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SMITHSONIAN INSTITUTION

Budget Justifications for the Fiscal Year 1970

Submitted to the Committees on Appropriations
Congress of the United States

January 1969

SMITHSONIAN INSTITUTION
BUDGET ESTIMATES, FISCAL YEAR 1970
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SMITHSONIAN INSTITUTION
GENERAL STATEMENT
FISCAL YEAR 1970

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

Since 1846, the Institution has devoted its resources to basic research, public education, and national service in science, the humanities, and the arts. Its museums, galleries, and scientific laboratories are national institutions with commitments in broad fields of scholarship and education. The Institution's laboratory and library facilities for research are extensive and noteworthy. Its staff of approximately 350 scientists and historians encompass many disciplines, and its collections of 60 million specimens and objects in art, science, and history with associated reference data, constitute a national referral center for research across the spectrum of man's cultural and biological environment. The Smithsonian's exhibits programs and performing arts presentations attract millions of visitors from all over the world.

The Institution administers five museums, five scientific programs, four art galleries, the Armed Forces Museum Advisory Board, and associated international programs. It is responsible for the operation and maintenance of seven exhibition buildings; the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts; the Tropical Research Institute in the Canal Zone; the River Basin Surveys in Lincoln, Nebraska; and seven other research, collection preservation, and service facilities.

Much of this activity can be considered interdisciplinary. The Institution is recognized in the academic and museum community as the leader in many investigative areas. To mention a few fields of special competence, these are American history, anthropology, art history, astronomy and astrophysics, botany, entomology, the history of cultures and technology, marine and tropical biology, mineral sciences, and zoology.

The varied activities of the Smithsonian contribute in many ways to the nation's goals in education and research. Its research programs help to provide basic scientific information to Federal agencies, whose missions, in turn, are related to maintaining our economic, agricultural, and military strength. The Institution is among the leading organizations in promoting better communications and understanding in the international scientific community. Through its public exhibit and education programs the Smithsonian presents the cultural and technological heritage of the country and strengthens its democratic institutions.

Over the course of the next several years, the funding objectives of the Smithsonian will be to strengthen its visitor services (including general public education), its formal educational activities, and its basic research and scholarship programs. The program increase requested for fiscal year 1970 does not provide for making major advances in these areas. It will, however, prevent some inevitable deterioration in our efforts at providing adequate visitor services and in maintaining the quality and the direction of our curatorial and research activity. It allows for maintenance of our educational efforts.

In determining those priority items of increase contained in the "Salaries and Expenses" Appropriation request, the Smithsonian exercised a maximum amount of selectivity for economy in a budget year which promises strong Governmentwide competition for scarce resources. Hard choices have been made at each stage of our budget formulation. Initially, the items contained in this request were evaluated against an array of alternatives for increased funding which, at the outset of the Institution's 1970 budget process, amounted to more than \$12,000,000. These alternatives were reviewed by the Smithsonian and a highly selective request was submitted to the President for an increase of \$4,618,000.

The President's budget allows the Smithsonian to seek an increased "Salaries and Expenses" Appropriation of \$2,617,000. Of this amount, \$1,970,000 are for program increases to correct the most serious program deficiencies of the Institution and \$647,000 (twenty five percent of the total increase) to help meet necessary pay increases. Here again, difficult choices have been made to match this increase against the greatest needs. All but our most essential funding requirements have been deferred. No additional program funding is being requested for eight of our operating bureaus and support activities. We have attempted to consolidate and direct our requested increase to those activities which will show the greatest public return on the investment of public funds.

Visitor Services and Exhibits--For fiscal year 1970, \$1,043,000, approximately 40 percent of the increase, are being requested for our general visitor service programs and support activities. These are directed at work leading to eventual public exhibits, presentations, or information dissemination. Also included here are the protection and maintenance services required for the buildings and public areas. Of the total amount, \$368,000 will help cover necessary pay increases.

Despite an abnormal period of decline during the first six months of 1968, the visitor trend is increasing. It is anticipated that by 1970, our facilities will be accommodating 14 million visitors annually. To serve this public will require no small amount of our total effort. The range of activity which must be accomplished is great and covers items from improved orientation and information services to updating collection labels and documentation. The request does not permit an extensive improvement on public service activities. Rather, it permits selective improvement. For example, in the area of exhibiting, it allows us to continue to experiment with ways to develop stimulating and educational experiences for the visiting public.

In an era when it seems particularly important to communicate to the average man the value of orderly change, the Smithsonian's exhibit and other public service programs become exceedingly important. They touch on the lives of many millions of our citizens annually. All around us we can see people, particularly the younger generation, trying to relate to their roots, and trying to extract from their contemporary surroundings a sense of place and pattern. The Smithsonian hopes to be able to make a significant public contribution to this interpretive process by providing our visiting public with more flexible and cogent presentations and exhibits. Under present funding levels, however, we are barely able to maintain our present permanent exhibits, to find resources to assemble timely special presentations, and to provide the necessary basic information, support, and protective services to accommodate our public and care for the buildings and grounds. If the Museums and the National

Collections are to keep pace with the growing needs of a growing public, additional funding is essential. Among the high priority needs for a measure of additional funding in fiscal year 1970 are preparation of the Joseph H. Hirshhorn gift collection of art for display in the new museum under construction, the advice and technical assistance program benefitting the nation's museums, support for the continued successful operations of the Anacostia Neighborhood Museum and refurbishing the outdated and shabby air and space exhibits.

The Smithsonian is deferring a number of important exhibit and public service activities. We are not seeking major new funding for the expansion of training programs in museum technology or for our loan and exchange programs. Much remains to be done in the area of visitor orientation and information services, such as the creation of films, directories, and other updated materials. The program and exhibit development for the Renwick Gallery is being postponed in order to concentrate our request on the Joseph H. Hirshhorn Museum and Sculpture Garden.

Education--Public demands on the educational resources of the Smithsonian are mounting rapidly. The sum of \$595,000 of the 1970 requested increase will be directed to our formal educational programs, and to our more general public education activities. Of this amount about \$90,000 are to help cover necessary pay increases. In 1968, fifty-four persons completed their Ph. D.'s under Smithsonian supervision. These degrees were granted by the students' home institutions. They were people training in areas where Smithsonian resources and staff make a substantial qualitative contribution to the needs of the nation's colleges and universities. In the same year, 30,000 school children were escorted through our exhibit halls and provided with meaningful instruction related to their classroom activity. Both of these areas, formal research training programs and instructional support related to the lower levels of the educational system, are national in character and represent endeavors where additional dollar support has substantial pay-off to the public. These programs merit strengthened support in 1970.

As a part of this educational effort the Institution is stressing improvement in its dissemination of useful information from the collections and from our research to the general public and to the national and international scientific community. This effort takes many forms. Among them are the construction of automated analytical and locator systems which reach across the art, history, natural, and environmental science information buried in our collections. In addition, we are trying to improve our capability to publish the results of our complex curatorial and research activity. Cataloging and record keeping as well as the more difficult conservation and analytical techniques strengthen and improve the usefulness of the collections. Our library performs special educational, research, and informational support services. Its customers are the public, our staff, and scientists across the nation. A newly added responsibility of the Smithsonian Institution is the Woodrow Wilson International Center for Scholars planned by the Congress to strengthen the relationship between the world of learning and the world of public affairs.

Research and Scholarship--The balance of this year's total requested increase amounts to \$979,000. It will be directed toward supporting basic research in the physical, biological, and anthropological science areas. Of this amount \$189,000 will be used to help fund necessary pay increases. The distribution of the requested increase reflects the need to strengthen selected areas in fiscal year 1970. Sixty-seven percent of the program funds will be directed to

units performing research or research support in radiation, marine, and tropical biology. The activities of the units performing in these areas are under mounting pressure from the nation's scientific community to expand their efforts in providing baseline information and service concerning interacting factors that man must control in order to maintain a habitable environment. Some of the work that this encompasses is related to measuring changes in the amount of solar energy that is reaching earth, and the resulting effects on plant growth and food production. We are also concerned with improving man's capability to identify, locate, and mine the useful products of our seas and inlets. Our tropical research is directed toward assessing the implications of a changing equatorial environment. Vast environmental changes are occurring in the middle regions of our planet which can offer clues as to man's future ability to keep his environment a fit place to live. An enormous amount of scientific spadework is necessary. Improving our ability to construct environmental servo-mechanisms in plant, marine, and tropical sciences is an immediate need.

We are also concerned with man's interactions with man. A significant portion of the program request is being directed to selected activities in areas of contemporary sociology and urgent anthropology, and in improving our ability to extract information from the collections which is related to man's social and economic well-being. This is a part of the Institution's general and continuing effort at making the knowledge contained in the collections more accessible and useful.

We are asking for some additional funding for our space sciences. This is by no means a low priority item. Rather, the small amount requested should be viewed as part of the need to consolidate items in a tight budget year. We fully intend to continue to strengthen our future activity in astrophysics and astronomy. Over the years our astrophysical observatory has made major contributions to the nation's space program. The Observatory has active programs which affect manned lunar flight, deep space instrumentation probes, terrestrial mapping, and the analysis of extraterrestrial materials. The Orbiting Astronomical Observatory was launched on December '14, 1968, and is now successfully carrying out its mission.

The Institution is deferring requests for expansion of its research activities in a number of its art, cultural, and history areas. In addition, we are seeking no increase in funding for our efforts at creating a larger interdisciplinary program, or team research approach to contemporary problems.

Construction--Our construction request for fiscal year 1970 consists of only the most essential improvements and additions to the physical plant of the Smithsonian.

The request for restoration and renovation of existing buildings of the Smithsonian amounts to \$755,000. This will meet essential needs in some of our storage areas, research laboratories, and galleries. We are deferring work on many important items in the Arts and Industries building, the Museum of Natural History and the Freer Gallery of Art. Items which we have set aside for fiscal year 1970 in restoration and renovation amount to more than four million dollars.

Included in the request are amounts which will: help to complete the Renwick Gallery of Art (\$200,000); continue with the relocation of the Radiation Biology Laboratory (\$300,000); improve the laboratory space of the Smithsonian

Tropical Research Institute (\$125,000); and expand our efforts at providing for collection handling facilities away from the Mall buildings (\$130,000).

Construction funding requested for fiscal year 1970 for the Joseph H. Hirshhorn Museum and Sculpture Garden is \$6,200,000. Contract authorization contained in the 1969 Appropriation Act permits the Smithsonian to enter into construction contracts totaling \$14,197,000. The sum of \$2,000,000 was appropriated in that year for initial construction costs. The amount requested for 1970 will be used to continue to fund necessary construction and relocation costs.

We are asking for \$600,000 for renovation, repairs, and the elimination of air pollution at the National Zoological Park. Approximately two million dollars of work related to the Zoo is being deferred, such as the construction of the public service building containing visitor orientation and restaurant facilities.

Special Foreign Currency Program- -Provision has been made in the 1970 estimates of appropriations for an expanded Special Foreign Currency Program to service the increasing requests of American institutions to conduct biological, archeological, and anthropological research overseas. This program uses surplus foreign currencies and does not contribute to the balance of payments problem. Because of this, it is of growing importance as an alternative to using dollar resources for the conduct of highly valuable studies. We are requesting an appropriation of \$4,500,000, an increase of \$2,184,000, for this need.

SMITHSONIAN INSTITUTION

"Salaries and Expenses"

Summary Statement

Appropriation Act, Fiscal Year 1969	\$25,748,000
Anticipated Supplemental	+695,000
Appropriation Transfer to General Services Administration..	<u>-105,000</u>
Total Available, Fiscal Year 1969.....	26,338,000
Budget Estimate, Fiscal Year 1970.....	<u>28,955,000</u>
Increase, Fiscal Year 1970.....	<u>\$2,617,000</u>

SMITHSONIAN INSTITUTION

"Salaries and Expenses"

Summary of Increases, 1970

<u>Page</u>	<u>Program</u>	<u>Necessary Pay Increase</u>	<u>Total</u>
B-10	United States National Museum--to strengthen assistance to the nation's museums, conserve rapidly deteriorating objects in the collections, modernize air and space exhibits, and meet mail and shipping workloads \$165,000	\$35,000	\$200,000
B-17	Museum of History and Technology--to develop research and exhibit programs emphasizing the history and achievements of the nation's ethnic minorities and augment preparations for the American Revolution Bicentennial Commemoration. 90,000	39,000	129,000
B-19	Museum of Natural History--to exploit the vast information resources of the national anthropological, biological, and geological collections by the application of computer systems. 100,000	80,000	180,000
B-21	National Air and Space Museum--for the preservation and public display of historic space vehicles and other objects acquired from the National Aeronautics and Space Administration 40,000	10,000	50,000
B-23	National Armed Forces Museum Advisory Board--for continued planning for a National Armed Forces Museum and Study Center 0	5,000	5,000
B-24	Anacostia Neighborhood Museum--for continued successful operations of a community museum located in a low-income urban area. 40,000	0	40,000
B-25	Freer Gallery of Art--to continue research, exhibit, and public service activities related to Near and Far East collections 0	3,000	3,000
B-26	National Collection of Fine Arts--to maintain a program of exhibitions, study collections, and research in American art in the Fine Arts and Portrait Galleries building and sponsor traveling exhibits 0	15,000	15,000

Summary of Increases, 1970 (continued)

<u>Page</u>	<u>Program</u>	<u>Necessary Pay Increase</u>	<u>Total</u>	
B-27	National Portrait Gallery--for continued development of the Gallery as a museum and study center of persons having made significant contributions to United States history	0	7,000	7,000
B-28	Joseph H. Hirshhorn Museum and Sculpture Garden--to prepare the gift collections of art and sculpture for the scheduled opening of a major art gallery now under construction .	100,000	4,000	104,000
B-29	Smithsonian Astrophysical Observatory--for selective support to research programs in theoretical astrophysics, optical observations, and radio astronomy	50,000	20,000	70,000
B-34	Smithsonian Tropical Research Institute--to develop the potential of the Institute as a research center in tropical biology for the investigation of problems in resource conservation and utilization.....	95,000	10,000	105,000
B-36	Radiation Biology Laboratory--to permit the Laboratory to occupy adequate space to continue its controlled-environment biology program.....	300,000	7,000	307,000
B-37	Smithsonian Office of Ecology--for protection of the property and maintenance of the research facilities of the Chesapeake Bay Center for Field Biology for baseline environmental studies	35,000	2,000	37,000
B-38	Office of Oceanography and Limnology--for the sorting, documenting, and distributing of backlogged specimens important to the study of marine resources.....	100,000	9,000	109,000
B-40	Center for the Study of Man--to conduct research and documentation projects in urgent anthropology including the Handbook of North American Indians and the study of changing and disappearing cultures	20,000	0	20,000
B-41	Center for Short-Lived Phenomena--for the maintenance of a worldwide report system to provide the scientific community with information on rare biological, geophysical, and astrophysical events	10,000	0	10,000

Summary of Increases, 1970 (continued)

<u>Page</u>		<u>Program</u>	<u>Necessary Pay Increase</u>	<u>Total</u>
B-42	Smithsonian Research Awards Program--to continue financing meritorious research opportunities at a level commensurate with previous National Science Foundation Support	0	0	0
B-43	Office of Academic Programs--to serve the academic community by providing additional opportunities for graduate study and research and by continuing a program of curriculum-related escorted tours to elementary schools	55, 000	3, 000	58, 000
B-45	International Activities--to administer a double workload with regard to Foreign Currency grants and to investigate streamlined methods for the international exchange of publications	30, 000	10, 000	40, 000
B-47	Woodrow Wilson International Center for Scholars--for support for the Board of Trustees and for necessary studies and planning activities associated with site selection and acquisition and development of the international studies program	100, 000	0	100, 000
B-48	Administrative and Central Support Activities--for selective additional administrative and centralized services with emphasis on library, publishing, computer, and performing arts needs	300, 000	72, 000	372, 000
B-64	Buildings Management Department--for workload needs largely associated with additional building spaces in the Fine Arts and Portrait Galleries, Renwick Gallery of Art, and the Arts and Industries building and for rising communication, utilities, and detection system costs	340, 000	316, 000	656, 000
	Total increase, 1970	<u>\$1, 970, 000</u>	<u>\$647, 000</u>	<u>\$2, 617, 000</u>

SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES, FISCAL YEAR 1970

JUSTIFICATIONS

1/ Pay Increases

Need for Increase--An increase of \$647,000 is required to finance existing positions. This total is made up of funds for personnel compensation (\$602,000) and personnel benefits (\$45,000). In fiscal year 1970, the Smithsonian Institution will be faced with increased pay costs in the amount of \$760,000. Of this total, the Institution will absorb \$113,000 through the application of the maximum lapse savings from tight position control, the filling of positions at lower grades whenever possible, and other overall economies of operation. As a result of the Revenue and Expenditure Control Act of 1968, the Secretary of the Smithsonian has personally been approving the use of positions vacated since July 1, 1968.

The requested increase is made up of the following cost components:

- (a) Annualization of the pay raise granted to current General Schedule employees on July 14, 1968, will add \$31,000 to Smithsonian costs in fiscal year 1970.
- (b) Annualization of the Wage Grade increases effective in October 1968 will amount to \$197,000. These increases, Governmentwide in the Washington Metropolitan Area, were aimed at correcting pay inequities by bringing the employees of a large number of agencies into a single wage structure. For the Smithsonian, the increases were particularly large in the levels 1 through 4 and 10 through 13, which represent 71 percent of the Institution's 529 Wage employees.
- (c) Periodic step-increases in accordance with the Government Employees Salary Reform Act of 1964 and step-increases granted to Wage Grade employees in accord with prevailing Governmentwide practices will cost an additional \$239,000. This includes the portion of the fiscal year 1970 step-increases to be paid in that year and the carryover cost from fiscal year 1969. The apparent cost was determined through a position-by-position study and has been reduced to real cost by projected offsets resulting from employees being separated or promoted before receiving step-increases and from filling some positions at a lower grade step than the former incumbents held.

During fiscal year 1968, 901 employees received within-grade promotions or step-increases at an actual cost of \$149,502. The cost of these within-grade promotions on an annual basis would be \$290,000.

During fiscal year 1969, it is estimated an additional \$165,000 will be paid employees for within-grade promotions and step-rate increases. This figure will annualize at an estimated \$325,000 in 1970. During fiscal year 1970 another \$175,000 will be paid for within-grade promotions. The cumulative burden of these costs, \$790,000, is offset by \$252,000 representing savings from separations and base of grade hirings and \$299,000 allowed in our 1969 appropriation to meet these costs.

- (d) Reclassification of positions will cost an additional \$180,000. Included in this is the reclassification of the majority of the positions in the Smithsonian Institution's Protection Division. The Civil Service Commission recently issued new standards for guards. These revised standards as applied to reconstituted position descriptions and guard assignments resulted in a general upgrading of the majority of nonsupervisory positions. The resultant structure provides for entrance level recruitment at the GS-3 level with promotion to GS-4 after sufficient training and awarding of special police commissions. Besides recognizing the full scope of the Smithsonian guard

duties, such a structure provides a more effective career pattern to enhance the recruitment and retention of guards. This upgrading eventually will affect 157 GS-3 guards and 96 GS-4 and GS-5. These promotions will be phased over a several month period.

The Smithsonian's professional staff is recruited at the GS-9 through GS-12 level depending upon their educational background. Then, based on their research, publications, and exhibit preparation contributions, they are provided with career opportunities up to GS-15.

The \$180,000 cost of these reclassification activities in fiscal year 1970 is based on part-year costs for 1970 and full-year costs from 1969. The costs have been offset by such factors as positions being filled at a lower level and improved productivity. During 1968, over 300 employees were promoted. This number will be increased substantially in 1969 because of the guard promotions.

A thorough examination of all operations of the Smithsonian has been made to determine and apply the maximum degree of absorption possible in all areas of increased pay. Absorption of an additional amount in fiscal year 1970 is impracticable in the face of present workloads and nondeferrable expenses. Over the past several years, the Smithsonian has absorbed significant portions of the several General Schedule and Wage pay increases. During the past 14 months, approximately \$250,000 in increased pay costs resulting from the October 1967 raises have been met within the regular appropriations of the Institution. In fiscal year 1969, 75 percent of the total "Salaries and Expenses" appropriation is devoted to the largely nondiscretionary costs of payroll, benefits, rent, communications, and utilities. Additional funds for pay purposes in fiscal year 1970 could be found only by forced cuts in employment or by diverting a large portion of the remaining operating funds appropriated to the Smithsonian to rectify material and equipment shortages in its museums, galleries, and laboratories. These funds are becoming increasingly thinly spread as new exhibit halls are prepared and opened and as older exhibits require maintenance; as additional building areas require care and cleaning; and as the expanding National Collections demand preservation and proper storage. For instance, exhibit installations costing in excess of \$10 million dollars must receive adequate care. Millions of visitors must be served. An additional million objects each year for the National Collections must be recorded and given conservation treatment. Emergency actions in order to achieve further absorption would deepen present deficiencies in these areas and adversely affect the Institution's capability to meet its traditional and new responsibilities in scholarship, the care and use of the collections, and in public education.

SMITHSONIAN INSTITUTION

"Salaries and Expenses"

Pay Increases Fiscal Year 1970

<u>Organizational Unit</u>	<u>Annualization</u> <u>GS-Pay</u> <u>Raise</u>	<u>Wage</u> <u>Raise</u>	<u>Within-</u> <u>Grade</u> <u>Increases</u>	<u>Reclassi-</u> <u>fication</u>	<u>Total</u>
United States National Museum					
Office of the Director General of					
Museums	0	0	\$1, 000	\$1, 000	\$2, 000
Office of Exhibits	\$3, 000	\$2, 000	20, 000	0	25, 000
Conservation Analytical Laboratory	0	0	3, 000	0	3, 000
Office of the Registrar	0	0	2, 000	3, 000	5, 000
Museum of History and Technology ...	3, 000	0	25, 000	11, 000	39, 000
Museum of Natural History	7, 000	0	50, 000	23, 000	80, 000
National Air and Space Museum	1, 000	1, 000	5, 000	3, 000	10, 000
National Armed Forces Museum					
Advisory Board	0	0	3, 000	2, 000	5, 000
Anacostia Neighborhood Museum	0	0	0	0	0
Freer Gallery of Art	0	0	2, 000	1, 000	3, 000
National Collection of Fine Arts	1, 000	0	10, 000	4, 000	15, 000
National Portrait Gallery	1, 000	0	5, 000	1, 000	7, 000
Joseph H. Hirshhorn Museum and					
Sculpture Garden	0	0	2, 000	2, 000	4, 000
Smithsonian Astrophysical Observatory	2, 000	0	10, 000	8, 000	20, 000
Smithsonian Tropical Research					
Institute	1, 000	0	4, 000	5, 000	10, 000
Radiation Biology Laboratory	1, 000	0	5, 000	1, 000	7, 000
Smithsonian Office of Ecology	0	0	2, 000	0	2, 000
Office of Oceanography and Limnology	1, 000	0	7, 000	1, 000	9, 000
Center for the Study of Man	0	0	0	0	0
Center for Short-Lived Phenemona ...	0	0	0	0	0
Smithsonian Research Awards	0	0	0	0	0
Office of Academic Programs	0	0	3, 000	0	3, 000
Office of International Activities	0	0	2, 000	1, 000	3, 000
International Exchange Service	0	4, 000	3, 000	0	7, 000
Woodrow Wilson International Center					
for Scholars	0	0	0	0	0
Office of the Secretary	1, 000	0	5, 000	0	6, 000
Management Support	1, 000	0	7, 000	0	8, 000
Office of the Treasurer	1, 000	0	4, 000	2, 000	7, 000
Division of Performing Arts	0	0	3, 000	0	3, 000
Office of Personnel and Management					
Resources	1, 000	0	3, 000	1, 000	5, 000
Office of Public Affairs	0	0	2, 000	3, 000	5, 000
Supply Division	1, 000	0	3, 000	1, 000	5, 000
Information Systems Division	0	0	2, 000	2, 000	4, 000
Smithsonian Institution Libraries	1, 000	0	12, 000	4, 000	17, 000
Photographic Services Division	0	0	3, 000	0	3, 000
Smithsonian Institution Press	1, 000	0	5, 000	3, 000	9, 000
Buildings Management Department ...	3, 000	190, 000	26, 000	97, 000	316, 000
Total	\$31, 000	\$197, 000	\$239, 000	\$180, 000	\$647, 000

2/ UNITED STATES NATIONAL MUSEUM

1968 Appropriation	\$2,600,000
1969 Appropriation	\$2,824,000
1970 Estimate	\$3,024,000

The United States National Museum advances knowledge through research in science and history and conveys, through publications, exhibits, and education programs, knowledge about the natural sciences and the nation's cultural and technological history. The Museum preserves extensive collections actively employed in support of research and exhibitions. The National Museum is comprised of the Museum of Natural History and the Museum of History and Technology which are presented in separate justifications; and the centralized services of the Office of the Director General of Museums, the Office of Exhibits, the Conservation Analytical Laboratory, and the Office of the Registrar, which are presented under this heading. These centralized services are requesting program increases totaling \$165,000 as summarized below.

	<u>1968</u>		<u>1969</u>		<u>1970</u>	
	<u>Pos.</u>	<u>Amount</u>	<u>Pos.</u>	<u>Amount</u>	<u>Pos.</u>	<u>Amount</u>
Office of Director General of Museums	5	\$172,000	5	\$200,000	7	\$280,000
Office of Exhibits	166	2,078,000	167	2,218,000	171	2,263,000
Conservation Analytical Laboratory	9	100,000	10	128,000	12	153,000
Office of the Registrar	<u>26</u>	<u>250,000</u>	<u>28</u>	<u>278,000</u>	<u>29</u>	<u>293,000</u>
Total, United States National Museum	<u>206</u>	<u>\$2,600,000</u>	<u>210</u>	<u>\$2,824,000</u>	<u>219</u>	<u>\$2,989,000^{1/}</u>

^{1/} In addition, these units are requesting an increase of \$35,000 for necessary pay increases.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

UNITED STATES NATIONAL MUSEUM
Office of Director General of Museums

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>5</u>	<u>2</u>	<u>7</u>
11 Personnel Compensation.....\$	60,000	\$ 40,000	\$ 100,000
12 Personnel Benefits.....	4,000	4,000	8,000
21 Travel & Transp. of Persons ..	2,000	3,000	5,000
22 Transportation of Things	0	1,000	1,000
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	94,000	6,000	100,000
26 Supplies and Materials	2,000	1,000	3,000
31 Equipment	<u>38,000</u>	<u>27,000</u>	<u>65,000</u>
TOTAL.....\$	<u>200,000</u>	<u>\$ 82,000</u>	<u>\$ 282,000</u>

Analysis of Total

Pay Increases	\$1,000	\$2,000	\$3,000
Program.....	\$199,000	\$80,000	\$279,000

Specification of Increase (Program):Assistance to Museums (2 positions \$80,000)

Smithsonian resources are not keeping pace with requests from museums, community groups, and colleges for assistance in developing and reorganizing museums, planning educational exhibits, solving conservation problems, and training museum personnel. Total requests approach 5,000 a year from almost every State. The Federal Council on the Arts and the Humanities has urged that the National Museum Act receive adequate funding. Request is for a museum specialist to prepare and coordinate responses to inquiries and an exhibits researcher to develop experimental exhibits (\$42,000); and funds for travel (\$3,000), transportation of loaned objects (\$1,000); and services (\$6,000), supplies (\$1,000), and equipment (\$27,000) in support of museum assistance activities including testing devices and the development of experimental exhibits.

Office of Director General of Museums

The Office of the Director General of Museums provides program planning and review of the Smithsonian Institution's museum and exhibition activities with special emphasis on developing educational exhibits, surveying the impact of the Smithsonian on the visiting public, and providing assistance to other museums. Its purpose is to work cooperatively with museum professionals in the United States and abroad to increase the effectiveness of museums in the performance of their scholarly and public functions.

An increase of \$80,000 is requested to strengthen the Smithsonian's capability to respond to requests for assistance from museums across the country under the National Museum Act. An additional increase of \$2,000 is sought for necessary pay increases.

Need for Increase--Throughout its history the Smithsonian by the exchange of specimens, identification of referred specimens and objects, and with advisory assistance on matters of museum organization and development has built up a tradition of service to museums and their associations. This traditional role was reaffirmed by the Congress with the passage of the National Museum Act in 1966. This Act charges the Secretary of the Smithsonian Institution and the Director of the United States National Museum to provide assistance to museums of the United States and abroad. Advice, information, research of museum and exhibit techniques and problems, publication of museum manuals, and the training of museum personnel are services directed by the Act to be performed by the Smithsonian.

The publicity given this Act and the wide notice that has been taken of the Smithsonian's Neighborhood Museum, its Folklife Festival, its leadership in studies of computerizing, cataloging, and collection management, and new experimental exhibitions and presentations have increased the requests for assistance in developing and reorganizing museums in practically every State and in many countries abroad by more than 300 percent. The Smithsonian now responds to requests concerning museum projects and the training of museum personnel at the rate of more than 1,500 a year. If to this are added inquiries on preparing and conducting special exhibition programs or for the loan of exhibits, the total approaches 5,000 a year.

By far the greatest rate of increase has been in requests from established museums, including some of the largest in the United States. Many inquiries are from small museums which frequently are the only cultural activities in their communities. Others are from public-spirited individuals seeking to help start museums in their towns or inner-city neighborhoods. Many wish to enrich the education of their children or to give their senior citizens opportunities for intellectual, cultural, and social development. Community colleges have sought advice on loan exhibits and on the content of museum technical courses. Universities ask about the reorganization of their museums and on the experience of research museums in bringing students and scholars together with the reference materials required for their studies.

Museums also are increasingly concerned with the effectiveness of their communication with the public through exhibits. Much study is required to understand what causes the visitor to become involved with exhibits and how exhibits can be made more effective in exciting an interest and a desire to learn. A start has been made with a visitors' survey now being conducted and with a small group of experimental teaching exhibits for use by local schools. More experiments are required including tests of visitors' wants and reactions; application of the principles of programmed learning and teaching machines; and the employment of electronic programming and computer graphics.

Many Smithsonian units and individual staff members have responded to meet these requests and the Office of the Director General of Museums has coordinated help from all quarters to provide the assistance sought. Smithsonian bureau directors, curators, exhibits designers, conservators, and education

specialists have responded to requests from practically every State and from more than a score of foreign countries. They have traveled to Georgia, California, New York, Michigan, Washington, West Virginia, Vermont, Texas, Kentucky, New Jersey, Virginia, Ohio, and many other States to advise museum directors. Their advice has been sought by international organizations such as UNESCO and the International Council of Museums and by governments or government institutions of such countries as Canada, the Republic of Korea, Thailand, the Philippines, Okinawa, several African nations, Israel, Tunisia, and Ceylon.

Existing resources are not adequate, however, to keep pace with the present and growing requirements for museum assistance and development. The Federal Council on the Arts and the Humanities in transmitting its report on "The Condition and Needs of America's Museums" to the President on November 25, 1968, urged that the National Museum Act receive substantial funding. As a minimum strengthening, a museum specialist is required to devote full time to the preparation and coordination of prompt and comprehensive responses to museum requests. An experimental exhibit researcher is required to develop experiments and tests of variations in exhibits. Funds are requested also for travel, transportation, other services, supplies, and equipment in support of museum assistance activities including test equipment and the construction of exhibits. This is a program increase of \$80,000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

UNITED STATES NATIONAL MUSEUMOffice of Exhibits

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>167</u>	<u>4</u>	<u>171</u>
11 Personnel Compensation.....	\$ 1,542,000	\$ 51,000	\$ 1,593,000
12 Personnel Benefits.....	116,000	4,000	120,000
21 Travel & Transp. of Persons ..	7,000	1,000	8,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	64,000	0	64,000
25 Other Services	244,000	8,000	252,000
26 Supplies and Materials	88,000	3,000	91,000
31 Equipment	<u>157,000</u>	<u>3,000</u>	<u>160,000</u>
TOTAL.....	<u>\$ 2,218,000</u>	<u>\$ 70,000</u>	<u>\$ 2,288,000</u>

Analysis of Total

Pay Increases	\$67,000	\$25,000	\$92,000
Program.....	\$2,151,000	\$45,000	\$2,196,000

Specification of Increase (Program):Refurbishing Air and Space Exhibits (4 positions \$45,000)

The Smithsonian's air and space exhibits have not received a major refurbishing since 1958. They are outdated and shabby and a source of disappointment to many of a million visitors interested in air and space exploration. Since a number of years will pass before the authorized National Air and Space Museum building can be opened, existing displays must be revitalized. This is a request for four exhibits technicians (\$30,000), travel for overall Office activities (\$1,000), and for services (\$8,000), supplies (\$3,000), and equipment (\$3,000) for air and space exhibits modernization.

Office of Exhibits

The Office of Exhibits, in collaboration with museum scientists and historians, designs, prepares, and installs permanent exhibition halls in Smithsonian museums; produces special and traveling exhibits on important and timely subjects in art, history, and science. Since its establishment in 1955, the Office has prepared more than 3,500 permanent exhibit units and hundreds of temporary presentations. The Office develops new and innovative exhibits techniques including freeze-dry taxidermy, skeletal maceration, audiovisual materials, visitor-participation devices, and has recently developed a capability for exhibits-oriented movies. The training of museum technicians from all points of the world has become an accepted responsibility to the other museums of the country.

An increase of \$45,000 is requested to revitalize the outdated and shabby air and space exhibits of the Smithsonian Institution. An additional \$25,000 are requested for necessary pay increases.

Need for Increase--At least five years will elapse before the authorized National Air and Space Museum can be funded, constructed, and opened to the public. For this period, the Office of Exhibits must improve presently allocated spaces in the Arts and Industries building and in the temporary (World War I) Air and Space building on Independence Avenue, to provide exhibits in America's air and space accomplishments to over one million annual visitors.

Except for a few temporary installations (representing space-oriented accomplishments of recent years), no major revisions in the displays in these buildings have been made since 1958. Exhibit areas have become an accumulation of hardware with little rational relationship. After ten years, many of the exhibits have become outdated. Virtually all are shopworn from heavy visitor traffic. Outstanding recently acquired objects are not on public display. The strong public interest in air and space exploration creates a desire to see objects associated with it. The present state of the exhibits disappoints many visitors.

A proposal has been developed for a complete refurbishing of all current air and space displays. During 1969 a review will be made of the best use of exhibit spaces now available. Exhibits areas will be developed on a thematic basis. Specific air and spacecraft, engines, and other objects in the Museum's extensive collections will be selected only if they fit into the thematic plan and if they have maximum visitor interest and education potential. Other items will be stored or, preferably, loaned to other museums until larger quarters become available in Washington. At least three years will be required to complete the job. Phase I is programmed to clean out and re-do the Air and Space building (making only minimal changes in the Arts and Industries building during fiscal 1970), followed by reworking of all exhibits in the Arts and Industries building, beginning with 1971 funds.

Not only is this program essential to meet present Smithsonian exhibit responsibilities, it is a necessary pilot operation for the development of dramatic displays for the future building. New ideas will be tested and developed during this program. Much of the display material will be designed for eventual transfer to the new building.

This is a request for four exhibits specialists and funds for travel, services, supplies, and equipment in support of the refurbishing effort; a program increase of \$45,000.

During fiscal year 1968, the Office of Exhibits completed 73 new units in eight permanent exhibit halls and produced over 40 special exhibitions, ranging from single-case presentations of specialized material to entire galleries. Among the special exhibitions that had international impact were "Peruvian Silver," "Colonial Art from Ecuador," "The Art of Organic Forms," and "Photography and the City: The Evolution of an Art and a Science." The year's most significant and

gratifying challenge was perhaps the development of the Anacostia Neighborhood Museum in Southeast Washington. In the many special operations within the Office, including the horticultural section, the conservation laboratories, the freeze-dry laboratory, the plastics shops, the model shops, and the silk-screen facilities, scores of persons were trained in techniques that could be adapted to their local needs. Many of these students were museum professionals from the United States. Among the foreign countries from which trainees came were Australia, Ceylon, Denmark, Ghana, Nepal, and Nigeria. The Office also worked extensively with disadvantaged young adults to help orient them to job opportunities and is continuing this program on an even broader scale. Among the non-Smithsonian museums assisted by the Office of Exhibits last year was the Children's Museum and Planetarium of Charlestown, W. Va., where a workshop seminar was conducted. Assistance was also given to the orientation courses conducted by the Department of State for overseas exhibits coordinators, and to the design and installation of a foreign crafts fair at the Department of Commerce. The Exhibits Office prepared or assisted with such items for the visiting public as five exhibition brochures, a guide map to the Museum of Natural History, and a comprehensive Smithsonian-wide exhibits directory.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

UNITED STATES NATIONAL MUSEUMConservation Analytical Laboratory

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>10</u>	<u>2</u>	<u>12</u>
11 Personnel Compensation.....	\$ 99,000	\$ 19,000	\$ 118,000
12 Personnel Benefits.....	7,000	1,000	8,000
21 Travel & Transp. of Persons ..	3,000	1,000	4,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	2,000	0	2,000
26 Supplies and Materials	7,000	3,000	10,000
31 Equipment	<u>10,000</u>	<u>4,000</u>	<u>14,000</u>
TOTAL.....	\$ <u>128,000</u>	\$ <u>28,000</u>	\$ <u>156,000</u>

Analysis of Total

Pay Increases	\$4,000	\$3,000	\$7,000
Program.....	\$124,000	\$25,000	\$149,000

Specification of Increase (Program):Analysis and Treatment of Deteriorating Objects (2 positions \$25,000)

Thousands of historically and technologically valuable objects await conservation to prevent irreparable damage or loss. New acquisitions to the collections from excavations and by donation arrive at a rate exceeding present capability to analyze or treat them properly. Analysis and conservation are painstaking operations. Additional staffing is required to make significant inroads on the workload. A conservator and a technician (\$17,000) and funds for travel (\$1,000), conservation supplies (\$3,000), and analytical equipment (\$4,000) are requested.

Conservation Analytical Laboratory

The Conservation Analytical Laboratory was established in 1963 to serve the museums of the Smithsonian Institution. It ascertains and advises on the suitability of environmental conditions found in the buildings for the protection of objects on display and in storage, and suggests remedial action if necessary. Advice is given to the curatorial units on conservation procedures for specific objects. Objects which present special problems or require more specialized equipment than is available in these units are treated, restored, and preserved in the Laboratory. Analysis of objects or their materials (e.g. pigments, fibers, alloys, or corrosion products) is done by advanced instrumentation to determine appropriate conservation procedures or to provide museum archeologists and historians with basic research data required for information on dates, attribution, and ancient production methods.

An increase of \$25,000 is requested to extend conservation services and to reduce the backlog of rapidly deteriorating objects requiring treatment. An additional \$3,000 are required for necessary pay increases.

Need for Increase--Entire collections of historically and technologically valuable objects, many irreplaceable, numbering thousands of items are in need of cleaning, repair, and conservation treatment. Objects which have never received treatment or which have been inadequately preserved in the past are deteriorating toward conditions which will result in total loss. New acquisitions are being received from excavations and by donation at a rate far exceeding present capability to analyze or treat them adequately. Many of the over 60-million items in the National Collections require treatment, for example, 80,000 items in the Division of Numismatics alone, representing at least seven man-years of work. The Laboratory layout has recently been reorganized to increase the efficiency of operations. During the three months of fiscal year 1969 following this reorganization over two-dozen assignments have been completed, involving about 40 objects and about 370 analyses. About the same number of jobs are currently in progress but some 150 await attention. Thousands more would be submitted by the museums' staffs if the Laboratory could handle them.

Analysis and conservation must be painstakingly careful in order to give maximum protection to the objects while treatment is underway. No production line techniques are possible. For instance, five gold bars, alleged to have come from the same mint, were analyzed for ten elements with a view to establishing whether their composition supported other evidence of authenticity. This examination, requiring 15 man-days, supported a belief that two of the bars were false.

This request provides for two essential additional staff, a conservator and a technician, to meet this workload, and funds for travel, conservation supplies, and analytical equipment for a total program increase of \$25,000.

Recent accomplishments of the Laboratory include the testing of the compatibility of paint for the decoration of rooms in which silver is stored, emergency action to deal with wood borers and termites originating from objects in special exhibitions, and the analysis of a corrosion product found to be hindering operation of one of the Museum of History and Technology's working models. A brass finial recovered by a diver from the Civil War monitor U. S. S. Tecumseh was freed from incrustation without loss of its aged appearance in order to reveal an imprint that enabled its manufacturer to be identified.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

UNITED STATES NATIONAL MUSEUMOffice of the Registrar

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>28</u>	<u>1</u>	<u>29</u>
11 Personnel Compensation.....\$	171,000	\$ 10,000	\$ 181,000
12 Personnel Benefits.....	12,000	0	12,000
21 Travel & Transp. of Persons ..	0	0	0
22 Transportation of Things	90,000	10,000	100,000
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	1,000	0	1,000
26 Supplies and Materials	2,000	0	2,000
31 Equipment	<u>2,000</u>	<u>0</u>	<u>2,000</u>
TOTAL..... \$	<u>278,000</u>	<u>\$ 20,000</u>	<u>\$ 298,000</u>

Analysis of Total

Pay Increases	\$5,000	\$5,000	\$10,000
Program.....	\$273,000	\$15,000	\$288,000

Specification of Increase (Program):Mail Room Operations and Museum Shipments (1 position \$15,000)

The number of letters and packages has risen from 1,000,000 pieces in 1967 to 1,250,000 in 1968. An additional mail clerk (\$5,000) is requested to sort, deliver, and bag for Post Office pick-up this higher volume of mail. Additional transportation funds (\$10,000) are needed to ship collections, field equipment, and loans to other museums. Eighteen thousand objects weighing two million pounds were moved in 1968.

Office of the Registrar

The Office of the Registrar records all accessions and loans of objects and specimens by the Museum of Natural History and the Museum of History and Technology in order to document the receipt and legal ownership of the collections. In addition to this responsibility which extends back to 1881, the Office also provides a variety of essential administrative services supporting all of the Institution's research, education, collection management, and exhibition programs. These include centralized mail, messenger, shipping, and passport, visa, and customs services and arrangements.

An increase of \$15,000 is requested to service an increasing volume of public mail and to permit the shipping of objects and materials essential to the success of exhibition and research programs. An additional \$5,000 are requested for necessary pay increases.

Need for Increase--An additional mail room clerk is required to process a growing volume of mail received in the central mail office as a result of the rise in public inquiries and Institution responses and the distribution of public information materials. Public interest in the Smithsonian's exhibits and performances, in its research, and in its reference collections is reflected in a rising number of pieces of mail inquiring about an object on display, forwarding an item for identification, or seeking the solution to a research problem. Approximately 1,250,000 pieces of mail were handled in fiscal year 1968, a 25 percent increase from the previous year. Additional mail pick-up and delivery points on and away from the Mall, including the recently opened Fine Arts and Portrait Galleries, compound the problem of adequate mail service. Daily, approximately 800 deliveries are made in the four buildings on the Mall and additional truck deliveries must service seven buildings in other parts of the city.

The exhibits and research programs of the Smithsonian are dependent on the shipping of collections, field equipment, supplies, and other objects. Transportation requirements reflect the growing workloads being experienced by the Institution's museums, art galleries, and laboratories. In fiscal year 1968, approximately 18,000 objects weighing close to 2-million pounds were moved between points all over the world. The present level of transportation funds of some \$90,000 is not adequate. Additional loans of objects are being made to other museums and to the Smithsonian for public display and study. Many shipments require special packing and handling arrangements which add to costs. Increased transportation rates are reducing available funds. An increase of \$10,000 in transportation funds is required.

MUSEUM OF HISTORY AND TECHNOLOGY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>154</u>	<u>3</u>	<u>157</u>
11 Personnel Compensation.....	\$ 1,466,000	\$ 73,000	\$1,539,000
12 Personnel Benefits.....	105,000	5,000	110,000
21 Travel & Transp. of Persons ..	38,000	4,000	42,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	7,000	0	7,000
24 Printing and Reproduction	5,000	0	5,000
25 Other Services	79,000	19,000	98,000
26 Supplies and Materials	22,000	1,000	23,000
31 Equipment	<u>178,000</u>	<u>27,000</u>	<u>205,000</u>
TOTAL	<u>\$1,900,000</u>	<u>\$ 129,000</u>	<u>\$2,029,000</u>

Analysis of Total

Pay Increases	\$71,000	\$39,000	\$110,000
Program.....	\$1,829,000	\$90,000	\$1,919,000

Specification of Increase (Program):Ethnic Cultural History (2 positions \$40,000)

Far too little has been done in museum collections, exhibits, and research to delineate the history of the ethnic minorities of the United States and to single out and describe their innovative, intellectual, and technological achievements. A start has been made in the Museum with regard to the study of the culture of Spanish America. To do further justice to this need, a strengthening of staff competence in ethnic history is needed. Increase would be applied to one curatorial specialist and a clerical assistant (\$22,000), travel to locate and examine relevant materials (\$2,000), services in connection with exhibits (\$4,000), and the purchase of important objects (\$12,000).

Bicentennial of the American Revolution (1 position \$50,000)

A number of notable studies and exhibits have been initiated in connection with the commemoration of the events leading to the American Revolution. In order to offer a wide and varied exhibition program (a draft script has been prepared) it is essential to improve the collections. One specialist (\$17,000) is required to document the collections for catalog preparation. Funds are requested for travel to acquire items (\$2,000), services for space planning and further exhibits script preparation (\$15,000), exhibits supplies (\$1,000), and the purchase of important objects to round-out present holdings (\$15,000).

3/ MUSEUM OF HISTORY AND TECHNOLOGY

1968 Appropriation	\$1,766,000
1969 Appropriation	\$1,900,000
1970 Estimate	\$2,029,000

The Museum of History and Technology is the national museum of American history and the history of science and technology. Its primary objective is to interpret national life and development through exposition of the National Collections. This exposition is accomplished in a variety of ways. Through exhibitions of cultural, civil, technological, and military history, the Museum seeks to instill in the viewer a curiosity that leads him to further study, in the museum, his school, or his library. Through systematic collection and documentation of historically and technically significant objects, the Museum serves the research requirements of students and scholars. Through correspondence, publications, and loans, the Museum communicates with the American people at large. The ultimate objective, then, becomes a melding of historically representative objects with successful communication of their significance by the staff of the Museum. The activities of the Museum supplement and reflect the programs of the Smithsonian Institution as a whole. As part of an effort to serve the nation it is participating in enlarged programs for special and experimental exhibition, in education at all levels from elementary school to the university, and in historic archeology and preservation.

An increase of \$90,000 is requested including \$40,000 to establish and prepare for study and exhibition collections of objects related to the history and achievements of ethnic minorities and \$50,000 to intensify preparations for the celebration of the Bicentennial of the American Revolution. An additional \$39,000 are requested for necessary pay increases.

Need for Increase--The principal facts of the history of our nation revolve around the cultural pluralism of our people. Museums should be concerned with presenting truth in a social context. Far too little has been done to delineate the history of the ethnic minorities of our country or to single out and describe their innovative, intellectual, and technological achievements. "Early America" has long been tacitly assumed to refer only to the British settlements of the Eastern Seaboard, ignoring not only the nonBritish elements of the colonial population, but the fact that the "early" history of a nation approaching its 200th birthday should include not only the 18th century but much of the 19th. For the most part in museum research, exhibits, and collections, our ethnic subcultures, our minority groups come off very badly indeed. Young people representing Negroes, Indians, Spanish, Chinese, Japanese, and other subcultures are not given the evidence that they are part of the stream of history of the United States with a noble past, a vital present, and an unlimited future.

If the Smithsonian is to play a vital role in the Bicentennial of the American Revolution, it should be prepared to correct what is in effect a series of oversights in history, the history of our country, and the multiplicity of our peoples. A start has been made. The Museum has allocated a position and funds to the study of the culture of Spanish America. Important broadening of the scope of the collections has resulted. The curatorial staff has participated in the experimental exhibitions in the successful Anacostia Neighborhood Museum. Through borrowing of objects, the Museum has established an exhibit on the African cultural background of the American Negro. In order to do fuller justice to this need, however, a strengthening of staff competence in ethnic history is required to develop the collections, undertake research projects, and plan and develop exhibits. The increase of \$40,000 would be applied to one curator and a clerical assistant and funds for travel to locate and examine relevant materials and their acquisition and for supplies and services in connection with the presentation of materials.

With regard to the requested increase for the Bicentennial, the Museum is concerned primarily with the nation's technological and cultural history, and with artifacts as unwritten documents relating to its history. Relatively less study has been devoted by historians to the objects and technologies of the Revolutionary period than to its political and intellectual aspects. The Museum is capable of making substantial contributions to the understanding and interpretation of the material culture of this period. In addition, several themes of this period have recurred again and again in American history to the present, and merit particular study, research, and presentation. Among these are such timely topics as transportation, civil disobedience, poverty, and urban development.

It is imperative that the Museum of History and Technology offer a wide and varied exhibition program worthy of this national commemoration. Using funds appropriated in fiscal year 1969, a script for a large-scale exhibition has been drafted to the point that individual units can be fully scripted and designed if the general plan is approved and funded. As a background to the planning of such exhibitions it is essential to improve the collections through acquisition in certain areas and to improve the documentation of existing collections pertaining to the era of the Revolution. Although the Museum's relevant collections are perhaps the most important in the country, they comprise principally objects associated with famous persons. Funds are requested for the acquisition of selected artifacts which will enable putting these objects into the context of the history of the 18th century. In addition, one specialist in the period is required for documentation work which is to begin with a systematic analysis of each object, suitable to the preparation of exhibits, the publication of a catalog, and to serve as a prototype for computerized control of information relevant to the Bicentennial, a stated objective of the President's Commission. Service funds are required in connection with further exhibits script preparation and space planning needs. This is a requested program increase of \$50,000.

In this Museum which has enjoyed an average yearly attendance of 5.5 million since its opening in 1964 (almost certainly the largest attendance of any museum in the world), a number of notable events have recently occurred in connection with the commemoration of the Bicentennial. A major study of American agriculture during the period 1775-1783 is underway with particular reference to the impact of the Revolution on farming. Among the items added to the collection has been an unusually fine example of a Brown Bess musket marked "29th Regt.," elements of which participated in the "Boston Massacre." Another in a series of special exhibits commemorating events leading up to the American Revolution opened in June 1968. This is "The Glorious Case of Liberty," dealing with American colonial resistance to the Townshend Acts in the years 1767-69, and featuring original documents and objects from the period.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

MUSEUM OF NATURAL HISTORY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>259</u>	<u>5</u>	<u>264</u>
11 Personnel Compensation.....	\$ 2,808,000	\$ 96,000	\$ 2,904,000
12 Personnel Benefits.....	209,000	7,000	216,000
21 Travel & Transp. of Persons ..	61,000	2,000	63,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	14,000	0	14,000
24 Printing and Reproduction	0	0	0
25 Other Services	144,000	58,000	202,000
26 Supplies and Materials	90,000	2,000	92,000
31 Equipment	<u>67,000</u>	<u>15,000</u>	<u>82,000</u>
TOTAL.....	<u>\$ 3,393,000</u>	<u>\$ 180,000</u>	<u>\$ 3,573,000</u>

Analysis of Total

Pay Increases	\$159,000	\$80,000	\$239,000
Program.....	\$3,234,000	\$100,000	\$3,334,000

Specification of Increase (Program):

Use of Automatic Data Processing for Collection Information
(5 positions \$100,000)

The increase will be used to apply the data storage, sorting, and combining abilities of computer processing systems to the natural history collections. The Museum has the potential to be a major information resource in systematic and environmental sciences. Accelerated collection growth, now 50 million specimens with associated environmental data, precludes trying to answer research questions from traditional paper records. Five information specialists and technicians (\$23,000 on a six-months basis) are required to transcribe and code data. Support funds are needed for travel (\$2,000), services, primarily computer operation time (\$58,000), computer tape, cards, and other supplies (\$2,000), and data input equipment (\$15,000).

1968 Appropriation	\$3,277,000
1969 Appropriation	\$3,393,000
1970 Estimate	\$3,573,000

The Museum of Natural History, the largest of the bureaus of the Institution, is an international center for the study of the natural sciences, maintaining the largest reference collections in the nation of anthropological, biological, and geological materials. It conducts a comprehensive program of basic research on man, plants, animals, rocks and minerals, and fossil organisms--their classification, distribution, and relationship to the environment. Over 450 publications were produced in fiscal year 1968. It is an important focal point for cooperative research and educational activities with other Smithsonian organization units, Federal agencies, universities, and other scientific institutions. Students and highly trained researchers in many fields and from many countries use its facilities to pursue studies of mutual interest, exchange information, and assist in strengthening and adding new dimensions to the research program. Its studies of living and fossil plants and animals provide critical data for research on problems of conservation and pollution; in the field of medicine; and development of food sources and earth sciences conducted by Federal agencies and private organizations. The fundamental studies in systematics conducted by the Museum are providing important new information needed in the planning of national and international programs on long-term environmental management. Through its exhibits, the Museum of Natural History presents and interprets for over 3-million visitors annually the history of the planet, its bewildering diversity of life, and the inter-relationships between animals, plants, and their environment. The scientific faculty and supporting staff of the Museum contribute to the intellectual content and conceptual development of these exhibits. The exhibits are utilized in curriculum-oriented tours for school children from the primary grades through high school. For most of the classes and the majority of the casual visitors, the exhibits represent an opportunity to learn more of the world about them. The Museum is a much sought-after participant in joint educational efforts with universities. A substantial number of staff members teach courses, train graduate students, develop seminars, and provide leadership in the development of Museum techniques, collection management, and the training of technical assistants.

An increase of \$100,000 is required to extend the application of computer processing systems to collection management in order to develop the Museum's capability as a major information resource in systematic and environmental sciences. An additional \$80,000 are sought for necessary pay increases.

Need for Increase--Caretaking of the National Collections of natural history is a major responsibility of the Museum of Natural History. This includes not only developing and maintaining the collections but making them fully available for study by scientists within and outside the Museum and by students in colleges and universities. Accelerated collection growth in the past 50 years has made obsolete traditional manual techniques for recording, filing, and the recall of information about natural history specimens. Currently there are over 50-million specimens in these collections. Much of the information associated with this material is not readily available for study because of the tremendous expenditures of manpower involved in searching, sorting, comparing, and transcribing paper records.

The collection information systems developed by a pilot computer project have clearly demonstrated the feasibility of using automatic data processing techniques in museums for these purposes. The result will be to enable museums to make more rapid and flexible use of information concerning their collections to answer research questions. Many of these questions relate to studies of environmental pollution, the source and composition of extraterrestrial materials, conservation of natural resources, and the increased production of food. Through the use of electronic data processing this information would be cataloged and so

programmed that data now available only at great cost would be made accessible. Combinations of data which have long been needed could be provided for the first time. For example, it would be possible to analyze and report on the collections by geographic area (to respond to inquiries from the Department of Defense, Department of Interior, conservation groups as well as by educational and research institutions, etc.). Such data is now organized by species only.

The projects which would be initiated in fiscal year 1970 would involve two of the collections which are becoming increasingly active and the subject of increasingly frequent and varied requests for information.

The mammal and bird collections number approximately 900,000 specimens. The more recent additions from Africa, the Middle East, Southeast Asia, and South and Central America (approximately 100,000) have associated data on ectoparasites and, therefore, are of particular importance. Using the data system which has been developed, work would be initiated to record the information on these 100,000 specimens in order to facilitate research on host-parasite relationships; the part ectoparasites play as vectors in the transmission of disease and their significance to public health problems, particularly as they relate to national defense. All of these questions and many others which now cannot be answered readily, if at all, are being asked by such agencies as the National Institutes of Health, the Department of Defense, Office of the Surgeon General, the Naval Bureau of Medicine and Surgery, and others concerned with the prevention and eradication of disease on a global scale.

The second project which would be undertaken would be the application of the data system to the Museum's collections of ores, drill cores, and "suites" of minerals which number about 30,000 specimens. The increasing attention being given to these collections and particularly to those samples obtained from mines has led the Society of Economic Geologists, among others, to urge the Museum to establish a National Reference Ore Collection and provide a broad spectrum of basic data on these ores to geologists and other researchers in the field. The only mechanism by which such a service to the scientific community would be feasible, both economically and on the basis of available manpower, would be through the establishment and use of this data retrieval system.

A program increase of \$100,000 is sought to employ a programming analyst, an information systems specialist, and two information technicians, and to provide funds for computer services and data input equipment.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

NATIONAL AIR AND SPACE MUSEUM

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>42</u>	<u>2</u>	<u>44</u>
11 Personnel Compensation.....\$	448,000	\$ 26,000	\$ 474,000
12 Personnel Benefits.....	35,000	2,000	37,000
21 Travel & Transp. of Persons ..	6,000	4,000	10,000
22 Transportation of Things	1,000	2,000	3,000
23 Rent, Comm. and Utilities.....	2,000	0	2,000
24 Printing and Reproduction	0	0	0
25 Other Services	20,000	10,000	30,000
26 Supplies and Materials	14,000	4,000	18,000
31 Equipment	12,000	2,000	14,000
TOTAL.....	\$ 538,000	\$ 50,000	\$ 588,000

Analysis of Total

Pay Increases	\$22,000	\$10,000	\$32,000
Program.....	\$516,000	\$40,000	\$556,000

Specification of Increase (Program):Space Artifacts Program (2 positions \$40,000)

Original NASA funding to enable the Museum to acquire, preserve, and display significant space artifacts will be expended by the end of fiscal year 1969. Successful continuation of the program, including loaning objects for display to organizations across the United States and in foreign countries, requires resources not now present in the Museum's appropriation. Even with the requested increase, available funds will be less than 30 percent of those required. Increase provides for a museum specialist and a technician to restore and preserve objects (\$18,000), travel to select the most significant objects at NASA centers (\$4,000), transportation of space vehicles (\$2,000), preservation services (\$10,000) and supplies (\$4,000), and handling devices (\$2,000).

5/ NATIONAL AIR AND SPACE MUSEUM

1968 Appropriation	\$488,000
1969 Appropriation	\$538,000
1970 Estimate	\$588,000

The National Air and Space Museum is the nation's center for exhibition, education, and research in the history and principles of air and space flight. It maintains the world's greatest collection of objects related to flight and is a unique resource for research in aviation and aerospace history, in flight science and technology, in the impact of man-flight on the cultural life and economy of America, and in the pioneering efforts of early aviators and astronauts. This growing collection now consists of more than 200 technically and historically important aircraft, more than 300 engines, 1,000 air and spacecraft models, and a vast array of ancillary equipment. Supplementing the physical specimens are extensive holdings of records resulting from air and space research, development and operations, films, art works, and memorabilia that are available to students, historians, biographers, technicians, and engineers. Drawing upon these resources, the Museum produces exhibits portraying the past, present, and future of aeronautics in America.

An increase of \$40,000 is requested to continue and strengthen the program of acquiring, preserving, and displaying important space objects acquired from the National Aeronautics and Space Administration. An additional \$10,000 are requested for necessary pay increases.

Need for Increase--Subsequent to the addition of space science and technology to the Museum's responsibility (Public Law 89-509, approved July 20, 1966), an agreement with the National Aeronautics and Space Administration in March 1967 provided for important air and space artifacts developed by NASA to be transferred to the Museum. In turn, the Museum accepted responsibility for the custody, preservation, protection, and display of these objects. The Space Agency provided initial funding of \$200,000 for this program with the understanding that the Smithsonian would seek continued funding directly from the Congress. With the increase provided in the 1969 appropriation, this request will permit a yearly level of operations less than 30 percent of that for which the Museum is committed under the agreement. The original NASA funding will be expended by the end of fiscal year 1969.

The number of space-oriented artifacts (many of them weighing several tons each) being received, preserved, stored, and/or displayed is large and increasing. During calendar year 1968 accessions included a full-scale F-1 rocket engine rated at 1.5 million pounds thrust (one of five such units of the first stage of Saturn V); a flown Apollo Command Module; a Lunar Orbiter engineering mock-up; a Surveyor S-10 full-scale engineering test model; and six complete space suits and ancillary equipment worn by astronauts in orbit.

Successful continuation of this program requires resources not now present in the Museum's appropriation. Thousands of objects, dispersed at NASA centers and industrial complexes from coast to coast, are potential candidates for accession. Extensive travel is required to select those items that represent significant breakthroughs in America's space efforts and later to arrange loans to other institutions for display. Objects must be recorded and their significance documented. Specimens are large and heavy and costly to ship. Special chemicals, materials, and handling devices are essential to restore, preserve, and protect artifacts. An increase in funding is essential to fulfill on a minimal basis the Museum's obligations under the NASA agreement and to make available these objects to the public. The Museum is continually receiving requests from organizations for the loan of spacecraft and other items. This is a requested increase of \$40,000 for a museum specialist and a technician to restore and prepare specimens for exhibit, and funds for travel, transportation, services, supplies, and equipment.

During calendar year 1968, in addition to furnishing space material for its own displays, the artifacts program resulted in the following major items loaned for exhibit: Gemini X exhibited in London and Barcelona (for Department of Commerce), at Lucerne in the Swiss Institute of Transport and Communications, and in Munich at the Deutsches Museum; Gemini VII to Wisconsin Regional Space Center; Gemini III to Air Force Museum at Wright-Patterson Air Force Base; Gemini II to Patrick Air Force Base; Aurora 7 to Andrews Air Force Base, to Warner-Robbins Air Force Base, and to NASA's Ames Research Center, Moffet Field, California; Surveyor spacecraft to Hall of Science, New York City; various astronaut space suits to United States museums and one to the United States Information Agency exhibit in Japan. In addition, many Museum-owned spacecraft are on loan to the several NASA field centers.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

NATIONAL ARMED FORCES MUSEUM ADVISORY BOARD

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>7</u>	<u>0</u>	<u>7</u>
11 Personnel Compensation.....\$	89,000	\$ 5,000	\$ 94,000
12 Personnel Benefits.....	7,000	0	7,000
21 Travel & Transp. of Persons ..	8,000	0	8,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	1,000	0	1,000
25 Other Services	24,000	0	24,000
26 Supplies and Materials	2,000	0	2,000
31 Equipment	<u>5,000</u>	<u>0</u>	<u>5,000</u>
TOTAL.....	\$ <u>136,000</u>	\$ <u>5,000</u>	\$ <u>141,000</u>

Analysis of Total

Pay Increases	\$4,000	\$5,000	\$9,000
Program.....	\$132,000	0	\$132,000

Specification of Increase (Program):

No program increase is being requested for fiscal year 1970 in order to concentrate requests for additional funding on the highest priority history activities.

6/ NATIONAL ARMED FORCES MUSEUM ADVISORY BOARD

1968 Appropriation	\$128,000
1969 Appropriation	\$136,000
1970 Estimate	\$141,000

The National Armed Forces Museum Advisory Board, as required by Public Law 89-186, advises and assists the Board of Regents of the Smithsonian Institution on matters concerned with portraying the valor and personal sacrifice of the members of the armed forces and their extensive peacetime contributions in science, engineering, medicine, exploration, and other fields. The Advisory Board recommends lands and facilities suitable for the proposed National Armed Forces Museum Park; conducts planning with regard to the concept of the museum park; performs research on the contributions of the armed forces; and selectively collects materials for exhibit and study.

An increase of \$5,000 is requested for necessary pay increases. No program fund increase is sought for fiscal year 1970.

Need for Increase--In October 1967, legislation was introduced in both the Senate and the House of Representatives which would authorize the Board of Regents of the Smithsonian Institution to acquire lands for the museum park in the Fort Foote area of Prince Georges County, Maryland. Action was not taken by the 90th Congress. Planning efforts are continuing on the development of a study center as part of the museum park. Specific recommendations resulting from a conference of distinguished historians called for early appointment of a senior scholar to serve as chairman of study center development including its role in commemorating the Bicentennial of the American Revolution. The staff of the Advisory Board is continuing its work on the salvage of the Civil War monitor U. S. S. Tecumseh. Engineering examination and laboratory analysis by the United States Navy indicates that the ship retains enough structural strength to permit being salvaged and, after restoration, display in the museum park.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

ANACOSTIA NEIGHBORHOOD MUSEUM

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>4</u>	<u>4</u>	<u>8</u>
11 Personnel Compensation.....	\$ 20,000	\$ 37,000	\$ 57,000
12 Personnel Benefits.....	2,000	3,000	5,000
21 Travel & Transp. of Persons ..	1,000	0	1,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	1,000	0	1,000
26 Supplies and Materials	1,000	0	1,000
31 Equipment	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL.....	\$ <u>25,000</u>	\$ <u>40,000</u>	\$ <u>65,000</u>

Analysis of Total

Pay Increases	0	0	0
Program.....	\$25,000	\$40,000	\$65,000

Specification of Increase (Program):

Neighborhood Museum Operations (5 positions \$40,000)

The Smithsonian Institution must continue to make available to a low income, urban area a museum whose objects, exhibits, and related classes educate by stimulating interest and excitement. Approximately 75,000 persons have enthusiastically visited and used the Museum since its opening in September 1967. Continued availability of initial private support is unlikely as the Museum assumes less of an experimental aspect. Requested staff increase of four positions would provide for an exhibits specialist, a museum technician, a typist, and a maintenance employee (\$40,000).

1968 Appropriation	\$6,000
1969 Appropriation	\$25,000
1970 Estimate	\$65,000

In September 1967, a former movie theater in the southeast corner of Washington, D.C. opened its doors as the Anacostia Neighborhood Museum. This is an experimental branch of the Smithsonian Institution, located in a low-income urban setting. The Museum provides an environment for open, nondirected learning through actual contact with real things. This is a unique experience for adults and children who rarely, if ever, use other museums and cultural resources potentially available to them. The Neighborhood Museum is not a substitute for use of the city's cultural resources but is a doorway or bridge to greater use of them.

An increase of \$40,000 is sought for continuing the successful operations of the Museum.

Need for Increase--Deteriorating urban areas are a major problem for human environmental concern. As a museum complex and as an educational resource, open to the general public for "increase and diffusion of knowledge among men," the Smithsonian has a responsibility for these areas and their human resources. To a large extent, however, people from run-down neighborhoods tend to stay there. They tend to be immobile, not to move much, except in a transient sense from slum to slum. Such people are likely never to go into any museum. Indeed, if badly dressed, they may feel awkward leaving their district, much less going to a vast monumental marble palace. The only solution is to bring the museum to them.

Convinced that objects are of basic importance to many people, the Smithsonian has been experimenting with a neighborhood museum in an area where 41 percent of the people are under eighteen, 78 percent are nonwhite, and the median family income is \$3,430. Here is a chance to work and educate with museum tools geared to create interest and excitement in minds not interested for the most part in books. The mere accessibility of the museum, however, does not insure intensive neighborhood use. Involvement is the key, but involvement can be created only if the museum's operations are participated in by the people who live in the community. To help achieve this, a community advisory council was created to advise on exhibits, their focus, and program activities. The museum's small staff is drawn from individuals with demonstrated skill in community work.

The results to date have been most encouraging. Approximately 75,000 people have used the museum. Frequently changing exhibits drawn from the Smithsonian's collections in art, history, and science include things which may be touched and tinkered with, not just observed. Workshops, classes, art shows by local residents, and music programs keep people coming back. Tours are conducted to the main Smithsonian museums. Local civic groups use the Museum for meetings on community problems. A national magazine recently described the Museum as "the most successful in this field" of "opening eyes in the ghetto." There has been no vandalism. Nothing has been stolen. There are no guards. The reason must be "because it is their museum, not ours, and they can be proud of it."

Continued successful operation and development of the Museum, however, require an adequate level of Federal funding. Its initial financing had to be raised from private sources. Long-term availability of private funding is unlikely as the Museum assumes less of an experimental aspect. It is estimated that once it is underway a neighborhood museum can be operated on about \$125,000 a year. Fiscal year 1969 Federal funding will permit meeting only about 25 percent of the direct cost of the Museum now being met from private sources. The request for fiscal year 1970 must concentrate on a build-up of essential staff. Of high priority are an exhibits specialist, a museum technician, a clerk-typist, and a maintenance employee for a total program increase of \$40,000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses, " Fiscal Year 1970

FREER GALLERY OF ART

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>7</u>	<u>0</u>	<u>7</u>
11 Personnel Compensation.....\$	44,000	\$ 3,000	\$ 47,000
12 Personnel Benefits.....	3,000	0	3,000
21 Travel & Transp. of Persons ..	0	0	0
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	0	0	0
26 Supplies and Materials	0	0	0
31 Equipment	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL.....\$	<u>47,000</u>	<u>3,000</u>	<u>50,000</u>

Analysis of Total

Pay Increases	\$1,000	\$3,000	\$4,000
Program.....	\$46,000	0	\$46,000

Specification of Increase (Program):

No program increase is being sought for fiscal year 1970 in order that the Smithsonian may emphasize the priority of other needs in the budget year.

8 / FREER GALLERY OF ART

1968 Appropriation	\$30,000
1969 Appropriation	\$47,000
1970 Estimate	\$50,000

The Freer Gallery of Art functions as a center for research on the civilizations and artistic achievements of Asia. Oriental objects of the highest quality and artistic significance are purchased to augment the study collections and for display to the public. The collections now number some 9,000 Chinese, Japanese, Near East, and Indian bronzes, jade, paintings, textiles, ceramics, and other objects. Staff members are engaged in research projects which relate to the cultural origins of objects in the collections. The Gallery is visited by scholars and students from all over the world who consult the staff, use the extensive library resources, and work with the objects themselves.

An increase of \$3,000 is requested for necessary pay increases. No program fund increase is sought for fiscal year 1970.

Need for Increase--Notable public service accomplishments during fiscal year 1968 included the examination and identification of over 8,000 objects and the translation of 800 oriental language inscriptions for individuals and institutions. Objects in storage were shown to 500 persons and over 50 groups, totaling 1,100 persons, were given tours through the exhibition galleries and reference areas. Scholarship, exhibit, and public service activities will continue in fiscal year 1970.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

NATIONAL COLLECTION OF FINE ARTS

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>57</u>	<u>0</u>	<u>57</u>
11 Personnel Compensation.....\$	493,000	\$ 14,000	\$ 507,000
12 Personnel Benefits.....	37,000	1,000	38,000
21 Travel & Transp. of Persons ..	17,000	0	17,000
22 Transportation of Things	41,000	0	41,000
23 Rent, Comm. and Utilities.....	12,000	0	12,000
24 Printing and Reproduction	1,000	0	1,000
25 Other Services	219,000	0	219,000
26 Supplies and Materials	28,000	0	28,000
31 Equipment	<u>145,000</u>	<u>0</u>	<u>145,000</u>
TOTAL.....\$	<u>\$ 993,000</u>	<u>\$ 15,000</u>	<u>\$1,008,000</u>

Analysis of Total

Pay Increases	\$23,000	\$15,000	\$38,000
Program.....	\$970,000	0	\$970,000

Specification of Increase (Program):

No increase for programs is being requested for fiscal year 1970 in order to limit the requests for additional funding for history and art activities to the highest priority needs in the budget year.

9/ NATIONAL COLLECTION OF FINE ARTS

1968 Appropriation	\$927,000
1969 Appropriation	\$993,000
1970 Estimate	\$1,008,000

The National Collection of Fine Arts is the custodian of an ever-increasing national heritage of valuable donations and deposits of traditional and contemporary American art. At present, some 11,000 paintings, sculptures, and decorative art objects are included in its exhibits and reference collections. The National Collection of Fine Arts is instructed "to encourage the development of contemporary art and to effect the widest distribution and cultivation in matters of such art" (20 U. S. C. 76c). To meet this responsibility the Gallery provides a repository for Government art; lends art to Government agencies, the White House, and embassies; promotes the public appreciation of art by permanent and special exhibits in its gallery and by sponsoring traveling exhibits within the United States and internationally. With its varied collections, library, photographs, and archives, the National Collection of Fine Arts offers to students and scholars an excellent resource for the study of the development of American art.

An increase of \$15,000 is requested for necessary pay increases. No program fund increase is sought for fiscal year 1970.

Need for Increase--The most notable recent event associated with the National Collection of Fine Arts was its public opening on May 6, 1968, in the recently renovated Fine Arts and Portrait Galleries building. Continuing and changing exhibitions are now presented in some 14 halls and galleries. These new galleries, which display some 600 examples of American painting, graphic arts, and sculpture, have already enjoyed widespread popular and critical success. Interest in the new museum brought 10,000 visitors in the first five days of operation.

During fiscal year 1970 additional exhibit areas will be opened and the program of rotating exhibits continued. With the heaviest demands on the staff for opening the building somewhat eased, research projects will move ahead. The department of painting and sculpture is working toward a final catalog of the National Collection's holdings of American painting and sculpture. Throughout Latin America, Europe, Asia, and Africa, the International Art Program will circulate exhibits.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

NATIONAL PORTRAIT GALLERY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>28</u>	<u>0</u>	<u>28</u>
11 Personnel Compensation.....	\$ 304,000	\$ 6,000	\$ 310,000
12 Personnel Benefits.....	18,000	1,000	19,000
21 Travel & Transp. of Persons ..	10,000	0	10,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	190,000	0	190,000
26 Supplies and Materials	22,000	0	22,000
31 Equipment	<u>250,000</u>	<u>0</u>	<u>250,000</u>
TOTAL.....	\$ <u>794,000</u>	\$ <u>7,000</u>	\$ <u>801,000</u>

Analysis of Total

Pay Increases	\$15,000	\$7,000	\$22,000
Program.....	\$779,000	0	\$779,000

Specification of Increase (Program):

No additional funding for programs is being sought in fiscal year 1970 in order that requests for increases can be limited to the highest priority needs elsewhere in the Smithsonian Institution.

10/ NATIONAL PORTRAIT GALLERY

1968 Appropriation	\$729,000
1969 Appropriation	\$794,000
1970 Estimate	\$801,000

The National Portrait Gallery serves as "a free public museum for the exhibition and study of portraiture and statuary depicting men and women who have made significant contributions to the history, development, and culture of the people of the United States of America, and the artists who created such portraits and statuary" (20 U. S. C. 75b). The Gallery presents, in permanent and temporary exhibitions and in study collections, some 500 portraits and thousands of other likenesses of significant Americans in engravings and photographs. Not just an art museum, the National Portrait Gallery is developing as a study center with biographical, archival, and iconographical materials for students and scholars whose major concern is American history.

An increase of \$7,000 is requested for necessary pay increases. No program fund increase is sought for fiscal year 1970.

Need for Increase--The National Portrait Gallery opened to the public in the Fine Arts and Portrait Galleries building on October 7, 1968. The inaugural exhibition was a provocative show of almost 200 paintings, sculptures, and photographs entitled "This New Man: A Discourse in Portraits." Designed to suggest answers to Jean de Crevecoeur's question, "What then is the American, this new man?" posed in his Letters from an American Farmer in 1782, the opening exhibition arranges portraits into such categories as image-maker, idol, defender, explorer, and expatriate. Setting the tone in the individual galleries are such general paintings as Albert Bierstadt's "The Oregon Trail" in the frontiersman and expansionist section which are supplemented by artifacts related either to individuals on view or the over-all theme. To develop the theme further, a symposium on the culture and character of the nation followed the opening with noted scholars as speakers. Opening along with the special "This New Man" exhibition was a permanent exhibition of the Portrait Gallery, a sweeping Presidential Gallery with likenesses of every Chief Executive.

During fiscal year 1970 additional gallery areas will be presented to the public. An intensified effort must be made to acquire fine portraits in all media. Work on the Catalogue of American Portraits, a national inventory of likenesses of Americans of historic significance, will continue. Equipment has been installed to prepare the data in the Catalogue for computer processing and indexing to meet public inquiries and reference needs.

JOSEPH H. HIRSHHORN MUSEUM AND SCULPTURE GARDEN

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>7</u>	<u>6</u>	<u>13</u>
11 Personnel Compensation.....	\$ 78,000	\$ 55,000	\$ 133,000
12 Personnel Benefits.....	5,000	4,000	9,000
21 Travel & Transp. of Persons ..	10,000	0	10,000
22 Transportation of Things	0	5,000	5,000
23 Rent, Comm. and Utilities.....	23,000	20,000	43,000
24 Printing and Reproduction	0	0	0
25 Other Services	33,000	15,000	48,000
26 Supplies and Materials	10,000	0	10,000
31 Equipment	0	5,000	5,000
TOTAL.....	<u>\$ 159,000</u>	<u>\$ 104,000</u>	<u>\$ 263,000</u>

Analysis of Total

Pay Increases	\$4,000	\$4,000	\$8,000
Program.....	\$155,000	\$100,000	\$255,000

Specification of Increase (Program):Preparing Collections to Meet Opening Deadline (6 positions \$100,000)

The new museum building is scheduled for completion in the spring of 1971 with a public opening in October 1971. Over 1,000 paintings and sculptures for the initial exhibition must be inventoried, conserved, and researched for the preparation of an illustrated catalog. To accomplish an accelerated program and meet the scheduled building deadlines, the present small staff must be augmented. An additional curator, curatorial assistant, research aid, administrator, contracts clerk, and clerk-typist are required (\$55,000). Also required are additional transportation funds to move objects (\$5,000), temporary sorting and assembly space (\$20,000), conservation and framing services (\$15,000), and furniture and exhibit equipment (\$5,000).

11/ JOSEPH H. HIRSHHORN MUSEUM AND SCULPTURE GARDEN

1968 Appropriation	\$62,000
1969 Appropriation	\$159,000
1970 Estimate	\$263,000

The Joseph H. Hirshhorn Museum and Sculpture Garden will display the collection of fine art donated by Joseph H. Hirshhorn to the United States for the benefit of the people. This is a superlative collection of more than 2,000 sculptures from antiquity to the present, and a unique survey of over 4,000 paintings which reflect the background and significant developments in American art of the 20th century and its international influence. The collection has been valued conservatively at \$25,000,000 to \$50,000,000. In addition to the \$1,000,000 Mr. Hirshhorn agreed to give for future acquisitions, he has been continuously adding outstanding works of art to the collection since the gift was made. Public Law 89-788, approved November 7, 1966, provides for the establishment of the Joseph H. Hirshhorn Museum and Sculpture Garden, to be located on the Mall.

An increase of \$100,000 is requested to intensify preparing the collections for the opening of a major new museum of art. An additional \$4,000 are requested for necessary pay increases.

Need for Increase--With funds appropriated in fiscal year 1969, construction of the Museum will be started. Construction will be completed in the spring of 1971, at which time the Hirshhorn Collection will be brought from New York and the new building will be prepared for opening to the public in October 1971. When open, the Museum will conduct a full program of exhibition, educational activities, research and publications related to modern art and its backgrounds, thereby using the collection for maximum public benefit.

To prepare for the opening of the Museum on schedule, the staff must intensify its activities of selection and preparation. Over 1,000 paintings and sculptures will be chosen for the initial exhibition. These must be inventoried and prepared for examination, photography, framing, and where necessary, cleaning and restoration. This involves frequent contracting for conservation and other services, extensive research, and a large volume of correspondence, recordkeeping, and other clerical work. Selected and processed works will be set aside to await shipment and installation in the Museum. The inaugural exhibition catalog must be initiated, coordinating information on hand with supplemental research material. Future exhibitions, educational programs, and publications must be planned. A museum library serving the needs of the professional staff, students, and scholars, must be organized. At the same time, the staff will continue the important task of receiving and recording new acquisitions.

To accomplish this accelerated program and meet the scheduled deadline, it is imperative that the present small staff be augmented. An additional curator, curatorial assistant, and a research aid plus an administrator, a contracts clerk, and a clerk-typist are needed. Additional transportation funds, temporary sorting and assembly space, conservation, framing, and other services, and furniture and equipment also are needed. This is a total program increase of \$100,000.

The Hirshhorn Museum is moving toward three related goals: the acquisition of new objects, the development of plans and programs for the new museum, and the continuation of its services to scholars and institutions involved in the history of modern American and European art. Mr. Hirshhorn's generosity led in 1968 to the acquisition of more than 500 additional paintings and sculptures including works by Bourdelle, Dubuffet, Mondrian, Miró, Pollack, and Rodin. The collection is a major source for museums and art historians preparing retrospective exhibitions, biographies, and catalogs. In 1968, more than 50 queries were received weekly for research information, loans, photographs, or permission to view specific works. More than 500 paintings were loaned to museums and galleries including those in Chicago, Los Angeles, Pittsburgh, and Washington.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>54</u>	<u>2</u>	<u>56</u>
11 Personnel Compensation.....	\$ 900,000	\$ 36,000	\$ 936,000
12 Personnel Benefits.....	67,000	4,000	71,000
21 Travel & Transp. of Persons ..	38,000	0	38,000
22 Transportation of Things	7,000	0	7,000
23 Rent, Comm. and Utilities.....	96,000	0	96,000
24 Printing and Reproduction	20,000	0	20,000
25 Other Services	353,000	(10,000)	343,000
26 Supplies and Materials	40,000	2,000	42,000
31 Equipment	297,000	38,000	335,000
32 Land and Structures.....	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	<u>\$1,818,000</u>	<u>\$ 70,000</u>	<u>\$1,888,000</u>

Analysis of Total

Pay Increases.....	\$56,000	\$20,000	\$76,000
Program	\$1,762,000	\$50,000	\$1,812,000

Specification of Increase (Program):Stellar Atmospheres and Theoretical Astrophysics (1 position)

Maximum effective utilization of the new 60" telescope to be installed at Mt. Hopkins can be achieved by the addition of a full-time observer technician. He will free highly paid senior scientists from essentially routine duties. Cost of the technician will be met by reduced funding needs in other programs.

Optical Observatory and Observations (\$35,000)

Use of the 60" telescope on Mt. Hopkins for ground-based planetary observations requires the purchase and installation of an interference spectrometer (\$35,000).

Radio Astronomy (1 position \$15,000)

The data gathering capacity of the SAO-Harvard 84-foot radio telescope can be significantly increased by adding one observational astronomer (\$10,000), and providing for supplies and materials (\$2,000), and a small amount of additional instrumentation (\$3,000).

1968 Appropriation	\$1,784,000
1969 Appropriation	\$1,818,000
1970 Estimate	\$1,888,000

The Smithsonian Astrophysical Observatory was established in 1890. In 1955 it was moved to its present location in Cambridge, Mass., where its work, although fully independent, became closely associated with that of the Harvard College Observatory. Additional facilities were recently opened at Mt. Hopkins, Ariz., where observations can be made without interference caused by the deteriorating atmospheric conditions found on the east coast. Current research of the Observatory reflects the need to learn the relationships between man and the universe. Observatory scientists derive data for astrophysical study from a wide variety of resources: gamma ray detectors, radio telescopes, optical instruments, satellite observations and experiments, and terrestrial study of meteorites, cosmic dust, and lunar materials. They perform research into the structure, composition, and gravity field of the earth; the temperature, pressure, and other characteristics of the upper atmosphere; the history, orbits, and compositions of other bodies in the solar system; the nature of stellar processes; and the origin of the universe. The results of these investigations have led to such useful achievements as the calculation of geodetic reference points and parameters used for maps and other navigational aids which are accurate to within a few meters; the derivation of formulas that describe the positions of celestial bodies from points other than the surface of the earth, which will simplify navigation from manned rockets and space stations; and information concerning the gravitational field and atmospheric density of the upper atmosphere. Scientists at the Observatory annually publish over 200 papers, articles, tables, and books covering a wide range of subjects in astrophysics.

An increase of \$50,000 is requested to improve the utilization of current facilities for research in Stellar Atmospheres, Optical Observations, and Radio Astronomy. An additional \$20,000 are sought for necessary pay increases.

Need for Increase--Research in astrophysics is based on the analysis and interpretation of data contained in a wide range of the energy spectrum. For the past several years, the Observatory has been steadily improving and modernizing the instrumentation used to gather this data. Much of this activity is centered at Mt. Hopkins. A 34-foot gamma ray reflector has been installed. A 60" optical telescope is being procured. A new prototype laser tracking system is in operation. The Observatory scientists designed the four ultraviolet telescopes that are now operating on board the Orbiting Astronomical Observatory launched December 8, 1968, and continue to use the 84-foot radio telescope at Cambridge, Mass. In addition, the Observatory maintains constant collaboration and exchange of information with universities, colleges, and Government agencies including the National Aeronautics and Space Administration, Department of Defense, and the National Science Foundation.

A careful review of the present systems at the Observatory shows that a significant improvement in its research capability could be made by increasing the utilization of present large-scale equipment through the selective addition of staff and ancillary equipment.

Stellar Atmospheres and Theoretical Astrophysics--To maintain the Observatory's lead in Stellar Atmospheres and Theoretical Astrophysics, additional observations are required from the 60" telescope (to be delivered in fiscal year 1969). This requires the employment of a full-time observer-technician to operate and maintain the telescope, and to free senior and highly paid scientists from this routine and time-consuming work. These observations will complement and are an essential element to the continuing Stellar Atmospheres program at the Observatory. The cost of the technician will be absorbed by funding requirement decreases in other programs.

Optical Observatory and Observations--With the installation of the 60" telescope at the Mt. Hopkins site, the Observatory will have greatly improved its ability to investigate the nature and composition of the atmospheres surrounding the planets, the visible and infrared emission from the sun and stars in early stages of evolution, and the enormous emissions from Quasars and Seyfert galaxies. Information of this type is needed before manned or unmanned flights can be made to the planets or the secrets of the immense power resulting from stellar reactions can be found. An increase of \$35,000 is requested to purchase an interference spectrometer, an instrument which is used in conjunction with the 60" telescope, to provide information concerning the elemental composition of stellar material.

Radio Astronomy--Radio astronomy has developed rapidly since the Second World War and now provides a rich source of new astrophysical information. Observations of discrete spectral lines can give clues to processes on the atomic and molecular scale and the study of quasars (quasistellar radio sources) and pulsars (pulsating radio sources) can yield knowledge about these strange objects that seem to emit vast amounts of energy by some process not yet understood. At this time, increasing demands for access to radio telescopes can only be met by fully utilizing existing modest equipment. The addition of an observational astronomer will insure that the 84-foot diameter radio telescope is fully utilized and properly maintained. Since each observation on a radio telescope requires a considerable length of time, this will free the other scientists to devote a greater proportion of their research to analytical work. This is a requested increase of \$15,000 for an observational astronomer and supporting funds for supplies and equipment items.

This is a total program increase of \$50,000 for the highest priority needs.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

January 1969

Budget Projection, 1968-1974^{1/}

Programs	1968		1969		1970		1971		1972		1973		1974	
	Man Yrs.	Amount	Man Yrs.	Amount	Man Yrs.	Amount	Man Yrs.	Amount	Man Yrs.	Amount	Man Yrs.	Amount	Man Yrs.	Amount
Radio Astronomy.....	2	80,000	3	102,000	4	133,000	5	230,000	6	260,000	7	375,000	9	415,000
Gamma Ray Astronomy....	4	207,000	5	96,000	5	201,000	7	360,000	8	225,000	8	500,000	10	500,000
Meteorites and Cosmic Dust.....	13	342,000	13	259,000	13	277,000	14	350,000	14	380,000	15	450,000	15	450,000
Stellar Atmospheres and Theoretical Astro- physics.....	14	421,000	13	423,000	14	448,000	14	500,000	14	525,000	15	550,000	15	575,000
Optical Observatory and Observations.....	3	77,000	3	331,000	3	223,000	4	790,000	5	910,000	6	850,000	7	650,000
Atomic and Molecular Astrophysics.....	4	61,000	4	124,000	4	124,000	6	200,000	7	300,000	8	350,000	10	425,000
Planetary and Lunar	2	228,000	2	65,000	2	65,000	2	110,000	3	125,000	3	150,000	4	175,000
Meteors and Comets.....	6	84,000	6	103,000	6	97,000	6	110,000	7	125,000	7	150,000	7	175,000
General Scientific and Administration	5	284,000	5	315,000	5	320,000	6	330,000	6	350,000	7	400,000	8	450,000
TOTAL.....	53	1,784,000	54	1,818,000	56	1,888,000	64	2,980,000	70	3,200,000	76	3,775,000	85	3,815,000

^{1/} Revisions in this projection result from efforts to keep the scientific research programs of the SAO aligned with national priorities, often involving unanticipated opportunities for research projects in collaboration with private and Governmental research laboratories. Accelerated or delayed schedules in the recruitment of scarce scientific personnel and the procurement of specially designed and fabricated equipment items also cause fluctuations in estimated and actual program amounts.

Radio Astronomy--The basis of radio astronomy is the fact that various stars, planets, nebulae, and other stellar objects emit radio waves. Data on these radio waves can be interpreted to disclose information of astronomical importance. Observations of discrete spectral lines give clues to processes on the atomic and molecular scale; data on flare stars reveal violent events on stars; study of quasars (quasi-stellar-radio sources) yields knowledge about these strange objects which seem to emit vast amounts of energy by some process not yet understood. The Smithsonian is presently using an 84-foot radio telescope located in Cambridge, Mass., in its continuing investigation of these phenomena.

Gamma Ray Astronomy--Gamma ray astronomy, the detection and analysis of gamma rays from astronomical objects, is still in an embryonic, but rapidly developing, state. Gamma rays are particularly important for the information they carry about high-energy phenomena in the universe. Scientists at the Observatory play an important role in the utilization of the theoretically great potential of this branch of astronomy and in developing instrumentation for its pursuit. A 34-foot reflector was recently installed at the Mt. Hopkins, Ariz., facility making it the largest known ground based gamma ray facility of this type. It will measure sources of high-energy gamma rays from suspected gamma ray emitters such as the Crab Nebula and pulsars (pulsating radio sources).

Meteorites and Cosmic Dust--The Observatory is investigating the petrography, mineralogy, metallurgy, and isotopic composition of meteorites and cosmic dust in order to reveal the history and evolution of the solar system as recorded in meteoritic matter. The same techniques will be applied by the Observatory to returned lunar samples in a responsibility assigned to it by the National Aeronautics and Space Administration. Current activities include a concerted effort to measure the quantity of extraterrestrial dust falling on the earth and to establish criteria for its identification.

Stellar Atmospheres and Theoretical Astrophysics--The Observatory is making significant contributions in research in stellar atmospherics and the evolution and mechanics of the solar system. It has pioneered in the use of high-speed digital computers for solving complex astrophysical problems. SAO scientists investigate many areas of interest including the composition of the sun and stars, temperature and density variations in the solar atmosphere, and unusual high-energy reactions found in stars and galaxies.

Optical Observatory and Observations--Theoretical studies at SAO have provided techniques for solving some of the classical problems of stellar atmospheres. The need for stellar observations for confirmation of theories has led to SAO's procuring a 60-inch telescope for installation at the Mt. Hopkins Observatory, Ariz., in 1969. This instrument will also be used for investigations of planetary atmospheres and for infrared astronomy. Observational work has disclosed numerous new and unsuspected phenomena including the enormous flux of infrared radiation from quasars and the discoveries of new very bright infrared nebulae and of extremely red and "cool" objects that may possibly be new stars in their earliest stages of formation.

Atomic and Molecular Astrophysics--SAO's program in atomic and molecular astrophysics embraces a wide range of fundamental studies. Atomic and molecular processes play a major role in a diverse range of astrophysical phenomena, including those occurring in plasmas, shock waves, nuclear and solid-state physics, and planetary atmospheres. Investigations into these phenomena may yield information concerning the nature of the high energy produced by these processes.

Planetary and Lunar--Studies of planets and satellites in the solar system, including investigations that bear on the earth as a planet, are making substantial advances, to which SAO is contributing significantly, particularly in the areas of planetary atmospheres and geodesy. SAO scientists continue to study the surfaces

and atmospheres of the planets especially Mercury, Venus, and Mars. Laboratories are being set up for the isotopic, mineralogical, and petrological study of lunar materials to be returned by the Apollo mission to the surface of the moon.

Meteors and Comets--Both radio and optical observations of meteors are made regularly. The distribution of its stations around the world make possible nearly continuous observations of bright comets, yielding data not otherwise available anywhere in the world. Research continues into such areas of interest as the source and effect of nongravitational forces that effect cometary orbits and the quantity of meteors and micrometeors entering the earth's atmosphere.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>23</u>	<u>7</u>	<u>30</u>
11 Personnel Compensation.....\$	285,000	\$ 57,000	\$ 342,000
12 Personnel Benefits.....	20,000	4,000	24,000
21 Travel & Transp. of Persons ..	10,000	4,000	14,000
22 Transportation of Things	2,000	2,000	4,000
23 Rent, Comm. and Utilities.....	14,000	3,000	17,000
24 Printing and Reproduction	0	0	0
25 Other Services	16,000	15,000	31,000
26 Supplies and Materials	11,000	12,000	23,000
31 Equipment	5,000	8,000	13,000
TOTAL.....	\$ <u>363,000</u>	\$ <u>105,000</u>	\$ <u>468,000</u>

Analysis of Total

Pay Increases	\$11,000	\$10,000	\$21,000
Program.....	\$352,000	\$95,000	\$447,000

Specification of Increase (Program):

Expansion of Quantitative Research (2 positions \$34,000)

The Institute needs to expand the predictive value of its present analytical systems. To do this the increase will be used to provide a mathematical ecologist and a microclimatologist (\$25,000), research related travel (\$4,000), transportation of equipment (\$2,000), and a small amount of additional scientific supplies and materials (\$3,000).

Additional Research Assistance and Technical Support (4 positions \$34,000)

Currently the Institute does not have any research assistants and lacks adequate clerical and library help. Scientists regularly do routine clerical work. The increase will be used to provide for a research assistant, two clerk-typists, and a librarian (\$23,000) and for increased contract benefit expenses for dependents' tuition and health benefits as required by Canal Zone law (\$11,000).

Buildings and Grounds (1 position \$27,000)

The facilities of the Institute are experiencing increasing deterioration caused by the tropical climate. To provide for maintenance and to repair the facilities the increase will be used to provide a laborer (\$3,000), utilities (\$3,000), maintenance supplies and materials (\$9,000), and other maintenance services (\$4,000). An additional \$8,000 will be used to replace the old and poorly functioning air conditioners needed to efficiently function in a tropical climate.

13/ SMITHSONIAN TROPICAL RESEARCH INSTITUTE

1968 Appropriation	\$342,000
1969 Appropriation	\$363,000
1970 Estimate	\$468,000

The Smithsonian Tropical Research Institute conducts and supports basic biological research, education, and conservation in the tropics. It does so in several ways: 1) by the scientific research of its own staff, and the staff of other bureaus of the Smithsonian; 2) through the maintenance of a natural reserve on Barro Colorado Island; 3) through operation of research facilities, including both terrestrial and marine laboratories, open to visiting scientists and students; 4) by directing and supporting the education and training of students at all levels from undergraduate to postdoctoral; and, 5) by providing technical and scientific information and counsel to other institutions, both private and Governmental. Some indications of the activity at the Institute during the past 12 months are:

- Of 500 visiting scientists, interns, and tropical experts to Barro Colorado Island and the expanding Marine facilities on Naos Island (Pacific) and Gal-eta Island (Atlantic) from 57 universities and 10 institutions across the United States, more than 80 were for extended work stays resulting in more than 50 distinct contributions, so far, to the understanding of key biological concerns.
- The past three to four years of intensive and complex field and experimental efforts of the Institute's small professional staff of seven scientists has now reached an advanced stage of scientific output with more than 35 papers published, submitted, or in preparation this year.
- The Institute conducted 30 professional seminars with attendance ranging from 30 to 50 local and visiting scientists and experts on topics ranging from the first New World tropical survey on seasonality to worldwide pesticide residual distributions.
- Scientists at the Institute provided more than 2,000 hours of professional consultation to visiting researchers.

Productivity at STRI has increased to the limit of available resources. Further potential can be released by relatively small additions of carefully selected staff and materials. An increase of \$95,000 would correct severe work-load hardships, allow for an important increase of scientific scope, and permit greater efficiency and flexibility in carrying out the assigned mission of the bureau: study and analysis of critical biological problems, training of advanced students from across the United States (and Latin America), and the provision of advice and assistance to scientists of other institutions and the staff of other Government agencies and private organizations. An additional \$10,000 are requested for necessary pay increases.

Need for Increase--Competition for scarce resources and life space marks the ecological crises of our times--in our cities, fields, and streams. For ages this has been the critical problem for biota in the tropics, where the greatest diversity of life forms on Earth produces intense interspecies competition. STRI scientists analyze the outcome of this competition--the ways in which evolutionary success is achieved. STRI scientists discern the mechanisms whereby broad environmental and biological principles actually operate at the individual level. This constitutes the major significance of STRI's field and experimental studies on the evolution, species diversity, and environmental and social adaptations of the tropical marine and terrestrial life forms. In order to continue and strengthen research aimed at the understanding and beneficial control of environmental forces, increases for the higher priority needs, from a broader spectrum of requirements are outlined. These are expansion of research competence, provision of additional research assistants and technical support, and maintenance of buildings and grounds.

STRI's research has concentrated on behavior, evolution, and qualitative ecology. This must be supplemented by a rapid and energetic program of more quantitative ecology in order to increase the predictive value of present analytical methods. New competence must be acquired by the addition of two new scientists. One would be a mathematical, theoretical ecologist to develop the models and techniques for more sophisticated attacks upon time and energy problems, refine and coordinate some of the investigations currently in progress, and develop plans for additional projects. The research of the bureau also must be extended to new organisms and different features of environment. For this, it will be necessary to acquire a microclimatologist, whose addition would add another critical dimension to STRI work. Additional support funds of \$9,000 are required for their travel, transportation, services, supplies, and equipment. Increased computer services will become essential in the fiscal year 1971 budget.

The Institute has virtually no research assistants. Although three assistants are essential for the marine and terrestrial research programs, only one can be requested in this budget. This investment will be paid back many times over in increased research output. In addition, a general strengthening of the present very limited clerical and library staff is required to serve both the resident staff and visiting researchers. Two clerk-typists and full-time librarian are absolutely essential. The library contains the finest New World tropical reference collection outside the United States, and is used by many other Federal programs in the region. In addition, much routine typing as well as other requisitioning and paper-work chores are being performed by the scientists themselves. The Institute also must budget for increased contract benefit expenses for its employees as required by Canal Zone law including dependents' tuition and health services (\$11,000).

Maintenance of buildings and grounds within the Smithsonian Tropical Research Institute complex of facilities is provided for entirely within its own direct budget (in contrast to most other components of the Smithsonian who receive services budgeted for by the Buildings Management Department). Approximately 40 percent of the STRI budget has been directed at the maintenance and operation of its facilities. Every possible economy has been made. The number of workers necessary to maintain Barro Colorado Island station has been reduced to the minimum. The budget is inadequate, however, to keep pace with increasing deterioration of the physical facilities. Also, the use of these facilities is greatly increasing (research and study visits of varying duration numbered 289 in 1966, 468 in 1967, and 567 in 1968, with an increasing spread of facilities--Barro Colorado, Galeta Island (Atlantic), and Naos Island (Pacific), plus mainland facilities). An efficient approach to maintenance would be to establish a small central labor pool, supervised by the island manager, in order to provide specialized maintenance and servicing, to replace deteriorated materials, to protect the present investment and facilities, and to continue their serviceability. Although three additional laborers are needed, only one can be requested in this budget. STRI has been opportunistic in securing present building space at the least possible cost to the Government; however, utilities expenses are increasing and must be fully borne by the Institute. Increased maintenance supplies and other services are essential (\$16,000). Air conditioners are mandatory for proper working conditions. Those on hand are both few and ancient and must be replaced at a cost of \$8,000 before irreparable breakdowns occur. This is a total program increase of seven positions and \$95,000.

Construction funds for essential repairs to existing buildings and to meet the long deferred need for improved laboratory and storage space are included in the Restoration and Renovation Appropriation request.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

RADIATION BIOLOGY LABORATORY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>32</u>	<u>4</u>	<u>36</u>
11 Personnel Compensation.....\$	331,000	\$ 46,000	\$ 377,000
12 Personnel Benefits.....	26,000	5,000	31,000
21 Travel & Transp. of Persons ..	5,000	0	5,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	256,000	256,000
24 Printing and Reproduction	0	0	0
25 Other Services	20,000	0	20,000
26 Supplies and Materials	24,000	0	24,000
31 Equipment	<u>41,000</u>	<u>0</u>	<u>41,000</u>
TOTAL.....\$	<u>447,000</u>	<u>\$ 307,000</u>	<u>\$ 754,000</u>

Analysis of Total

Pay Increases	\$17,000	\$7,000	\$24,000
Program.....	\$430,000	\$300,000	\$730,000

Specification of Increase (Program):

Relocation Operating Costs (4 positions \$300,000)

In order for the Laboratory to move from its present cramped and unsuitable quarters in the basement of the 115-year-old Smithsonian Institution building to a properly configured laboratory building of adequate size, an increase in funds is essential to meet new operating expenses. Increase would provide for maintenance and service personnel to care for complex laboratory equipment and systems (\$44,000), and for rent and utilities (\$256,000).

14/ RADIATION BIOLOGY LABORATORY

1968 Appropriation	\$399,000
1969 Appropriation	\$447,000
1970 Estimate	\$754,000

The program of the Radiation Biology Laboratory, from the initial charge that it be concerned with the effects of the sun's energy on earth's life, has been devoted exclusively to the study of the responses of living organisms to various qualities and intensities of radiant energy and to the determination of the influence of various factors in the environment--light, temperature, humidity, and atmospheric content--on growth and development cycles of plants. As a corollary to the serious concern with regard to the deleterious effects of air pollutants on living systems, there has been speculation that less of the sun's energy is reaching the earth's surface. Recent comparisons with data gathered by the Smithsonian at the turn of the century indicate that the decrease in solar energy may be as much as 16 percent. There are essentially no data available to indicate what the long term effects of such a reduction will be upon crop and food production. The Laboratory's program of solar energy measurements and biological response correlation fills a significant gap in efforts to provide understanding of the interacting factors that man must adjust and control in order to maintain a habitable environment. The Laboratory has been credited with major contributions in photobiology which include the first detailed action spectra of such diverse responses as photosynthesis, photocontrol of seed germination, the induction and reversal of photomorphogenesis, and phototropism.

An increase of \$300,000 is requested to provide for operating expenses at the Laboratory's relocation site in Rockville, Md. An additional \$7,000 are requested for necessary pay increases.

Need for Increase--Relocation of the Laboratory has been planned for a considerable period of time because of its inadequate and unsuitable quarters in the basement of the 115-year-old Smithsonian Institution building. Although the Laboratory has taken advantage of every square foot in cramped, dungeon-like rooms with low vaulted ceilings, the space has become very unsatisfactory for constant condition rooms to provide controlled radiant energy, precise temperature and humidity controls, and general physiology and chemistry laboratories. In the renovation of the building it has been necessary to use for machinery rooms and other purposes a part of the space occupied by the Laboratory, thus reducing an already inadequate area. The Laboratory's research program has become severely impeded by this situation. The provision of a properly configured laboratory area of sufficient size is essential to insure future contributions to knowledge on the effects of light on man and his environment.

Funds have been appropriated in fiscal years 1968 and 1969 in the Restoration and Renovation section of the Smithsonian Budget for partial costs of the relocation. Blueprints and specifications have been completed, and an extensive and exhaustive search carried out to locate appropriate quarters at an economical cost. A new laboratory building, providing approximately 50,000 square feet, available for lease has been located in Rockville, Md. Additional Restoration and Renovation funds are being requested to ready the building for occupancy.

This is a request for funds for basic operating costs of the new laboratory building. These include rent, utilities to maintain controlled environment conditions, and four mechanical and service personnel to operate and repair complex refrigeration, plumbing, and electrical equipment used in experiments. The complexity of technology, the cost of equipment employed in experiments, and the need to maintain facilities in continuous operation around the clock for long periods while experiments are in progress require the presence of this in-house support staff. This is a requested program increase of \$300,000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

SMITHSONIAN OFFICE OF ECOLOGY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>5</u>	<u>1</u>	<u>6</u>
11 Personnel Compensation.....	\$ 94,000	\$ 10,000	\$ 104,000
12 Personnel Benefits.....	7,000	1,000	8,000
21 Travel & Transp. of Persons ..	6,000	2,000	8,000
22 Transportation of Things	0	2,000	2,000
23 Rent, Comm. and Utilities.....	3,000	5,000	8,000
24 Printing and Reproduction	1,000	0	1,000
25 Other Services	6,000	11,000	17,000
26 Supplies and Materials	1,000	1,000	2,000
31 Equipment	8,000	5,000	13,000
TOTAL.....	\$ <u>126,000</u>	\$ <u>37,000</u>	\$ <u>163,000</u>

Analysis of Total

Pay Increases	\$4,000	\$2,000	\$6,000
Program.....	\$122,000	\$35,000	\$157,000

Specification of Increase (Program):

Chesapeake Bay Center for Field Biology (1 position \$35,000)

The Center presently consists of 700 acres. Negotiations are underway to increase these holdings to approximately 2,000 acres of undisturbed land in the Chesapeake Bay that is of significant value to scientists concerned with ecology, conservation, and the effects of air and water pollution. The increase will be used to provide for a full-time resident manager (\$9,000) to protect and maintain the property, travel to study areas(\$2,000), transportation of research equipment (\$2,000), utilities and communications (\$5,000), scientific and preservation supplies (\$1,000), equipment essential for research (\$5,000), and other services related to the maintenance and operation of the Center (\$11,000).

15/ SMITHSONIAN OFFICE OF ECOLOGY

1968 Appropriation	\$120,000
1969 Appropriation	\$126,000
1970 Estimate	\$163,000

The origin of the Smithsonian Office of Ecology, established in 1965, lies in the need for cooperation between various scientific disciplines in research relevant to effects of rapidly changing environments on natural resources and on human societies. The historical roots for a program in ecology extend over nearly the entire span of the Smithsonian's 122 years, particularly with reference to the development of biological collections as a basis for precise identification of the components of ecological systems. The Smithsonian with the largest natural history collections in the world, with two natural preserves, and with a productive staff performing original research on man, plants, animals, in astrophysics and the earth sciences, and in the humanities, is a logical center of activity for ecological research. The Office of Ecology is a program office--not a research bureau. It was created to encourage, support, and coordinate research within the various bureaus of the Smithsonian Institution and between the Smithsonian and other organizations. The Office guides ecological studies, plans and develops international projects, finances fieldwork, arranges ecological seminars and conferences, and offers the research resources of the Chesapeake Bay Center for Field Biology.

An increase of \$35,000 is requested for protection of the property and maintenance of the research facilities at the Chesapeake Bay Center for Field Biology. An additional \$2,000 are requested for necessary pay increases.

Need for Increase--Man faces an urgent need to increase his knowledge of the living components of his environment as a basis for maintaining or correcting its quality and assuring his cultural and economic development and wellbeing. The byproducts of human progress are rapidly modifying the world environment. A concerted interdisciplinary effort must be made to understand the relationships among man, animals, and plants and predict the consequences of human technology to avoid irreversible damages to these relationships. The research conducted at the Chesapeake Bay Center for Field Biology will contribute toward understanding the processes that control the stability and populations of ecological systems.

The Center provides basic facilities for research and training along with land representative of the general mosaic of the densely-populated Washington-Baltimore region, including both disturbed and nondisturbed areas. The Center occupies an important segment of the Chesapeake Bay, the most important bay on the east coast of the United States from the standpoint of economic and recreational resources. With its acres of mature forests, overgrown meadows, salt marshes, eroding bluffs, sandy beaches, and shallow estuaries, the Center constitutes an ecological baseline against which to compare other areas in this rapidly changing region. Increasingly being used by scientists and students from the Smithsonian, area universities, and Federal agencies, it offers a variety of opportunities for long-term research on vegetation, pollution, and wildlife protection.

At the present time there are 700 acres of land at the Center. Negotiations are underway to acquire surrounding land in order to protect the Center from intrusion and to preserve its undisturbed state. This will increase the facilities available for ecological study to almost 2,000 acres and 12 miles of shoreline. A full-time resident manager is required to insure protection of the land from poachers and vandals and to oversee the daily care and maintenance of the facilities. Additional funds are needed for the operation and maintenance of the Center including utilities, acquisition, repair, and maintenance of equipment, and supplies for scientists using the Center. This is a program increase of \$35,000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

OFFICE OF OCEANOGRAPHY AND LIMNOLOGY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>18</u>	<u>7</u>	<u>25</u>
11 Personnel Compensation.....\$	227,000	\$ 61,000	\$ 288,000
12 Personnel Benefits.....	15,000	5,000	20,000
21 Travel & Transp. of Persons ..	5,000	3,000	8,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	5,000	0	5,000
24 Printing and Reproduction	0	0	0
25 Other Services	4,000	8,000	12,000
26 Supplies and Materials	11,000	17,000	28,000
31 Equipment	12,000	15,000	27,000
TOTAL.....\$	<u>279,000</u>	<u>\$ 109,000</u>	<u>\$ 388,000</u>

Analysis of Total

Pay Increases	\$12,000	\$9,000	\$21,000
Program.....	\$267,000	\$100,000	\$367,000

Specification of Increase (Program):

Oceanographic Sorting Center (7 positions \$100,000)

The Center currently is faced with a backlog of several million marine biological and geological specimens that require processing and distribution to a worldwide network of scientists for analyses aimed at discovering the resources of the seas. In addition, several international expeditions are currently in progress or are planned for the immediate future that will add thousands of samples that need processing. The increase will be used to provide for seven sorter-technicians (\$57,000), travel to examine new specimens (\$3,000), processing and preservation supplies (\$17,000), equipment (\$15,000), and other related services (\$8,000).

1968 Appropriation	\$259, 000
1969 Appropriation	\$279, 000
1970 Estimate	\$388, 000

The Smithsonian Institution has been engaged in studies of marine organisms for more than one hundred years. Its first extensive oceanographic collections came from the 1838-42 Wilkes' around-the-world expedition to investigate the commercial whaling industry. The Office of Oceanography and Limnology was established to increase knowledge of the oceans and fresh waters that comprise 71 percent of our planet and to broaden the ability of oceanographers to respond to national needs. The Office does this in several ways. Through its Sorting Centers in Washington, D.C., and in Tunisia (the latter principally supported by the Foreign Currency Program) the Office serves as a substantial producer and repository of biological and geological data for the Federal Government. The Office also facilitates the productive involvement of Smithsonian scientists in marine and fresh-water research and provides outside scientists and research organizations with a focal point for their effective use of Smithsonian resources within the national interest. Emphasis has been placed on relating the needs of natural history specialists to advanced technology including deep diving submersibles, underwater habitats, and improved sampling devices. Special emphasis has also been given to involving the specialists in the problems associated with the ecological consequences of environmental modification, including such biological changes as may result from the connection of the two oceans, problems of near shore modification, and pollution. Working closely with the National Commission on Marine Sciences, Engineering and Resources, and with the National Council for Marine Resources and Engineering Development, the Office participates in many of their committees and panels. It also responds to many requests for oceanographic information from the Departments of the Interior, Navy, State, Army, Transportation, and Atomic Energy Commission.

An increase of \$100, 000 is requested to strengthen the operations of the Smithsonian Oceanographic Sorting Center, thus enabling it to process and distribute urgently needed, backlogged specimens collected during past major oceanographic expeditions. In addition, the Sorting Center must begin to train sorters to process material from collecting programs currently in progress, or about to begin, including EASTROPAC, Cooperative Studies of the Mediterranean and Caribbean, and the planned International Decade of Oceanographic Exploration. This support will also enhance the Sorting Center's capability to process materials developed in studies associated with estuaries and nearshore pollution problems. An additional increase of \$9, 000 is requested for necessary pay increases.

Need for Increase--The Office of Oceanography and Limnology operates the Smithsonian Oceanographic Sorting Center which processes marine specimens from United States and international expeditions for use by more than 300 scientists of 27 countries in specimen-related research. This Center provides marine biological and geological identification and systematics services. Serving as a national referral service in all kinds of specimen-based activities, from field collecting to the disposition of identified species in permanent repositories, the Center receives bulk samples from Governmental and private sources; separates them into appropriate groupings for identification by specialists; and coordinates collecting station data (water temperature, salinity, etc.) to provide maximum environmental information with the specimens.

During the past year, several thousand samples were received and four million specimens were sorted for distribution to scientists. As an example of the demand for specimens, one visit to a few midwestern universities located more than 20 scientists who desired material from the Center for their research.

In spite of the high productivity of the Center, its progress has been hampered by a stringent budget. A significant backlog of several million specimens has built up from expeditions, including several which were completed more than

two years ago. Unless this work is completed soon, important contributions to our understanding of the potential food resources of the oceans will be lost with the press of new materials, resulting from several international expeditions. The backlogged materials contain important baseline information, which is essential for the evaluation of the effects of environmental modification. For instance, this information, combined with planned studies in anticipation of the proposed Isthmian sea level canal, and historical material from the Great Lakes and other important environmental areas, must be gathered and analyzed before engineering devices can be designed to eliminate possible detrimental consequences.

The seven positions requested will be used for sorter-technicians who will be trained to process and preserve the large number of specimens at the Center. Within the organization, considerable effort has been taken to train and employ unemployed and underemployed people. Their employment will relieve a serious workload problem and provide new skills and self-confidence to the people involved. Support funds in the amount of \$43,000 are requested to provide services, supplies, and equipment essential to sort, package, and distribute specimens. This is a total program increase of \$100,000.

An automatic data processing system for maintaining records of collected specimens has been designed and installed. Many of the previously manual operations of preparing labels, inventory cards, and invoices have been automated. The inventory provides a necessary record of the Center's activities and eventually will become a useful tool for studies of ecological communities and distribution of taxonomic groups. The inventory is designed to contain specimen data as well as associated information such as the ship's name, the collector, station number, position, date, depth, and type of collecting gear. Data retrieval can be made on one or any combination of these parameters.

Smithsonian Oceanographic Sorting Center
(1963-1968)

	<u>Samples Received</u>	<u>Specimens</u>		<u>No. of Shipments</u>	<u>No. of Receiving Specialists</u>
		<u>Sorted</u>	<u>Shipped</u>		
Algae	4,975	4,314	2,059	188	18
Geology	4,803	562	382	14	41
Invertebrates	4,872	5,714,503	2,570,740	251	123 ^{1/}
Plankton	17,157	11,451,645	2,964,089	239	64 ^{1/}
Vertebrates ..	<u>3,854</u>	<u>657,736</u>	<u>541,843</u>	<u>494</u>	<u>84</u>
Totals ..	35,661	17,828,760	6,079,113 ^{2/}	1,186	330 ^{3/}

^{1/} About 30 duplicates

^{2/} In addition, 12,171 lots of unsorted specimens were shipped.

^{3/} In approximately 27 countries

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

CENTER FOR THE STUDY OF MAN

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>0</u>	<u>1</u>	<u>1</u>
11 Personnel Compensation.....\$	0	\$ 14,000	\$ 14,000
12 Personnel Benefits.....	0	1,000	1,000
21 Travel & Transp. of Persons ..	0	1,000	1,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	2,000	2,000
24 Printing and Reproduction	0	2,000	2,000
25 Other Services	0	0	0
26 Supplies and Materials	0	0	0
31 Equipment	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL.....\$	<u>0</u>	<u>\$ 20,000</u>	<u>\$ 20,000</u>

Analysis of Total

Pay Increases	0	0	0
Program.....	0	\$20,000	\$20,000

Specification of Increase (Program):

Urgent Anthropology (1 position \$20,000)

This request is aimed at continuing work on the revision of the 60-year-old Handbook of North American Indians by coordinating the research contributions of some 2,000 experts in Indian culture and by planning and overseeing an organized program of studies of fast-disappearing subcultures. Increase provides for a program coordinator (\$15,000) and travel (\$1,000), communications (\$2,000), and printing (\$2,000) to develop Handbook revisions and high priority study projects.

17/ CENTER FOR THE STUDY OF MAN

1968 Appropriation	0
1969 Appropriation	0
1970 Estimate	\$20,000

The Center for the Study of Man was established in 1968 by the Smithsonian Institution following a report and recommendations by an ad hoc committee consisting of four outstanding anthropologists asked to review the total operation of the Office of Anthropology of the Museum of Natural History. The committee urged that the Center be organized to assume responsibility for planning and developing research and documentation in the area of urgent anthropology. Actual research is performed by personnel in other organizations of the Smithsonian, such as the Office of Anthropology and the Museum of History and Technology, and scholars and scientists from colleges and universities throughout the world. These researchers are assigned specific areas of study and their efforts are coordinated by the Center. Their association with the Center lasts only until they complete their research, so that there is a continuous change in the research staff as each phase of the research ends and another begins. By providing a focus for the interdisciplinary study of man, the Center insures that research will be efficiently and effectively applied to the study of rapidly changing civilizations.

An increase of \$20,000 is requested to continue research and documentation projects in urgent anthropology.

Need for Increase--At the present time, the Center is engaged in two high priority projects, The Handbook of North American Indians and the study of American and other subcultures. The Indians passed their customs and history from generation to generation by word-of-mouth. Each year the number of older tribal members available to recount this information decreases. In order to revise the 60-year-old Handbook, now badly out of date, which is the primary authoritative reference in this field, it is essential to gather information while it is still available. The revised Handbook will be the definitive work in the field of North American Indian cultures. Some preliminary work by the Center has resulted in the compilation of a listing of over 2,000 experts in various aspects of Indian culture who are willing to contribute their time toward the revision of this Handbook. While it is difficult to place a value on this contribution, a conservative estimate would be at least \$2,500,000. The Smithsonian Institution is the logical center to direct the efforts of thousands of experts in the field of American Indian studies so that a new and long overdue Handbook of North American Indians can be produced.

Urgent anthropology recognizes that social and economic influences, such as mass media and the general mobility of groups, are blending distinctive cultural traits and are causing a rapid disappearance of some cultures and subcultures. These cultures must be documented and studied while they still exist as distinct entities and while the results of this research may be applied to the solution of local and national problems. For example, information concerning the evolution and status of the Negro subcultures in America or the customs of various immigrant groups is not only of scientific value, but it is necessary for the effective planning and implementation of many social and economic programs. Research in this area involves the efforts of a considerable number of anthropologists. With its long history of anthropological work, the Smithsonian can effectively mobilize the world's anthropologists in an organized program to carry out urgent anthropological research on disappearing and rapidly changing cultures.

The Center's most urgent need at this time is for a program coordinator to continue work on the revision of the Handbook of North American Indians and to coordinate the efforts of many researchers in urgent anthropology. Support funds are required for operating expenses such as travel, communications and printing. This is a requested program funding of \$20,000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

CENTER FOR SHORT-LIVED PHENOMENA

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>0</u>	<u>0</u>	<u>0</u>
11 Personnel Compensation.....\$	0	\$ 0	\$ 0
12 Personnel Benefits.....	0	0	0
21 Travel & Transp. of Persons ..	0	0	0
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	10,000	10,000
24 Printing and Reproduction	0	0	0
25 Other Services	0	0	0
26 Supplies and Materials	0	0	0
31 Equipment	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL.....\$	<u>0</u>	<u>\$ 10,000</u>	<u>\$ 10,000</u>

Analysis of Total

Pay Increases	0	0	0
Program.....	0	\$10,000	\$10,000

Specification of Increase (Program):

Communications Support for Timely Event Notification (\$10,000)

This will provide communications services needed to disseminate accurate and timely event reports to a network of almost 800 scientists in 86 countries. Sixty-eight major geophysical, astrophysical, and biological events were reported by the Center in 1968. Request is for \$10,000 for radio, cable, telephone, and mail costs.

1968 Appropriation	0
1969 Appropriation	0
1970 Estimate	\$10,000

The investigation of short-lived natural phenomena is a difficult problem because they are unexpected, transient in nature, and often occur in remote locations. Yet many of these events are of unusual scientific significance. In order to provide the scientific community with a means of rapidly responding to these occurrences, the Center for Short-Lived Phenomena was established in fiscal year 1968. The Center serves as a clearing house for the timely receipt and dissemination of information concerning rare natural events which might otherwise go unobserved or uninvestigated, such as remote volcanic eruptions and earthquakes, the birth of new islands, the fall of meteorites and large fireballs, and sudden changes in biological and ecological systems. Rapid dissemination of event reports permits research teams with data-gathering instruments to enter an area, often while the event is occurring, to gather information that otherwise would be lost to science. Reports are received from a wide range of sources, including news media, private citizens, individual scientists, and scientific observatories. These reports are made available to investigators and others who become correspondents of the Center and indicate their desire to receive them. Reports are transmitted by radio, cable, telephone, or air mail, depending on the correspondent's ability to receive the information and/or respond to the event.

An amount of \$10,000 is requested to provide for communications services to report these events to a worldwide network of scientists and researchers.

Need for Increase--During calendar year 1968, the Center participated in 68 geophysical, astrophysical, and biological events, including the birth of an island, 12 volcanic eruptions, 17 major earthquakes, 11 fireballs, two rare animal migrations, three fish kills, five oil-tanker spills, a locust swarm, a major drought, two meteorite falls, a seiche, a mussel poisoning, a sea surge, and the disappearance of an island. These events led to 34 actual onsite investigations including seven major expeditions. Eighteen scientific publications have resulted from the Center's operations. The Center's work immediately received an enthusiastic response from the scientific community throughout the world. It has been besieged with requests from universities, foundations, Federal agencies, and scientific societies asking to become part of the Center's reporting system. Its number of correspondents has grown to 755 in 86 countries, representing every major scientific discipline. New requests are arriving at the rate of 50 a month. Thirty-six Federal agencies are users of the Center's services.

Scientists and organizations have cooperated with the Center by reporting events, obtaining additional information about events that occur in their areas, and providing assistance to research teams sent to their areas to investigate events and make measurements while environmental changes are occurring.

The ability to communicate quickly and accurately is the key to the Center's success. The Center has been located at the Smithsonian Astrophysical Observatory in order to take advantage of the Observatory's extensive communications facilities and network. The increasing communications traffic of the Center is placing an undue burden upon the facilities of this bureau. Although the Smithsonian is seeking support from user organizations and individuals in order that, to the maximum extent possible, the Center can be funded by those receiving its services, some basic core support is sought for nondeferrable operating expenses. The most essential need is \$10,000 for communications services to assure that sufficient facilities will be available to maintain the required level of event reporting.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

SMITHSONIAN RESEARCH AWARDS PROGRAM

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>0</u>	<u>0</u>	<u>0</u>
11 Personnel Compensation.....\$	0	\$ 0	\$ 0
12 Personnel Benefits.....	0	0	0
21 Travel & Transp. of Persons ..	0	0	0
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	400,000	0	400,000
26 Supplies and Materials	0	0	0
31 Equipment	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL.....	\$ <u>400,000</u>	\$ <u>0</u>	\$ <u>400,000</u>

Analysis of Total

Pay Increases	0	0	0
Program.....	\$400,000	0	\$400,000

Specification of Increase (Program):

No program increase is sought for fiscal year 1970 in order to concentrate requested additional support to correct severe research competence deficits and backlog situations in other science activities.

19/ SMITHSONIAN RESEARCH AWARDS PROGRAM

1968 Appropriation	\$400,000
1969 Appropriation	\$400,000
1970 Estimate	\$400,000

The Smithsonian Research Awards Program was established in fiscal year 1966 to provide funds for research and education in fields of scholarship of interest to the scientific staff. The program concentrates on field-oriented fundamental research which takes advantage of unexpected opportunities to investigate biological and natural events occurring in the field. Further, it serves as an important means whereby scientists of the Smithsonian Institution may engage in collaborative field research projects in timely fashion with colleagues located in other institutions. Many opportunities for participation in expeditions and other field projects would be lost were it not for the Research Awards Program providing modest but essential assistance. The Smithsonian Research Awards Advisory Committee reviews all proposals and recommends that support be given to those having the greatest scientific merit. Careful consideration is given to the competence of the investigator, the relevance of the research, and the facilities that are available. In addition to worthwhile publications resulting from research supported through the Research Awards Program, an initial research effort activated by a research award, in many cases, has been continued through funding by other Federal granting agencies, and research and development foundations.

No program increase is requested in fiscal year 1970.

During the budget year the current level of funding will be used to permit the prompt investigation of new research opportunities, as well as the maintenance and continuity of basic long-term research already underway through essential supplementary support.

OFFICE OF ACADEMIC PROGRAMS

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>14</u>	<u>2</u>	<u>16</u>
11 Personnel Compensation.....\$	99,000	\$ 17,000	\$ 116,000
12 Personnel Benefits.....	7,000	1,000	8,000
21 Travel & Transp. of Persons ..	3,000	0	3,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	374,000	40,000	414,000
26 Supplies and Materials	3,000	0	3,000
31 Equipment	<u>4,000</u>	<u>0</u>	<u>4,000</u>
TOTAL.....	<u>\$ 490,000</u>	<u>\$ 58,000</u>	<u>\$ 548,000</u>

Analysis of Total

Pay Increases	\$4,000	\$3,000	\$7,000
Program.....	\$486,000	\$55,000	\$541,000

Specification of Increase (Program):Higher Education and Research Training (\$40,000)

The Smithsonian has served higher education from the time of its establishment by making its collections, laboratories, and professional staff available to students and scholars for research and research training. In fiscal year 1968, under a program of visiting research associates, 53 Ph. D. s, awarded by home universities, were earned within the Smithsonian by graduate students conducting research under Smithsonian professional staff supervision. Applications for these opportunities greatly outnumber the availability of fellowships with current funds. Only 29 percent of applications could be accepted this year. Request is for \$40,000 to increase the number of stipends.

School Visit Program (2 positions \$15,000)

Over 30,000 children explored the Smithsonian exhibits under a program of curriculum-related, escorted school tours in each of fiscal years 1967 and 1968. This program was made possible by a two-year demonstration grant by a private group enabling a special staff assignment to train and coordinate volunteer docents. The grant will not extend into fiscal year 1970. To continue the program, a program coordinator and a clerk-typist are essential to provide volunteer recruitment, training, and assignment (\$15,000).

20/ OFFICE OF ACADEMIC PROGRAMS

1968 Appropriation	\$218, 000
1969 Appropriation	\$490, 000
1970 Estimate	\$548, 000

The Office of Academic Programs was formerly the Office of Education and Training. Its name was changed to specify its purpose as making Smithsonian resources available for formal education in addition to general open education as offered to the public in the museums and galleries. At the higher educational level, the Office of Academic Programs develops and coordinates the Institution's activities in graduate study through a variety of cooperative agreements with the nation's universities. The Office promotes and arranges research training at the Smithsonian for doctoral candidates and junior postdoctoral investigators. As a part of this training the Office oversees the development of seminars in the various curatorial and disciplinary areas which are central to the Smithsonian Institution's research effort. Formal education activities below the university level are also a responsibility of the Office. These include the highly popular escorted school visits, the preparation of teaching guides, lectures, and audio-visual materials. Public demand for use of the educational potential of the Smithsonian is growing rapidly at all levels of formal training. The Institution increasingly is being looked to as a major supplementary education resource by colleges and universities, and by elementary and secondary school systems across the nation.

An increase of \$55, 000 is requested including \$40, 000 for the higher education and research training program and \$15, 000 to provide school tours. A further \$3, 000 are sought for necessary pay increases.

Need for Increase--From the time of its establishment the Smithsonian has served education. Its facilities have been focal points where visiting students, scientists, and scholars conduct research. It has actively encouraged the development of graduate schools. In 1901 the Smithsonian helped to secure the passage of basic authorizing legislation to make available its own "facilities for study and research," and those of Government research establishments generally, to students and other qualified investigators (20 U.S.C. 91). The President's memorandum of September 13, 1965, "Strengthening Academic Capability..." enjoined Federal research establishments to conduct their programs "with a view to strengthening academic institutions." The Federal Council for Science and Technology in a recent report urges Government laboratories to take the initiative in establishing joint activities with universities so as to make their facilities available "to the maximum extent practical."

The Smithsonian aims to serve the academic community as a national center of research training in several subject areas where it excels, thereby extending on a wide front the benefits of public investment in its research. The Institution makes a distinctive qualitative contribution to the future supply of teachers and scholars. Smithsonian activities in research supervision and formal instruction also yield substantial benefits to the Institution because they nourish the academic environment. This is an essential ingredient for successful intellectual inquiry. The interplay between Smithsonian Institution staff and outside scholars brings with it a heightened awareness of trends in the development of knowledge and constructively influences the design of new research. Students absorb rapidly new methods and findings, and accelerate the process of discovery and the communication of results.

A primary emphasis of the Office of Academic Programs is that of planning, coordinating, and administering visiting research appointments in fields of concern to the Smithsonian bureaus. There are programs in the physical sciences, evolutionary and systematic biology, American studies, environmental biology, anthropology, history of science and technology, tropical biology, the history of art and museum studies. These programs have now grown to the level where thirty or more visiting scholars and scientists at the postdoctoral level come annually to the

Institution (for periods of several months to a year) to pursue mutually valuable research studies in consultation with members of the Smithsonian's professional staff. In addition, under a program of fellowship awards, promising graduate students conduct research under the supervision of Smithsonian scientists or scholars. In fiscal year 1968, fifty-four Ph.D.s, awarded by these students' home universities, were earned within the Smithsonian. Of these, seven were in American studies; one in anthropology; 20 in environmental, evolutionary, and systematic biology; three in the history of science and technology; and 23 in the physical sciences, primarily in astrophysics.

Applications for pre and postdoctoral training using the laboratories, collections, and professional resources of the Smithsonian have greatly increased, especially in historical studies with the opening of the National Collection of Fine Arts and the National Portrait Gallery. University requests for cooperative arrangements at the graduate level are made with increasing frequency. This is indicative of the high quality of Smithsonian programs. For academic year 1968-69, the Institution could accept only 14 percent of the postdoctoral applications and 29 percent of those coming from graduate students. The Institution's inability to respond to rising demand is viewed with concern. The Smithsonian possesses resources for increasing its academic contribution. But these are not being used to capacity. In order to help extend the availability of these resources and to permit wider participation in graduate study, an increase of \$40,000 in funds for stipends is requested.

For its elementary and secondary education activities, the Institution requires a program coordinator and a clerk-typist to schedule school tours and oversee the corps of volunteer docents. With the aid of a demonstration grant from the Junior League of Washington, the Smithsonian trained (through a special staff assignment) volunteers to coordinate a program of escorted school tours. Over 800 classes and 30,000 elementary school students participated in these curriculum-related museum visits in fiscal year 1968. Prior to the grant, the volunteer docent corps could not be built-up beyond 30 or so, a number insufficient to meet the heavy demand. Now 150 docents can be trained each year. In coming years volunteers will be drawn from a wider range of community organizations. This will allow for an increase in the number of students and schools served. The number of major halls available for escorted class visits will also be expanded. Currently, ten halls are available.

The demonstration grant will not extend into fiscal year 1970. Without it, the program cannot continue. The coordination and detail necessary for recruitment, training, and assignment at the present level of activity demands a full-time staff. The provision of these two positions will greatly increase the use of museum collections and exhibits for purposes of primary education. This is a program increase of \$15,000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

OFFICE OF INTERNATIONAL ACTIVITIES

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>6</u>	<u>1</u>	<u>7</u>
11 Personnel Compensation.....\$	74,000	\$ 17,000	\$ 91,000
12 Personnel Benefits.....	6,000	1,000	7,000
21 Travel & Transp. of Persons ..	6,000	2,000	8,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	11,000	1,000	12,000
26 Supplies and Materials	1,000	1,000	2,000
31 Equipment	<u>0</u>	<u>1,000</u>	<u>1,000</u>
TOTAL.....\$	<u>98,000</u>	<u>\$ 23,000</u>	<u>\$ 121,000</u>

Analysis of Total

Pay Increases	\$2,000	\$3,000	\$5,000
Program.....	\$96,000	\$20,000	\$116,000

Specification of Increase (Program):Foreign Currency Program Workload (1 position \$20,000)

The number of active grants to American institutions for research in the excess foreign currency countries has more than doubled to 80 within the existing appropriation. Administrative costs have been kept at about 2.5 percent of the grant funds, but the increased workload of proposals and active grants requires an additional grants specialist (\$15,000) and funds for travel (\$2,000), services (\$1,000), supplies (\$1,000), and equipment (\$1,000) in support of grant administration.

21/ INTERNATIONAL ACTIVITIES
Office of International Activities

1968 Appropriation	\$101,000
1969 Appropriation	\$98,000
1970 Estimate	\$121,000

The Office of International Activities establishes cooperative research programs with institutions of higher learning in other countries and fosters programs for the international exchange of persons in the sciences and humanities of traditional concern to the Institution. The Office administers the Smithsonian's Special Foreign Currency Program and the joint Smithsonian-Organization of American States fellowship program for Latin American graduate students in the biological sciences. It also provides advisory services to the Department of State and various private organizations on exchange of persons in fields of Smithsonian competence.

An increase of \$20,000 is requested to manage increasing documentation and correspondence caused by a doubling of the number of Special Foreign Currency Program Grants administered by the Office. An additional \$3,000 are requested for necessary pay increases.

Need for Increase--Under the Special Foreign Currency Program, grants are made to American institutions of higher learning to carry out field expeditions and research, primarily in archeology and systematic and environmental biology, in the excess foreign currency countries. Although the total appropriation of foreign currencies administered (\$2,316,000) has remained the same since fiscal year 1967, the number of active grants has more than doubled since that year--from about 40 to more than 80. This research support has benefited more than 200 United States institutions in over 25 States. The cutback in dollar support from other sources for overseas research is further increasing the number of proposals being submitted.

The growth in the number of active grants has resulted in a substantial gain in administrative activity, yet there has been no corresponding increase in staff to carry it out. Administrative costs have been maintained at 2.5 percent of the total amount administered. The paperwork needed to review and administer each grant is about the same regardless of its size. Thus the workload, which is relatively independent of the amount of funds administered, has increased to the point where an additional staff member is needed to administer properly and efficiently this important program. This is a request for an additional grants specialist and a small amount of support funds, for a program increase of \$20,000. The grants specialist would be involved in the yearly cycle of 1) reviewing new proposals and progress reports on on-going research by the advisory councils, 2) preparing documents for new and renewable grants, and, 3) corresponding with Foreign Service Posts on host government clearance and fund disbursement. Each of these basic steps is accompanied by preparatory negotiations and correspondence and it is anticipated that this activity will increase.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

INTERNATIONAL EXCHANGE SERVICE

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>9</u>	<u>0</u>	<u>9</u>
11 Personnel Compensation.....\$	64,000	\$ 6,000	\$ 70,000
12 Personnel Benefits.....	4,000	1,000	5,000
21 Travel & Transp. of Persons ..	0	0	0
22 Transportation of Things	43,000	0	43,000
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	0	10,000	10,000
26 Supplies and Materials	2,000	0	2,000
31 Equipment	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL.....	\$ <u>113,000</u>	\$ <u>17,000</u>	\$ <u>130,000</u>

Analysis of Total

Pay Increases	\$5,000	\$7,000	\$12,000
Program.....	\$108,000	\$10,000	\$118,000

Specification of Increase (Program):Streamline the Transmission of Publications (\$10,000)

New methods, such as micro-printing, are essential for the more efficient and economical transmission of United States publications overseas. Investigation should be aimed also at reducing or eliminating the shipment of unessential publications. This request, which is made as an alternative to seeking additional shipping funds, is for \$10,000 for study services.

International Activities--International Exchange Service

1968 Appropriation	\$101,000
1969 Appropriation	\$113,000
1970 Estimate	\$130,000

The International Exchange Service was established in 1849 to provide a means for distributing Smithsonian publications to other countries. This method of exchange proved so successful that other organizations in the United States were permitted to use the Exchange Service for sending their publications to other countries and for receiving in return publications from foreign organizations. In 1867, legislation (14 Stat. 573) provided that official United States documents shall be exchanged through the agency of the Smithsonian Institution. The Service is the bureau of the Smithsonian responsible for carrying out the functions assigned by this legislation as well as by treaties, conventions, and other international agreements for the exchange of publications.

An increase of \$10,000 is requested to investigate ways of streamlining and improving the transmission of publications. An additional increase of \$7,000 is sought for necessary pay increases.

Need for Increase--Official United States Government and private organizations' publications transmitted through the Service have aided foreign governments, colleges, universities, and medical and dental schools by providing their libraries with essential reference materials for study and teaching. In 1968, three hundred and fifty colleges, universities, societies, Government bureaus, and Congressional committees provided about 850,000 pounds of publications for transmission to 100 countries.

Traditional means of assembling, packing, and shipping publications are no longer able to keep pace with demands. Many worthwhile requests for assistance in transmitting publications to the developing countries are having to be refused by the Service. This is largely a matter of rising costs. Costs of transporting publications to the piers have more than doubled. Ocean freight rates have risen sharply. In addition, the volume of United States publications available for shipping overseas has increased to the point where their proper storage and accessibility in foreign libraries have become very difficult.

Rather than seek additional shipping funds as a partial solution to these problems, the Exchange Service needs to investigate new methods, such as micro-printing or micro-transparencies, for the transmission of official United States publications to foreign depository libraries. Compact information reduction, transmission, and retrieval systems can benefit the Service as much as the foreign libraries by eliminating bulk freight charges. Companion to this investigation should be a thorough review of the materials themselves, especially their end-use with a view to reducing or eliminating the shipment of marginal-use publications. In order to investigate these problems fully, a program increase of \$10,000 is required for services.

International Activities--International Exchange Service

1968 Appropriation	\$101,000
1969 Appropriation	\$113,000
1970 Estimate	\$130,000

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SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>0</u>	<u>2</u>	<u>2</u>
11 Personnel Compensation.....\$	0	\$ 25,000	\$ 25,000
12 Personnel Benefits.....	0	2,000	2,000
21 Travel & Transp. of Persons ..	0	10,000	10,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	0	50,000	50,000
26 Supplies and Materials	0	3,000	3,000
31 Equipment	0	10,000	10,000
TOTAL.....\$	<u>0</u>	<u>\$ 100,000</u>	<u>\$ 100,000</u>

Analysis of Total

Pay Increases	0	0	0
Program.....	0	\$100,000	\$100,000

Specification of Increase (Program):

Expenses of Board of Trustees (2 positions \$100,000)

The Woodrow Wilson Memorial Act of 1968 empowered the Board of Trustees of the Center to appoint scholars, manage gifts and property, and explore site acquisition. In order for the Board to meet these responsibilities, it must have staff assistance. A director and secretary are requested (\$27,000). Funds are needed also for Board travel (\$10,000), studies and planning activities for site acquisition and the scholarly program (\$50,000), and for supplies (\$3,000) and equipment (\$10,000) for staff offices.

22/ WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

1968 Appropriation	0
1969 Appropriation	0
1970 Estimate	\$100,000

Public Law 90-637 approved October 24, 1968, established in the Smithsonian Institution the Woodrow Wilson International Center for Scholars. In enacting the "Woodrow Wilson Memorial Act of 1968," the Congress found that "such a center symbolizing and strengthening the fruitful relation between the world of learning and the world of public affairs, would be a suitable memorial to the spirit of Woodrow Wilson; and that the establishment of such a center would be consonant with the purposes of the Smithsonian Institution." The nucleus of the Center's staff will be a score or more of scholars drawn from all parts of the world and chosen for their record of accomplishment or promise in their special fields. The academic accent will be in fields most closely associated with Woodrow Wilson including American Government and politics, the legislative process, international law and organization, the peaceful settlement of international disputes, and social ethics.

Funding in the amount of \$100,000 is requested for fiscal year 1970 to meet the expenses of the Board of Trustees of the Center and for necessary studies and planning activities.

Need for Increase--The Woodrow Wilson Memorial Act additionally established with the Smithsonian Institution a Board of Trustees of the Center and empowered this Board to appoint scholars; solicit, accept, and dispose of gifts, bequests, and other property; and acquire such site as a location for the Center as may subsequently be authorized by the Congress. In order for the Board to perform these and related duties, the Act authorized the appropriation to the Board of such funds as may be necessary provided that no more than \$200,000 shall be authorized for appropriation through fiscal year 1970 and no part of this appropriation shall be used for construction. In order for the Board to meet these responsibilities it will be essential to provide staff assistance, a director and a secretary, and to meet other administrative expenses including travel of Board members. Funds are also requested for necessary studies and planning activities associated with site selection and acquisition and development of the international studies program. This is a total requested increase of \$100,000.

23/ ADMINISTRATIVE AND CENTRAL SUPPORT ACTIVITIES

1968 Appropriation	\$3,271,000
1969 Appropriation	\$3,575,000
1970 Estimate	\$3,947,000

This grouping covers a wide range of activity within 11 Smithsonian organizational units. In sum, these units are responsible for finances, planning and budgeting, computer operations, libraries, performing arts, personnel management, publications, public affairs, photographic services, supply procurement, and management support. The increased needs expressed here are only those which are essential for continuing the quality performance of these units in order that they may give adequate support to the research, education, exhibition, and collection management work of the Smithsonian. The total increase for administrative and support activities amounts to 15 positions and \$372,000. About one-quarter of the dollar amount is to cover necessary pay increases. Three of the 11 units are not requesting increases in program dollars. The costs of expanded activities in personnel management, photographic services, and the management support group will be met through the continued introduction of more efficient operating methods. Within the remaining eight units, approximately 67 percent of the program increase is concentrated in four priority areas--publication activity, libraries, computer services, and performing arts.

In the aggregate, increases requested for support activities are closely related to the program growth and development of other units. For example, an increase in the workload of the Smithsonian Institution Press is indicative of higher research output of the various museums and laboratories. Additional library needs are the result of intensified curatorial and exhibit preparation activity. Demands for automatic data processing service reflect the strong need to gain access to the wealth of information in the National Collections. Increases in central administration reflect the growth in necessary management duties associated with Institutional growth. The following table provides trends in appropriations for the 11 units involved.

Unit	1968		1969		1970	
	<u>Pos.</u>	<u>Appropriation Amount</u>	<u>Pos.</u>	<u>Appropriation Amount</u>	<u>Pos.</u>	<u>Estimate Amount</u>
Office of the Secretary	23	\$342, 000	26	\$396, 000	29	\$442, 000
Management Support	31	315, 000	33	360, 000	33	368, 000
Office of the Treasurer	31	426, 000	31	481, 000	31	513, 000
Division of Performing Arts	5	98, 000	7	129, 000	9	162, 000
Office of Personnel and Management Resources	18	246, 000	18	263, 000	18	268, 000
Office of Public Affairs	12	124, 000	12	137, 000	13	162, 000
Supply Division	20	276, 000	20	290, 000	20	310, 000
Information Systems Division	8	132, 000	8	123, 000	12	177, 000
Smithsonian Institution Libraries	44	546, 000	44	578, 000	48	665, 000
Photographic Services Division	18	189, 000	18	217, 000	18	220, 000
Smithsonian Institution Press	<u>20</u>	<u>577, 000</u>	<u>20</u>	<u>601, 000</u>	<u>21</u>	<u>660, 000</u>
Totals	<u>230</u>	<u>\$3, 271, 000</u>	<u>237</u>	<u>\$3, 575, 000</u>	<u>252</u>	<u>\$3, 947, 000</u>

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

OFFICE OF THE SECRETARY

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>26</u>	<u>3</u>	<u>29</u>
11 Personnel Compensation.....	\$ 340,000	\$ 43,000	\$ 383,000
12 Personnel Benefits.....	24,000	3,000	27,000
21 Travel & Transp. of Persons ..	15,000	0	15,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	1,000	0	1,000
24 Printing and Reproduction	0	0	0
25 Other Services	8,000	0	8,000
26 Supplies and Materials	2,000	0	2,000
31 Equipment	6,000	0	6,000
TOTAL.....	<u>\$ 396,000</u>	<u>\$ 46,000</u>	<u>\$ 442,000</u>

Analysis of Total

Pay Increases	\$16,000	\$6,000	\$22,000
Program.....	\$380,000	\$40,000	\$420,000

Specification of Increase (Program):

Public Service Program Management (3 positions \$40,000)

All Smithsonian employees and organization units can contribute to the Institution's traditional responsibilities to its public. The coordination of this activity requires the establishment of an Office of Assistant Secretary (Public Service). This requires the positions of Assistant Secretary, a program assistant, and a secretary (\$40,000).

Administrative and Central Support Activities--Office of the Secretary

1968 Appropriation	\$342, 000
1969 Appropriation	\$396, 000
1970 Estimate	\$442, 000

The Office of the Secretary provides executive direction and review of all programs of the Institution. To assist the Secretary in this responsibility, assistant secretary assignments have been identified as being essential to specific program areas reflecting the interests of the Smithsonian. Directly under the Secretary is the Assistant Secretary whose functional responsibility parallels the Secretary's. Other assignments are the Assistant Secretary for Science, the Assistant Secretary for History and Art, and the Assistant Secretary for Public Services. Each of these offices is concerned with planning and reviewing the development of museum, bureau, and office activities falling within their purview, and for Institutionwide functions cutting across organizational lines.

An increase of \$40, 000 is requested to establish the operating program of the Assistant Secretary of Public Service. An additional increase of \$6, 000 is sought for necessary pay increases in the Office of the Secretary.

Need for Increase--Over the last few years the Smithsonian has attempted to draw together its various bureaus and other organizations for the purpose of creating more efficient program management. To complete this effort, the Institution needs to consolidate responsibilities for its public and institutional service activities. The organizational units of the Smithsonian that can make contributions to these services are as diverse as the Institution itself and its many spheres of interest. In public or popular education, they may range, for example, from an assistant curator's evening class in bird identification for a half-dozen students to a Summer Festival of American Folklife which presents and interprets American performing arts and crafts to an audience of over 430, 000 persons. In institutional services, the Smithsonian's resources may extend from the shipment of medical texts to a Peace Corps Volunteer, effected through the International Exchange Service, to an electronically compiled summary of all research-in-progress on river pollution, effected through the Science Information Exchange.

To bring together these individual and collective resources so that they make the most effective possible contributions is the basic need which this request for an Assistant Secretary position addresses. No area of Smithsonian endeavor requires more coordination, since there is no organizational unit nor individual in the Smithsonian that cannot in some way contribute to the Institution's traditional responsibilities to its public. This is a request for an Assistant Secretary for Public Service, a program assistant, and a secretary, a total program increase of \$40, 000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

MANAGEMENT SUPPORT

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>33</u>	<u>0</u>	<u>33</u>
11 Personnel Compensation.....	\$ 291,000	\$ 8,000	\$ 299,000
12 Personnel Benefits.....	22,000	0	22,000
21 Travel & Transp. of Persons ..	8,000	0	8,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	4,000	0	4,000
24 Printing and Reproduction	19,000	0	19,000
25 Other Services	4,000	0	4,000
26 Supplies and Materials	9,000	0	9,000
31 Equipment	<u>3,000</u>	<u>0</u>	<u>3,000</u>
TOTAL.....	\$ <u>360,000</u>	\$ <u>8,000</u>	\$ <u>368,000</u>

Analysis of Total

Pay Increases	\$25,000	\$8,000	\$33,000
Program.....	\$335,000	0	\$335,000

Specification of Increase (Program):

No program increase is requested in order to concentrate budget request on higher priority needs in the Administrative and Central Support Activities.

Administrative and Central Support Activities--Management Support

1968 Appropriation	\$315,000
1969 Appropriation	\$360,000
1970 Estimate	\$368,000

The Management Support group represents a consolidation of various activities that provides Institutionwide services. These units supply special advice and technical aid to the Secretary and Assistant Secretaries, and fulfill certain agencywide requirements. Management Support consists of the following: Administrative Systems, Duplicating, the Equal Employment Opportunity Office, General Counsel, Secretary's Files, Smithsonian Archives, and the Travel Services Office.

An increase of \$8,000 is sought to help meet necessary pay costs. No program fund increase is sought for fiscal year 1970.

Need for Increase--Activities in several areas will be carried forward in these units under current program funding levels. The Office of the General Counsel advises the Secretary and other officials of the Smithsonian on a wide range of matters pertaining to the collections and operations of a museum and research complex. The Administrative Systems Division is of continuing assistance to Smithsonian administration in its efforts to update and improve its procedural operations and forms management. The information contained in the Archives continues to be widely used by students and scholars concerned with the history of American science in the 19th century. The Duplicating Section, while handling a greatly increased workload, has introduced time-saving methods to stretch its capacities. The centralized Travel Services Office has increased its effectiveness in the area of arranging and coordinating Institutionwide travel matters.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

OFFICE OF THE TREASURER

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>31</u>	<u>0</u>	<u>31</u>
11 Personnel Compensation.....	\$ 310,000	\$ 7,000	\$ 317,000
12 Personnel Benefits.....	23,000	2,000	25,000
21 Travel & Transp. of Persons...	1,000	0	1,000
22 Transportation of Things.....	0	0	0
23 Rent, Comm. and Utilities.....	132,000	23,000	155,000
24 Printing and Reproduction	0	0	0
25 Other Services	11,000	0	11,000
26 Supplies and Materials	2,000	0	2,000
31 Equipment.....	2,000	0	2,000
42 Ins. Claims and Indemnities...	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL.....	\$ <u>481,000</u>	\$ <u>32,000</u>	\$ <u>513,000</u>

Analysis of Total

Pay Increases.....	\$10,000	\$7,000	\$17,000
Program	\$471,000	\$25,000	\$496,000

Specification of Increase (Program):Workmen's Compensation and Postal Costs (\$25,000):

Increased employees' compensation has been requested by the Department of Labor to pay for accident and injury-caused lost time to Smithsonian employees (\$2,000). Additional postage costs are being caused by higher postage rates and an increasing volume of public service mail (\$23,000).

Administrative and Central Support Activities--Office of the Treasurer

1968 Appropriation	\$426,000
1969 Appropriation	\$481,000
1970 Estimate	\$513,000

The Office of the Treasurer manages the income and expenditures of the Institution. It provides the Secretary with financial recommendations related to Smithsonian resource allocation. Recently the Treasurer's office was reorganized to include the Office of Programming and Budget, the Contracts Office, the Fiscal Division, and the Internal Audit Office. Through these sections, the Treasurer assembles the financial implications of Institutional development alternatives. Long-range planning and annual budgeting in public appropriations, endowment income, gifts, grants, and contracts center in the Treasurer's office. The objective of this concentrated activity is to formulate the best possible financial policies to help facilitate the achievement of Institutional goals. Over the course of the last year, the Office has improved the system of financial records from which information is extracted that is needed for internal management and by other agencies and authorities having review responsibilities. Improvements in financial planning, budget control, and accounting will continue to be made.

An increase of \$25,000 is requested to cover additional costs of workmen's compensation and public service mail. An additional \$7,000 are requested to cover necessary pay increases.

Need for Increase--No program increases are being sought for the direct use of the several financial management units comprising this Office. Additional funding is sought, however, for two areas of higher cost which reflect Institution-wide requirements. Despite continued efforts to reduce the number of accidents and injuries to employees, the costs of lost-time are rising. To meet these costs, the Department of Labor has requested additional Smithsonian reimbursement to the Employee Compensation Fund. Costs of postage indicia mail are also rising as a result of higher rates and strengthened public service activities at the Institution. There is a great volume of mail from the general public, students, scientists, and organizations seeking information, advice, and assistance.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

DIVISION OF PERFORMING ARTS

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>7</u>	<u>2</u>	<u>9</u>
11 Personnel Compensation.....	\$ 100,000	\$ 19,000	\$ 119,000
12 Personnel Benefits.....	7,000	1,000	8,000
21 Travel & Transp. of Persons ..	2,000	2,000	4,000
22 Transportation of Things	0	1,000	1,000
23 Rent, Comm. and Utilities.....	5,000	3,000	8,000
24 Printing and Reproduction	0	0	0
25 Other Services	10,000	3,000	13,000
26 Supplies and Materials	4,000	2,000	6,000
31 Equipment	1,000	2,000	3,000
TOTAL.....	\$ 129,000	\$ 33,000	\$ 162,000

Analysis of Total

Pay Increases	\$3,000	\$3,000	\$6,000
Program.....	\$126,000	\$30,000	\$156,000

Specification of Increase (Program):Continue Performances and Presentations (2 positions \$30,000)

Well over a million persons have enthusiastically viewed, listened, and learned at Smithsonian programs of music, dance, and expositions of folk culture during the past two years. To continue this activity, it is essential to add a technical director and a production assistant (\$17,000) and funds for travel to search out and obtain native craftsmen and performers (\$2,000), transportation of objects (\$1,000), communications services to plan and produce events (\$3,000), services for the design and fabrication of staging facilities (\$3,000), and production supplies (\$2,000) and equipment (\$2,000).

Administrative and Central Support Activities--Division of Performing Arts

1968 Appropriation	\$98,000
1969 Appropriation	\$129,000
1970 Estimate	\$162,000

Over 500,000 persons viewed, listened, and learned at the second annual Festival of American Folklife held during the several-day Fourth of July celebration in 1968. The first American College Theatre Festival, to be held late in fiscal year 1969, will increase public awareness and support for the arts, stimulating a large segment of the nation's student population to productive and creative endeavor by national exposure and the opportunities for a nationwide interchange of ideas. These are two of the ongoing programs presently being administered and produced by the Division of Performing Arts. Its objective is to illuminate the collections of the Museums through programs of music, theatre, and dance, and through expositions of the folk traditions that comprise the cultural heritage of this country --to add collections of performances and demonstrations to the Smithsonian's collections of artifacts, and in doing so, to bring to life the total Smithsonian environment. Enthusiastic public attendance and participation in these performances, craft demonstrations, and special events have testified to the value of adding this new dimension to traditional museum visiting.

An increase of \$30,000 is sought for 1970 in order to sustain this activity, to maintain high quality production standards, and to insure continued enthusiastic public response. An additional \$3,000 are requested for necessary pay increases.

Need for Increase--The Festival of American Folklife, viewed by 431,000 persons in 1967 and 515,000 in 1968, and its related activities, is now an annual event. It brings to the Washington Mall demonstrations by craftsmen of pottery, basketry, toy making, carving, and weaving; and live performances of traditional folk music and dance. In a real sense it is a living exhibition of the creativity of the many ethnic groups that make up the culture of the United States.

The Mall programs for the summer of 1968 were inaugurated by the second annual Rites of Spring on April 1, offering examples on the Mall of the use of the outdoor environment for city parks and recreation centers and including balloon flights, exhibitions, demonstrations of poster painting and collage construction, music, carousel rides, and athletic demonstrations. Public reaction included comments on the "...genuine sense of community, a thriving sense of involvement in the heart of this great city... The Institution seems to understand that culture is a total way of life of a people, not merely a treasure house for academicians or a plaything for the elite."

The Division's first attempts at outdoor programs have had far-reaching, rapid effects. The National Park Service requested that it plan and produce a program of cultural activities events for "Summer In the Parks" of 1968. As a result, mobile art demonstrations, jazz and folk concerts, puppet theater, and a film theater were held on the Mall and in 20 city parks during a 10-week period, attended by hundreds of thousands of people.

The Puppet Theater, begun in the summer of 1967 with one-week appearances of the Jacque Chesnais Puppet Theater of Paris and the Czech Puppet Theater, and continued with great success in the summer of 1968 in the parks and in a tent theater on the Mall, is now established as a resident theatre in the Museum of History and Technology. It is open to the public and available to school groups for reservations (currently booked two months in advance), featuring changing puppet exhibits, demonstration of puppet-making and manipulation, and daily performances.

In February of 1966, the American National Theater and Academy requested Smithsonian cooperation in planning the first American College Theatre Festival. Subsequently, because of its successful record in the production of large scale, open-air performance events on the Mall, the Institution was asked to provide the two principal theaters and facilities for related activities, such as a poster contest and exhibition, a conference entitled "The American Theater--A Cultural Process," an exhibit on the history of the American theater, and arrangements for television network programs emanating from the Festival. The Smithsonian will provide a specially designed tent, with a capacity for seating 900 persons, to be erected on the Mall. It will be the principal theater for the presentations of the finalists in the Festival; with the cooperation of the Department of the Interior, arrangements have been made for the use of Ford's Theatre for additional performances, as required.

These are specific examples of the work of the Division of Performing Arts aimed at bringing the American people more in touch with their cultural and creative roots. Many of these activities can continue only if the staffing and resources of the Division are increased. For instance, for the Folklife Festival, it is necessary to maintain a sound, scholarly foundation for authentic programs, to conduct extensive searches to obtain native craftsmen, performers, and other participants, and to produce presentations of high technical and artistic quality. A technical director and a production assistant are required to provide coordinated staging and program production. Additional funds for travel, transportation, communications, design and fabrication services, and production supplies and services are associated with the planning and presentation of performances. This is a program increase of \$30,000.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

OFFICE OF PERSONNEL AND MANAGEMENT RESOURCES

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>18</u>	<u>0</u>	<u>18</u>
11 Personnel Compensation.....	\$ 214,000	\$ 5,000	\$ 219,000
12 Personnel Benefits.....	16,000	0	16,000
21 Travel & Transp. of Persons ..	8,000	0	8,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	0	0	0
25 Other Services	22,000	0	22,000
26 Supplies and Materials	2,000	0	2,000
31 Equipment	1,000	0	1,000
TOTAL.....	<u>\$ 263,000</u>	<u>\$ 5,000</u>	<u>\$ 268,000</u>
<u>Analysis of Total</u>			
Pay Increases	\$13,000	\$5,000	\$18,000
Program.....	\$250,000	0	\$250,000

Specification of Increase (Program):

No program increase is being requested in order to concentrate the budget request on higher priority needs in the Administrative and Central Support Activities.

Administrative and Central Support Activities--Office of Personnel and
Management Resources

1968 Appropriation	\$246,000
1969 Appropriation	\$263,000
1970 Estimate	\$268,000

The Office of Personnel and Management Resources provides specialized services in employment, position classification, employee relations, employee training, and salary and wage administration. In addition, it assists the Secretary by providing consultation and planning in the area of human resources. The Office conducts studies in organizational and behavioral sciences. It is also responsible for formulating policy and coordinating the activities of the Health Services Section, which provides health services to the Smithsonian staff and to museum visitors.

An increase of \$5,000 is sought to cover necessary pay increases. No increase is being sought for programs.

Need for Increase--Over the course of the last year, the Office has begun to automate its personnel management information system. The objective is to introduce a better system for evaluating qualifications and potential performance. This activity is presently being conducted within the current funding level of the Office. Gradually, the most recent advances in personnel selection and performance measurement will be integrated into Smithsonian operations.

OFFICE OF PUBLIC AFFAIRS

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>12</u>	<u>1</u>	<u>13</u>
11 Personnel Compensation.....	\$ 110,000	\$ 19,000	\$ 129,000
12 Personnel Benefits.....	9,000	1,000	10,000
21 Travel & Transp. of Persons ..	1,000	2,000	3,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	3,000	0	3,000
24 Printing and Reproduction	8,000	0	8,000
25 Other Services	2,000	1,000	3,000
26 Supplies and Materials	2,000	1,000	3,000
31 Equipment	2,000	1,000	3,000
TOTAL.....	\$ <u>137,000</u>	\$ <u>25,000</u>	\$ <u>162,000</u>

Analysis of Total

Pay Increases	\$8,000	\$5,000	\$13,000
Program.....	\$129,000	\$20,000	\$149,000

Specification of Increase (Program):Science Information Program (1 position \$20,000)

The Smithsonian should extend the interest and usefulness of its scientific collections of some 50-million specimens and research programs in urgent anthropology, space science, gems and minerals, oceanography, and other disciplines by developing a well-defined and comprehensive science information program. No such program now exists. Increase would provide for a science writer (\$15,000), travel to field research sites (\$2,000), processing of films (\$1,000), supplies (\$1,000), and equipment (\$1,000).

Administrative and Central Support Activities--Office of Public Affairs

1968 Appropriation	\$124,000
1969 Appropriation	\$137,000
1970 Estimate	\$162,000

Since its establishment in 1967, the Office of Public Affairs has served visitors to the Smithsonian and the general public by various means of communications. The Office provides visitor orientation services, responds to general public inquiries, supplies information to the press, works with educational radio and television, conducts a free educational film program, furnishes free slide lectures, and performs other information and popular education functions.

An increase of \$20,000 is sought to strengthen the Smithsonian's science information program. This program attempts to relate to the general public the progress achieved in many of the scientific activities performed by the Smithsonian staff. An additional \$5,000 are necessary to provide for pay increases.

Need for Increase--The Office of Public Affairs provided noteworthy contributions to meeting public information needs in 1968. It has coordinated activities with the USIA, Westinghouse Broadcasting Company, the British Broadcasting Corporation, Japan Broadcasting Company, and others, to produce film reports concerned in whole or in part with Smithsonian activities. The attendance at the Free Film Theater increased approximately 50 percent to more than 18,000. Spectacular increases have again been recorded by the Dial-A-Museum and Dial-A-Satellite services. Up-to-the-minute information on daily events and exhibits was provided to 60,250 callers on the recorded telephone service, Dial-A-Museum. Information from the Smithsonian Astrophysical Observatory provided Dial-A-Satellite service to 135,250 individuals, enabling them to view artificial satellites as well as other celestial bodies. In addition to a heavy volume of mail inquiries, the Office of Public Affairs answered approximately 30,000 general telephone inquiries from the public.

Despite these information activities, the general public is not being provided with informative, interesting, and educational material on the science programs of the Smithsonian. Current staffing, workload, and budgetary factors do not permit an effective program. Only one-half to three-quarters of a man-year can now be devoted to a need which could productively occupy the talents of several people. As a minimum, a full-time science writer is needed to prepare interpretive articles and information for the public. For instance, he might describe in popular terms the potential benefits, possibly in harvesting ocean foods, to be realized from the use by marine biologists of a locator index similar to the "Global Reference System." This was developed by the Institution's Information Systems Division. Also important would be relating to the public Smithsonian scientific effort in the areas of contemporary anthropology and environmental biology. Man's gradual contamination of his surroundings, both social and physical, is revealed through our collection-related research. The identification of many of our current environmental anomalies can be found buried in our collections of the past. A science writer would help to describe these problems and to educate the public concerning the degree of collective effort required in finding solutions to them. This is a request for one position and \$20,000, including funds for travel, office supplies and equipment, and processing films.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

INFORMATION SYSTEMS DIVISION

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>8</u>	<u>4</u>	<u>12</u>
11 Personnel Compensation.....	\$ 96,000	\$ 51,000	\$ 147,000
12 Personnel Benefits.....	6,000	3,000	9,000
21 Travel & Transp. of Persons ..	3,000	0	3,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	9,000	0	9,000
24 Printing and Reproduction	0	0	0
25 Other Services	3,000	0	3,000
26 Supplies and Materials	2,000	0	2,000
31 Equipment	<u>4,000</u>	<u>0</u>	<u>4,000</u>
TOTAL.....	<u>\$ 123,000</u>	<u>\$ 54,000</u>	<u>\$ 177,000</u>

Analysis of Total

Pay Increases	\$8,000	\$4,000	\$12,000
Program.....	\$115,000	\$50,000	\$165,000

Specification of Increase (Program):

Improving Access to Collection Information (4 positions \$50,000)

Increasingly, each of the Smithsonian museums, art galleries, and laboratories is finding that data associated with its research experiments or with its rapidly growing collections are too voluminous or complex to provide answers to frequently asked questions. The Information Systems Division has the computer capacity to handle more data. Its present small staff has demonstrated its ability to solve problems. Additional staff capacity is required to tap the information resources of the Smithsonian. This is a request for two systems analysts, a programmer, and a programmer trainee (\$50,000).

1968 Appropriation	\$132,000
1969 Appropriation	\$123,000
1970 Estimate	\$177,000

The Information Systems Division diagnoses and solves information problems within the Smithsonian through the application of computer technology. It is comprised of an information retrieval section, a mathematical computation section, and a management systems section. The information retrieval section is concerned with the information systems used for indexing and retrieving data, especially that associated with objects and specimens in the collections. The mathematical computation section provides mathematical analysis and computer programming to aid Smithsonian scientists in interpreting and presenting their research data. The management systems section supports administrative activities requiring automatic data processing of business or fiscal data. The collective ability of this group, including skills in finite and infinite mathematical techniques, algorithm structure, and computer applications, is helping to blend the traditional disciplinary approaches in the natural sciences. Similar assistance is being given to information needs in art history, technological and cultural research areas. Widely recognized by the museum community across the nation as a leader in the application of automatic data processing to collection informational problems, the Division's advice also is sought by the major museums in Canada, England, Mexico, and Sweden.

An increase of \$50,000 is sought to meet a growing workload of applying automatic data processing to improve the usefulness of museum collections. An additional \$4,000 are requested for necessary pay increases.

Need for Increase--As the national repository for collections in art, history, science, and technology for more than 100 years, the Smithsonian Institution is acquiring, protecting, and attempting to make readily available for research and exhibit purposes new objects and specimens at the rate of one million a year. Traditional file card and log book methods of recording and searching for data have proven woefully inadequate to the job of handling large volumes of data and answering specific questions, particularly those cutting across subject matter, time, and geographic areas. For instance, a Federal agency may ask, "What damaging insects were found associated with food plants in the early 1900's as compared with the present?" Manual systems of data handling cannot answer this question. Smithsonian and other scientists, historians, and curators increasingly are turning to the Information Systems Division to help them tap the information resources of the Smithsonian collections.

These collections should be approached as if they were library books from which valuable information is extracted and encoded for instant retrieval and problem solving. Without such ability, the collections become meaningless. With such ability, the collections are tools which can be interwoven into the fabric of knowledge in such a way that specific questions may be asked of a social, technical, demographic, or biomedical nature which perhaps could not be otherwise answered. The data buried in collections in the arts, social sciences, and natural sciences is of fundamental importance to the solutions of contemporary problems in preservation, social stress, population, conservation, pollution, and food supply.

The Division has the machine capacity for handling more data input, processing, and reporting. It has reached the limit in its capacity, however, to analyze and design information systems before actual computer processing is possible. This constraint on its present ability to keep up with the processing and retrieval of collection information has affected Smithsonian responsibilities in another way. As a pioneer in the field of museum information processing, the Institution should take an active role in assisting other museums and educational

institutions with their information management efforts. The pressure of in-house work, however, has precluded adequately fulfilling Smithsonian's traditional responsibilities in this area. The provision of assistance in the design of information and analytical systems is important in the context of national goals. For instance, in time all museum holdings in such subjects as art, marine biology, and cultural history should be linked by computer in a kind of union catalog which, when properly interpreted, may teach us more than we presently know about ourselves and lead to an objective form of wisdom from which true planning for the future may emerge.

To meet the above problems, additional staffing is required by the Division. An increase of \$50,000 is requested to employ two systems analysts, a programmer, and a programmer trainee.

The Division has helped Smithsonian scientists to accomplish many tasks in the recent past. For example, a common denominator code (Global Reference Code) was devised to interrelate the commonly-used techniques in expressing locations on the globe. This new tool transforms latitude-longitude coordinates, Marsden quadrangles, and political and geographical names into a common code which facilitates retrieval of global data. A practical application of this locator mechanism may be to pinpoint a source of ocean foods. It has wide application to all geographic locator needs.

In addition, other systems were developed for the analysis, storage, and retrieval of collection and specimen data. These systems are flexible enough to be useful in solving many problems within the Institution and throughout the scientific community. For example, computer programs were developed for data reduction and statistical analysis dealing with neutron activation experiments to determine the amount of trace elements present in archeological artifacts. The purpose was to establish the compatibility, or the "nativeness," of the artifact to the area of discovery. With improvement and modification, similar approaches can be used to help scientists determine how changes over time in physical, natural, or spatial factors are influencing our contemporary environment.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

SMITHSONIAN INSTITUTION LIBRARIES

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>44</u>	<u>4</u>	<u>48</u>
11 Personnel Compensation.....	\$ 452,000	\$ 45,000	\$ 497,000
12 Personnel Benefits.....	34,000	4,000	38,000
21 Travel & Transp. of Persons ..	4,000	0	4,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	10,000	0	10,000
24 Printing and Reproduction	27,000	0	27,000
25 Other Services	3,000	0	3,000
26 Supplies and Materials	45,000	20,000	65,000
31 Equipment	<u>3,000</u>	<u>18,000</u>	<u>21,000</u>
TOTAL.....	<u>\$ 578,000</u>	<u>\$ 87,000</u>	<u>\$ 665,000</u>

Analysis of Total

Pay Increases	\$25,000	\$17,000	\$42,000
Program.....	\$553,000	\$70,000	\$623,000

Specification of Increase (Program):

Correction of Serious Material and Reference Service Deficiencies (4 positions,
\$70,000)

Libraries funding and staffing are at subminimal levels. In fiscal year 1969 only one book for every four members of the professional staff could be purchased. Journal subscriptions have had to be cancelled. Reference and circulation services cannot keep pace with demands (66,000 requests in 1968). To help correct these deficiencies, the request is for three reference librarians and a messenger for interlibrary loans (\$32,000), journal purchases (\$20,000), and the acquisition of books and transportation facilities (\$18,000).

Administrative and Central Support Activities--
Smithsonian Institution Libraries

1968 Appropriation	\$546,000
1969 Appropriation	\$578,000
1970 Estimate	\$665,000

The Smithsonian Institution Libraries are an essential adjunct to the proper performance of all phases of the Smithsonian's programs in research, exhibitions, and the curating of the National Collections. The Libraries resources of some 600,000 volumes and periodicals in Smithsonian fields of art, science, and history have come to be widely used also by the educational and research activities of Government agencies, schools, museums, and the general research community. The services that the Libraries can offer greatly enhance the capability of the professional staff of the Institution.

An increase of \$70,000 is requested to maintain a minimum level of book and journal purchases, to exploit interlibrary loans to conserve scarce purchase funds, and to improve reference services. In addition, \$17,000 are sought to help meet necessary pay increases.

Need for Increase--In the face of the need for economy the Libraries will concentrate on selective increases aimed principally at extending the capability of existing resources in fiscal year 1970. No new program efforts or projects will be started. The requested increase will be directed toward meeting a growing workload and correcting the most serious deficiencies in providing support to Smithsonian and outside users.

The Libraries are not able to meet the growing needs of the administrative and professional staff of the Institution for books, journals, and reference services. Its staff could not be increased in 1969 and higher individual book and journal costs have substantially reduced its capacity to service Institutional needs. To effect savings, the Libraries cancelled a number of journal subscriptions in 1969, but a cost increase of about 13 percent in those subscriptions which have been renewed have more than offset the savings. The Libraries have sufficient funds this year to purchase only one basic reference book for every four members of the professional staff. The utility of book purchase funds also is being reduced by the continued increases in their prices. Through 1967, prices for art, history, science, and technology books have risen 13.1 percent, 44.3 percent, 49.3 percent, and 54.4 percent respectively since 1957-59. These trends are continuing according to preliminary figures from the publishing industry. In history, science, and technology, annual book price increases are currently averaging about five percent. The establishment of charges for Department of Defense documents from the Clearinghouse for Federal Scientific and Technical Information transferred an additional unexpected burden to the Libraries. Thus the increased cost of materials has kept the Libraries from bringing acquisitions into line with the demands of the Institution.

A minimal increase of \$36,000 for library materials for fiscal year 1970 is requested. The increase will enable the Libraries to acquire about 800 new journals, including those subscriptions that were not renewed, and 410 new books (an average of one book per year for each member of the Institution's professional and administrative staff). This is still far short of any library's standard for the support of advanced research and education that can be allowed but it will permit the Libraries to maintain a reduced level of operations without falling further behind.

To help counteract the greatly reduced level of purchases of its own library materials, the Libraries are seeking economies by increasing reliance on loans from other libraries in the Washington area and by speeding up the exchange of commonly used materials among branches of the Institution. In addition, the press for space in buildings on the Mall makes it necessary to use storage space

in other locations for less frequently borrowed materials. A messenger and transportation facilities are requested to facilitate this interlibrary cooperation and use of materials at an additional cost of \$7,000.

In addition to serious shortages of library materials, circulation and reference services are falling to substandard levels. The reference staff handled 66,000 requests for information and publications in 1968. This workload is growing at about 10 percent each year. The current staff cannot keep up with this growth in the need for library assistance. Services to users, including Government agencies and schools, have had to be curtailed in order to accommodate the growing needs of the Institution's own staff. In addition, there has been a reduction of 40 percent in the Libraries "open" hours in order to use reference staff for other essential library jobs such as shelving and recataloging. In order to improve reference services, three librarian positions are requested, an increase of \$27,000.

This is a total program increase of \$70,000.

PHOTOGRAPHIC SERVICES DIVISION

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>18</u>	<u>0</u>	<u>18</u>
11 Personnel Compensation.....	\$ 156,000	\$ 3,000	\$ 159,000
12 Personnel Benefits.....	12,000	0	12,000
21 Travel & Transp. of Persons ..	0	0	0
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	20,000	0	20,000
25 Other Services	1,000	0	1,000
26 Supplies and Materials	21,000	0	21,000
31 Equipment	<u>7,000</u>	<u>0</u>	<u>7,000</u>
TOTAL.....	\$ <u>217,000</u>	\$ <u>3,000</u>	\$ <u>220,000</u>

Analysis of Total

Pay Increases	\$6,000	\$3,000	\$9,000
Program.....	\$211,000	0	\$211,000

Specification of Increase (Program):

No program increase is requested in order to concentrate request on high priority needs in the Administrative and Central Support Activities.

Administrative and Central Support Activities--Photographic Services Division

1968 Appropriation	\$189,000
1969 Appropriation	\$217,000
1970 Estimate	\$220,000

The Photographic Services Division is charged with supplying all types of photographic and related services required by programs of research, documentation, conservation of collections, exhibitions, education, training, publication, and public service. This involves filling photographic requests, obtaining outside specialized photographic services, and providing technical assistance and training in field photography to Smithsonian staff members.

An increase of \$3,000 is sought to help meet necessary pay costs. No program increase is requested.

Need for Increase--The growth of Smithsonian curatorial and research activity has substantially increased the photographic workload. The Division has responded in an effective and efficient fashion. The centralized photographic function allows the efficient shifting of personnel, equipment, supplies, and workload, as the circumstances warrant. A single administrative unit allows greater economies in the purchasing of photographic supplies and services for Smithsonian laboratories and museums.

SMITHSONIAN INSTITUTION--"Salaries and Expenses," Fiscal Year 1970

SMITHSONIAN INSTITUTION PRESS

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>20</u>	<u>1</u>	<u>21</u>
11 Personnel Compensation.....	\$ 227,000	\$ 14,000	\$ 241,000
12 Personnel Benefits.....	17,000	1,000	18,000
21 Travel & Transp. of Persons ..	2,000	0	2,000
22 Transportation of Things	0	0	0
23 Rent, Comm. and Utilities.....	0	0	0
24 Printing and Reproduction	350,000	41,000	391,000
25 Other Services	3,000	1,000	4,000
26 Supplies and Materials	1,000	1,000	2,000
31 Equipment	<u>1,000</u>	<u>1,000</u>	<u>2,000</u>
TOTAL.....	<u>\$ 601,000</u>	<u>\$ 59,000</u>	<u>\$ 660,000</u>
<u>Analysis of Total</u>			
Pay Increases	\$12,000	\$9,000	\$21,000
Program.....	\$589,000	\$50,000	\$639,000

Specification of Increase (Program):

Reduce Printing Backlog and Improve Publications Distribution (1 position,
\$50,000)

An increase in printing and related funds (\$44,000) will be used to reduce the severe backlog of unpublished research manuscripts. Research productivity is outstripping printing capability. No additional publication funds could be provided in fiscal 1969. If no additional funding is forthcoming in 1970, the compounded 1969-1970 backlog will be approximately 14,000 pages, or more than an entire year of printing fund availability. Current funding levels provide a capacity publication output of 12,000 pages per year. At present funding levels, the Smithsonian Institution Press is servicing only about 50 percent of the printing needs of the Smithsonian scientists and historians. One shipping clerk (\$6,000) is needed also to meet a growing distribution workload. Over 300,000 publications were distributed in 1968 in response to public requests.

1968 Appropriation	\$577,000
1969 Appropriation	\$601,000
1970 Estimate	\$660,000

The Smithsonian Institution Press publishes the results of the Institution's research, education, and exhibits programs. It issues numerous research studies in eight series, disseminating newly acquired facts, synoptic interpretations of data, or original theory in the fields of anthropology, astrophysics, biology, history, and technology. It produces catalogs that document special and permanent exhibitions. It publishes popular information leaflets that describe and illustrate the National Collections. Press functions include the approval and editing of manuscripts, design of publications, procurement of printing, and distribution of well over 100 finished works annually.

An increase of \$50,000 is requested to reduce a severe backlog of printing research manuscripts and to improve distribution of publications. An additional \$9,000 are sought for necessary pay increases.

Need for Increase--Publication of results is an essential extension of research. At present, publication of Smithsonian research reports is in a state of near-paralysis. There is a mounting backlog and extreme delays are occurring. This situation has arisen during fiscal years 1968 and 1969 because of a greatly expanded input of completed manuscripts. In recent years, research productivity in bureau programs has increased. The backlog has been compounded with the opening of the National Collection of Fine Arts and National Portrait Gallery. The Smithsonian Office of Ecology, National Zoological Park, and National Air and Space Museum have all initiated demands on the Press within this recent period. Appropriations for printing have not kept pace with the growth in manuscript output.

A survey of Smithsonian units indicated that 19,625 pages of manuscript (plus illustrations) might be submitted in fiscal year 1969. The allotment for printing allowed publication of 12,000 pages at maximum. That capacity was nearly consumed, however, by a backlog of 7,500 pages of manuscripts submitted in fiscal 1968 which could not be published because of insufficient funds. The cumulative effect is illustrated by the fact that in fiscal year 1968 the Press began refusal of manuscripts at the end of January, while in fiscal year 1969 it refused manuscripts from most bureaus at the end of October. It is rapidly approaching a point where it must refuse acceptance of new manuscripts for an entire year in order to work exclusively on accumulated backlog. The compounded 1969-1970 backlog is now estimated at 14,000 pages.

The publication program is fundamental to Smithsonian objectives. Additional funding for disseminating research results must be obtained. Scientific output at the Smithsonian is benchmark information of primary importance to the advancement of applied research in Government agencies, industry, and universities. The immediate objective is to eliminate the backlog of unpublished research reports. No additional funds are requested for publication of orientation and information leaflets for museum visitors or for official publications. Since these other publications currently account for only 20 percent of the Press budget, it is not possible to solve the backlog problem by allocating resources from them. The Press has greatly increased its internal efficiency through revised procedures, and has reduced the per-page cost of printing by employing improved technologies. But economies obtained through such means are leveling off. The backlog of manuscripts can be eliminated only by increasing Press printing funds. An increase of \$44,000 is requested for this purpose. An additional \$6,000 are required for a shipping clerk. A growing number of available titles and a rising volume of requests for publications from libraries and the general public are creating a distribution problem. Over 300,000 publications were distributed in fiscal year 1968. This is a total program increase of \$50,000.

BUILDINGS MANAGEMENT DEPARTMENT

<u>Object Class</u>	<u>1969 Base</u>	<u>Increase Requested</u>	<u>1970 Estimate</u>
Number of Permanent Positions	<u>827</u>	<u>48</u>	<u>875</u>
11 Personnel Compensation.....	\$4,901,000	\$ 517,000	\$5,418,000
12 Personnel Benefits.....	382,000	42,000	424,000
21 Travel & Transp. of Persons..	2,000	0	2,000
22 Transportation of Things	1,000	0	1,000
23 Rent, Comm. and Utilities.....	1,182,000	50,000	1,232,000
24 Printing and Reproduction.....	0	0	0
25 Other Services	736,000	47,000	783,000
26 Supplies and Materials	346,000	0	346,000
31 Equipment	270,000	0	270,000
32 Land and Structures	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	<u>\$7,820,000</u>	<u>\$ 656,000</u>	<u>\$8,476,000</u>

Analysis of Total

Pay Increases.....	\$73,000	\$316,000	\$389,000
Program	\$7,747,000	\$340,000	\$8,087,000

Specification of Increase (Program):Maintain, Operate, and Protect New Building Spaces (48 positions \$340,000)

Additional guard, custodial, and mechanical services must be provided for the National Portrait Gallery (opened in October 1968) and as additional exhibition areas are opened in the Fine Arts and Portrait Galleries building in 1970. The Renwick Gallery of Art and other building areas require fire, security, and detection systems to supplement onsite guarding. Higher utility costs (up 60 percent in five years) must be met. Renovation in the Smithsonian Institution building and in the Arts and Industries building creates a need for additional operating engineer and custodial positions. Heavy workloads elsewhere in three million square feet of building space preclude absorbing these additional requirements. Increase will provide for 11 mechanics, 18 custodial and service employees, an assistant building manager, and 18 guards (\$243,000), higher steam, electricity, and communication costs (\$50,000), and installation and service charges for systems for the detection of smoke, fire, and physical security violations(\$47,000).

1968 Appropriation	\$7,302,000
1969 Appropriation	\$7,820,000
1970 Estimate	\$8,476,000

The Buildings Management Department protects, maintains, and operates eight major Smithsonian buildings, including the original Smithsonian building, the Museum of Natural History, the Museum of History and Technology, the Arts and Industries building, the Freer Gallery of Art, the National Air and Space building, the Fine Arts and Portrait Galleries building, and the Renwick Gallery of Art. It is also responsible for seven other research, collection, and service facilities. Among them are the Chesapeake Bay Center for Field Biology, the Belmont Conference Center, the Oceanographic Sorting Center, and the Silver Hill facility which provides for the restoration and preservation of air and space objects, and houses reference collections of aircraft and other objects of science, technology, art, and natural history.

The Department provides utilities (water, gas, steam, electricity, and compressed air). It services, repairs, and operates the refrigeration, heating, temperature and humidity control systems, related machinery, and accessories. It furnishes communications and transportation. It is responsible for protection services for the buildings of the Institution; provides custodial services; maintains and operates the elevators and escalators; furnishes elevator operators and check-room attendants; provides for basic fire and smoke detection, security, and safety services. It performs repairs, improvements, and alterations to the buildings and facilities. The Department refinishes and paints interior areas on a scheduled basis; and is responsible for safety, physical security, and disaster programs. The engineering and construction services for Smithsonian projects, and the supervision of contract construction work are part of the Department's responsibility. On specific building projects, the Department coordinates work performed by architects and engineers, and acts as liaison with contractors, the General Services Administration, and the Smithsonian staff. When called on, the Buildings Management Department also provides special custodial, protection, and fabrication services in support of research activities, exhibits, and other public events, and the care of the National Collections.

An increase of 48 positions and \$340,000 is required to provide for workload increases in protection, maintenance, and operation support services. Most of this increase will be directed to the Fine Arts and Portrait Galleries building; the Renwick Gallery of Art; and the Arts and Industries building. Some essential additional funding is required to cover increased communications and utility costs; and to provide for the installation and service charges for fire, security, and detection systems. In recognition of the need for economy, this is a highly selective program increase to correct only the most urgent buildings management problems. An additional \$316,000 are requested for necessary pay increases.

Need for Increase--The increases requested are required for the Buildings Management Department to provide minimum protection, operation, and maintenance services for more than 3,000,000 square feet of specialized laboratories, offices, libraries, reference collection areas, exhibition and other public areas, and supporting facilities, located at 15 different sites. The largest items of increase are for salaries, communications, and utilities. These currently amount to approximately 81 percent of the total buildings management budget.

This Department must increase its staff and support fund resources in order to meet the growing demand for its services. The increases are related to additional or renovated building space acquired by the Smithsonian. They also relate to the opening of new exhibition halls; the accessioning of a million objects and specimens a year; new approved educational, research, and other public service programs; continued heavy visitor attraction to the Institution's exhibits and other museum presentations; and a growing use of the Smithsonian's resources by students and researchers from academic institutions at all educational levels.

During the period 1959 to 1970, the total square footage of Smithsonian buildings has grown from 1.4 million to 3.3 million. Visitor use has paralleled this growth. During 1959, seven million persons visited Smithsonian buildings. It is anticipated that this will increase to 14 million in 1970 and to 20 million by 1973. Buildings management services must be provided during regular hours when the buildings are open to the public, as well as for special public service and educational activities in the evenings, on weekends, and holidays.

The National Collection of Fine Arts, housed in the newly renovated Fine Arts and Portrait Galleries building, was opened to the public in May 1968. During fiscal year 1969, the Buildings Management staff is adequate only to provide minimum maintenance, protection, and custodial services for the National Collection of Fine Arts offices, laboratory areas, and those exhibit galleries which have been completed, furnished, and opened to the public, and for the non-public areas of the National Portrait Gallery also in the Fine Arts and Portrait Galleries building. This staff had to be supplemented by other staff temporarily assigned from other important Institution buildings in order to permit the scheduled opening of the National Portrait Gallery exhibition areas in October 1968.

The increase requested will provide minimum support services to the National Portrait Gallery public areas, give similar services to the National Collection of Fine Arts as additional exhibition areas are opened in the budget year, and restore personnel originally assigned to duties elsewhere in the Institution. This building will become fully operational over the next few years as additional galleries are completed, furnished, and opened to the public. Approximately 70 percent of exhibit space in each museum is now open. It is planned that an additional 20 percent will be opened in 1970. Approximately one-half of the requested increase is to provide for this new space. The remainder is to bring staffing in other areas of the building up to an adequate level. The additional positions required to provide a minimal staffing level during fiscal 1970 are nine mechanics, 13 custodial and service employees, and 18 guards. Funds in the amount of \$14,000 are also requested for the installation and service charges for additional fire, security, and detection systems in the new public areas as an additional protection to valuable art collections.

The Renwick Gallery of Art, located at 17th and Pennsylvania Avenue, now undergoing restoration, will be turned over to the Smithsonian by the contractor prior to fiscal 1970. The Buildings Management Department will be required to give basic services (i.e. protection, custodial, and mechanical to operate, maintain, and service the heating, air-conditioning, and humidity control systems, on a 24-hour basis, seven days a week). No additional staffing increase is being sought for this building. Present increases are being met out of current funds. A small staff of five guards, one laborer, and one operating engineer is now deployed from other buildings to provide these initial support services. The requested increase is for \$33,000 for the installation and service charges for fire, security, and detection systems in the Renwick Gallery, and other building areas now deficient in these systems. These systems supplement other forms of protection and enable some economies in the use of guard personnel.

In order to obtain maximum utilization of the 100-year-old Arts and Industries building, additional offices are being developed on its upper level and three additional exhibit areas are to be opened as an Exposition Hall featuring special temporary exhibits. Increased public and administrative use of the building requires five additional laborers for custodial and other supporting services in offices, exhibit areas, and workrooms. An assistant building manager is required to provide on a continuous basis improved management of building operations for a large group of buildings including the Arts and Industries building.

The cost of electricity, steam, and communications for all Smithsonian buildings and programs continues to increase as indicated in the following table. In a five-year period, the cost of utilities has increased by 60 percent.

Type of Expense	1965	1968	1969 (est.)	1970 (est.)
Electricity.....	\$424,000	\$534,000	\$600,000	\$614,000
Steam.....	255,000	299,000	353,000	382,000
Communications...	100,000	209,000	236,000	243,000
Gas.....	14,000	20,000	24,000	24,000
Total...	\$793,000	\$1,062,000	\$1,213,000	\$1,263,000

Although higher consumption and increased costs reflect the growth in building areas, to a substantial degree they result from the fact that Smithsonian buildings and operations are not normal office-type activities. Air-conditioning, heating, and lighting must be provided for a heavy visitor influx, during day and evening hours. Continuous operations, including the availability of operating engineers seven days a week, 24 hours a day, are required for maintaining environmental conditions for the objects in the collections to prevent damage by changes in temperature and humidity. Greater public awareness and interest in the Smithsonian has increased communications costs.

An increase of \$50,000 is required to meet projected increased costs for steam, electricity, and communications. Of this amount, \$14,000 will be needed for the additional cost of electricity to operate the 500-ton capacity air-conditioning equipment now being installed as part of the restoration and renovation of the Smithsonian Institution building. An increase of two engineer positions also will be required to operate this equipment for six months of fiscal 1970. The cost of steam per pound has risen 9.6 percent over the past year. An increase of \$29,000 is requested to meet this added cost. An increase of \$7,000 is required for the Federal Telecommunications System (FTS) intercity telephone service in fiscal 1970, based on a recent communication from the General Services Administration.

This is a total program increase of 48 positions and \$340,000. Existing resources of staff and funds cannot be applied to meet these needs. The operation and preventive maintenance of complex mechanical and electrical systems is at bare minimum standards. Routine cleaning of public and work spaces and the moving of equipment and museum objects are not keeping pace with demands. Guard protection is too thinly spread during peak visitor times.

The volume and complexity of work orders for mechanical trades assistance continue to place heavy demands on this Department as indicated below:

<u>Fiscal Year</u>	<u>No. Work Orders</u>
1967	4,916
1968	6,470
1969	9,000 est.
1970	11,000 est.

These work orders cover a varied range of assistance and support by the skilled trade and craft employees. They include such activities as the installation of special exhibitions and presentations in science, history, and art for the instruction and pleasure of the public; building repairs to prevent deterioration; installation of special laboratory equipment for the scientific staff; fabrication of metal frame and supports for collection housing; design of lighting installations in exhibit halls and art galleries; and restoration of antique furniture for special exhibition.

The mechanical service employees of the Buildings Management Department are also responsible for inspecting, operating, servicing, and repairing the present 9,400-ton capacity environmental control equipment. This is a complex and intricate system of machinery used for air-conditioning, refrigeration, heating, and humidity control purposes. It must be closely supervised seven days a week, 24-hours a day. The total capacity of this machinery compares with

2,280 tons in 1964, an increase of 311 percent. The environmental control system is absolutely essential to the conservation and preservation of approximately 62-million objects in the National Collections and to the comfort of visitors and staff.

This Department also provides building services support to the many programs of the Institution, including cleaning exhibits areas, e.g. the Railroad and Auto Halls in the Museum of History and Technology, as well as public lounges, restrooms, offices, laboratories, and shops; assisting in the movement and installation of exhibits; and transporting museum objects from donors in the Washington Metropolitan area. These employees also provide such special services as office moves, vehicle transportation, telephone services, and pest-control operations for the buildings and grounds.

Minimum acceptable security standards require specialized techniques and extensive installations to assure protection for museum and gallery buildings, for the National Collections contained therein, as well as the safety and welfare of the visitors and the staff. The prevention of pilferage and vandalism, and the detection and elimination of safety and fire hazards are programs of major concern. An increasing burden is being put on the Smithsonian for the proper maintenance of its protective standards. New design concepts in exhibit halls and galleries result in a minimum amount of large open space which can be effectively protected by a single guard. In addition, many new exhibits are being presented in a fashion that prevents the use of protective devices such as barriers, cases, and enclosures which might intrude between the objects and the viewer. These innovations, while desirable for public enjoyment and education, result in an ever-growing requirement for more guards, each with a lesser area of proper surveillance. The increased use of sophisticated electronic protection devices only partially compensates for the absence of an onsite guard. In case of trouble or emergency, the response and action of a trained guard are still required.

In 1969, only 84 percent of the essential guard posts could be adequately staffed within the authorized positions of the guard force. This compares with 90 percent in 1966. Actually, the manpower limitations, imposed by the existing austerity program, have reduced the on-board strength and now allow coverage of only 72 percent of the total required posts. This shortage makes it necessary to combine posts and extend individual guard coverage considerably beyond minimum acceptable security standards. The National Collections must be protected against loss or damage through theft or vandalism. During fiscal 1968, the number of such incidents increased to 240 from 183 in 1967, an increase of 31 percent. The number of incidents expected during the current fiscal year will be at least the level of 1968.

In recognition of the need to reduce costs wherever possible, a study was made to determine the feasibility and possible savings in changing the regular scheduled night cleaning force to the day shift, beginning at 6:00 a.m. This study revealed that the change-over to day cleaning improved coordination and cooperation with daytime activities; increased production (through closer supervision); and reduced tardiness and absenteeism (because of the better transportation available for the daytime hours of duty). In addition to the above benefits, approximately \$20,000 will be saved annually through the elimination of night-differential costs. These savings are being used to cover the increase in the cost of trash removal, elevator inspection and repairs, building supplies, materials, and equipment items.

BUILDINGS MANAGEMENT DEPARTMENT

Name of Building	Square Feet Gross	Number of Positions			Operating Costs-- ^{1/}	
		1968	1969	1970	1968	1970
Museum of History and Technology	753,667	248	248	248	\$2,299,000	\$2,392,000
Museum of Natural History.....	1,220,581	262	262	262	2,606,000	2,721,000
Fine Arts and Portrait Galleries	374,125	74	88	128	455,000	617,000
Smithsonian Institution Building...	150,388	49	50	52	390,000	409,000
Arts and Industries Building.....	162,897	74	75	77	561,000	602,000
Renwick Gallery of Art	38,000	0	7	7	0	42,000
All other (National Air and Space Museum, Freer Gallery of Art, 24th Street, Anacostia Neighbor- hood Museum, Oceanographic Sorting Center, Silver Hill facility, Lamont Street, Building 3, and minor sheds).....	607,962	92	97	101	842,000	917,000
Rehabilitation Projects	---	---	---	---	149,000	120,000
Totals.....	3,307,620	799	827	875	\$7,302,000	\$7,820,000
						\$8,476,000

^{1/} Excludes Rehabilitation Costs

^{2/} Initial operation only

MUSEUM PROGRAMS AND RELATED RESEARCH
Special Foreign Currency Program

1968 Appropriation	\$2, 316, 000
1969 Appropriation	\$2, 316, 000
1970 Estimate	\$4, 500, 000

An appropriation of \$4, 500, 000 in foreign currencies, which are determined by the Treasury Department to be excess to the needs of the United States is requested for a program of grants to United States institutions for essential field research in archeology and related disciplines, systematic and environmental biology, astrophysics and other fields of Smithsonian competence.

The requested increase of \$2, 184, 000 in foreign currencies is to be devoted to strengthening the research programs of United States universities, museums and other institutions of higher learning. The request is based on the growing total of on-going research commitments, the unabated flow of new research proposals and the increasing opportunities for research contributing to national programs.

In this time of budgetary restraint, however, the total amount requested for Fiscal Year 1970 has been reduced by the equivalent of \$1, 500, 000 below the request submitted for Fiscal Year 1969. The reduction has been made possible primarily by reducing the scale of research plans. It is estimated that Program needs can be limited to the new \$4, 500, 000 level. Ideally, an appropriation of about \$6, 000, 000 in foreign currencies would be adequate to meet these needs in subsequent years.

Funds are requested for the following programs:

	<u>FY 1968</u> <u>Appropriation</u>	<u>FY 1969</u> <u>Appropriation</u>	<u>FY 1970</u> <u>Estimate</u>
Archeology and Related Disciplines	\$1, 105, 000	\$1, 105, 000	\$2, 000, 000
Systematic and Environmental Biology	1, 016, 000	1, 046, 000	2, 000, 000
Museum Programs	40, 000	40, 000	75, 000
Astrophysics	145, 000	95, 000	380, 000
International Exchange Service	15, 000	15, 000
Grant Administration	<u>10, 000</u>	<u>15, 000</u>	<u>30, 000</u>
 Total	 \$2, 316, 000	 \$2, 316, 000	 \$4, 500, 000
 Less Fy 1969 Appropriation			 <u>2, 316, 000</u>
 FY 1970 Increase			 \$2, 184, 000

The requested increase in the Smithsonian Special Foreign Currency Program appropriation seeks to bring the supply of these funds more in line with the demand from United States research institutions. The increase is justified because an

expanded program has been authorized and yet the level of funding has remained stationary for three of the four years of the Program's existence. At the invitation of the Department of State, the Smithsonian took over the program of grants in "excess" foreign currencies for archeological research which had grown up under State Department auspices as the principal source of field research funding of American classical archeology abroad. Just as this initial approach to the Smithsonian was based on the Institution's long leadership in archeological research Congressional approval of expansion of the Program first into systematic and environmental biology and then into astrophysics was based on Smithsonian leadership in these fields. The result, however, is that the Fiscal Year 1969 appropriation of \$2, 316, 000 in foreign currencies is likely to suffice for little more than the support of on-going research.

On-going research totals more than 80 projects benefitting more than two hundred United States institutions in over twenty-five states. Examples of these studies include:

... Five different archeological excavations in Yugoslavia carried out with Smithsonian support by Stanford, the Institute for Advanced Study at Princeton, the University of Pittsburgh, the University of Minnesota, and Denison College in collaboration with Yugoslav institutions which will vastly increase our knowledge of man's history from early prehistoric through Roman and medieval times while providing field research training for many American graduate students.

... Urgent studies of urbanization on the social and economic structure of the indigenous Vedda peoples of Ceylon by the University of Washington.

... Interdisciplinary environmental studies of the plants and animals of tropical Ceylon, a natural research laboratory. These studies embrace the vegetation, elephants, related species of monkey, and certain fish species. They can be expected to contribute to conservation practices insuring their full utilization for agriculture, medical research, tourism, and fisheries. The Ceylon studies are expected to serve as a model for similar studies in other world areas. These studies involve scholars and students from the University of Miami, the University of Hawaii, the University of Maryland, the Smithsonian and two Ceylonese collaborating institutions.

... Computer correlation of theories on the nature of the core and the surface of evolving stars, a joint project of the Smithsonian Astrophysical Observatory and Hebrew University, Jerusalem.

Inquiries concerning new research proposals continue to flow in unabated at the rate of about seven per week. This flow reflects in part the awareness that dollar funding for basic research is likely to be curtailed in this period of budgetary stringency, and that this is the time to take advantage of the availability of PL-480 currencies to undertake research programs which can best be carried out abroad. Research in tropical biology can naturally be best conducted in the tropics and studies in South Asian linguistics can, perforce, be best conducted in the field in South Asia. It is felt that chances of obtaining research funding may be better at present in PL-480 "excess" foreign currencies countries because of U.S. government efforts to employ without delay these funds which continually depreciate through inflation.

In this situation, an increase in the foreign currency appropriation to the Smithsonian is necessary to cover pending and new research proposals which are expected to total some \$825,000 and \$780,000 respectively during Fiscal Year 1970. Present estimates of distribution of demand for funds in Fiscal Year 1970 follow:

	<u>Archeology</u>	<u>Biology</u>	<u>Astrophysics</u>	<u>Other</u>	<u>Total</u>
On-going	\$1,420,000	\$1,380,000	\$ 95,000	--	\$2,895,000
Pending	350,000	475,000	--	--	825,000
New	<u>230,000</u>	<u>145,000</u>	<u>285,000</u>	<u>\$120,000</u> ^{1/}	<u>780,000</u>
	\$2,000,000	\$2,000,000	\$380,000	\$120,000	\$4,500,000

Many proposals represent careful planning and coordination of staff availability over a period of several years. To postpone such research is often to lose an opportunity to advance knowledge significantly and to waste the years of patient planning at home and patient development of working relations with collaborating research institutions abroad. Examples of pending and new proposals include:

... A study in India of the nature and movement of microscopic airborne organisms by Pennsylvania State University biologists under the International Biological Program.

... Cooperative operation of an archeological research and training program involving a consortium of United States institutions of American Museum of Natural History and Vassar College and the Archeological Survey of India to speed the training of a substantial number of Americans competent in South Asian archeology.

... An interdisciplinary study of both terrestrial and marine coral reef environments; one of the principal natural environmental types involving scientists from the American Museum of Natural History in New York City, the University of Southern California, the University of Georgia, the Woods Hole Marine Biological Laboratory and the Smithsonian Institution.

... To provide under the U.S. National Museum Act museum expertise and support for the International Council of Museums' program of development of teaching museums of science and technology in Asia and Africa. For example, a central laboratory for basic exhibits in science and technology is planned for India where teaching exhibits will be built for circulation in industrializing countries. The experiment will provide opportunities to American museum specialists to observe the effectiveness of exhibits in teaching basic science and technology to people of all cultural backgrounds.

Research supported by the Smithsonian foreign currency grants contributes to national programs. A joint Congressional colloquium convened in August 1968 was devoted exclusively to the study of environmental quality which is the focus of Smithsonian supported ecological studies. In addition, oceanographic studies of direct interest to the National Council for Marine Resources and Engineering Development and supported by the Smithsonian Foreign Currency Program are carefully constructing a picture of the food and mineral resources of the seas. Many of these studies contribute to the National Academy of Sciences' United States

^{1/} The sum for Museum Programs-\$75,000-, International Exchange Service-\$15,000-and Grant Administration-\$30,000-justified in detail in appended charts.

Committee for the International Biological Program. This Council of Scientific Unions worldwide program promotes those studies of natural productivity which can not well be studied by any one nation alone. Many of these studies contribute valuable materials to the National Collections of the Smithsonian; all of them provide the basis for the enduring collaboration involving American and foreign scholars and institutions sharing the vital objective of providing knowledge which will improve the quality of man's environment.

Opportunities for foreign currency funded research continue to grow, further justifying an increase in the Smithsonian foreign currency appropriation. Morocco had been added to the list of "excess" currency countries. As soon as Morocco appeared on the list a proposal was in preparation to explore that country's Atlantic and Mediterranean waters in collaboration with Mohammed V University in Rabat and the government fisheries station at Casablanca in studies complementary to those already being conducted in Tunisia and Israel with foreign currency support. A proposal to study ancient and little known Phoenician settlements in Morocco has also been received.

Furthermore, after years of careful preparation, the opportunity to broaden research activities in Tunisia, Yugoslavia and India appears at hand. A bilateral agreement has been signed with Tunisia providing the legal basis for research in that country in all fields of Smithsonian competence. The agreement is expected to facilitate arrangements for research which have long been delayed. The first project likely to profit from the agreement is a multi-national, interdisciplinary International Biological Program study of the Sahara and adjacent ecosystems. The study will seek the explanation for the continuing advance of the desert and the corollary recommendations for halting that advance. Furthermore, the Yugoslav Government has invited expansion of PL-480 uses under the Smithsonian program because of the satisfactory experience over the past two summers in archeological research. Expanded American research collaboration there appears likely to develop within the framework of a Yugoslav national program of ecological research. Such a program would seek to contribute to man's ability to sustain environmental quality by predicting and compensating for the effects of his environment modifying actions. In India development of agreed program procedure suggests that Smithsonian funded research will now be smoothly processed by the Government of India providing further, great opportunities.

Expanding research opportunities in these countries will not be offset in Fiscal Year 1970 by the imminent end of the United States excess account in Israeli pounds. No new research starts will be made there, but it is necessary to complete the research which has already been started. In Fiscal Year 1970, for example, the Smithsonian would need some \$694,000 in Israeli pounds for this ongoing research.

Publications based on research supported by Smithsonian Foreign Currency Program Grants are now beginning to appear. Southern Methodist University's survey of prehistoric sites along the Nile have, for example, resulted in a three volume publication by principal investigator Fred Wendorf entitled The Prehistory of Nubia. These volumes are the first of a series covering continuing research which is revealing the early phases of man's residence in the Nile Valley -- phases long neglected for the more spectacular historic period. A series of volumes entitled Ashdod is now coming off the press detailing the results of the

excavation of this Philistine city by the Carnegie Museum in Pittsburgh working in collaboration with the Israeli Department of Antiquities. The Biblical Archeologist's issue of May 1967, was entirely devoted to the results of the excavations at biblical Gezer being conducted by Cincinnati's Hebrew Union College on a Smithsonian Foreign Currency grant. The American Academy of Benares in India has begun publishing a Bulletin or international scholarly journal devoted to South Asian art and archeology. A number of scientific monographs have also begun to appear on the mollusks of the Indian Ocean which the University of Michigan has been studying with Smithsonian support.

Some other significant research results are already known. For example:

... The same Yale University team which uncovered the skull of one of man's early primate ancestors in the Egyptian Fayum badlands has uncovered an equally remarkable lower jaw of a giant ape in the Siwalik Hills of Northern India on a joint expedition with Punjab University. Preliminary estimates date this "early man" about 14 million years ago. The Smithsonian provided the local currencies for this research; the National Science Foundation provided dollars for the expenses in this country.

... Studies of the migration of fishes between the Red Sea and the Mediterranean through the sea-level Suez Canal have shown that a majority of commercially exploited species in the Eastern Mediterranean have migrated from the Red Sea. These studies are considered base-line studies for those surrounding the sea-level canal in Panama and the results so far suggest the importance of studies going on at the Smithsonian Tropical Research Institute in Panama.

The Smithsonian Foreign Currency Program is operated at minimum cost to the Institution in dollars. Such costs are limited to those for personnel in Washington who administer the Program. During Fiscal Year 1969 five people were employed in the Office of International Activities for this purpose at a total cost of approximately \$80,000. One additional person contributed a portion of his time. The total cost of the operation of the Office of International Activities is \$98,000 for the current fiscal year.

There are no overseas dollar costs to the Program and those associated with individual research projects meet expenses within the United States and do not contribute to the U.S. balance of payments deficit.

In fact, the Smithsonian Foreign Currency Program functions as a dollar-saving device for government agencies and private foundations which share the support of research with the Institution. The National Science Foundation, mentioned above, is one of these. In addition, the Program bears project costs abroad, while organizations like the National Institute of Mental Health, the World Wildlife Fund, the John D. Rockefeller, III Fund, the Wenner-Gren Foundation provide the dollars for equipment purchases, salaries of American scholars and the like in the United States.

There follow project-by-project lists of the research which the Institution seeks to support through grants to United States institutions under its four year old Special Foreign Currency Program. This request, as in the past, is based on budget projections for on-going research and on pending and new research proposals

which include firm research, those postponed for lack of sufficient funds and other sample or illustrative proposals based on firm indications of interest both within and without the Smithsonian. They represent the Institution's selection of possible projects which appear most promising for successful development and implementation during fiscal year 1970. It should be noted, however, that actual implementation of these projects will be contingent upon three factors: review by the Smithsonian's outside advisory councils, review and approval by American embassies overseas, and appropriate cooperative arrangements with host-country institutions or Governmental authorities.

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

1. Archeology and Related Disciplines

A. On-going Projects

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U. S. Dollars</u>	
1. American Institute of Indian Studies (a non-profit organization of 24 American colleges and universities)	For continued support of the American Academy of Benares, a research center for South Asian archeology and art history.	1970est.	150,000
		1969	147,000
		1968	144,753
		1967	130,778
		1966	76,850
2. American Research Center in Egypt (a nonprofit study center supported by ten American universities)	To continue support of the Center's research and excavation program in the archeology of Egypt, which includes Pharaonic, Hellenistic, Roman, and early Christian sites.	1970est.	150,000
		1969	150,000
		1968	258,728
		1967	177,137
3. Jerusalem School of Archeology of the Hebrew Union College	To continue the survey and exploration of some 400 archeological sites in the Negev and to conduct seminars in biblical archeology for American graduate students in archeology.	1970est.	174,000
		1969	150,000
		1968	134,250
		1967	165,750
		1966	150,000
4. Peabody Museum of Yale University	To continue the paleontology and stratigraphy studies of the Paleocene, Eocene, and Oligocene deposits of Egypt, which have resulted in important discoveries relating to human evolution.	1970est.	30,000
		1969	30,000
		1967	31,396
		1966	19,310
5. University of Colorado	To study the prehistoric archeology of Tunisia at an excavation at Oued el Akarit	1970est.	60,000
		1969	60,000
		1967	62,000
6. Southern Methodist University	To study prehistory of the area around Sibaiya, Egypt.	1970est.	40,000
		1969	40,000
		1968	33,390
		1967	39,800
7. University Museum, University of Pennsylvania	To study remaining stones of the Temple of Akhnaten at Luxor, Egypt.	1970est.	60,000
		1969	60,000
		1968	9,730
		1967	65,070

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U. S. Dollars</u>	
8. Museum of Anthropology, University of Michigan	To develop a program for research and training in pre-historic archeology through field excavations on Mt. Carmel in Israel.	1970est.	50,000
		1969	50,000
		1968	47,660
		1967	50,000
9. Carnegie Museum	To continue the excavation of a Philistine City at Ashdod, Israel.	1970est.	50,000
		1969	50,000
		1968	56,180
		1967	47,180
10. Lawrence Radiation Lab. University of California, Berkeley	To continue testing the utilization of cosmic rays to 'x-ray' the Egyptian pyramids in search of presently unknown chambers.	1970est.	45,000
		1969	30,000
		1967	21,680
		1966	23,320
11. University of Missouri	To excavate at Tell Anafa, Israel, to understand better the nature of Greek trade with Palestine and Egypt in the period after 800 B. C.	1970	40,000
		1969	40,000
		1968	60,500
12. University of Minnesota	To initiate a program of research in Yugoslavia with excavations of the unique Roman Palace of Diocletian at Split, Yugoslavia.	1970est.	50,000
		1969	27,000
		1968	32,505
13. Smithsonian Institution Office of Anthropology	To study disappearing metal-working crafts of Pakistan and Ceylon as part of a worldwide study of ancient technologies and their development.	1970	40,000
		1969	20,000
		1968	21,128
14. Yale University Peabody Museum	To locate and open quarry excavations for fossil remains of early relatives of man in Siwalik hills of North India.	1970est.	60,000
		1969	40,000
		1968	43,850
15. Brooklyn Museum	To construct scale models of Egyptian monuments and archeological sites for study.	1970est.	10,000
		1969	10,000
		1967	4,222
16. Institute for Advanced Study, Princeton	To conduct interdisciplinary research and excavations in Bronze and early Iron Ages of Northern Yugoslavia.	1970est.	10,000
		1969	8,000
		1968	9,496
		1967	2,030

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U. S. Dollars</u>	
17. University of Chicago	To provide research assistantships for graduate credit in South Asian art at the American Academy of Benares, India, an affiliate of the American Institute of Indian Studies.	1970est. 1969 1967	10,000 10,000 11,400
18. University of Chicago	To examine a Vaisnava religious community in West Bengal historically and sociologically. (Funds available in 1967, awaiting Government of India approval)	1970est. 1969	55,000 50,000
19. American University in Cairo	To study the distinctive domed Mausolea of the Mamluk era (1250-1517 A. D.) in Cairo which have not been studied and are threatened by growth and modernization of Cairo.	1970est. 1969 1968	20,000 21,000 6,340
20. Dumbarton Oaks (Harvard) Center of Byzantine Studies; American Academy in Rome	To continue studies of the unique but rapidly disintegrating Roman and Byzantine mosaics at historic Utica, Tunisia.	1970est. 1969	30,000 28,628
21. Smithsonian Institution	To continue development of urgent anthropological research in the excess countries as a part of the Research Program in Changing Cultures of the newly established Center for the Study of Man.	1970est. 1969	20,000 20,000
22. University of Washington	To continue studies of the relationship between social structure and economic organization in the Vedda Communities of Ceylon.	1970est. 1968	15,000 16,000
23. University of Illinois	To continue comparative studies of the effects of cultural change on folk music in Israel and Tunisia.	1970est. 1969	30,000 31,000
24. Denison University	To continue to build the Denison research through exchanges of materials on Ancient Burmese art with Burmese museums.	1970est. 1969	5,000 5,000
25. American Institute of Indian Studies	To continue support for post-doctoral research in social and cultural anthropology and linguistics of India and Ceylon	1970est. 1969	145,000 148,000

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U.S. Dollars</u>	
26. University Museum University of Pennsylvania	To continue study of Dra Abul El Naga tomb inscriptions, Egypt	1970est. 17, 000 1969 17, 300	
27. Douglass College Rutgers University	To continue excavations of the early Greek and Roman settle- ments at Salona in Yugoslavia.	1970est. 20, 000 1969 20, 300	
28. University of California, Los Angeles	To continue excavations of an early neolithic settlement at Auzibegova Macedonia, Yugo- slavia considered a cross road for formative cultures of western civilization.	1970est. 30, 000 1969 31, 000	
29. University of Minnesota	To continue studies of climate influences on man's shift from nomadic to settled life in the Middle East through studies of fossil evidence of evolving flora and fauna.	1970est. 4, 000 1969 7, 700	
<u>Subtotal Estimate for On-going Research</u>		1, 420, 000	

B. Pending Research Proposals

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U.S. Dollars</u>	
1. University Museum University of Pennsylvania	To excavate the proto- historic of Kuntarodai Ceylon to determine the nature and chronology of settlement and relations with south India.	1970 40, 000	
2. University of Washington	To study the Byzanto-Slavic culture of medieval Bargala in Yugoslavia.	1970 34, 000	
3. University of Wisconsin	To study and film the rapidly disappearing Dhangars/Bangars, the semi-nomadic shepherds of Maharashtra State, India.	1970 40, 000	
4. Smithsonian Institution Office of Anthropology	To study the rapidly disappear- ing crafts at village level in India.	1970 50, 000	

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U. S. Dollars</u>	
5. American Institute of Indian Studies, American Academy of Benares	To survey and initiate excavation of Cultural Sites of the Pratihara period especially at Bhinmal in Rajasthan, India.	1970	50,000
6. Smithsonian Institution Museum of Natural History	To survey and document the art history of Tibet on the basis of objects currently being brought to India and Nepal by Tibetan refugees.	1970	30,000
7. New York University Columbia University University of Michigan	To excavate ancient Utica, Tunisia employing interdisciplinary techniques designed to describe fully the mode of life and environment characteristic of successive cultures inhabiting the site.	1970	50,000
8. American Museum of Natural History	To initiate archeological excavations together with the Archeological Survey of Indian with special provision for the training of Americans in the archeology of South Asia, today an area largely neglected by U. S. scholarship.	1970	30,000
9. Smithsonian Institution Office of Anthropology	To initiate systematic collections of Indian folk art which is disappearing as village crafts yield to urban technology.	1970	26,000
<u>Subtotal Estimate for Pending Research</u>			350,000

C. New Project Proposals

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U. S. Dollars</u>	
1. Southern Methodist University	To study prehistoric industries and settlement patterns in the central Negev, Israel.	1970	5,000
2. University of California Los Angeles	To excavate Islamic archeological sites in West Pakistan.	1970	30,000
3. Brandeis University	To survey western Phoenician archeological sites in Morocco.	1970	25,000
4. University of Michigan	To conduct research and excavations into the Middle Paleolithic of Northern Bosnia.	1970	20,000

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U. S. Dollars</u>	
5. Indiana University	To excavate at Aenona (Modern Nin) Yugoslavia a Roman and Medieval city built on a prehistoric site.	1970	40,000
6. Institute for Advanced Studies, Stanford University	To conduct investigations in the archeology of historical India.	1970	40,000
7. Columbia University; University of Pennsylvania	To conduct ethno-historical re- search into the history of Traits of traditional life in Modern India.	1970	30,000
8. University of Washington	To conduct investigations into the chalcolithic and early civili- zation of India.	1970	40,000
<u>Subtotal Estimate for New Research</u>			230,000
<u>Total Archeology and Related Disciplines</u>			2,000,000

II . Systematic and Environmental Biology

A. On-going Projects

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U. S. Dollars</u>	
1. National Academy of Sciences - U. S. National Committee for the Inter- national Biological Pro- gram	To continue direct support to the U. S. National Committee for the International Biological Program for planning symposia, training of U.S. Scientists, and research program development.	1970est. 1969 1968	50,000 35,000 35,000
2. National Academy of Sciences-U.S. National Committee for the IBP	To continue development of joint U. S. - Indian research projects which strengthen United States research and contribute to priority objectives of the U. S. IBP.	1970est. 1969	50,000 30,000
3. University of Georgia	To study the flow of energy through small rodent populations in different habitats in conjunction with the Ecological Institute of Poland.	1970est. 1969	100,000 125,000

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U.S. Dollars</u>	
4. Smithsonian Institution, Office of Oceanography and Limnology	To study marine organisms of the Red Sea and Eastern Mediterranean in order to determine what biological interchange of species has occurred through the Suez Canal.	1970est.	100,000
		1969	100,000
		1967	122,000
5. Smithsonian Institution, Office of Oceanography and Limnology	To accelerate the processing of marine organisms from the Mediterranean through the sorting facility known as the Mediterranean Marine Sorting Center operated in cooperation with the Tunisian Institute of Oceanography and Fisheries.	1970est.	100,000
		1969	100,000
		1967	152,360
6. University of Colorado	To continue to excavate a paleon- tological site in the Miocene- Pliocene formations of South Central Tunisia to attempt to establish a chronology for fossil mammals in Tunisia which may help to determine geological re- lationships with similar European formations.	1970est.	25,000
		1969	23,000
		1968	23,165
7. Smithsonian Institution, Division of Birds	To continue investigations on the ecology of Palearctic birds mi- grating through northeastern Africa, including cooperative research on serology with the Rockefeller Virus Laboratory and ectoparasites with the Naval Medical Research Unit III in Egypt.	1970est.	50,000
		1969	41,000
		1968	21,517
		1967	44,093
8. University of Michigan	To continue taxonomic studies of Indian mollusks through caryotype analysis and the cytogenetics of closely related species which will contribute to medical, public health, and veterinary programs.	1970est.	15,000
		1969	16,000
		1968	21,394
9. Smithsonian Institution, National Zoological Park	To continue studies of the evolution and behavior of related primates (Cercopithecidae) in different en- vironments in Ceylon.	1970est.	20,000
		1969	21,000
		1968	45,749

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U. S. Dollars</u>	
10. Smithsonian Institution, National Zoological Park	To continue studies of the relation of man and elephant in Ceylon where the domesticated beast of burden is captured and trained to work with man after reaching maturity as a wild elephant rather than after domesti- cation as a young animal.	1970est.	10,000
		1969	10,000
		1968	4,371
11. University of Michigan	To continue theoretical ecological studies of a living coral reef and the organisms related to it in Israel.	1970est.	20,000
		1969	20,000
		1968	12,036
12. Smithsonian Institution	To continue revision of the basic <u>Trimen's Flora of Ceylon</u> in the light of modern botanical know- ledge and techniques.	1970est.	30,000
		1969	30,000
		1968	39,400
13. Smithsonian Institution Department of Botany	To continue flora and vegetation studies of a district of Mysore State in the Ghat Mountains of Southwest India and to prepare collections for the Smithsonian's National Herbarium.	1970est.	20,000
		1969	20,000
14. Smithsonian Institution Radiation Biology Lab.	To continue studies of solar radiation station in Israel to ob- tain data for comparison with base line conducted in Washington, D.C.	1970est.	80,000
		1969	84,000
		1967	110,000
15. University of Georgia	To continue studies of the inte- ruction of human and small rodent populations in a variety of tem- perate zone environments in conjunction with the Ecological Institute of the Polish Academy. of Sciences.	1970est.	50,000
		1969est.	50,000
16. California Academy of Sciences	To continue field investigations of the habitats of Indian amphibians and reptiles especially in the fast disappearing virgin environ- ments of that country.	1970est.	50,000
		1969est.	50,000
17. Smithsonian Institution Office of Oceanography and Limnology	To continue studies of the benthic and planktonic biology of the Adriatic Sea in Yugoslavia.	1970est.	50,000
		1969est.	35,000

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U. S. Dollars</u>	
18. Duke University	To continue taxonomic studies in Yugoslavia of the Adriatic isopod and to prepare a handbook for the study around the world of this marine organism.	1970est. 40,000 1969est. 40,000	
19. Smithsonian Institution: National Zoological Park and Museum of Natural History	To provide additional grants to Smithsonian scientists for increasing the national entomological, botanical and zoological collections by expeditions to India, Ceylon, Egypt, Pakistan, Tunisia and Morocco.	1970est. 50,000 1969est. 50,000	
20. Smithsonian Institution Office of Ecology	To continue ecological studies of Mediterranean and Saharan environments in a multinational project conducted in research preserves being established in Tunisia as a result of recommendations of the International Biological Program.	1970est. 90,000 1969est. 90,000	
21. Smithsonian Institution Office of Ecology	To continue studies of the behavior of elephants and primates in India coordinated with baseline studies conducted in Ceylon.	1970est. 50,000 1969est. 50,000	
22. Union College, Schenectady, N. Y.	To collect and study the plankton communities of the Nile River Delta with special reference to the changes salinity and circulation caused by interruption of seasonal river fluctuation by the Aswan Dam.	1970est. 170,000 1969est. 210,000	
23. Smithsonian Institution, Department of Vertebrate Zoology	To continue studies, of South Asian birds and the preparation of a handbook.	1970est. 5,000 1969 5,000 1968 5,000	
24. Dartmouth University	To continue studies of freshwater lakes organisms and sediments in Ceylon.	1970est. 20,000 1969 20,000	
25. University of Miami Florida	To continue studies in Ceylon of Carangid fishes which constitute one of the major sources of man's food around the world.	1970est. 25,000 1969 25,000	

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U. S. Dollars</u>	
26. University of the State of New York, Stony Brook	To continue studies of the ecology of snails in Israel.	1970est. 20,000 1969 20,000	
27. University of Missouri	To continue studies of the behavior and ecology of gazelles in Israel.	1970est. 40,000 1969 40,000	
28. Library, Smithsonian Institution	To continue accelerated translation and publication of reference works and monographs.	1970est. 50,000 1969 50,000	
<u>Subtotal Estimate for On-going Research</u>			1,380,000

B. Pending Projects

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U. S. Dollars</u>	
1. Duke University	To conduct field studies in plant taxonomy and ecology in the state of Assom, India.	1970est. 30,000	
2. University of California at Davis	To study the taxonomy and dis- tribution of the poorly known microscopic marine fauna of the Bay of Bengal on the basis of collections of marine sediments from the coastal region of East Pakistan.	1970est. 20,000	
3. Smithsonian Institution Office of Ecology	To study the ecology and behavior of hooved animals in a teak forest in India.	1970est. 40,000	
4. Southern Methodist University	To undertake a definitive study of Quaternary age deposits on the floor and lower slopes of the Qattara Depression in the western Desert of Egypt.	1970est. 50,000	
5. Smithsonian Institution, Office of Oceanography and Limnology	To collect and conduct taxonomic studies of the marine fauna of West Pakistan's continental shelf.	1970est. 70,000	
6. Johns Hopkins University	To complete studies of the popu- lation ecology of Rhesus monkeys in Northern India.	1970est. 10,000	

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U. S. Dollars</u>
7. American University in Cairo	To study in Egypt the migration of marine biota between the Red Sea and the Mediterranean through the Suez Canal.	1970est. 40,000
8. Smithsonian Institution Office of Ecology	To conduct studies of the pattern and behavior of birds during migration in the Himalayan Mountains of Northern India and Nepal.	1970est. 20,000
9. Smithsonian Institution Division of Invertebrate Paleontology	To study in India the broadly distributed fossil astracode which reveals through its varied physical appearance much about the climate and geography of the geologic era in which it lives.	1970est. 45,000
10. University of Michigan	To study the snail, carrier of the disease, bilharziasis, in the newly formed reservoirs and canals associated with the Aswan dam in Egypt.	1970est. 40,000
11. University of Utah	To collect the may flies of Pakistan for taxonomic studies as a part of specialized world wide studies of this species.	1970est. 10,000
12. Smithsonian Institution Office of Ecology	To investigate the plant ecology of the Laccadive Islands of India in cooperation with the Botanical Survey of India and to obtain a duplicate set of specimens for the research collections of the U. S. National Museum.	1970est. 30,000
13. Smithsonian Institution Office of Ecology	To collect for the U. S. National Museum and study the flora of the long neglected areas of India particularly the Malabar and the Karomandel Coasts, and the Nilghiri and Khasia Hills--areas which served as sources of materials for classic botanical studies made as long ago as the 17th Century and badly in need of revision.	1970est. 70,000
<u>Subtotal Estimate for Pending Research</u>		<hr/> 475,000

C. New Projects

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U.S. Dollars</u>
1. University of Montana	To conduct pilot studies of the behavior and ecology of the wild boar in West Pakistan-- a little studied animal which is nevertheless considered a significant agricultural pest.	1970est. 10,000
2. Michigan State University	To initiate long term studies of the biotic productivity of a natural forest and large mammal community in Nepal.	1970est. 15,000
3. Smithsonian Institution Mediterranean Marine Sorting Center	To convene a symposium in Tunisia to review progress and set objectives for forthcoming research on meiofauna.	1970est. 10,000
4. Smithsonian Institution Office of Ecology	To study the ecology and behavior of ungulates in Ceylonese forests-- a study supplementary to studies of the Ceylonese elephant, vegetation, etc. in a series of ecological studies which form a pattern for other world areas.	1970est. 15,000
5. Smithsonian Institution Office of Ecology	To assist in the planning and conduct of a symposium in India on natural resource conservation problems in tropical environments in collaboration with the International Union for the Conservation of Nature and Natural Resources.	1970est. 20,000
6. Smithsonian Institution Department of Entomology	To study the Biosystematics of the insects of Ceylon as a part of the model program of ecological studies of that tropical island.	1970est. 25,000
7. University of Georgia	To study organic productivity and nutrient cycling in tropical ecosystems in collaboration with the Hindu University of Benares, India. This study has been proposed to the National Committees for the International Biological Program of both the United States and India.	1970est. 20,000

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U. S. Dollars.</u>
8. Yale University	To measure habitat relation- ships numbers and distribution of wild ungulates in the Gir Forest, India--one of a series of ecological studies to be proposed for U. S. - Indian IBP sponsorship and to be based in this unique tropical forest preserve where the last of the Asian lion, of biblical fame, survives.	1970est. 10,000
9. Scripps Institution of Oceanography, La Jolla, California	To plan in collaboration with the Indian Institute of oceanography periodic research cruises along a carefully determined line of collection stations to collect sediments, and marine biota and second changing marine and climato- logical data.	1970est. 20,000
<u>Sub Total, Estimate for New Research</u>		145,000
<u>Total, Systematic and Environmental Biology</u>		<u>2,000,000</u>

III. Museum Programs

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U. S. Dollars</u>
1. U. S. National Museum	To assist, under the U. S. National Museum Act, with museum expertise and support the program of the International Council of Museums, (ICOM) a UNESCO affiliate, to develop teaching museums of science and technology in Asia and Africa. For example, the Smithsonian has con- tributed in FY 1968 to studies resulting in recommendations to ICOM that there be established in India a laboratory for basic exhibits in science and technology where teaching exhibits will be built for circulation in industrializing countries. The experiment will pro- vide opportunities to American Museum Specialists to observe the effectiveness of exhibits in teaching basic science and technology to people of all cultural backgrounds.	1970est. 60,000 1969 20,000

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U.S. Dollars</u>
2. University Museum University of Pennsylvania and Smithsonian Traveling Exhibition Service	To prepare an exhibit catalogue, to be the first scholarly publi- cation on a unique collection at Benares Hindu University of miniature paintings of the Moghul period of Indian art for distribution through American museums exhibiting such art treasures for the first time in the United States.	1970est. 5,000
3. Milwaukee Museum and the University of Wisconsin	To conduct a pilot program of professional training for museum curators and technicians in collaboration with museums in India and Tunisia through two- way exchanges of personnel for on- the-job training supplemented in the U.S. with university courses in museo- logy. The exchanges are expected to enrich substantially the programs of the participating United States and foreign institutions.	1970est. 10,000
<u>Total for Museum Programs</u>		<u>75,000</u>

IV. Astrophysics

A. On-going Projects

<u>Recipient</u>	<u>Project</u>	<u>Grant Expressed in U.S. Dollars</u>
1. Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	To continue balloon experi- ments in cooperation with the Tata Institute of Fundamental Research, Bombay, India on gamma radiation reaching the earth's upper atmosphere from outer-space at the magnetic equator.	1970est. 30,000 1969 4,000 1968 29,100
2. Hunter College of the City University of New York and Smithsonian Astrophysical Obser- vatory	To continue computer analysis in Israel of the application of principles of plasma physics con- cerning the movement of particles at extremely high speeds to the movement of celestial bodies in galaxies--a study of the collective behavior of self-gravitating systems.	1970est 35,000 1968 41,800

<u>Recipient</u>	<u>Project</u>	<u>Grants Expressed in US. Dollars</u>	
3. Smithsonian Astrophysical Observatory	To continue studies in Israel comparing theories developed separately of the nature of the interior and of the exterior of evolving stars.	1970est.	30,000
		1969	27,300

<u>Subtotal On-going Research</u>	95,000
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B. New Project Proposals

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U.S. Dollars</u>	
1. Smithsonian Astrophysical Observatory	To record and analyze together with data from around the world, at the Uttar Pradesh State Obser- vatory, India, film exposures of suspected flare stars, a relatively newly discovered class of variable stars with radio and optical energies several orders of magnitude higher than emissions from the largest solar flares.	1970est.	10,000
2. Harvard University	To initiate a collaborative pro- gram with the Indian Institute of Science leading to a publication on the historical, mathematical and theoretical foundations of the theory of radiation gas dynamics.	1970est.	25,000
3. Smithsonian Institution Office of the Secretary	To assist in studies sponsored by the newly created Center for Short-Lived Phenomena, a clearing house for the receipt and dissemination of information concerning rare or infrequent natural events that might other- wise go unobserved or uninvesti- gated, such as remote volcanic eruptions, the birth of new islands, the fall of meteorites and large fire balls and sudden changes in biological and ecological systems.	1970est.	40,000

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U.S. Dollars</u>
4. Harvard University and the Smithsonian Astrophysical Observatory	To select, translate and publish the key works of the distinguished Polish Copernican scholar, L. A. Birkenmajer, in collaboration with the International Astronomical Union. The publication will make available for the first time to large segments of American and other English speaking scholarly communities invaluable analysis of the astronomy of Copernicus.	1970est. 15,000
5. Harvard University and Smithsonian Astrophysical Observatory	To initiate collaborative studies with Indian astrophysical institutions leading to the design of instrumentation for stellar observation.	1970est. 40,000
6. Smithsonian Astrophysical Observatory	To conduct laboratory studies of the spectra of hydrids and oxides in the visible and vacuum ultra violet region.	1970est. 30,000
7. Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	To investigate solar radiation pressure purturbations upon the Passive Geodetic Earth-Orbitting satellite (PAGEOS) in collaboration with the University of Warsaw and the Polish Academy of Sciences.	1970est. 45,000
8. Harvard University	To conduct laboratory studies of the excitation processes in stellar, planetary and cometary atmospheres.	1970est. 30,000
9. Smithsonian Astrophysical Observatory	To measure air glow and iono- spheric characteristics at the magnetic equator in studies contributing to the understanding of the nature of the upper atmosphere and of some of its effects on satellites.	1970est. 50,000
<u>Subtotal New Research Proposals</u>		285,000
<u>Total Astrophysics</u>		380,000

V. International Exchanges of Scientific Publications

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U.S. Dollars</u>	
1. Smithsonian Institution	To support costs of ocean freight of learned and governmental publications exchanged by the United States and the excess currency countries according to provisions of intergovernmental agreement.	1970est.	15,000
		1969	15,000
<u>Total International Exchange of Scientific Publications</u>			15,000

VI. Program Development and Administration

<u>Recipient</u>	<u>Project</u>	<u>Estimated Request in U.S. Dollars</u>	
1. Smithsonian Institution Office of International Activities	To defray costs of inspection and audit of field research sites and costs of negotiation with host governments on program operations--costs which increase in step with the increasing numbers of active grants.	1970est.	30,000
		1969	15,000
		1968	10,000
<u>Total Program Development and Administration</u>			30,000
GRAND TOTAL			4,500,000

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

Jan. 1969

Distribution of Funds by Country

Fiscal Years 1968, 1969, and 1970

Country	1968	1969	1970
India	\$323,709	\$490,066	\$1,016,250
Egypt.....	308,359	400,210	662,250
Israel	1,182,688	450,000	450,000
Morocco.....	0	25,000	210,500
Pakistan.....	78,816	34,380	176,000
Tunisia.....	81,816	225,000	281,000
Poland.....	90,000	100,000	300,750
Guinea.....	55,301	3,000	105,000
Burma.....	0	0	182,000
Yugoslavia.....	59,170	479,333	678,750
Ceylon.....	136,141	109,011	437,500
Total	<u>\$2,316,000</u>	<u>\$2,316,000</u>	<u>\$4,500,000</u>

CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

1968 Appropriation	\$400, 000
1969 Appropriation	\$300, 000
1970 Estimate	\$600, 000

An appropriation of \$600,000 is requested to continue a program of essential renovation, repairs, and the elimination of air pollution at the National Zoological Park.

In fiscal year 1963 the Congress appropriated funds for the first increment of a long-term program to redevelop and improve the National Zoological Park. At that time the 73-year-old Zoological Park had not had any major improvements since the mid-1930's, except for a police building constructed in 1956, although the collection of animals, reptiles, and birds had become one of the largest and finest in the world, and visitor attendance had grown to 4,000,000 annually. A widely acclaimed master plan was approved as a basis for redevelopment which would cost approximately 17-million dollars over a ten-year period.

A rapid pace of development was maintained for the next five years and work was completed on new roads, parking areas, sewer lines, a new flight cage, renovated bird house, new deer paddocks, an incinerator, antelope houses and paddocks, and service facilities. In 1968, however, the pace slackened because construction funds could not be provided due to more urgent demands and a request had to be made for funds to maintain and continue the useful life of those antiquated facilities not yet replaced.

The excellence of the new facilities must not eclipse the critical condition of those portions not yet completed. The redevelopment job is only half-done. Eventually, momentum must be regained to replace the 78-year-old lion house, the 67-year-old bear pens, the inadequate and unsanitary mammal pools, the wolf pens, the monkey facilities, and the disgraceful restaurant building. All of these facilities are now seven years older than they were when the improvement program was started and because their replacement has been anticipated, their maintenance has been minimal. Major repairs now are required to keep these buildings in operation for an indefinite period of time. All main program items are deferred for another year.

Funds in the amount of \$300,000 are requested to repair, renovate, and extend the useful life of miles of fencing and walks, along with a maze of cages, exhibits, walls, roofs, and utilities that comprise the 167-acre Zoological Park. Although all new facilities are designed to require a minimum of maintenance, some repairs are occasionally required. Because these facilities retain highly dangerous animals and reptiles, repairs must be made promptly, regardless of cost. With the continued deferral of replacement of old buildings the need for this priority request becomes critical to insure continued public safety and to prevent excessive deterioration in advance of future replacement.

The balance of the request, \$300,000, is for installation of heating plants. The central coal-fired heating plant at the Zoological Park, built in 1937, has been criticized for several years by city inspection officials and by local residents as a source of obnoxious air pollution. The improvement program proposes installation of smaller, modern heating plants in each building and the eventual elimination of the central plant. The age and extensive deterioration of the central plant have placed it in extremely dangerous condition. The plant should be discontinued before the next heating season. The District of Columbia Department of Licenses and Inspections permits continued operation of the plant only because planning is underway for a replacement. If that Department should force a shutdown, those animals which require heated shelters could not survive a winter. These animals comprise about 80 percent of the collection. To provide alternate heating facilities promptly and in compliance with efforts of the Federal Government to eliminate air pollution from Government facilities, this is a high priority. This appropriation will allow continuation of heating plant conversion authorized in the fiscal year 1969 appropriation.

RESTORATION AND RENOVATION OF BUILDINGS

1968 Appropriation	\$1,125,000
1969 Appropriation	\$400,000
1970 Estimate	\$755,000

An appropriation of \$755,000 is requested for the following projects:

Radiation Biology Laboratory	\$300,000
Renwick Gallery of Art	200,000
Smithsonian Tropical Research Institute	125,000
Silver Hill Facility	<u>130,000</u>

Total estimate for 1970

\$755,000

Less amount appropriated in fiscal year 1969

400,000

Increase in fiscal year 1970

\$355,000

Radiation Biology Laboratory

An appropriation of \$300,000 is requested for continuing the relocation of the Radiation Biology Laboratory.

With funds appropriated in fiscal years 1968 and 1969 work has been started to relocate the Smithsonian Radiation Biology Laboratory from cramped dungeon-like rooms in the basement of the old Smithsonian Institution building to a new leased laboratory building at Rockville, Md. The General Services Administration assisted the Smithsonian Institution with locating space and arranged for the lease.

The additional amount requested in fiscal year 1970 will permit additional portions of the Laboratory to be moved to the new building, as soon as experimental programs permit. As experiments are completed, laboratories are closed and equipment is dismantled and moved. After installation in the new building, experiments are rescheduled.

Comprehensive research to study the effect of light on plant growth and development started at the Smithsonian Institution in 1928. Within a few years, the Radiation Biology Laboratory achieved a leadership position in this important field of study and has maintained this position. Additionally, the Laboratory has pioneered in the development of solar radiation instruments and calibration standards for measuring biological responses. Basic research of significance to agricultural and health-oriented problems has been accomplished and published.

The provision of adequate, properly configured laboratory areas is essential to relieve the present intolerable space situation and to insure future contributions to knowledge on the effects of light on man and his environment.

Renwick Gallery of Art

An appropriation of \$200,000 is requested for continuing the important and nearly completed work on restoration of the old Corcoran Gallery of Art at 17th and Pennsylvania Avenue, N. W.

In fiscal year 1967 the Congress approved transferring the original Corcoran Gallery of Art, then known as the Court of Claims, from the General Services Administration to the Smithsonian Institution and appropriated funds to preserve the building and restore it for use as an art gallery. Its location next door to the Blair House, and across the street from the White House, presents an opportunity for a small museum, specializing in American arts, crafts, and design, in the center of Washington and at the focus of international attention. With this important use in mind the building is being carefully restored to its original magnificence as

an architectural and artistic masterpiece and plans are being prepared for an opening in 1970.

For a while it appeared that time, erosion, and hard wear along with serious structural damage caused by foundation settlement, had combined to prevent any worthwhile restoration. The combined cooperative efforts of many people including the architect, the General Services Administration staff, and the construction contractors have been successful and the restored building is a tribute to that cooperation. The badly deteriorated brownstone has been fully and faithfully restored with all its decorative garlands, medallions, festoons, wreaths, and other 19th century pediments as fresh and sharp as they were originally. The interior restoration and modification for use as an art gallery is an equally high quality effort.

With funds available it will not be possible to complete all restoration work that is desired. Work less essential to full use of the building will be deferred until budget restraints are less severe. It is necessary, however, that an additional amount be provided to improve the receiving-service area so that objects can be moved into the building without blocking the front entrance, complete some of the interior finishes now deferred, correct deficiencies in the roof covering and flashing, improve the broken and unsafe sidewalk, and install museum lights and security devices. This additional funding is essential to permit the building's use as a public museum.

Smithsonian Tropical Research Institute

An appropriation of \$125,000 is requested for improved laboratory space for the Smithsonian Tropical Research Institute.

A natural reserve was set aside in the Panama Canal Zone, for scientific study, by an Act of Congress in 1922. The Smithsonian Institution is charged with management of the reserve and with providing support facilities for American-sponsored scientists. Increasing numbers of these scientists are using the Smithsonian Tropical Research Institute to achieve a better understanding of tropical environments and biota and their economic potential.

During the past 20 years the Smithsonian has provided a small number of wood buildings, on Barro Colorado Island, to serve as a support base of operations and to provide space for scientists to keep their equipment and collections. These facilities are overcrowded and some minimal additional physical facilities are desperately needed to support the growing numbers of scientists working in the tropical environment.

Since Barro Colorado Island is a carefully protected natural area, it should not be used for facilities or activities not directly related to scientific study of the Island. It is essential therefore that a small building be provided in the Canal Zone and that all non-island related activities be moved to that center of operations. With an appropriation of \$100,000, a replacement facility consisting of a small single-story low cost masonry building with approximately 10,000 square-feet of floor space can be provided on Government-owned land made available to the Smithsonian Institution by the United States Navy. This building will provide protected space for books, papers, laboratory experiments and storage of equipment, including expensive microscopes, in a more secure manner and better protected from weather, insects, and tropical fungus.

The existing facilities consisting of small wood buildings on the main island and three small buildings, surplus to the Navy, two on the Pacific side of the canal and one on the Atlantic side, are all in very poor condition and rapidly deteriorating in the hot, humid, insect-infested environment. An appropriation of \$25,000 is requested for minimum essential repairs to continue the useful life of these buildings.

Silver Hill Facility

An appropriation of \$130,000 is requested for improvements and for planning future facilities at the Smithsonian Institution storage facility at Silver Hill, Md.

If the Smithsonian Institution is to continue to acquire objects in its role as a national historical and scientific depository and on behalf of the United States Government, at an average rate comparable to that of the past decade (a million objects a year), it is obvious that a highly developed and modern storage facility will be needed. Rather than continue to use monumental buildings on the Washington Mall as warehouses, a new solution is proposed. The Smithsonian Institution has used Government-owned land at Silver Hill, Md., for several years, to store and refurbish large objects such as historic aircraft, engines, and vehicles. Several temporary-type prefabricated metal buildings have been constructed to provide protection from the weather for some objects.

It is now proposed to make some immediate improvements in existing facilities for work on mammal skeletons and for small objects from the Museum of History and Technology. Funds in the amount of \$50,000 are requested for this purpose.

An additional \$80,000 are requested, as a very high priority, for preparing plans for a long-term development of the Silver Hill area. By removing the temporary buildings and constructing permanent, specially-designed warehouses and laboratories the Institution will be prepared to administer and manage the National Collections. This ultimate development would then free substantial space in Mall buildings for additional exhibits and public service needs.

CONSTRUCTION
(JOSEPH H. HIRSHHORN MUSEUM AND SCULPTURE GARDEN)

1968 Appropriation	\$803, 000
1969 Appropriation	\$2, 000, 000
1970 Estimate	\$6, 200, 000

An appropriation of \$6,200,000 is requested to continue construction of the Joseph H. Hirshhorn Museum and Sculpture Garden.

By the Act of November 7, 1966, the Congress provided a site on the Mall for construction of the Joseph H. Hirshhorn Museum and Sculpture Garden and provided statutory authority for the appropriation of construction and operating funds. Within this appropriation authority funds were appropriated in fiscal year 1968 for the preparation of plans and specifications. In fiscal year 1969 an additional \$2,000,000 were appropriated to start construction and authorization was granted by language in the appropriations bill to enter into construction contracts in an amount not to exceed \$14,197,000.

The present schedule calls for a construction bid opening in March, 1969, with construction running continuously until April 1971. Exhibits will be installed during the following six months and the new museum will be opened to the public in October 1971. Funds now appropriated will finance construction activities through fiscal year 1969. An additional \$6,000,000 are requested for continuing construction through fiscal year 1970. Additional funds requested will be used for continuing contract payments for an obligation incurred under the authorization contained in the 1969 appropriations bill and will not be used to incur a new obligation.

As a corollary to the authorization for the Joseph H. Hirshhorn Museum and Sculpture Garden, the Act of November 2, 1966, authorized the Secretary of the Army to construct an addition to the existing Armed Forces Institution of Pathology at Walter Reed Army Medical Center. Funds for construction of this addition were appropriated to the Department of Defense in fiscal year 1968. This new addition, when completed in January 1970, will house the Medical Museum and a research unit formerly housed in the Medical Museum building at Seventh Street and Independence Avenue, the site of the Hirshhorn Museum. To comply with the intent of Congress and proceed promptly with construction of the Hirshhorn Museum, the Medical Museum must be relocated to temporary quarters until the new building is completed at Walter Reed. Funds for this interim move have not been included in previous budgets and an appropriation in the amount of \$200,000 is now requested. The estimate was prepared by the General Services Administration, which will prepare temporary space at the old Bureau of Standards site on Connecticut Avenue and accomplish this move.

SMITHSONIAN INSTITUTION

January 1969

SCHEDULE OF BUILDING PROJECTS

Fiscal Years	1963	1964	1965	1966	1967	1968	1969	1970	1971
Remodeling of Civil Service Commission Bldg. (for Art Galleries)		Apprn. received, \$5,465,000	Under Construction Apprn. received, \$1,000,000			April 1967 completion	May 1968 opening (N. C. F. A.)	Oct. 1968 opening (N. P. G.)	
National Air and Space Museum Building		Planning apprn. received \$511,000	Remainder of planning apprn. received \$1,364,000						Request construction apprn.
Construction and Improvements, National Zoological Park	Apprn. received, \$1,275,000	Apprn. received \$1,275,000	Apprn. received \$1,525,000	Apprn. received \$1,539,000	Apprn. received \$1,589,000	Apprn. received \$400,000	Apprn. received \$300,000	Apprn. requested \$600,000	Request apprn. for continuing program
Restoration and Renovation of Buildings				Apprn. received \$2,248,000	Apprn. received \$2,300,000	Apprn. received \$1,125,000	Apprn. received \$400,000	Apprn. requested \$755,000	Request apprn. for additional renovation
Joseph H. Hirschhorn Museum and Sculpture Garden						Planning apprn. \$803,000	Construction authorized \$14,197,000 apprn. received \$2,000,000	Apprn. requested \$6,200,000	Request apprn. \$6,197,000

SMITHSONIAN INSTITUTION

"SALARIES AND EXPENSES"

Report on the Number of Permanent Positions by Organization Unit

<u>Unit</u>	<u>1968 Actual</u>	<u>1969 Estimate</u>	<u>1970 Estimate</u>	<u>Increase 1969 over 1968</u>
United States National Museum.....	206	210	219	9
Museum of History and Technology.....	152	154	157	3
Museum of Natural History.....	263	259	264	5
National Air and Space Museum.....	41	42	44	2
National Armed Forces Museum Advisory Board.....	7	7	7	0
Anacostia Neighborhood Museum.....	1	4	8	4
Freer Gallery of Art.....	6	7	7	0
National Collection of Fine Arts.....	56	57	57	0
National Portrait Gallery.....	27	28	28	0
Joseph H. Hirshhorn Museum and Sculpture Garden	3	7	13	6
Smithsonian Astrophysical Observatory	53	54	56	2
Smithsonian Tropical Research Institute	21	23	30	7
Radiation Biology Laboratory.....	31	32	36	4
Office of Ecology.....	5	5	6	1
Office of Oceanography and Limnology..	18	18	25	7
Center for the Study of Man.....	0	0	1	1
Office of Academic Programs.....	12	14	16	2
International Activities.....	15	15	16	1
Woodrow Wilson International Center for Scholars.....	0	0	2	2
Administrative and Central Support Activities.....	230	237	252	15
Buildings Management Department.....	<u>799</u>	<u>827</u>	<u>875</u>	<u>48</u>
GRAND TOTAL.....	<u>1,946</u>	<u>2,000</u>	<u>2,119</u>	<u>119</u>

SMITHSONIAN INSTITUTION
"Salaries and Expenses"

Report of Obligations by Objects

	<u>1968 Actual</u>	<u>1969 Estimate</u>	<u>1970 Estimate</u>	<u>Increase or Decrease (-) '70 over '69</u>
11 Personnel Compensation	\$15,654,000	\$17,096,000	\$18,556,000	\$1,460,000
12 Personnel Benefits	1,161,000	1,279,000	1,393,000	114,000
21 Travel and Transportation of Persons	250,000	282,000	323,000	41,000
22 Transportation of Things	221,000	185,000	208,000	23,000
23 Rent, Communications, and Utilities	1,393,000	1,639,000	2,011,000	372,000
24 Printing and Reproduction	495,000	516,000	559,000	43,000
25 Other Services	2,468,000	3,050,000	3,343,000	293,000
26 Supplies and Materials	985,000	864,000	953,000	89,000
31 Equipment	1,439,000	1,532,000	1,714,000	182,000
32 Lands and Structures	256,000	0	0	0
42 Insurance Claims and Indemnities	3,000	0	0	0
Total Obligations	\$24,325,000	\$26,443,000	\$29,060,000	\$2,617,000
<u>Appropriation Adjustments:</u>				
Receipts and Reimbursements from Federal funds	-15,000	0	0	0
Unobligated balance lapsing	+30,000	0	0	0
Transferred to other accounts	0	-105,000	-105,000	0
<u>Appropriation or estimate</u>	<u>\$24,340,000</u>	<u>\$26,338,000*</u>	<u>\$28,955,000</u>	<u>\$2,617,000</u>

*Includes anticipated supplemental
of \$695,000.

VISITORS TO SMITHSONIAN BUILDINGS ON THE MALL
(By fiscal year)

Fiscal year	Smithsonian Institution	Arts and Industries	Museum of Natural History	National Air and Space Museum	Freer Gallery of Art	Museum of History and Technology	Fine Arts and Portrait Gallery	Total
1961.....	1,024,526	2,912,371	2,047,973	987,858	130,746	(1)	(3)	7,103,474
1962.....	1,222,112	3,471,050	2,113,053	1,986,319	130,597	(1)	(3)	8,923,131
1963.....	1,630,280	3,534,182	2,288,397	2,673,618	183,359	(1)	(3)	10,309,836
1964.....	1,311,061	2,457,243	2,512,306	1,854,186	168,625	2,509,774 ^{1/}	(3)	10,813,195 ^{2/}
1965.....	1,065,635	2,028,175	3,051,472	1,705,683	210,972	5,091,776	(3)	13,153,713
1966.....	870,010	1,746,715	2,988,006	1,494,922	222,089	4,829,112	(3)	12,150,854
1967.....	1,020,312	1,638,873	3,409,957	1,484,422	212,920	5,546,102	(3)	13,312,586 ^{4/}
1968.....	847,176	1,344,622	3,257,957	1,123,698	169,533	4,750,023	30,888	11,523,897 ^{4/}

^{1/} Museum of History and Technology opened January 1964.

^{2/} July-August 1964, certain Smithsonian Institution buildings were open 4:30 to 10 p.m. for the first time.

^{3/} National Collection of Fine Arts opened May 1968.

^{4/} Reflects the significant decrease in visitors to the Nation's Capital because of unsettled local conditions.

SMITHSONIAN INSTITUTION

Multiyear Projections of Selected "Outputs"

By Program Category							
Program Category	Actual 1968	1969	1970	1971	1972	1973	1974
I. Research and Scholarship							
A. Senior independent visiting researchers (Project investigators expressed in terms of full-time equivalents)	120	140	170	205	245	295	355
B. Junior visiting researchers supervised:							
Cooperative Ph.D.'s Completed at Smithsonian	50	60	75	100	120	145	160
Others supervised:							
Postdoctoral investigators	40	40	60	75	90	120	150
II. Growth of National Collections (Number of specimens in the United States National Museum, in millions)	64.5	66.5	68.0	70.0	72.0	73.5	75.0
III. Public Education and Enlightenment							
A. Number of visitors (Mall facilities exclusive of National Gallery of Art, in millions)	11.5	13.0	14.4	16.4	17.1	18.0	18.9
B. Organized visitation programs							
secondary school visits (in thousands)	10.0	16.6	20.0	3.4	28.6	35.0	41.5
primary school visits (in thousands)	30.0	50.0	60.0	72.0	86.0	105.0	126.0

SMITHSONIAN INSTITUTION

Exhibits Program, Museum of History and Technology

Fiscal Years 1968 through 1969

A. Halls Installed and Opened to the Public as of June 30, 1968:

- | | |
|---|--|
| 1. Flag Hall | 17. Graphic Arts: Hand Processes |
| 2. First Ladies Hall | 18. Graphic Arts: Photomechanical Processes |
| Everyday Life in the American Past: | 19. Graphic Arts Salon |
| 3. 17th Century Furnishings | 20. History of the Armed Forces I & (through Civil War) |
| 4. 18th and 19th Century Furnishings | 21. Ordnance, and the gunboat Philadelphia |
| 5. Historic Americans | 22. Special Exhibits (third floor) |
| 6. American Costume | 23. Medicine, Dentistry, and Pharmacy (Medical Sciences) |
| 7. Light Machinery (Timekeeping, Typewriters, Phonographs, and Locks) | 24. Physics |
| 8. Tools | 25. Ceramics |
| 9. Farm Machinery | 26. Electricity I |
| 10. Autos and Coaches (partial) | 27. Heavy Machinery |
| 11. Railroads | 28. Petroleum |
| 12. Temporary Exhibits Gallery (first floor) | 29. Growth of the United States & (through 1851) |
| 13. Civil Engineering (Bridges and Tunnels) | 30. Numismatics |
| 14. Watercraft | |
| 15. Philately and Postal History | |
| 16. Glass | |

B. Additional Halls to be Installed and Opened to the Public by June 30, 1969:

1. Textiles
2. Electricity II
3. Armed Forces, III

SMITHSONIAN INSTITUTION

Renovation of Exhibits

In 1970 the Smithsonian will continue its program of revitalizing the exhibits in the Museum of Natural History.

A. Completed and Opened to the Public in 1968:

1. Cultures of Asia and Africa (third section)

B. Halls to be Completed and Opened to the Public by the End of 1969:

During 1969, architectural drawings for the Hall of Living Things will be completed and contracts will be awarded for certain architectural modifications.

C. Construction Partially Completed by the End of 1969:

1. Hall of Physical Geology

During 1970, contracts will be awarded to complete the Hall of Living Things and the production work will be substantially completed. Production work will also begin on the Hall of Ice Age Mammals.

SMITHSONIAN INSTITUTION

Temporary and Special Exhibits

Fiscal Years 1969 and 1970

Fiscal Year 1969

Costume Prints
Slavery Exhibits, Part II
National Portrait Gallery Special Exhibit
(Arts and Industries Building)
Berlandier in Texas
Art Forms in Biology
Commodore Perry Show
The Concerned Photographer
Temporary Craft Exhibit in Hall of
Everyday Life in American Past
The Glorious Cause of Liberty
Hall of Surgical Instruments
Quest for Presidency
A Defeated Candidate
National Portrait Gallery Special Exhibit
(Museum of History and Technology
Building)
Stencil Ornaments of Louis Sullivan
Drawings by Edgar Dorsey Taylor
Malta Stamp Exhibit
Patent Controversies in History of
Radio
Raphael Soyer's Prints
Women, Cameras and Images
Cunningham
Canada: A Year of the Land
Art of Kolomon and Oskar Kokoschka
Co-op Crafts Exhibits (USDA)
Bolivian Hemisfair Exhibition
Please Be Seated
1968 Industrial Review
Local Artist Exhibit
Negro History and Fred Douglas Exhibit
Dr. King Exhibit
Weather Exhibit
Communication Exhibit
Chesapeake Bay Project
The Japan Expedition
Rights of Existence
Carl Henning Petersen: Retrospective
Masada
Ward Collection: African Sculptures

Coke Push
American Folk Craft Survivals
Endangered Species
Ginning Cotton
Hail to the Chief
Human Rights
Jazz Show
Israeli Coins and Medals
Pioneering Heart Surgeon
Reading is Fundamental
Tibetan Carpet Show
Moppets and the Moon
View from Space
Cybernetic Serendipity
Jordanian Stamp Show
Toledo Glass Show
Daraniyagala Exhibition
American Crafts
Swiss Folk Art
Infinity
Abandoned Mine Scenes
School Prints
Puppet Theater Exhibit
Golden Spike
West German Stamps
Recent Accessions III
Iron and Steel
American Theater
The Work of Richard Neutra

Fiscal Year 1970

Ten Italian Architects
The Art of John Held
The Camera and the Human Facade
People Figures
History of U.S. Weather Bureau
French Silver
John Wesley Powell
Smithsonian Institution Scientific
Illustrators
Bio-Medical Telemetry

SMITHSONIAN INSTITUTION

Grants to the Smithsonian Institution, Fiscal Year 1968

<u>Granting Agency</u>	<u>Actual Amount</u>
Department of Defense Ecology of Tropical Delta	
Forest	\$22,600
Miscellaneous	<u>19,813</u>
Total, Department of Defense	\$42,413
National Aeronautics Satellite Tracking Program	4,517,204
and Space Adminis- Recovery of Meteorites ...	<u>130,000</u>
tration	
Total, National Aeronautics and	
Space Administration	4,647,204
National Science Systematic Study--	
Foundation Antarctic Biology	38,600
Undergraduate Research	
Program	28,560
Miscellaneous Small Grants	<u>23,414</u>
Total, National Science Foundation	90,574
Department of Health, Postdoctoral in Education	22,914
Education, and Pit Vipers of the World ...	<u>22,203</u>
Welfare	
Total, Department of Health, Education, and Welfare	45,117
Miscellaneous Grants	<u>82,240</u>
Total Grants, Fiscal Year 1968	<u><u>\$4,907,548</u></u>

SMITHSONIAN INSTITUTION

Contracts to the Smithsonian Institution, Fiscal Year 1968

<u>Contracting Agency</u>		<u>Actual Amount</u>
National Aeronautics and Space Administration	Historical artifacts	\$199, 672
	Interdisciplinary communications.....	145, 386
	Argon Measurements on Lunar Material	100, 000
	Analysis of Lunar Samples....	61, 000
	Mineralogic Investigation of Lunar Samples.....	44, 000
	Radio-Meteor Research.....	390, 000
	Telescope.....	551, 675
	Miscellaneous	<u>208, 345</u>
Total, National Aeronautics and Space Administration.....		\$1, 700, 078
Department of Defense	Development of NCR-315 and 304.....	95, 602
	Migratory Birds in Northeast Africa	75, 000
	Pacific Birds Program.....	318, 460
	Mosquitoes in Southeast Asia	189, 298
	Disease in Overseas Areas ..	177, 940
	Mammalian Ectoparasites in Venezuela.....	174, 560
	Miscellaneous	<u>176, 880</u>
Total, Department of Defense.....		1, 207, 740
Atomic Energy Commission	Properties of Phycobili-protein.....	27, 138
	Radiation and Plant Metabolism.....	<u>22, 478</u>
Total, Atomic Energy Commission.....		49, 616
Department of Interior	Miscellaneous	68, 584
National Science Foundation	Sorting and Recording of Collections from U. S. A. R. P.	125, 164
	Science Information Exchange	2, 350, 000
	Miscellaneous	<u>18, 850</u>
Total, National Science Foundation.....		2, 494, 014
National Capital Region	Summer in the Parks.....	100, 000
Miscellaneous Contracts		<u>210, 677</u>
Total Contracts, Fiscal Year 1968		<u>\$5, 830, 709</u>

SMITHSONIAN INSTITUTION

Grants to the Smithsonian Institution, Fiscal Year 1969

<u>Granting Agency</u>		<u>Estimated Amount</u>
National Aeronautics and Space Administration	Satellite Tracking Program... \$4,724,000	
	Study of Meteorites 70,000	
	Miscellaneous..... <u>306,400</u>	
Total, National Aeronautics and Space Administration.....		\$5,100,400
National Institutes of Health	Miscellaneous.....	335,000
Department of Defense	Miscellaneous.....	60,000
National Science Foundation	Miscellaneous	60,000
Other Miscellaneous.....		<u>80,000</u>
Total Grants, Fiscal Year 1969.....		<u>\$5,635,400</u>

SMITHSONIAN INSTITUTION

Contracts to the Smithsonian Institution, Fiscal Year 1969

<u>Contracting Agency</u>		<u>Estimated Amount</u>
Department of State	Olympic Games in Mexico.....	\$55,000
Department of Defense	Pacific Birds Project.....	\$190,080
	Mosquitoes in Southeast Asia..	197,741
	Disease in Overseas Areas....	155,068
	Miscellaneous.....	<u>633,921</u>
Total, Department of Defense		1,176,810
National Science Foundation	Sorting of Collections from U. S. A. R. P.	90,736
	Science Information Exchange..	2,592,462
	Training Program.....	91,955
	SAO Star Catalog.....	157,430
	Recording of Collections from U. S. A. R. P.	<u>47,000</u>
Total, National Science Foundation		2,979,583
National Aeronautics and Space Admini- stration	Celescope.....	600,000
	Radio Meteor Research.....	763,130
	Interdisciplinary Communi- cations.....	179,385
	Miscellaneous	<u>458,060</u>
Total, National Aeronautics and Space Administration		2,000,575
Other Miscellaneous		<u>379,883</u>
Total Contracts, Fiscal Year 1969		<u>\$6,591,851</u>

SMITHSONIAN INSTITUTION LIBRARIES



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