Indian on the Mall have affected the Museum's plans. It now seems unlikely that we will go forward with the grand plan for a large new "Visions of the Americas" exhibition hall on Native Americans, but we are still evaluating this matter. Meanwhile, we are moving forward vigorously with the renewal of our two existing Native American halls by systematically changing and upgrading the exhibits in these halls. We are removing or renewing objectionable parts of these halls first, followed ultimately by all parts of the halls.

Following is a brief summary of what has been accomplished to date, what is in progress and what is planned for FY 1990:

In FY 1989, the NMNH planning team developed concept designs for a series of experimental, interactive displays on Native American life and culture. These hands-on exhibits will actively involve the public in displays on basket making, weaving, pottery, and other crafts and cultural expressions. The first of these, on basket making, is under development now, and will open this summer. In

addition, we have made a number of significant improvements to our present Indian Halls. Highlights of this work include creation of a demonstration area for live performances and handicraft demonstrations by Native American individuals or groups, which begin this summer; the development of a Native American Theater for films and videos by and about Native Americans; and the development of a temporary exhibition gallery for short-term exhibits on Native American subjects, which will feature approximately three shows per year.

In FY 1990, we will continue physical improvements to the halls, and develop and install three to four new interactive displays of the kind mentioned above. Staff will remove additional outdated material and conduct appropriate conservation on them prior to their return to the collections.

Question 53: Does the Museum plan to continue to sell ivory objects after the "Crossroads of Continents" show closes?

Answer: No. The ivory objects made by Alaskan natives were being sold only in conjunction with the "Crossroads of Continents" exhibition and will not be reordered when stock is depleted. The Alaskan congressional delegation and the Governor interceded on behalf of their craftsmen after the Institution had decided not to sell ivory objects.

Question 54: How are you planning to use the funds provided in FY 1989 for the Molecular Systematics Laboratory in 1990, particularly the \$273,000 for equipment?

Answer: In FY 1990, the National Museum of Natural History's Laboratory for Molecular Systematics will still require basic start-up equipment. Funds will support purchase and installation of chemical fume hoods, laboratory benches, distilled water, cold and warm rooms and autoclaves, and various pieces of stand-alone equipment, such as a DNA synthesizer, automated DNA extraction system and DNA sequencers. The Museum needs maintenance contracts on a number of the large pieces of specialized and sophisticated equipment which require regular maintenance. In addition, the growth of staff as the program becomes fully operational necessitates an increase in basic support for travel, supplies and contracts. The Museum plans to accomplish this through redirection of a portion of the equipment budget to other object classes.

Question 55: What are the plans for the funds provided in 1989 for purchase of a vehicle for the biological diversity program?

Answer: Researchers will utilize the vehicle to collect plant, insect and animal specimens in South America, principally in Peru and Bolivia. It is difficult to rent a four-wheel drive vehicle in this area and such costs run approximately \$1000 U.S. per week. Purchase of a vehicle will enable staff scientists to reach new areas and gather the necessary material for research. In FY 1990, the Museum plans to use the funds to extend fieldwork into Surinam. Currently

we support field work in French Guiana and Guyana. The proposed work in Surinam is critical if the "Biological Diversity of the Guianas" is to be a truly comprehensive program.

Question 56: Under restricted funds, the justification notes that Smithsonian plans to construct a laboratory and residential facility at the Marine Station at Link Port, Florida. What are the estimated costs of these facilities? Will restricted funds be the source for all of these costs?

Answer: The preliminary cost estimate for design and construction of the new Link Port facility is \$3.9 million in current year dollars. Yes, restricted funds will be the source for all project costs.

National Air and Space Museum

Question 57: The request for the National Air and Space Museum is \$9,904,000, an increase of \$117,000. Have the two senior level curator/historians provided in FY 1989 been hired yet?

Answer: NASM is currently searching for a new Aeronautics Department chairman, and the Museum expects to make the selection by early May. NASM postponed recruiting for the new Aeronautics Department curators so the new chairman could participate in the selection. The Smithsonian's Office of Personnel Administration has advertised the first position, for a military historian, and will close the announcement on May 1. NASM will define and advertise the second position in consultation with the new chairman as soon as possible after his or her selection.

Question 58: What is the status of the planning for the Air and Space extension? Has a contract with an A&E firm been signed yet?

Answer: The Smithsonian selected an architect/engineering firm in January 1989 to prepare a site evaluation study and master plan for the National Air and Space Museum Extension for construction either at Dulles International Airport or Baltimore-Washington International Airport. The Institution negotiated a final price with the A&E firm in early March, and will award the contract by April 3. The contractor will submit a summary of the preliminary findings of the site evaluation study in September 1989 and the complete site evaluation report by December 1989. The Institution currently plans to initiate a detailed Master Plan in March 1990.

Question: 59: What is the cost of the A&E contract, and what is the source of funds?

Answer: The cost of the A&E contract is \$365,000. The Institution is using Construction Planning funds appropriated in FY 1989.

National Museum of American History

Question 60: P. 97. The request for the National Museum of American History is \$15,666,000, an increase of \$799,000. Explain the increases in the 1989 base column in travel, transportation of things, printing and equipment, compared to the 1989 request.

Answer: The reason for the increase in travel is three-fold. First, the Gramm-Rudman cut in FY 1986 and the allocation of FERS funding late in FY 1987 resulted in cuts to the travel budget in both those years. In FY 1988 and FY 1989 the Museum restored its travel funding. Secondly, the newly acquired Duke Ellington collection required an additional allocation for travel which was originally underestimated. Thirdly, some major exhibit reinstallations required more travel to collect, design and produce than in previous budgets and projections.

The transportation of things increase is due to increased shipping costs associated with the major exhibition reinstallations.

The increase in printing and reproduction object class category represents an increased emphasis in the Museum on publishing of scholarly publications, exhibition and public programs printed materials (including museum floor plans and guide books), and the rising costs of printing services.

The increase in the equipment base reflects a desire on the Museum's part to replace worn and obsolete equipment in FY 1990; this replacement was deferred in past fiscal years due to other exigencies.

Question 61: When will the remaining two buildings at Suitland complete the asbestos cleanup?

Answer: Asbestos encapsulation is complete in Building #16. NMAH staff is currently decontaminating the artifacts stored in the building. Building #17 asbestos removal is scheduled in FY 1990 and will require about two or three years to complete.

Question 62: Last year, funds were provided for training related to the collections information system. How much are you spending in FY 1989 for training?

Answer: The Museum will spend about \$1,000 for CIS training in FY 1989. This amount will provide training to the Museum's technical staff in CIS database software skills. Training opportunities will be limited until the Institution-wide CIS system is implemented at NMAH.

Question 63: How much do you plan to spend in FY 1990?

Answer: The Museum anticipates spending \$19,000 in FY 1990 on CIS-related training.

Question 64: There is an increase of \$430,000 requested for storage space rental. Has leased space at the Fullerton Industrial Park in Springfield, VA already been acquired? If so, when and with what funds?

Answer: The Fullerton space was acquired in FY 1988. The leasing cost was covered by reimbursement from the National Institute of Health. NIH took over the Smithsonian's lease of the former Radiation Biology Laboratory facility in Rockville, Md. used by NMAH for collections storage.

Question 65: How long is the lease period? Will the lease continue after renovation of the Museum is completed?

Answer: The lease period is 5 years with option to renew. The Museum will continue to need leased space to house collections after the renovations are completed until the Institution acquires permanent space for its current and growing storage deficiency.

Question 66: What other options were considered for this storage need, and why were they rejected?

Answer: Over the last 6 years NMAH has explored every conceivable option for increasing its storage space, all of which the Institution rejected for engineering or cost reasons. The Museum examined sites at the Navy Yard and Alexandria waterfront. NMAH investigated using a huge tent offered by donation where public tennis is currently played, but the maintenance and security needs were too great. The Museums also investigated installing skeletal construction between Silver Hill buildings to use existing walls, adding a concrete slab and pre-fab front and back, but again was discouraged in light of the relatively high cost per footage gained. The Museum used as much storage at North Capitol Street or elsewhere as possible. The Museum purchased trailers for use at Silver Hill, but these have utility for only the least environmentally sensitive collections for which access is not an issue. In short, NMAH explored every possibility, and not until the Institution identified the Fullerton site was there any promise of a temporary solution to this growing crisis.

National Museum of American Art

Question 67: P. 104. The request for the National Museum of American Art is \$5,714,000, an increase of \$129,000. Explain the increases in the 1989 base over the 1989 request for other services, supplies and equipment.

Answer: The 1989 base appearing in the 1990 Request to Congress reflects the National Museum of American Art's (with the office of the Building Manager's) initial October 1988 object class distribution. At that time, the Museum first allocated amounts for projected salaries and benefits requirements. Beyond that, the Museum distributed its remaining allocation among other object

classes (including travel, other services, supplies, and equipment) according to the year's travel plans and the pattern of actual expenses during the previous fiscal year.

A year earlier, the Museum derived the 1988 base for its FY 1989 Request to Congress by a similar process. Since both last year's FY 1989 Budget Request and this year's FY 1989 Base reflect a projection and a later reallocation based on anticipated needs, it is impossible to cite specific procurements which would reconcile each object class.

Question 68: What are your plans for the Inventory of American Sculpture in FY 1990? What is the total amount of funding expected to be used for this purpose in 1990?

Answer: The Inventory of American Sculpture will continue soliciting information on American sculpture in public and private collections throughout the United States and entering the data on computer file. The federal base of \$53,000 appropriated in FY 1989 will maintain the current minimal level of data entry, travel, equipment, and supplies. In addition, the Getty Grant Program has awarded partial funding to the Museum's co-sponsor, the National Institute for the Conservation of Cultural Property, to begin a systematic nationwide survey of outdoor sculpture. Fund-raising negotiations are in progress with a major private foundation and with a large financial corporation for grants in excess of \$2,000,000 to cover the remaining costs of the project over a three-year period; the Museum anticipates these decisions by the end of FY 1989. Pending favorable outcomes of these major fund-raising initiatives, the Museum would supplement the \$53,000 federal base in FY 1990 with over \$300,000 in private grants for additional positions, computer hardware and software, contract field surveys, photography, and other related costs.

National Portrait Gallery

Question 69: P. 110. The request for the National Portrait Gallery is \$4,304,000, an increase of \$80,000. What is the reason for the significant increase in the 1989 base for transportation of things (\$140,000, compared to \$50,000)?

Answer: In FY 1988, NPG had the following exhibitions:

- "Masterpieces for Gripsholm Castle." Primarily private sources funded this exhibition, and Lufthansa Airlines donated shipping.
- "The Instant Likeness: Portraits in Polaroid." Polaroid paid the round trip shipping expenses.
- "On The Air: Pioneers of American Broadcasting." NPG paid transportation expenses from its federal budget. While "On The Air" was a large exhibition, transportation was

relatively inexpensive. Most objects were contemporary and not especially fragile. Minimal packing was necessary, and transits were not complicated.

In addition, NPG dispatched the "American Colonial Portraits" exhibition and returned the paintings to their owners. NPG also returned paintings from "The Artist's Mother: Portraits and Homages" to their owners. The latter was a traveling exhibition organized by the Hecksher Museum in New York, and NPG's transportation expense was a contracted flat fee.

Programs in FY 1989 include the return of "On The Air," plus:

- "The First Federal Congress." NPG will pay incoming and outgoing shipping expenses from its federal budget. Due to the precious and fragile nature of these 18th-century exhibits on loan to NPG, shipping is more complex than usual, with many objects needing expensive packing and truck transit.
- "Isamu Noguchi: Portrait Sculpture." NPG will pay incoming and outgoing shipping expenses from its federal budget. Several fragile terra cottas need elaborate and expensive shipping crates.
- "Portrait of the Law." NPG will pay incoming expenses from its federal budget. "Portrait of the Law" is a large exhibition, with many objects and accompanying shipping crates.
- "Winold Reiss Portraits: To Color America." NPG will pay incoming expenses from its federal budget. This is another large exhibition, and the fragile pastels require additional packing and transportation.

The increase in the "Transportation of Things" base for FY 1989 is due to the types of objects in the exhibitions planned during FY 1989, as well as the number of projects initiated solely by NPG.

Question 70: What are your plans for design and installation of storage units for the Photographs and Prints and Drawings collections in FY 1990?

Answer: Given the inherent limitations of the available space, the Portrait Gallery intends to study the feasibility of installing compressible storage units to get the maximum shelf space possible.

Question 71: How will the \$30,000 provided for FY 1989 for renovating storage space at North Capitol Street be used in 1990?

Answer: NPG will use these funds for the following purposes:

- Purchase and install additional shelving for holding sculptures (estimated at \$4,000);

- Purchase and install shelving for storing matted objects (estimated at \$6,000);
- Purchase boxes for storing matted objects (estimated at \$2,000).

NPG will use the remaining funds to replace storage bins and carpet padding. For FY 1991 and the following years, NPG will use these funds for the ongoing conservation, storage, and general maintenance of the collections.

Question 72: What is the time frame for completing the national portrait survey? How has this effort been funded to date, and at what cost? What are the estimated costs to complete it, and what are the possible sources of funding?

Answer: The Catalog of American Portraits (CAP) is one of the most valuable resources for scholarship developed at the National Portrait Gallery. It is the CAP's mission to collect documentation and photographs for all historically significant American portraits in institutions and private collections across the United States. The CAP survey serves as a major research center for the study of history and art history through portraiture for an ever increasing number of museum personnel, historians and art historians, public and private collectors, publishers, and media personnel.

Established in 1966, even before the National Portrait Gallery opened to the public, the CAP began amassing portrait data from secondary sources such as special archival collections, libraries, auction catalogs, published and unpublished art historical and historical papers. This information was fundamental to the development of NPG's collections, and to the creation of the significant loan exhibitions organized by the Gallery. NPG began field cataloging on a small scale in 1971 with on-site work by a professional art historian who collected primary data directly from public and private collections in the southeastern states.

In 1978, with a major grant from the Andrew W. Mellon Foundation, NPG launched a national portrait survey. The grant of \$325,000 from the Mellon Foundation supplemented appropriated funds from the federal government and smaller grants from localities throughout the United States that had participated in the project. As of 1986, NPG had surveyed all but 16 states and had collected approximately 50,000 portrait records for the CAP. NPG had spent approximately \$600,000 in private funds and approximately \$470,000 in federal funds on the survey. Due to the high rate of inflation, the survey expended funds more rapidly than anticipated, and during the subsequent economic recession, further private funding was virtually impossible to obtain.

Since 1986, the available federal funds have limited the field study work and the data processing for an automated database. From 1986 through 1988, the CAP staff devoted approximately two-thirds of its time to collecting, researching, and processing survey

information (including data entry for the automated database), expending approximately \$281,600 in federal funds for three years. Currently, the CAP staff spends approximately 60 percent of its time in collecting, researching, and processing survey information; however, time spent in answering reference requests (currently about 35 percent) is growing rapidly as requests from researchers increase.

The CAP presently contains close to 80,000 manual files with over 50,000 records retrievable on an automated database. On completion of the national survey, the CAP's files and automated database will contain over 100,000 portrait records. With the present number of staff and current rate of funding, it will take the CAP at least fifteen years to survey the remaining sixteen states (as well as some collections missed in previously surveyed states), process the data for the automated database, and bring pre-survey portrait data up to current standards. However, at the present rate of funding, CAP will not be able to maintain an automated database and will not have the ability to retrieve vast stores of information for researchers. Additional funding of \$40,000/year for two years is necessary to design and implement the Smithsonian's automated Collections Information System for the NPG collections (including the CAP) and an estimated \$6,000/year will be necessary to support on-line data entry and retrieval thereafter. NPG will need additional funds every five years or so in order to upgrade the computer system.

NPG could complete the entire survey in three years with additional funding of \$400,000. This increased funding would provide salary and expenses for two additional field surveyors for two years, two additional catalogers for three years, and the funds necessary for the automated database. The additional funds would raise total federal funding currently devoted to this project to approximately \$587,000 for this three year period.

The prime purpose of the CAP is to provide researchers with comprehensive, easily accessible, and accurate information concerning American portraiture. After the completion of the national survey, NPG will always find new collections to add and previously surveyed collections to update, but the major corpus of data will remain as the core of the Catalog. Obviously, until NPG completes the survey, major gaps remain in American portrait information, particularly concerning the history of our western states.

Hirshhorn Museum and Sculpture Garden

Question 73: P. 118. The request for the Hirshhorn Museum is \$3,556,000, an increase of \$25,000. What is the reason for the higher than estimated amounts included under restricted funds, special, for FY 1988 (\$873,000 versus \$230,000) and FY 1989 (\$417,000 versus \$138,000)?

Answer: The actual spending for FY 1988 contains \$360,000 for the purchase of a work of art using Smithsonian Special Acquisition Funds. These monies are budgeted elsewhere in the FY 1989 document

but appear in the FY 1990 document where the expenditure took place. In addition, Mr. Hirschhorn's estate was settled, and additional funds were available for the purchase of works of art.

The difference in the FY 1989 estimates are a reflection of additional funds being available for acquisitions.

Arthur M. Sackler Gallery / Freer Gallery of Art

Question 74: P. 122. The request for the Sackler and Freer Galleries is \$4,390,000, an increase of \$23,000. Has the re-opening of the Freer Gallery been postponed from the date estimated a year ago? If so, what is the reason for the delay?

Answer: The re-opening of the Freer Gallery is currently estimated to be feasible by winter 1992-93. The delay since the projection made last year is due to the following factors:

1. There was some delay in receiving a well-executed set of working drawings from the architects.
2. An unfavorable bidding climate caused construction prices to exceed available funds, and several months were spent securing the necessary additional funding as well as negotiating for more favorable prices.
3. Significantly more asbestos was found unexpectedly in the construction area while the originally identified asbestos was being removed. Planned funding was insufficient for this additional work, so the removal of the remaining asbestos was included in the construction contract which created an extension of the work schedule.
4. A slight delay also resulted after the construction contractor found that the concrete foundations and basement floor slabs differed from the original building documentation.
5. At the time of the estimate last year, the unprecedented relocation of the Freer collection had not been completed. With the completion of the relocation to temporary storage, it was realized that the time that had been estimated for the movement of collection objects and for the delivery and installation of collection storage cabinets had been underestimated.

Question 75: Explain the increase in personnel benefits in the 1989 base from \$246,000 requested to \$483,000.

Answer: In the FY 1989 Congressional request, the amount shown in the 1989 estimate does not include increased FERS and health benefits costs. A lump sum increase for FERS and health insurance costs was contained under the Administration line item in the FY 1989 request and was subsequently distributed to the bureaus. In the FY 1990 request, the amount for benefits includes these funds.

Question 76: Last year, \$150,000 was provided for collections storage equipment for the Freer after it is reopened. Provide a breakdown of how those funds have been spent in FY 1989, and how you plan to use them in FY 1990.

Answer: In FY 1989, the following items will be purchased:

1. 5 Cabinets for the storage of Islamic and Indian Manuscripts, Miniatures and Metalwork (96"w x 30-3/4"d x 72"), aluminum construction, sliding doors, each with 12 adjustable shelves and 6 drawers 4" deep, shelves to support 150 lbs, bottom shelf to support 500 lbs, lockable. \$28,000
2. 1 Cabinet for the storage of Islamic and Indian Manuscripts, Miniatures and Metalwork (96"w x 36-3/4"d x 72"), aluminum construction, sliding doors, with 12 adjustable shelves and 6 drawers 4" deep, shelves to support 150 lbs, bottom shelf to support 500 lbs, lockable. \$ 5,000
3. 19 Cabinets for Pottery Storage (72"w x 24"d x 86"h), aluminum construction, sliding doors, glass windows, each with 4 adjustable shelves, shelves to support 150 lbs, bottom shelf to support 500 lbs, lockable. \$96,000
4. 1 Cabinet for Chinese rubbings, 4-drawer legal size, lateral file with lock. \$1,000
5. 2 Scroll Tables for East Asian Paintings (12-feet long, 39"h), upturned table top ends, panel legs, walnut veneer \$8,000
6. 1 Examination Table for Islamic and Indian Manuscripts and Miniatures (12-feet long, 30"h), walnut veneer top. \$4,000
7. 1 Large Discussion Table for Pottery Storage (10-feet long), with cork top inset, walnut veneer. \$4,000
8. 12 Stackable stools (15"dia. x 17-1/4"h), solid natural birch legs, natural ash veneer top \$4,000

In FY 1990, the following items will be purchased:

1. 9 Cabinets for Pottery Storage (48"w x 24"d x 84"h) aluminum construction, sliding doors, glass windows, 4 adjustable shelves, shelves to support 150 lbs., bottom shelf to support 500 lbs., lockable \$37,000
2. Open steel shelving for furniture and stone sculpture storage \$2,000

- | | | |
|----|--|----------|
| 3. | 60 Drawers of various sizes for cabinets, aluminum construction, 4" deep, extension glides; with installation | \$17,000 |
| 4. | Casework: Built-in wood storage systems for East Asian Painting panels, reusing existing butternut doors and sliding racks | \$75,000 |
| 5. | Casework for American Painting Storage, Islamic and Indian Manuscripts and Miniatures, Large Stone Sculpture Storage | \$19,000 |

Anacostia Museum

Question 77: P. 144. The request for the Anacostia Museum is \$1,050,000, an increase of \$20,000. Explain the significant differences in the 1989 base column compared to last year's request, for rent (\$30,000 versus \$6,000), supplies (\$50,000 versus \$161,000), and equipment (\$50,000 versus \$19,000).

Answer: The change from \$6,000 to \$30,000 was made to provide funding to house the Museum's permanent collections, incoming loans, and future gifts and acquisitions. The change from \$161,000 to \$50,000 is due to the need to contract exhibit structures, instead of producing them in-house. The change from \$19,000 to \$50,000 was made to allow the purchase of state-of-the art AV equipment that will enhance our exhibition programs, and to purchase additional computers.

Question 78: Why has a new line been added for insurance claims and indemnities?

Answer: The funding shown under object class 42 is to pay for the Museum's collection insurance premium for incoming loans. This funding is incorrectly shown under object class 42 as object class 25 is the appropriate line-item for this expenditure.

Conservation Analytical Laboratory

Question 79: P. 150. The request for the Conservation Analytical Laboratory is \$2,628,000, an increase of \$60,000. Explain the significant increase in personnel compensation in the 1989 base column (\$1,524,000 versus \$1,320,000 requested).

Answer: While the \$1,750,000 in the FY 1990 Budget is for CAL's estimated salary and benefit costs for FY 1989, the correct "split" between salary and benefits should have been \$1,465,000 and \$285,000 respectively. The difference between this year's projected salaries of \$1,465,000 for FY 1989 and the projection in last year's budget to Congress of \$1,320,000 reflects in part redirections to cover the 4.1% pay raise effective January, 1989. The remaining difference

reflects vacancies for highly specialized staff which existed at the beginning of FY 1988, and which we did not expect to be able to fill till late in that year. Meanwhile, these vacancies have been filled, and the associated personnel costs appear in the appropriate object classes in this year's document.

Office of Exhibits Central

Question 80: P. 156. The request for the Office of Exhibits Central is \$1,963,000, an increase of \$16,000. Explain the increase in the 1989 base column in other services (\$101,000 versus \$55,000) and the decrease in equipment (\$40,000 versus \$120,000).

Answer: In FY 1988 and FY 1989, the Office of Exhibits Central automated its office systems and upgraded its production systems. OEC upgraded and purchased new saws and a dust collector, purchased and installed air conditioning units, and purchased computers and attendant software and supplies. In FY 1990, the Office anticipates the cost of service contracts to maintain equipment will rise. The Office has factored the cost of maintaining a contract with a computer consultant into the FY 1989 "Other Services" base. OEC has purchased most of the computer equipment it needs. However, the Office plans to purchase hardware for a computer graphics package and some additional computers in FY 1990; the reduction in the "Equipment" base reflects both the smaller equipment purchases needed and the reduced cost of such equipment due to competitive dealer reductions in price.

Assistant Secretary of Public Service

Question 81: P. 163. The request for the Assistant Secretary for Public Service is \$1,450,000, an increase of \$121,000. Explain the increase in travel in the 1989 base column over the amount requested last year (\$24,000 versus \$13,000).

Answer: The increase in travel costs is due to additional requirements for staff to attend conferences, seminars, and outreach activities. The Assistant Secretary, Deputy Assistant Secretary and Director of Office of Public Affairs travel to participate in projects and activities related to bureau programming e.g. Folklore Society annual meeting, regional education conferences, national meetings of scholars, scientists, publishers, etc.

Smithsonian Institution Press

Question 82: P. 169. The request for the Smithsonian Institution Press is \$1,286,000, an increase of \$12,000. What is the reason for the significant decrease in personnel benefits in the 1989 base column (\$40,000 compared to \$146,000 requested in 1989)?

Answer: The \$40,000 reflected for personnel benefits in FY 1989 is the result of a mis-allocation of funds between salaries and benefits. The correct figure is \$154,000 with a corresponding decrease to salaries.

American Studies and Folklife Programs

Question 83: P. 179. The request for American Studies and Folklife Programs is \$937,000, an increase of \$14,000.

At the January Board meeting, it was announced that the Office of Folklife programs would set up an on-demand cassette operation to supply small quantities of slower-selling titles in the Folkways Records collection. The Office would cover the expected deficit in this operation (\$26,250) (p. vii). What is the basis for this estimated deficit? Do you expect to continue to have this size of deficit in the future?

Answer: Based on the sale of 11,000 cassettes at \$11.00 each plus postage and handling of \$1.50 per cassette, gross receipts would be \$187,500. Start up costs (equipment, software, catalog) of \$32,000 plus recurring costs (labor, rent, production) of \$181,750 total \$213,750 for first-year costs. Therefore the first year deficit would be \$26,250.

We do not expect to have future deficits of this size. If everything remained the same for the second year except for the omission of the start up costs, surplus revenues would be \$5,750.

Question 84: What is the source of funds to cover the deficit?

Answer: Office of Folklife Programs would use its discretionary trust funds to cover the deficit.

Museum Support Center

Question 85: P. 197. The request for the Museum Support Center is \$4,491,000, an increase of \$36,000.

The justification states that \$21.6 million is currently available for the procurement of storage equipment (p. 199). The additional sum of \$3.058 million appropriated in 1989 will be transferred to GSA, making a total available of \$24.658 million. According to the report at the January Board meeting (p. 167), GSA needs a total of \$20.4 million to award the new contracts. If these two statements are correct, why are additional funds needed in 1990 in order to fund the equipment contracts?

Answer: The total amount of funding available to GSA for the procurement is \$24.658 million (through FY 1989). This amount includes the funding of \$21.6 million transferred to GSA through FY 1988 and \$3.058 million transferred in early 1989. The figure

mentioned in the letter to the Smithsonian Regents (\$20.4 million) represents the total funding for the storage equipment component of the reprourement but does not include the funding for the construction of the structure and utilities, architect and GSA design costs, GSA management fees, contingency amounts, some of the escalation, etc. On the other hand, the figure in the Regents report does include the FY 1990 budget request of \$3.058 million as part of the funding for the storage equipment component, which is in addition to the \$24.6 million figure.

Question 86: The justification states that GSA has increased its estimate of the costs of the reprourement, to \$28.1 million (p. 200). How much will be required for new design work compared to the original estimate?

Answer: GSA currently estimates that the design costs for the construction of the concrete decks, related utilities systems, and collections storage equipment for the reprourement will be approximately \$1.3 to \$1.5 million of the total project cost of \$28.1 million. This estimate represents a significant increase over GSA's previous estimate of \$882,000, which it made in March 1988. The March 1988 estimate included costs to complete the design reprourement documents for bidding (\$700,000); obligations to the architectural/engineering consultants for design and preparation of the reprourement documents (\$123,000); and GSA's obligation for its own design services on these reprourement documents (approximately \$59,000 through January 1988).

Two major factors have contributed to the current higher estimate for the design costs. Following its earlier estimate, GSA determined that the reprourement as a whole would be far less expensive in the long run if the architectural/engineering firms produced the contract documents more quickly than GSA originally requested, and if these documents were more explicit in detail. With greater contract clarity, the contractors could spend less time preparing shop drawings later in the process. This decision resulted in the architectural/engineering firms incurring additional costs including overtime costs that GSA had not budgeted in the March 1988 estimate.

In addition, at the time of the March 1988 estimate, the consultant's market survey of the storage industry had not yet been completed to advise GSA of the best types of procurements for the storage equipment packages. Based on GSA's review of this study, as well as additional survey work that GSA and Smithsonian conducted, GSA increased its estimate for design costs.

Question 87: What is the basis for assuming inflation costs of 15 to 20 percent per year for storage cabinets, through FY 1988? What are the expected increases, if any, for 1989, 1990 and 1991?

Answer: Some of the steel cabinet manufacturers told GSA that escalation over the period of one year can be as high as 15 to 20 percent. GSA took this escalation projection into account in its

cost estimate, but based its estimate primarily on the 1988 market values for similar commercially available storage equipment. GSA also included in its cost estimate projected escalation on the freight charges and installation costs for the storage equipment.

GSA anticipated an escalation rate of ten percent for FY 1989. The terms of the contracts that GSA will award for the reprocurement of the storage equipment in FY 1989 specify a ceiling for escalation rates for FY 1990 and following years. Expected increases for FY 1990 and FY 1991 will depend on the rates of two industrial indexes: the appropriate producer price index for storage equipment and a labor cost index for freight and installation costs. These contracts specify that for the steel cabinets and other storage equipment, an escalation rate of up to ten percent per annum, based on the appropriate producer price index, will be paid to the manufacturer for storage equipment which the contractor does not install within one year after contract award. For the freight and installation of the equipment, the contracts specify an escalation rate of up to ten percent per annum, based on the labor cost index of the Engineering News Record, will be paid to the manufacturer for storage equipment which the contractor does not install within one year after contract award. Under the terms of the GSA contract, neither of these escalation rates may exceed the ten percent per annum ceiling.

Question 88: Has the cost estimate been revised, as anticipated, after reviewing the bids? If so, what is the current estimate?

Answer: GSA and the Smithsonian have revised the cost estimate after receipt of the shelving and drawer cabinet contracts. The current estimate, as indicated in the status report given to Congress in March 1989 prior to the FY 1990 hearings, is approximately \$27.7 million, a slight decrease from the \$28.1 million estimate in the FY 1990 budget to Congress.

Question 89: Explain why it is necessary to again postpone procurement of the high bay equipment, which was planned for installation in 1989 last year?

Answer: The Institution has established the reprocurement of the high density initial move storage equipment as its highest priority. Since the Institution needs the FY 1990 funding to achieve this goal, the Institution has again postponed the procurement of the high bay collection storage equipment.

Question 90: Why has the amount spent on the move changed from the \$2.8 million reported last year to \$2.6 million this year, over the period from 1983 to 1988?

Answer: The \$2.8 million reported in the FY 1989 Congressional Budget Justification (Feb. 1988) assumed that the Smithsonian would spend the full appropriated amount of \$465,000 for the MCS move in FY 1988. The \$2.6 million estimate reported in the FY 1990

Congressional Budget Justification (Jan. 1989) reflects the amount spent on the move during FY 1988, which was less than the appropriated amount. Because of the storage equipment contract default in July 1987, and the resultant delay in installing storage equipment to house the collections being relocated during the initial move, the Institution could make efficient use of only \$293,000 for the Move in FY 1988. The Smithsonian transferred the balance (\$170,000) to GSA for use in procuring the storage equipment contracts.

Administration

Question 91: P. 203. The request for Administration is \$21,187,000, an increase of \$2,680,000. Provide a breakdown of all the differences between the \$8,787,000 requested for personnel benefits in 1989, and the current amount shown in the base column of \$3,436,000.

Answer: The difference in the FY 1989 object class information for Administration shown in base column in the FY 1990 budget justification and in the request column in the FY 1989 budget justification results from the net effect of the following major factors:

1) Distribution of FERS funding - The majority of the variance between the two figures results from a difference in the presentation of the funding for the Federal Employee Retirement System for FY 1989. In the FY 1989 Congressional budget justification, the Smithsonian included the request of \$6,181,000 for FERS for the entire Institution in the Administration line-item (in object class 12 -- "personnel benefits"). The Institution has now distributed FERS funding to the bureaus and offices. Therefore, the FY 1989 estimate in the FY 1990 Congressional budget justification only includes \$144,000 for FERS costs for Administration.

2) Adjustment for FY 1989 Pay Supplemental Need - The estimate for FY 1989 in the FY 1990 justification for Administration also reflects the base adjustments for the additional \$45,000 needed to cover three-quarters of the January 1989 pay raise. (The Institution requests the fourth quarter of this funding requirement as the FY 1990 Necessary Pay increase.)

3) Unemployment Compensation - The object class amounts for Administration in the FY 1990 Congressional justification also includes the Institution's funding for unemployment compensation (\$398,000) in object class 12, instead of object class 13 -- "benefits to former employees."

4) Increased Costs for Health Insurance - In addition to the above, there is a variance of \$243,000 in FY 1989 benefits costs for Administration between last year's justification and this year's justification. Of this amount, \$144,000 represents the additional costs for health insurance for bureaus and offices within the

Administration line-item (for which Congress provided funding as a result of Conference Committee action).

5) Other Changes - The balance of \$99,000 equals the net effects of calculations of personnel benefits costs for the 23 bureaus and offices which comprise the Administration line-item during the FY 1989 allocation process, offset by decreases associated with Congressional action such as the elimination of funding for within-grade increases, the disapproval of one new position for the Office of Financial Management and Planning, the 25 percent salary lapse for 34 new positions, and the reduction related to the decrease in workdays from 262 in FY 1988 to 260 in FY 1989.

Question 92: There is a request of 15 workyears and \$601,000 for the Office of Accounting and Financial Services. How long will the seven temporary accounting technicians be hired for?

Answer: The seven temporary accounting technicians will be needed for fiscal year 1990 to relieve the burden that implementation of a new accounting system will place on existing staff. The Institution must maintain the existing level of recordkeeping and financial services as the implementation proceeds concurrently. The implementation (the process of learning new procedures and ways of doing things, the loading of base data, the testing of hardware and software) as well as the need to run parallel systems for a period of time to assure accuracy creates the temporary workload increase. These positions will cover the first of several phases of the proposed implementation. It must be remembered we anticipate moving from 1960's technology to that of the 1980's. Phase I will see utilization of a new general ledger, automated accounts payable and purchasing, and an enhanced budget projection system. It is anticipated that later phases of the implementation will have a similar requirement for temporary positions.

Question 93: Will the new accounting programs be developed in-house, or are they being purchased?

Answer: The software which will be used for the new accounting system will be purchased. The Walker package we intend to implement is currently available on the GSA schedule and meets the JFMIP requirements. Our consultants have advised that the package will have to be modified to meet the unique needs of the Smithsonian.

Question 94: Explain why the new staff positions are needed to operate the new programs, rather than using existing staff. How many positions like those proposed to be added are currently available (i.e., accountants, systems accountants, records clerks, and accounting technicians)?

Answer: The Smithsonian's accounting system is not adequately serving the needs of the Institution. The current semi-automated system is at capacity. With an expanded computer and software capability we will require additional staff, many with new and different skills, to satisfy processing and reporting requirements

currently not being met. There are no staff available to pick up an increased work load. In fact, the opposite is the case. We hope that with the addition of new staff and efficiencies provided by the new accounting system we will be able to solve what has been an ongoing base deficiency in staffing levels vis a vis a more than inflationary growth in expenses and an increasingly burdensome and complex set of federal and non-profit accounting and reporting requirements.

Question 95: What are the expected future costs of the new programs?

Answer: Our future needs include 8 full-time positions including internal controls staff who would establish procedures relating to the new system, and keep current appropriate documentation, and staff accountants. We think we have anticipated all needs. We are being especially cautious as we proceed with implementation of the new accounting system given our experience in moving to the personnel/payroll system at the Department of Agriculture's National Finance Center. This effort took one and a half years and many manhours more than we had planned due to its complexity. We know the new accounting system will be even more complex.

Question 96: When will the complete system be operational?

Answer: The complete system (all phases) will be operational in the mid 1990's.

Question 97: Provide a breakdown of the requested increase by cost element.

Answer: A complete breakdown of the FY 1990 request for the Office of Accounting and Financial Services is as follows:

1. Fifteen positions	\$381,000
2. Printing handbooks and manuals	30,000
3. Training and travel	25,000
4. Space renovation	30,000
5. Supplies	10,000
6. Computer usage	<u>125,000</u>
	\$601,000

Question 98: There is a request of \$51,000 and 1 workyear to monitor and utilize the new accounting system. How many financial analyst positions are there currently in the Office of the Treasurer?

Answer: There are no financial analyst positions in the Treasurer's Office.

Question 99: Why is a new position needed for the functions mentioned, rather than being done by existing personnel?

Answer: As pointed out in question 98, there are no analysts in the Office of the Treasurer. The growth and increasing complexity of the Institution makes it imperative that this support be made available. Further, this type analysis will be critical in assisting the Treasurer with oversight responsibilities for the implementation of the new accounting system, funding plans for the new Museum of the American Indian, as well as the NASM extension. The Institution is embarked on a range of projects of unprecedented magnitude.

Question 100: Why does this position need to be hired in FY 1990 if the new systems are just being implemented?

Answer: Our experience with the implementation of a new personnel/payroll system using the established system of the Department of Agriculture's National Finance Center taught us that the more forward thinking you are, the more prepared you will be in systems implementation and the fewer problems you will have along the way. We have yet to fully set forth the kinds of analysis we want our new system to do so that we can best understand the full implications of our Federal spending patterns. Our planning efforts now are hampered by poor data. An analyst devoted to these issues working in concert with the implementation team will assure a better end product.

Question 101: An increase of \$39,000 and 1 workyear is requested for the Office of Audits and Investigations' for a criminal investigator. How many criminal investigator positions are there currently in the Office? Are all of them filled?

Answer: The Office of Audits and Investigations currently has three investigator positions, all of which are filled.

Question 102: How many requests have not been investigated in recent years, due to the lack of staff?

Answer: During 1988 the Office of Audits and Investigation deferred 17 potential cases. Four cases were reactive for investigated assistance. The remaining 13 cases were identified as a result of a pro-active initiative. These are suspected fraudulent workers' compensation cases.

Question 103: What kind of requests or complaints are involved?

Answer: We have had complaints regarding possible contract irregularities; standards of conduct violations; employee benefit fraud; and suspected workers' compensation abuse. Furthermore, we have made very little progress on our "proactive" initiative program. These initiatives are broad-based systematic efforts that focus on specific Smithsonian operations or activities that are vulnerable to fraud and abuse. The primary objective of these initiatives is to detect previously undisclosed illegal activity and to identify associated weaknesses in internal controls. We have not been able to devote sufficient time to this program because our resources have

been devoted almost exclusively to high priority reactive investigations having major impact on programs and operations.

Question 104: There is a request of \$530,000 for additional space rental requirement. The Office of Personnel Administration will be moved to rental space in L'Enfant Plaza in order to free space in the Arts and Industries Building for a child care center and health unit. How many health units are there now in Mall buildings?

Answer: The Smithsonian Institution has a health unit in the American History Building and first aid units in the Air and Space, Natural History and Hirshhorn Buildings. An additional unit, to be located in the Arts and Industries Building, is needed to serve large numbers of employees and visitors in that building as well as the Castle, Freer Gallery, and Quadrangle Buildings. The A&I unit will also support the Infant Child Care Center in that building, and provide space for the Employee Assistance Program.

Question 105: What are the costs related to the child care center and health unit, and what are the sources of those funds?

Answer: The estimated cost of the child care center is \$300,000. The Institution will use funds appropriated in the R&R account in FY 1989 for this project. The estimated cost of the health unit is \$193,000. The Smithsonian will complete the work with funds requested for space renovations in the Arts and Industries Building in FY 1990.

Question 106: When will the center and health unit actually be available?

Answer: The Institution expects that the health unit will open for partial use by the end of June 1989, although work will not be complete until FY 1990. The child care center will be ready in January, 1990.

Question 107: What is the cost and source of funds being reprogrammed within the Administration program to move Personnel Administration in 1989?

Answer: The move of the Office of Personnel Administration to L'Enfant Plaza will cost approximately \$455,000. Of this amount, \$302,000 was spent in FY 1988 from the Administration and Facilities line items for space preparations at L'Enfant Plaza and purchase of modular furnishings to make efficient use of the space. The Institution will use an estimated \$100,000 of S&E funds in FY 1989 to install security and a communications system and to move OPersA staff to their new quarters. The Smithsonian will fund these costs from the OPersA base, supplemented by \$15,000 in trust funds.

Question 108: How has the split between Federal and Trust been determined for this request?

Answer: For administrative units, such as the Office of Personnel Administration, rental expense allocations to the S&E and Trust budgets reflect the ratio of Civil Service and Trust program salary expenses.

Question 109: How large is the rental space, and how many employees, Federal and Trust, are being moved?

Answer: The rental space is approximately 12,500 square feet. About 81 staff members of the Office of Personnel Administration will move into this space, and 13 will remain in the Arts and Industries Building. The staff of Personnel Administration is about two-thirds Federal and one-third trust fund employees.

Question 110: What is included in the \$200,000 estimate for space preparations? Will any funds be spent for this purpose in 1989? If so, identify the amount, source, and purpose.

Answer: The estimate includes the cost of moving walls and installing electrical outlets and communications systems in the new space, and the cost of contractual services for office moves. As outlined in a previous answer, the Institution spent approximately \$302,000 in FY 1988 S&E funds, and will spend about \$100,000 in FY 1989 S&E, Trust, and Minor Construction, Alterations and Modifications funds to reconfigure space that became available in FY 1988 when the SI Press moved into larger space in another L'Enfant Plaza building. The urgency of the move from extremely poor space in the Arts and Industries Building was confirmed in a recent audit report which stated "the move to L'Enfant Plaza will result in a better office environment and layout and more space which should further improve staff supervision and morale."

Question 111: If this increase is not agreed to, what will be the impact?

Answer: The effect would be to eliminate or delay space modifications required to accommodate new staff the Smithsonian will hire in FY 1989 and in FY 1990 (if authorized by Congress) to manage the additional workload associated with the growth in the Repair and Restoration of Buildings account.

Question 112: At the January Board meeting, the Regents authorized the Secretary to acquire new space to replace the North Capitol St. space in 1992, using up to \$10 million in Trust funds. Annual costs for the mortgage, and to provide a return on the investment of Trust funds, would be \$9 million, compared to an estimate of \$11 million to lease comparable space. What is the current status of this effort?

Answer: We are gathering information on the various occupants who would co-locate in such new space and their square footage requirements, using as a starting point our knowledge about the North Capitol Street building. This information will form the basis for a request for proposals on lease, lease purchase, or other forms of

acquisition and a subsequent assessment of the most cost-effective alternatives.

Question 113: Will this acquisition require specific Congressional authorization?

Answer: The need for authorization will depend on the eventual type of acquisition technique and the proposed financing agreement. Under any circumstance, however, the Institution will keep the appropriate committees of Congress fully informed.

Question 114: What is the total amount of space involved? How would you plan to use this space?

Answer: Although we have not yet developed specific numbers, we can foresee a need for approximately 300,000 square feet of space, about double the present space in the North Capitol Street building. Overall, the space would be characterized as special purpose to include light industrial uses, such as printing and exhibit preparation functions, warehousing of building supplies and materials and storage of equipment and other items.

Question 115: Why would this total amount of space be necessary?

Answer: In part, additional space would relieve much crowded conditions in the North Capital Street building and permit the possible relocation of functions from Mall buildings, such as the trade and craft shops of the Office of Plant Services.

Office of Plant Services

Question 116: P. 220. The request for the Office of Plant Services is \$41,822,000, an increase of \$3,860,000. Explain the decrease in the 1989 base column in other services (\$1,051,000 versus \$1,782,000) and the increase in supplies (\$2,132,000 versus \$1,389,000).

Answer: The Office of Plant Services (OPlantS) adjusted its spending plan for other services and supplies to reflect more recent actual expenditure patterns. Smithsonian organizations reimburse OPlantS for materials used on program and exhibit projects prepared by the OPlantS workforce. The Institution's accounting system credits these reimbursements against expenses in the other services object class. However, OPlantS' actual costs for the materials it uses on these projects appear in the supplies object class. The new distribution of the base, as reported in the FY 1990 request, more accurately represents how appropriated funds are actually used.

Construction and Improvements
National Zoological Park

Question 117: P. 225. The request for construction for the Zoo is \$6,500,000, an increase of \$1,195,000. Included is \$4,500,000 for the Amazonia exhibit. Will this complete the project?

Answer: Yes. This amount will complete the exhibit which will open to the public in the Spring of 1992.

Question 118: What other sources of funds are being used, or are contemplated?

Answer: We intend to raise from private sources the funds necessary to construct an Amazonia Tropical Rainforest/Global Change Information Gallery adjacent to the Amazonia Exhibit.

Question 119: Provide a breakdown of the actual projects completed at Rock Creek and Front Royal in 1988, and planned for 1989 and 1990, with costs.

Answer:

ROCK CREEK
MASTER PLAN CONSTRUCTION

1988 (completed):		
	\$ 993,800	Gibbon Ridge exhibit
	3,482,200	Veterinary Hospital
1989:	\$2,600,000	Olmsted Walk (phase III)
	3,000,000	Research Facility
	3,200,000	Amazonia (phase I)
1990:	\$4,500,000	Amazonia (phase II)

ROCK CREEK
RENOVATION, REPAIRS, AND IMPROVEMENTS

1988 (completed):		
	\$178,000	HVAC Contract
	685,000	Elephant House renovation
	30,000	Outdoor Flight Cage renovation
	196,000	Electrical Feeder Line (red) repair
	104,000	Panda House renovation
	275,000	Veterinary hospital support
	97,000	Tree maintenance contract
	28,000	Komodo Dragon exhibit
	1,000	Tortoise Yard
	13,000	Invertebrate exhibit
	16,000	Wetlands exhibit
	3,000	Gibbon exhibit
	15,000	Mane Restaurant Roof
	3,000	Glass replacement
	22,000	Education Bldg. renovations
	13,000	Miscellaneous

1989:	\$350,000	HVAC Contract
	270,000	Outdoor Flight Cage renovation
	250,000	Renovate Hardy Hoofed Stock Yard
	200,000	Asbestos Removal (Elephant House and Delicate Hoof Building)
	100,000	Repair Curbs, Gutters, and Walkways
	100,000	Renovate Bat exhibit
	50,000	Alarm System for Veterinary Hospital
	50,000	Repair Pools, Beaver Valley
	50,000	Renovate Upper Bear line
	40,000	Tree maintenance contract
	30,000	Repairs to roads
	30,000	Repair skylights and doors, Small Mammal House
	25,000	Lion/Tiger Building renovations
	25,000	Improve Telecommunications NZP - CRC
	20,000	Painting program
	15,000	Inspect Boiler Stack
	10,000	Replace Security Cameras (3)
1990:	\$400,000	Roof repairs
	300,000	HVAC contract
	250,000	Bridge repairs and painting
	250,000	Repairs to rock work, Zoo-wide
	175,000	Repair/Replace guardrails Zoo-wide
	25,000	Renovation of Lab space

FRONT ROYAL

RENOVATION, REPAIRS, AND IMPROVEMENTS

1988 (completed):

\$128,100	Renovate hay sheds (3)
123,000	Renovate maned wolf facility
39,700	Hoofed stock corral
37,300	Renovate student dormitory
24,800	Renovate electrical systems in residences (3)
14,400	Renovation to Administration Building
15,400	Aluminum roof shelters for black-footed ferret enclosure
9,600	Paint interiors of 5 residences
3,600	Renovation work on Greenhill Barn area

1989:	\$300,100	Carry forward from FY-88 held for Conference Building renovation
	170,000	Renovate the exteriors of residences (12)
	86,500	Rhea pasture fencing, shelter, and utilities
	47,800	Renovate buildings #5 and #8
	40,000	Renovate bird holding/breeding yards
	35,000	Veterinary Hospital, flooring material
	25,000	Utility work
	22,700	Renovate Conference Center
	13,000	Repair roadways
	110,000	In-house projects such as fencing and minor repair projects

1990:	\$240,000	Renovate interior and exterior of buildings including #16, #28, #32 and #44
	140,000	Deer stable and hoofed stock sheds
	35,000	Hoofed stock shed at Meade Barn #2
	30,000	Fence work at Rockhill pasture
	25,000	Replace deteriorated soffit on Veterinary Hospital
	21,500	Install non-slip flooring in small mammal and bird holding area in Veterinary Hospital
	8,500	Repair roof on Small Animal Facility
	30,000	In-house minor repair projects
	70,000	Reserve for emergencies and change orders

Question 120: At Front Royal, what does the project at the east wing of the Small Animal Facility involve?

Answer: The project involves repair and replacement of metal fixtures in the building, including electrical conduits and boxes, cage fronts and doors, and ventilation ducts. The east wing of the Small Animal Facility was constructed largely of lumber treated with fire-retardant chemicals to minimize fire hazards. These chemicals have reacted and corroded many of the metal fixtures.

Question 121: What will be done to the interior and exterior of building #32?

Answer: Building #32 houses the Conservation and Research Center's administrative offices. In 1988, the Zoo relocated the library to the basement and converted the former library room into office space. During FY 1990, the Zoo will undertake exterior renovations including: (1) glazing and painting of windows; (2) covering exposed trim with vinyl or aluminum siding; (3) replacing gutters and downspouts; and (4) waterproofing of exterior stucco surfaces.

Question 122: Why is new flooring material needed in the new veterinary hospital? What are the costs, and why wasn't this included in the original project?

Answer: The Zoo needs new flooring in the CRC Veterinary Hospital to meet animal health, safety, and sanitation requirements. Although the original flooring was among the best then available, a series of new, hard rubber floor coverings have since been developed and tested at NZP's Rock Creek Veterinary Hospital in Washington, D.C., and at other veterinary facilities around the nation. The new flooring is durable, much less abrasive, and can be thoroughly disinfected; its installation will eliminate serious problems with the old flooring that include poor traction, foot and hoof abrasion, and inadequate sanitation. Because the most serious problems have occurred with exotic hoofed animals, the Zoo will replace flooring in the holding areas for these animals first (scheduled for FY 1989) and then in the holding areas for small mammals and birds (in FY 1990). The Zoo estimates the total

replacement to be approximately \$56,500 (\$35,000 in FY 1989 and \$21,500 in FY 1990).

Repair and Restoration of Buildings

Question 123: P. 229. The request for repair and restoration of buildings is \$26,653,000, an increase of \$5,918,000. Did you complete the update of the backlog estimate in February, as planned? If so, what is the updated estimate?

Answer: The staff of the Office of Plant Services completed the update of the backlog estimate on February 6, 1989. The new estimate is \$195 million.

Question 124: What were the actual obligations in FY 1988 in this account, versus the estimate, and the amount carried forward, and what is the current estimate of obligations, and carryover, in 1989?

Answer: The estimated and actual obligations and carryover in the Repair and Restoration of Buildings account for FY 1988 and estimates for FY 1989 are listed below.

<u>Fiscal Year</u>	<u>Estimated Obligations</u>	<u>Actual Obligations</u>	<u>Year End Carryover</u>
1988	14,620,794	14,467,794	15,580,252
1989	18,695,206	^{1/} 7,784,665	^{2/} 17,620,049

^{1/} Actual obligations as of February 28, 1989

^{2/} Estimated carryover based on information available February 28, 1989; of this amount, an estimated \$2.6 million worth of work will have cleared the design process and be awaiting final contract award

Question 125: The request for major capital renewal projects is \$13,625,000, an increase of almost of \$10,000,000. Have the authorizing committees reviewed any of these projects, and taken any action on them?

Answer: The staff of the House Public Works Subcommittee on Public Buildings and Grounds reviewed the Smithsonian's Repair and Restoration and Construction requests for FY 1990 on March 15, 1989. The Institution has provided other authorizing committees with information on the FY 1990 budget request, but these committees have not scheduled any other hearings. The Public Works Subcommittee on Public Buildings and Grounds has accepted 20 U.S.C 53a as sufficient

authorization for the repair work to be accomplished under the Major Capital Renewal category of the Repair and Restoration account.

Question 126: What is the basis for the \$200,000 request to relocate staff and collections in the American History building due to the HVAC project (compared to \$100,000 for the same purpose in 1989)?

Answer: The Institution requests \$200,000 in FY 1990 to relocate staff and collections affected by Phase III construction of the American History HVAC project. The funds appropriated in FY 1989 covered relocation costs for Phase II of the project. Phase III encompasses a larger area than Phase II and will be more disruptive to current operations in the Museum. Smithsonian staff based the \$200,000 request on previous experience of relocations for Phases I and II of construction, adjusted to reflect a higher square footage of construction area, a higher construction cost, and specific knowledge of the activities and collections to be displaced during Phase III.

Question 127: Provide the same information for the \$400,000 requested for the Natural History project.

Answer: The project planned for the Natural History Building will disrupt ongoing activities in the building over a number of years. The Institution will require funds to prepare temporary holding areas and relocate any personnel and collections impacted by each phase of the work, and to construct temporary dust barriers to seal off the construction zones. Smithsonian staff based the estimated cost of relocations for the initial phase on past experience with the American History Building HVAC project and the Arts and Industries Building roof replacement project.

Question 128: Provide also a breakdown of the \$9,000,000 for construction and emergency replacement in the Natural History project.

Answer: The \$9.0 million requested in FY 1990 will cover (1) design and construction of central chiller plants (air conditioning) and (2) the design of the east and west wing mechanical equipment penthouses.

Question 129: What will be the criteria for deciding whether certain electrical or HVAC equipment should be replaced on an emergency basis during the project? Will the replacements remain as part of the final project, or eventually be replaced?

Answer: The Institution plans to replace early only those pieces of equipment required to keep the facility operational prior to and during implementation of the HVAC project. The Office of Plant Services will work with the design contractor to identify the equipment that is likely to fail before it would be replaced in the normal construction sequence. The Smithsonian will incorporate replacement equipment as part of the final project wherever possible.

Question 130: \$1,845,000 is requested for general repairs. What is included in the \$250,000 for structural repairs to the Smithsonian Institution building?

Answer: Initial structural repairs will include repairs to the roof, flashings, mortar, and stonework of the building. The Institution plans to continue surveying and documenting the structural condition and capacity of the building through testing and computer modeling. The study will identify problems such as the weight capacity of floors, which might affect the internal use of the building.

Question 131: What were the actual obligations for emergency repairs in FY 1987 and FY 1988? What has been obligated to date in FY 1989?

Answer: In FY 1987, the Institution spent \$49,785 for emergency repairs, of a total of \$50,000 provided in the R&R account. In FY 1988, we spent \$58,316 of a total of \$100,000 appropriated. So far in FY 1989, the Smithsonian has obligated \$18,015, with a further amount of \$82,449 pending contract award, from a total of \$100,000 provided for emergency repairs.

In each of the last several years, the Smithsonian has funded a number of emergency repair requirements by redirecting small residual balances in the R&R account remaining after the completion of other repair projects. The Office of Plant Services also uses salaries and expenses funds to make many of the needed repairs. However, the level of funding in the S&E base for OPlantS is not sufficient to guarantee that funds will be available to meet every emergency repair situation. If adequate funding levels are not available in the R&R account to cover emergency repair, there is a risk of not being able to replace a piece of failed equipment or make a critical safety correction without deferring other much needed repair work.

Question 132: Will the \$300,000 included for gallery renovation at the Freer complete this effort?

Answer: The requested funds will not complete the renovations required at the gallery level of the Freer Gallery Building. The Institution expects to request additional funds in FY 1991 to extend the restoration work into the public corridors of the building, which were not within the scope of the gallery renovation project.

Question 133: The request for facade, roof and terrace repairs is \$5,710,000. How does the \$600,000 included for window restoration at the SI building compare to the \$750,000 provided last year for window replacement?

Answer: The Institution is phasing the window replacement project by sections of the building to avoid major disruption to activities in the Castle. The Institution will complete the first phase of the work, which includes the center section of the building, with funds appropriated through FY 1989. The funds requested for

FY 1990 will complete the second phase, on the east side of the building. The Institution plans to request funds in FY 1991 to complete the final phase, on the west side of the building.

Question 134: Will the \$1.2 million requested for plaza resurfacing at the Hirshhorn complete that project?

Answer: The \$1.2 million request will not complete the project. The Institution will seek a final increment in FY 1991.

Question 135: \$2,385,000 is requested for access, safety and security. What is the total estimated cost of the asbestos abatement project? Will the 1990 request of \$500,000 complete this effort?

Answer: In FY 1989, the Institution retained a consulting firm to survey, identify, label and report on all asbestos in major facilities. In addition to recommending corrective action at each asbestos location, the consultant will develop a schedule for removal or containment of the asbestos and an estimate of the total cost and annual funding requirements. The contractor will complete this comprehensive asbestos survey in FY 1991, and the information will form the basis for future budget requests. The Institution expects that the survey will identify substantial remaining work in asbestos abatement, beyond the work Congress would fund in the FY 1990 request.

Question 136: What is the basis for the \$450,000 for the emergency power study/design? What does it involve?

Answer: The Institution is conducting a series of studies of emergency power requirements at Smithsonian buildings in FY 1989. The initial phase of the work will address the most urgent requirements. The \$450,000 requested for FY 1990 will install emergency generators at the Cooper-Hewitt Museum (\$200,000), the American Art and Portrait Gallery (\$150,000), and the Smithsonian Institution building (\$100,000).

Question 137: Will the \$100,000 included for fume hood modifications at the Museum Support Center complete this project?

Answer: The Institution will conduct a study in FY 1989 to determine recommended corrective measures and the total project budget. At present, the Institution anticipates that the project will require some modifications to the ventilation system that in all likelihood will require additional funding in the outyears.

Question 138: There is also a request for 7 workyears and \$361,000 related to the R&R program, funded under Salaries and Expenses. How many of the positions added in FY 1989 have been filled to date, and when will the remainder be filled?

Answer: The Congress appropriated funding for these positions for three quarters of FY 1989. The bureaus and offices involved postponed recruitment to help defray the cost of this year's pay

raise. As of March 1989 two positions have been filled. The Institution is actively recruiting applicants for the remaining positions by advertising in nationwide professional journals as well as by contacting universities with degree programs in these fields.

Question 139: How much of the request is for salaries?

Answer: The request includes a total of \$287,000 for salaries and benefits: \$234,000 for six positions in the Office of Design and Construction, and \$53,000 for one position in the Office of Procurement and Property Management. The remaining funds will cover the cost of leasing additional space to house the new staff members, as well as purchase supplies and equipment.

Construction

Question 140: P. 243. The request for construction is \$10,000,000, an increase of \$1,345,000. Included is \$1,750,000 for design of the renovation of the General Post Office Building. Has the renovation project been authorized?

Answer: Section 3 of Public Law 98-523, signed by the President October 19, 1984, authorizes appropriations of \$40,000,000 for renovation and repair of the General Post Office Building.

Question 141: How much has been spent on planning to date?

Answer: The Institution has spent \$164,500 for contractual planning services for the General Post Office Building.

Question 142: Will the requested amount complete the design? If not, what is will be the balance of funding required?

Answer: The Smithsonian tentatively estimates that the design of the renovation of the General Post Office Building will cost \$3 million. The \$1.75 million requested for FY 1990 will begin the design process. The Institution will require an additional \$1.25 million in FY 1991 to complete the design.

Question 143: \$3,840,000 is included for research facilities for STRI in Panama. Are all of these projects authorized?

Answer: H. R. 1483 signed by the President on September 30, 1986 authorized \$11,100,000 for the design and construction of facilities at the Tropical Research Institute. Of this amount, the Facilities Master Plan anticipated a need for approximately \$3.5 million for Atlantic Coast marine facilities. Subsequent studies of marine habitats and the impact of the major oil spill adjacent to our Galeta Facility dictate that the requirements of STRI's Atlantic coast research program will best be served through three separate and smaller construction projects.

1. A small scale on-site replacement for our Galeta Island laboratory and dormitory facility.
2. Construction of a small laboratory-residence facility in the San Blas Archipelago at a remote site that has been authorized by the Kuna Congress.
3. A floating research facility to allow research access to sites along both coasts of Panama and adjacent countries.

Question 144: With regard to the San Blas facility, are there any costs involved in ending the lease on the current facility, rented from the Kuna Indians?

Answer: STRI will be able to terminate without cost the lease of the sand cay on which the San Blas Station is built. The only provision is that we notify the landowner one year in advance of the termination of the lease.

Question 145: Where are the research vessel and other boats currently docked when at San Blas?

Answer: The R. V. Benjamin, STRI's research vessel, is berthed at Naos Island in the Bay of Panama or at Barro Colorado Island in Lake Gatun. When the vessel is at the San Blas Station, it anchors about 200 meters away because shallow water prevents docking next to the station. Six thirteen-foot Boston Whalers operate out of the station and tie up directly to wooden plank docks next to living quarters at the Station.

Question 146: How many staff can be accommodated at the current facility? How many on average use San Blas at any given time?

Answer: The station provides living accommodations and kitchen facilities for 14 research personnel and one manager. Diving and boating safety regulations require each staff member, visiting scientist, and fellow to be accompanied by an assistant. Thus, no more than seven scientists can use the station at any one time. Currently, five staff scientists have ongoing projects at the station, and the number will increase to six next year. Nonetheless, the size of the station poses few day-to-day problems in the winter dry season (January to May), when visitor presence is low due to academic schedules, poorer diving conditions, and restrictions on the use of fresh water due to the lack of rainfall. During the rest of the year, the station is often filled to capacity, and it is often necessary for scientists to change schedules to less-than-optimal times to avoid overflow. When it is near or at capacity, the station is extremely crowded, and space for research and accommodations are inadequate and substandard. At these times, noise and vibration from human activity often interfere with or even prevent sensitive experiments.

Question 147: Will any of the staff be at San Blas on a permanent, year-round basis?

Answer: A laboratory manager lives at the San Blas Station year-round. Five members of the STRI scientific staff conduct their primary long-term research programs at the Station. Due to lack of office, dry or wet laboratory facilities, and competition for space by fellows and visiting scientists, none occupy the station on a permanent basis. However, they or their assistants work at the facility year-round.

Question 148: \$1,700,000 is included for a new floating laboratory. How much longer is it estimated the current vessel could last?

Answer: The R. V. Benjamin is a steel vessel that was built 26 years ago in Antwerp, Belgium. According to Mr. Leo Van Valkenhoef, a STRI employee with Dutch certification as a marine engineer, the standard maritime industry estimate for the service life of vessels of this type is 25 years. Extensive oxidation of the decking, conning station and the hull plates has already occurred. During routine surface preparation of the hull for painting in the fall of 1988, three areas of the hull were discovered to be rusted through. Approximately 12 square feet of steel plate were welded to the hull to patch these areas. With ever more frequent and costly repairs, we estimate that the vessel could be made to operate with reasonable margin of safety for approximately another year.

Question 149: What studies have been done to determine the cost of providing adequate, if not ideal, conditions through refitting a donated vessel, compared to building a new vessel? Provide details for the record of such studies, and the comparative costs.

Answer: The cost of refitting a donated vessel to provide adequate service as a research facility is highly variable and depends on the exact configuration of the donated vessel relative to that required for research. Since no specific vessel is at hand for donation, STRI cannot make a realistic estimate.

The STRI has modified four donated vessels for research, the last three of which were built as yachts with comfortable accommodations for persons but with little space for the machinery, equipment, and storage needed for marine research. Due to their basic design and construction, it has been possible to refit these vessels only as living and support facilities for SCUBA diving. We have not been able to use these vessels for even the most routine bottom or water column sampling procedures or on-board wet and dry laboratory work consistent with other kinds of marine research. The lack of such capabilities in our research vessels has constrained the directions of the research programs of the marine staff of the STRI. The documented need for a floating laboratory that would provide full support for a variety of marine research programs in the Caribbean and Eastern Pacific seas of the Central American region could not be met by refitting a donated vessel.

As an alternative to obtaining a vessel through donation, the STRI initiated, in January 1988, a search for a vessel from Federally

seized properties that could be converted for research use. However, STRI has not located a suitable vessel. Seized vessels tend to be either small, fast pleasure boats or commercial vessels too large to enter or manoeuvre in shallow water in the vicinity of coral reefs.

The attached cost estimate for a new boat indicates by asterisk those items which would need to be installed on a donated yacht to accommodate research needs. Modification, restructuring, rewiring and replumbing might double these individual item costs. Savings in modifying a donated vessel would be moderate at best.

Surface Systems

Naval Architecture
Survey
Operations

Marine Consultants

Structure
Stability
Design

June 19, 1988

Capt. David A. West
STRI
APO Miami 34002-0011

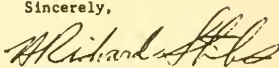
Dear Captain West:

Find enclosed the requested cost estimate for a 80' x 25' x 8' vessel, in aluminum, from the general specifications on your list. These figures are best estimates only as no plans are yet available and are based on rates (w.g. labor) from my experience in Louisiana.

Please note that your operational characteristics are not attainable for a vessel of the desired size. In order to retain the 12-15 knot speed capability and approach the desired fuel efficiency, the range had to be reduced to 1500 miles.

Feel free to call upon me for any additional services you may need.

Sincerely,



H. Richard Stilea
Naval Architect

SURFACE SYSTEMS ESTIMATE PAGE 2

CONSTRUCTION ESTIMATE FOR SMITHSONIAN INSTITUTE RESEARCH VESSEL

TO BE BUILT IN ACCORDANCE WITH

SUBCHAPTER "T" CONSTRUCTION & OUTFITTING STDS.

The breakdown of the cost of the Research Vessel follows:

Material	50%	\$ 828.5 K
Labor + Overhead	15% + 15%	496.5 K
Material Handling (10% of Material Cost)	5% of Total Cost	82.8 K
G & A	11% of Total Cost	182.0 K
(13% of Mat'l, Labor, Ovhd & Mat'l Hdling)		
Profit	4%	66.2 K
		<hr/> 1,656.0 K

Materials List:

Aluminum Construction, Including:	120.0 K
Polyurethane Exterior Paint System	
Marlite (Masonite) Interior Sheathing	
Fiberglass Batt Insulation	
Engines Twin 12V-92T1, Opposite Rotation 2 X \$65,000 w/ Twin Disc Transmission, Resilient Mounts.	130.0 K
Vee Drives (Rigid Remote Mounted)	30.0 K
Jack Shafts	10.0 K
Shafts (3" Diameter 17-4PH Stainless Steel)	8.0 K
Props (Bronze)	4.0 K
Bearings and Full Length Shaft Logs	10.0 K
Stuff Boxes, Custom Aluminum	12.0 K
Couplings	1.5 K
Main Engine Exhausts, Under Water, on Transom	5.5 K
Generator Exhausts, Dry, Thru Hull Side, Residential Mfr.	3.5 K
Raw Water Cooling for Main Engines	10.0 K
Split Pipe Keel Cooling for Generators	2.5 K
Fuel System, 5,000 Gallons	5.0 K
Steering (CharLynn Hydraulic)	7.5 K
Rudders	3.0 K
Rudder Bearings	1.0 K
Rudder Stuff Boxes & Logs	4.5 K
Stern Ramp	17.5 K*
A-Frame Over Stern Ramp, Hydraulic Operation	35.5 K*
Blocks (Pulleys) on A-Frame	2.5 K*
Cargo Hold & Hatch Cover	30.0 K*
Electric Motor Driven Hydraulic Pwr Pac	12.0 K*
Hydraulic Crane	30.0 K*
Air Conditioning (2 X 6 Tons)	12.0 K
Scuba Compressor (Mako, Inc.) and Fill Station	12.0 K*
Pneumatic System (Engine Start and Shop Air)	13.0 K

Kahlenberg Air Horns, Triple, Bronze	1.5 K
Bilge and Ballast System	7.0 K
Pressurized Raw Water to Wet Lab	3.0 K*
Salt Water Fire and Washdown System	8.0 K
Three Heads each w/ 1 Shower, Wash Basin & 1 Water Closet	4.5 K
Pressurized Fresh Water System	2.5 K
Water Maker (R.O.M 1,000 GPD)	15.0 K
Generators (2 X 30 KW, NonParallel, 230 VAC 3 Ph. 2 X 18K	36.0 K
Galley (All-Electric, Conventional Marine Style)	20.0 K
Power Supplies for D.C. Powered Electronics & Instruments	2.5 K
Deck Flood Lights	1.5 K
Pilot House Roof-Mounted Search Lights	1.5 K
Intercom/Phone System (Hose-McCann or Equal)	3.0 K
Electrical Fittings & Hdwe equal to Pauluhn Bronze	4.0 K
Mess Deck (Dining Room)	2.0 K
Gasoline Tanks (600 Gallon Total)	3.0 K
Relocate Pilot House to Coach Roof	14.0 K
2-Bunk Crew Stateroom #1	4.0 K
2-Bunk Crew Stateroom #2	4.0 K
2-Bunk Stateroom for Chief Scientist	4.0 K
4-Bunk Stateroom #1	4.0 K
4-Bunk Stateroom #2	4.0 K
Captain's Sea Cabin Adjacent to Bridge	3.0 K
Dry Laboratory	20.0 K*
Wet Laboratory	25.0 K*
Holding Tanks in Wet Lab	10.0 K*
Wet Tables in Wet Lab	10.0 K*
Modular Furnishings in Laboratories	15.0 K*
Safety Glass Windows, Fixed	5.0 K
Bridge Instrumentation	
Engine Alarm and Monitoring System	5.0 K
Autopilot	4.5 K
GPS w/Integrated Log and Compass	5.5 K
Radar (15 KW)	10.0 K
Radar (5 KW)	5.0 K
SSB Transceiver w/ Weather Fax	5.0 K
Dual VHF Transceivers 2 X \$1K	2.0 K
Weather Instruments	2.0 K
Sonar Equipment	7.5 K
Fire Extinguishing System for Engine Room (Halon)	2.5 K
Ten-Man Life Raft, Two Each 2 X \$3.5 K	7.0 K
Personnel Safety Equipment (Life Jackets, etc.)	3.0 K

 828.5 K

Question 150: What is the basis of the cost estimate for the vessel as planned?

Answer: The cost estimate for the vessel was prepared by Naval Architect H. Richard Stiles in consultation with Mr. David West, the Captain of STRI's current research vessel. Mr. West presented Mr. Stiles with a list of operational characteristics and research capabilities for the vessel based on the expressed needs of STRI research staff in both the marine and terrestrial programs. Mr. Stiles worked for STRI in the past on the preparation of specifications for the Jacana, our new vessel that is used to transport STRI employees to and from our facility at Barro Colorado Island. He also worked as a naval architect for the Panama Canal Commission and, in the commercial sector, for Swiftships, Inc., Morgan City, Louisiana. We have been pleased with his work and trust that this estimate is accurate and realistic relative to our needs and current costs. In addition to the estimate provided by H. Richard Stiles, a detailed design and planning study will cost approximately \$80,000.

Question 151: \$730,000 is requested for construction planning. Provide a breakdown of how the funds are being used in FY 1989, by project.

Answer: The following is the current allocation of FY 1989 (\$750,000 available):

\$365,000	NASM Extension concept planning
50,000	NMNH Board Room design
<u>200,000</u>	GPO concept planning
\$615,000	Total Identified Requirements

Smithsonian management will decide this spring on other pending construction projects whose planning must continue using the balance of funds available this year.

Question 152: Would you plan to continue planning related to these same projects in 1990? If not, what additional projects would you anticipate the funds would be spent for?

Answer: The Institution has not made a final determination of the distribution of construction planning funding requested for FY 1990. The purpose behind the Institution's request for Construction Planning resources as a lump sum is to offer flexibility in defining priorities in developing a long-range facilities plan. Management is currently making a comprehensive assessment of its requirements for new facilities, and it will set short-term priorities for further planning efforts as part of this process.

It is likely that the Institution will use a portion of the FY 1990 Construction Planning funding to initiate a detailed Master Plan of the proposed NASM Extension once a site has been selected, but the cost for this planning phase has not yet been determined. The Institution would be pleased to provide Committee staff with a

list of projects for which planning will proceed when it establishes its short-term priorities.

Question 153: There is a request of \$4,040,000 for minor construction projects. Under the Natural History building, there is a request to design and renovate space for a new advisory body, costing \$484,000. What exactly will be the role of this new advisory body? How often will they meet, and use the facilities planned for them?

Answer: The role of the new National Advisory Board for the National Museum of Natural History will be to give advice on both the scientific and public programs of the Museum, including exhibits, education, outreach, public affairs, and fund-raising. The Board will advise the Director and his staff on a regular basis and the Secretary on an annual basis of the Museum's status and needs with respect to these matters. The new Board will determine the frequency of the meetings, possibly sometime in September 1989. The Board members also will have a vital role in giving and raising money. They should link the NMNH with the broader community, both lay and scientific, through their contacts and transmit national views about the NMNH back to the Director and Secretary.

The full Board of the new National Advisory Board for the National Museum of Natural History will meet annually. Committees on scientific policy (with NMNH staff), exhibits policy (with NMNH staff), and fund-raising, and an Advisory Board Executive Committee, as well as sub-committees, will meet regularly. It is anticipated that meetings will number several times per month throughout the year.

Question 154: When will the board be in place?

Answer: The Board is expected to be in place by fall 1989.

Question 155: What is the total cost of this effort? What exactly will be accomplished with the 1990 request?

Answer: The total cost of this effort is \$985,000. Design of the new space, demolition of the existing space to prepare it for construction, and initial construction work could be accomplished for \$484,000. The new Director would like to increase his request from \$484,000 to \$700,000 for FY 1990 to provide some usable space, rather than only a construction shell, at the end of this phase of the project. The Director will request a second phase of this project in FY 1991 to provide the appropriate furnishings for this space and to construct the adjacent staff offices to assist in outreach activities.

Question 156: Since the 1989 budget includes a project to renovate space to provide conference space, rest rooms, and kitchen facilities, why is this project necessary?

Answer: In FY 1989, Congress appropriated funds to consolidate the National Museum of Natural History's (NMNH) central administrative functions in space vacated by the recent relocation of the Automated Data Processing Center. The Museum has a severe

shortage of administrative offices and conference rooms for use by all NMNH staff for seminars, training classes, and meetings. As a result of the renovation of the vacated space, the Museum will create a number of badly needed new administrative offices and will establish a small conference room that it will use for some of these purposes. There is a decades-old kitchenette and one rest room facility that now services the Director, his staff, and official guests. In the FY 1989 renovation, the Museum will modernize the kitchenette, and add another rest room to accommodate today's larger administrative staff.

In the FY 1990 budget justification, the Smithsonian has requested funding to design and renovate space for its new Advisory Board. This new complex will be on a different floor from the central administrative space being renovated in FY 1989. This site is a better location for the Advisory Board rooms because of its proximity to an existing kitchen facility which serves the public and its ease of access in a building laden with mazes of hallways. The Advisory Board requires a meeting space and rest rooms, as well as a dining room and kitchen for special functions.

Question 157: There is an additional amount of \$641,000, with the actual projects to be accomplished by the priorities of the new Museum Director.

Has the Director established his priorities? If so, what are the projects for which the \$641,000 would be used?

Answer: The director would like to increase the request as stated in the budget document for the advisory board project by \$216,000. The budget estimate to design and renovate space for the new advisory board would now total \$700,000 for FY 1990. The remaining \$425,000 portion of the \$1,125,000 request will fund the following projects: \$125,000 to construct new rest room facilities on the west ground floor of the main building; \$50,000 for improvements of the public checkroom; \$150,000 for the renovation of part of the laboratory of Molecular Systematics space; and \$100,000 for the miscellaneous modifications to the spaces freed by the move of collections to the Museum Support Center.

Question 158: What decision has been made regarding the new exhibit that will go into Exhibit Hall 10?

Answer: A new exhibit to go into Hall 10 is the focus of a seminar to be held this spring (1989). The NMNH needs to strengthen and update its anthropological exhibits and also to portray more clearly the huge global changes made by mankind. Hall 10 is being considered for new anthropological exhibits that will incorporate environmental themes, and this should be better defined later in the year.

Question 159: \$300,000 is requested to modify 5,000 sq. ft. in the Arts and Industries building, including adding the new health clinic. Will this complete the modifications of the A&I building?

Answer: The Arts and Industries Building continues to provide important central administrative and educational program space and flexible use of the building is key to the Institution's short and long term space utilization plans. The Institution is planning to make additional adjustments to space allocations in the building beyond those planned for FY 1990. Although staff have not completed specific plans and designs for these future space modifications, the Smithsonian expects that funding will be required on a fairly constant basis over the next several years.

Question 160: \$380,000 is requested for the Air and Space Museum. Will the \$320,000 requested complete the renovations of the old cafeteria space?

Answer: No, the \$320,000 will not complete the renovations of the old cafeteria space. The Institution will use the \$320,000 requested for FY 1990 to complete demolition work in the space and for construction of a new staff dining room in the central section. The Smithsonian expects to request an additional amount in FY 1991 to convert the present staff cafeteria in the southern section of the space into staff offices for public affairs, curatorial and registrarial functions to be consolidated in the area.

Question 161: How exactly will these funds be used?

Answer: The Institution will use the requested funds for modifications to the mechanical, electrical and fire protection systems to accommodate changes to the way the space is used, demolition work in the central and south sections of the area, and construction of a new staff dining room in the central portion of the space.

Question 162: What will you use the space currently occupied by the Center for Earth and Planetary Studies for?

Answer: The space currently occupied by the Center for Earth and Planetary Studies (CEPS) is in a corner of the library of the Air and Space Museum. The Museum plans to use the majority of the vacated space for expansion of the Information Management Division. The Museum will hire a new Archivist in this division in FY 1989 and plans other additions to the staff in the future to provide improved support to researchers within and outside the Institution. The Library will also use a few of the offices in the former CEPS space, and library stack areas will be extended into this area. The Museum does not anticipate any significant alterations to the CEPS space before these new activities move in.

Question 163: Where is the employee cafeteria currently located?

Answer: The employee cafeteria is on the south side of the third floor east wing.

Question 164: \$100,000 is requested for a greenhouse at SERC. Why wasn't this included as part of the original laboratory project?

Answer: The greenhouse was included in the original scope of work for the Mathias Laboratory, but was eliminated when the project cost increased due to various unforeseen conditions. In FY 1987 the Institution requested approval to reprogram sufficient funds within the R&R account to build the greenhouse. Congress instead asked that the Institution seek funding for the greenhouse in a future year.

Question 165: With regard to the Museum of the American Indian, what agreement for cost-sharing of operational costs at the New York site has been reached in the recent negotiations?

Answer: The Smithsonian sought commitments from the City and State of New York for specific contributions to the costs of operating the New York facility of the proposed National Museum of the American Indian. The City and State each agreed to treat applications by the Smithsonian for support of programs there as though they had been made by local cultural institutions. However, amounts were not specified, and the State of New York has essentially ruled out funds for general operating support.

Nonetheless, the Mayor of the City of New York and the Governor of the State of New York have written to Secretary Adams expressing the commitment of each to fund one-third, or not more than \$8 million, of the costs of refurbishing the Smithsonian portion of the New York Custom House for museum purposes. Copies of the letters from the Mayor and the Governor are attached, as is the option paper referenced in each.



THE CITY OF NEW YORK
OFFICE OF THE MAYOR
NEW YORK, N.Y. 10007

March 15, 1989

Mr. Robert McCormick Adams
Secretary
The Smithsonian Institution
1000 Jefferson Drive, S.W.
Washington, DC 20560

Dear Mr. Secretary:

I refer to the Memorandum of Understanding to be entered into between the Smithsonian Institution and the Museum of the American Indian, Heye Foundation and to the option paper for the New York element of the National Museum of the American Indian.

In order to help establish a Museum facility of approximately 82,500 square feet, including space shared with the General Services Administration, at the Custom House as provided in the Memorandum of Understanding, the City of New York hereby agrees (i) to fund the design, construction and renovation of the space in the Custom House to be used by the Museum as outlined in the option paper, to the extent of the lesser of eight million dollars (\$8,000,000) or an amount equal to one third (1/3) of the cost of such design, construction and renovation and (ii) to treat any and all applications by the Institution for grants to support programs to be conducted by the museum in New York and/or for contracts for services, as though they had been made by a local cultural institution.

The City shall make monies available to the Institution for the purposes set forth above at the same times and subject to the cap described above, in the same amounts as the Federal government shall make funds available to the Institution for said purposes.

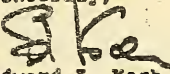
You may show this letter to members of Congress in connection with your efforts to obtain Federal support for the project and may advise the persons to whom you show it that they may rely upon these undertakings.

Secretary Adams
March 15, 1989
Page Two

The cultural resources of the City already have been enhanced by the Smithsonian's presence in its Cooper-Hewitt Museum and the Archives of American Art. We look forward to extending this relationship and to welcoming you also to Bowling Green.

All the best.

Sincerely,


Edward I. Koch
MAYOR

cc: Harry Baldwin
Edward Costikyan
Paul Dickstein
Lorna Goodman
Julia Kidd
Pamela Mann



STATE OF NEW YORK
EXECUTIVE CHAMBER
ALBANY 12224

MARIO M. CUOMO
GOVERNOR

March 9, 1989

Dear Mr. Secretary:

I refer to the Memorandum of Understanding to be entered into between the Smithsonian Institution and the Museum of the American Indian, Heye Foundation and to the option paper for the New York element of the National Museum of the American Indian.

In order to help establish a museum facility at the Custom House in New York City as provided in the Memorandum of Understanding, I agree (i) to propose appropriations in the 1990-91 Executive Budget to fund the design, construction and renovation of the space in the Custom House to be used by the museum as outlined in the option paper, to the extent of the lesser of \$8 million or an amount equal to one-third of the cost of such design, construction and renovation, with the understanding that all three sources of funding for the project will be assessed in equal amounts as the project is completed, and (ii) to treat applications by the Institution to the New York State Council on the Arts and/or to other appropriate State agencies for support for programs to be conducted by the Museum in New York as though they had been made by a local cultural institution except grants for general operating support for the museum.

You may show this letter to members of Congress in connection with your efforts to obtain federal support for the project and may advise the persons to whom you show it that they may rely upon these undertakings.

Sincerely,

Mario M. Cuomo

Mr. Robert McCormick Adams
Secretary
Smithsonian Institute
Jefferson Drive
Washington, DC 20560

The George Gustav Heye Center
of the
National Museum of the American Indian

March 15, 1989

Presented here is a conceptual option for space allocation for the center in New York. This option assumes the U.S. Custom House as the site, and uses primarily its first and basement levels. The areas and costs shown represent flexible ranges.

To facilitate discussion and to base areas and costs on reasonable assumptions, the staff of the Institution has developed a program model using a variety of existing and proposed museum functions as a base.

Custom House Concept

Concept Assumptions

The Custom House is a GSA-operated seven-story building with a basement and sub-basement levels. It has been partially renovated by GSA to receive new tenants. The building exterior appears to be in good condition and new insulated glass windows have been installed. The exterior walls are primarily of heavy stone, clay tile, and plaster-lathe construction. The interior partitioning appears to be clay tile and plaster-lathe. Many of the interior halls are finished with marble, have ornate architectural detailing, and are penetrated with multiple doorways and interior windows. The heating, ventilating, and air conditioning (HVAC) plant is capable of providing an office environment for building tenants. GSA has refurbished and updated the passenger and freight elevators and installed new fire stairs to meet today's codes. A new shipping and receiving area has been created and the restroom facilities have been completely redone. GSA maintains a control room in the northeast corner of the first floor level.

Most of the unoccupied spaces are in a raw condition, and all finishes will need to be provided. Much of the plaster still remains on the walls and the original marble flooring remains in the hallways. Basic heating and fire protection devices have been installed. Security modifications will be necessary before museum artifacts can be received and displayed.

The basis of this program is that the museum facilities use as much of the first floor level as possible, and use the basement level for areas not needed to be located in the museum's major activity areas. This is illustrated on the concept floor plans that follow these assumptions and the concept program. The first floor is readily accessible from the street level making visitor access, particularly handicapped access, direct and efficient. Restricting the museum to one floor also simplifies museum security and HVAC requirements. Even though the museum system may use a building energy source for HVAC, an independent system is assumed to assure a quality environment, long life, and reliability. Another assumption is that the building electrical system is based on commercial or office needs. Some adjustment will be required to meet the power and lighting needs of a museum.

Exhibition Areas are shown in the central portion of the first floor level. These large open spaces are the most conducive to accommodating a variety of exhibit arrangements. Other Public Facilities Areas and Museum Support Area spaces are located in the perimeter areas and have ready access to the Exhibition Areas. The temporary exhibition areas are placed so that they can be closed for reinstallation without disrupting the permanent exhibition area. It should be noted that the south portion of the oval area in the permanent exhibition area is not now part of the existing building square footage. This area is now open to the basement level courtyard area. This program "recovers" that square footage by decking over the basement area to the existing structure and enclosing the first floor space.

An unfortunate aspect about the exhibition spaces, as well as the entire building, is that no vapor barrier exists. This barrier is necessary to maintain the constant humidity level most artifacts require. With no air-tight barrier, water vapor in the museum environment would condense within the cooler exterior walls and cause extensive damage. Although impractical for the entire floor, some attempt will be made to enclose the central exhibition areas within a newly created vapor barrier, that is, the oval area of the permanent and the temporary exhibition areas. This could be achieved by creating false walls which include a barrier at the existing perimeter walls. This wall could also resolve another problem associated with the numerous windows in the exhibition areas. In most cases natural light is not desirable in exhibition situations. It hampers flexibility in the exhibit design and, if not filtered, can be harmful to the collection. The windows, although new and insulated, represent an energy loss or "weak spot" in the building envelope. An extra layer of insulation will be added in the false wall. A vapor barrier also could be included during the installation of the new floor, ceiling, and lighting. Because security devices will be installed at each window, access panels will be required. It is important to note that the barrier must be airtight, and some accommodation to this must be made at the entrance to the exhibition area. Doors may need to be added to contain the exhibition area humidity level.

The extreme north exhibition area could also receive the same treatment. However, the exhibition area shown in the first floor lobby area should be limited to informational-type exhibits with no sensitive artifacts or exhibits using artifacts in climate controlled cases. This space has much architectural detailing and would be extremely difficult to separate from the main body of the first floor.

If after further investigation the preceding scenario is found impractical, then the HVAC system can be designed to eliminate sudden and extreme shifts in humidity level which has been found an acceptable alternative by some for museums housed in older buildings. Extremely sensitive artifacts can be placed in climate controlled cases. This alternative is now being planned for the National Museum of Natural History.

The main entrance to the museum is in the northwest corner of the building. This side corner is the best exposure to the open spaces of the plaza in front and the park on the west of the building. The entry is almost at grade level and construction of a handicapped ramp should pose no problem. The possibility of automatic door openers for the existing doors will be investigated. The museum shop and coat check area have been located immediately after entering. This allows the visitor to relieve themselves of coats and packages before entering the museum proper and allows others to use the shop without entering the museum. No shop or coat facilities exist in the space now. Complete renovation is needed and should include the necessary security requirements.

Little change is anticipated in the lobby area. It is seen mostly as an orientation and information area. Visitors will be directed either to the exhibition areas or to the education center areas. Existing restrooms are just off the lobby and are adequate for the public. They have been equipped for the handicapped.

The education center office and classroom areas are grouped together as a unit while the storage area is located near the shipping and receiving area. The education center areas will need to be completely renovated with some consideration for built-in storage in the classrooms. Auditorium facilities are included in this program only in the sense that the institution would encourage GSA as the owner to develop these facilities in the basement and sub-basement areas immediately under the oval rotunda area. This facility could not only be used by the institution but also by other building tenants and perhaps those outside the building.

Administration facilities are located on the east side of the building and have direct access to the exhibition areas. Public access to the administration facilities is only through the GSA entrance. This arrangement will help prevent visitors from accidentally wandering into unauthorized areas. These areas will need overall renovation to a top quality office environment:

Both the exhibition and collection support areas have been placed at the rear of the building close to the shipping and receiving area. These areas are not public access areas and are often in receipt of artifact or material shipments. An employee entrance is anticipated either at the east or west side door. Exhibition support will need some large open space for exhibit staging as well as some office, shop, and storage areas. Some provision for the use of power tools should be assumed. This should include adequate electrical power and a proper dust collection system. The collection support area will need an environmentally controlled storage area for registering artifacts before their use in exhibits. The collection support area will include space for crating and uncrating, and again the use of power tools should be anticipated. Both areas will need complete renovation. The present shipping and receiving area has been renovated and is maintained by GSA and is shared by all the building's tenants. This program assumes that arrangement will continue in the future.

Most of the security and building services facilities have been located at the basement level. These types of facilities, locker rooms, lunch rooms, etc. are better suited out of the major activity areas. Because the nurse's facility, computer room, and control room may work more closely with major activity areas, they have been located at the first floor level. All areas will be completely renovated. A substantial mechanical/electrical area has been located in the sub-basement area, close to the building's system. This reflects the assumption that some independence will be necessary in operating the museum's systems. Further investigation will be needed.

Concept Program

The following concept program is based on the preceding assumptions and typical staffing levels for a museum of this size and nature. The square footages indicated by the program do not match exactly those of the concept plan. In most cases the plan, if scaled, will indicate a larger square footage. The total net square footage at the end of the program has been multiplied by a "net to gross" factor of 1.5. A factor this large is not unusual when trying to fit a new facilities program into an older building. It also takes into consideration circulation and utility spaces not reflected in the program.

I. Exhibition Areas (Subtotal: 18,700 sf)

- A. Permanent Exhibition (14,200 sf)
- B. Temporary Exhibition (4,500 sf)

II. Other Public Facility Areas

- A. Visitor Service Facilities (Subtotal: 2,950 sf)
 - 1. Lobby/Orientation/Telephones (1,200 sf)
 - 2. Public Restrooms (750 sf)
 - 3. Coat and Package Check (400 sf)
 - 4. Entry Area (600 sf)
- B. Museum Shops (Subtotal: 1,500 sf)
 - 1. Sales Area (700 sf)
 - 2. Office/Storage (800 sf)
- C. Education Center (Subtotal: 2,250 sf)
 - 1. Staff Areas
 - a. Docent Supervisor/Trainer's Office (150 sf)
 - b. Assistant Supervisor's Office (100 sf)
 - c. Guides' Workstation Area (4 @ 75 sf = 300 sf)
 - d. Docents' and Guides' Lounge (100 sf)
 - 2. Classrooms/Workshops (3 @ 400 sf = 1,200 sf)
 - 3. Storage (400 sf)
 - 4. Auditorium Facilities (developed by GSA, share w/building)*
 - a. Lobby
 - b. Auditorium
 - c. Restrooms
 - d. Projection Room

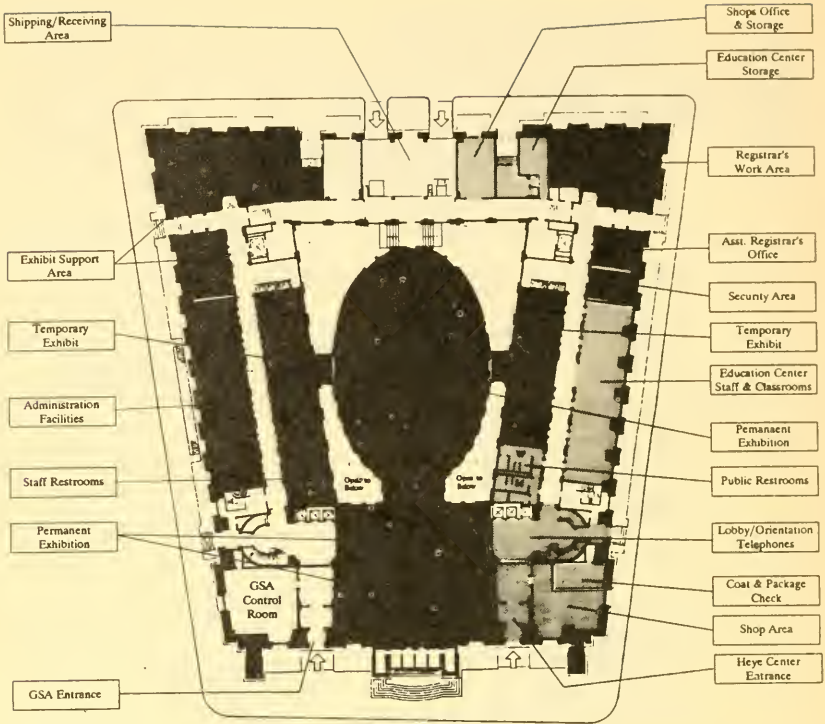
III. Museum Support Areas

- A. Administration Facilities (Subtotal: 2,400 sf)
 - 1. Director's Office (250 sf)
 - 2. Administrator's Office (150 sf)
 - 3. Office Manager's Office (150 sf)
 - 4. Accounting Assistant (150 sf)
 - 5. Public Affairs Officer's Office (150 sf)
 - 6. Secretaries (3) Area (3 @ 100 sf = 300 sf)
 - 7. Reception and Storage (200 sf)

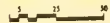
- 8. Conference/Workroom (200 sf)
 - 9. Kitchenette/Lunch Room (100 sf)
 - 10. Staff Restrooms (750 sf)
- B. Exhibition Support Facilities (Subtotal: 3,000 sf)
- 1. Support Staff Area
 - a. Audio-visual Workshop/Storage (400 sf)
 - b. Projectionist Workshop/Storage (200 sf)
 - c. Exhibit Designer Studio (200 sf)
 - d. Technical Support and Repair Area (400 sf)
 - 2. Exhibit Staging Area (1,200 sf)
 - 3. Prop/Tool Storage Area (600 sf)
- C. Collection Support Facilities (Subtotal: 1,850 sf)
- 1. Registrar's Office (150 sf)
 - 2. Assistant Registrar's Office (100 sf)
 - 3. Registration Work Area (200 sf)
 - 4. Crating/Uncrating/Inspection Area (1,400 sf)
 - 5. Shipping and Receiving Area (developed by GSA, shared w/building)*
- D. Security Office (Subtotal: 1,600 sf)
- 1. Security Supervisor's Office (100 sf)
 - 2. Sergeant's Office (100 sf)
 - 3. Computer Room (150 sf)
 - 2. Control Room (100 sf)
 - 3. Nurse's Facility (200 sf)
 - 3. Break Room (100 sf)
 - 4. Lockers/Restrooms (700 sf)
 - 5. Alarm Maintenance/Storage Rooms (150 sf)
- E. Building Services (Subtotal: 3,700 sf)
- 1. Superintendent's Office (150 sf)
 - 2. Custodial Workshop (300 sf)
 - 3. Staff Area (200 sf)
 - 4. Lockers/Restrooms (300 sf)
 - 5. Storage (250 sf)
 - 6. Mechanical/Electrical Area (2,500 sf)

Total Square Footage: 37,950 sf x 1.5 = 56,925 gsf*

* Note: Auditorium Facilities, approximately 14,000 sf, and the Shipping and Receiving Area, approximately 3,000 sf, are in addition to the total for the Center.

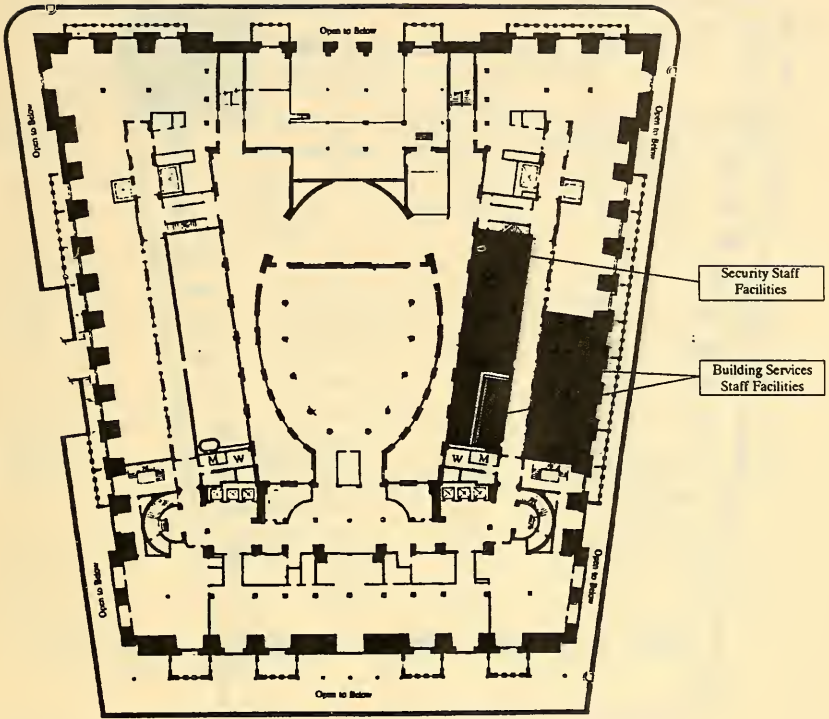


First Floor Plan



KEY PLAN

- Exhibition Area
- Other Public Facility Areas
- Museum Support Areas

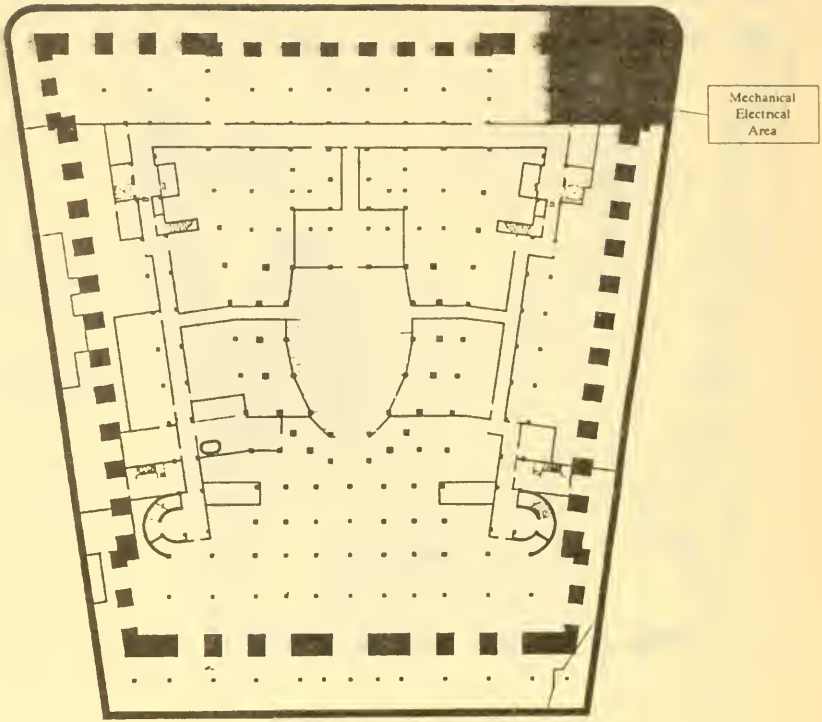


Basement Plan

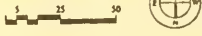


KEY PLAN

- Exhibition Area
- Other Public Facility Areas
- Museum Support Areas



Sub-Basement Plan



KEY PLAN

- Exhibition Area
- Other Public Facility Areas
- Museum Support Areas

Square Foot Comparison

Note: Figures are estimated and are intended to show an order of magnitude. The column entitled "Exhibition Areas" offers the best comparison of facilities because many of the facilities contain large collection storage areas in the Museum Support Areas. Exhibition Areas figures are listed in ascending order.

Facilities	Exhibition Areas	Other Public Facility Areas	Museum Support Areas	Total Square Footage
Cooper-Hewitt Museum	11,000	2,000	48,000 *	61,000
IBM Gallery, NYC	13,000	4,500	3,000	20,500
Museum of the American Indian (existing)				
Museum Building	15,300	400	24,300	40,000
Research Branch	0	0	45,000	45,000
Library	0	1,200	11,300	12,500
Subtotal	15,300	1,600	80,600 *	97,500
Renwick Gallery	17,000	7,000	14,000	38,000
Custom House Program **				
Heye Center	28,050	10,050	18,825	56,925
HC/GSA	to be determined	21,000	4,500	25,500
Subtotal	28,050	31,050	23,325	82,425
National Museum of African Art	24,500	11,500	71,500 *	107,500
Sackler Gallery	26,000	11,600	72,000 *	109,600
Freer Gallery of Art	32,000	10,500	25,500 *	68,000

* Includes collection storage areas.

** Figures include a "net to gross" factor of 1.5.

Cost Ranges

Note: Figures are estimated and intended to show an order of magnitude and are in FY '89 dollars. Total forecasted escalation factors for NYC construction is 7.8% in FY'90, 15.6% in FY'91, 19.7% in FY'92, 27.7% in FY'93, and 29.6% in FY'1994. These factors may be applied directly to the Construction Cost Range.

Cost Items	Construction Cost Range	Building Operating Cost	Museum Operating Program Costs
Initial Starting Costs	\$15,000,000 to \$18,000,000	\$350,000	\$5,700,000 ***
Annual Continuing Costs	N/A	\$2,000,000 ****	\$4,600,000

*** Includes \$4,000,000 for exhibition installation and \$1,700,000 for furnishing and equipment.

**** Does not include GSA tenant fees which is subject to negotiation.

SMITHSONIAN INSTITUTION LIBRARIES



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