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SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

Submitted as a supplement
to the FY 1983 budget

January 1982

SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

PROGRAM PURPOSES AND LIST OF GRANTS

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MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

PROGRAM PURPOSES AND LIST OF GRANTS

INTRODUCTION

The Smithsonian Institution's Special Foreign Currency Program makes grants in United States-owned foreign currencies to United States institutions, including the Smithsonian itself, to conduct research projects in the so-called "excess" foreign currency countries. In FY 1981, the "excess" foreign currency countries were Burma, Egypt, Guinea, India, and Pakistan. The Smithsonian program supports research in Archeology and Related Disciplines, Systematic and Environmental Biology, Astrophysics and Earth Sciences, and Museum Programs.

The Smithsonian Foreign Currency Program awards grants when applicants have fulfilled three requirements. These are: 1) the favorable recommendation by a national advisory council of qualified scholars; 2) the concurrence of the appropriate American embassy and host government overseas; and 3) the completion of appropriate cooperative arrangements with host country institutions.

This supplement to the Institution's FY 1983 appropriation request describes: 1) the Smithsonian Foreign Currency Program within the context of the basic Smithsonian purpose; 2) some of the Program's achievements; 3) its goals for FY 1983; and 4) projects for which obligations were incurred during FY 1981.

THE GLOBAL NATURE OF THE SMITHSONIAN'S CHARTER

The purpose of the Smithsonian Institution is "the increase and diffusion of knowledge." This quotation from the will of its founder, James Smithson, was made part of the Institution's enabling legislation enacted by the Congress in 1846, chartering the Institution and leading to the eventual designation of the Institution as the custodian of the National Collections.

The Smithsonian's first Secretary, Joseph Henry, implemented the charter through support of basic research and publication not only in Washington but through a global network of correspondence devoted to these same ends. At the same time, the Institution began to acquire substantial collections of biological and geological specimens and of archeological and ethnographic materials, derived both from its own research and from U.S. Government programs. The Institution continues to conduct research and education programs and to improve its collections. Today the Institution is acknowledged to be a major national resource for the study of natural and cultural history and to be without equal anywhere on earth.

THE FY 1983 APPROPRIATION

For FY 1983, the Smithsonian requests an appropriation of \$2,000,000 equivalent in foreign currencies which have been determined by the Treasury Department to be in excess of the normal needs of the United States. This appropriation will be used to continue a program of grants to United States institutions for research in those countries where excess local currencies are available. Of the total requested, \$1,700,000 will be available for one-year funding of continuing projects, \$300,000 will support new projects.

Special Foreign Currency Program Appropriations and the U.S. Taxpayer

An appropriation for this program does not add to the tax burden of Americans because the money used for foreign currency grants comes from U.S. holdings of foreign currencies abroad in existing accounts that were established in connection with the "Food for Peace" (P.L. 480) program. These accounts were generated largely through sales of surplus U.S. agricultural commodities abroad in exchange for local currencies. In cases where these are greatly in excess of the projected normal U.S. needs, the Treasury Department designates them "excess foreign currencies." They then become available through the Special Foreign Currency Program appropriation process for U.S. uses like scientific research.

Erosion of these accounts by inflation is in many countries dramatically reducing their value to the United States. The Indian rupee has lost, for example, more than half of its value since 1970. As a consequence, when a worthy use of these excess currencies can be identified through programs like the Smithsonian Foreign Currency Program, the U.S. can effectively employ at least some of these currencies before inflation effectively eliminates their usefulness.

PROGRAM OF GRANTS FOR RESEARCH

The purpose of the Smithsonian Foreign Currency Program is, like that of the Institution itself, "the increase and diffusion of knowledge." The Smithsonian Foreign Currency Program supports this purpose by making grants to United States universities, museums, and other institutions of higher learning, including the Smithsonian itself, primarily for research and advanced professional training in fields of traditional Smithsonian competence. An appropriation of \$2,000,000 equivalent in excess foreign currencies is sought for these grants.

The Smithsonian program is a major source of excess foreign currency support for research carried out by United States institutions in the excess currency countries. The Smithsonian program is distinguished from other Special Foreign Currency Programs in that the full responsibility for the design, execution and publication of research results rests with a scholar working within the program of a United States institution.

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The Smithsonian program strengthens the research and training activities of collaborating institutions abroad, for most projects directly involve host country institutions and scholars. Enduring professional ties which result from joint efforts and scholarly exchange contribute to the strongest form of United States cultural relations with other nations. These ties contribute to the integration of the worldwide advancement of science which serves to narrow the gap between the industrial and the developing nations.

The Importance of Research in the Natural Sciences and Cultural History

The density of world population and the impact of technological development make it important to understand their effect on the natural environment and on society. Research sponsored by the Smithsonian in the natural sciences and in cultural history is aimed at improving understanding of the environment, of the management and protection of scarce resources, and the cultural setting within which social changes take place.

Grants awarded by the Smithsonian in systematic and evolutionary biology have contributed to the understanding of the individual and the surrounding environment. In FY 1981, grants supported the following projects of special interest:

- comparison of prehistoric and modern pollen samples in Pakistan is providing data for the understanding of the environment of the pre-Harappan and Harappan periods, over 5,000 years ago.
- continuing limnological analysis of Lake Ohrid, Yugoslavia, is providing data for a management plan for the ancient lake which is being polluted with urban and industrial waste.
- examination of broad populations of Punjabi youths for dental malocclusion is contributing important anthropometric data for the understanding of this dental problem which, like many chronic ailments, increases drastically with modern development.

In astrophysics and earth sciences, contributions were made to the study of the earth and its management. For example:

--data from geological investigation of Quaternary deposits on factors controlling prehistoric occupation of the Nubian Desert are being used to predict and manage future land use and conservation.

Smithsonian grants in cultural history and in museum programs contribute to the understanding of the individual and society and foster understanding of diverse cultures. In FY 1981, grants supported the following projects:

- study of the widespread migration of professional and highly skilled Gujaratis and Punjabis from India is determining the little-known effect of migration of the sending society.
- linguistic evidence is being used in an innovative study in India to answer questions concerning the prehistory of the subcontinent by examining relations between linguistic change and prehistoric events.
- a major exhibition, "The Renaissance of Islam: Art of the Mamluks," was developed to tour the United States, exposing the medieval artifacts from a little known period of a major world culture.

Further, with emphasis on information exchange through small workshops, symposia and field conferences, the Smithsonian is encouraging international research in specialized areas, such as environmental research, wildlife and ecosystem studies, and museum techniques. In FY 1981, for example, U.S. scholars received support for participation in exchanges on the subjects of Himalayan geology, Mamluk art, sanskrit and Tamil studies, tropical ecology, global time synchronization and natural history exhibition techniques.

The Importance of Multi-Year Grants

Beginning in FY 1979 the Smithsonian Foreign Currency Program began a policy of multi-year funding of major programs, whenever sufficient funds were available. Such funding is important because rational planning requires the advance commitment of professors and graduate students as well as of facilities. Multi-year grants, with annual disbursements subject to satisfactory review of progress by the advisory councils, allow participating institutions to coordinate such projects into their long-range scholarly programs, by providing some assurance of funding for the duration of the project.

Further, the Smithsonian has been able to use multi-year grants to protect successful projects from sudden termination when excess currency accounts were abruptly exhausted. This happened in Poland and Tunisia in

1976 and in Egypt in 1981. With multi-year funding over a three-year period, 10 projects in Egypt were funded to reasonable conclusions and 3 continuing projects gained sufficient time to seek other funding sources.

India is currently projected for removal from the excess currency list before 1990. The Smithsonian hopes to provide stabilizing funding before that time through multi-year grants and, for the American Institute of Indian Studies, a substantial forward-funded reserve.

No multi-year grants are planned in FY 1983.

Benefits to United States Institutions

Since the inception of the program in FY 1966, Smithsonian grants have been made to 221 United States institutions in 40 states and the District of Columbia to support more than 750 individual projects. Publications known to have resulted from program grants totalled more than 1,350 at the end of FY 1981.

Collections of original biological specimens and the archeological and ethnographic materials are acquired in the course of field research. They remain available for further study and interpretation by other generations of scholars long after the research teams supported by the Smithsonian have dispersed and their conclusions have been published. More than 100 such research collections have been placed in United States universities and museums. A similar number of collections has been added to the research resources of the excess currency countries.

The benefits of the program have extended to a far larger number of institutions than the 221 United States institutions which have received grants directly. For example, three of the grantee institutions are consortia of United States scholarly institutions. They are the American Institute of Indian Studies (AIIS) in Chicago, Illinois, with 37 institutional members; the American Research Center in Egypt (ARCE) in New York City, with 27 institutional and approximately 600 individual members; and the American Schools of Oriental Research (ASOR) in Cambridge, Massachusetts, with 135 member institutions.

Smithsonian grants have supported the research in India of 425 AIIS fellows over the 14-year period from FY 1968 through FY 1981. The fellows were drawn from 58 United States institutions in 22 states. Program grants have also supported more than 70 ARCE projects over the 16-year period from FY 1966 through FY 1981, and since FY 1977, 50 ARCE fellows have received Smithsonian support. Nine ASOR excavations in Israel and Tunisia provided research opportunities for more than 260 senior U.S. scholars and field training for more than 324 graduate students. The Indo-American Fellowship Program, initiated in FY 1977 under the auspices of the Indo-U.S. Subcommission on Education and Culture has sent 47 scholars from U.S. institutions to India.

Scientific Review Under the Smithsonian Program

The Smithsonian program considers proposals from any qualified American institution for research in fields of traditional Smithsonian competence. The program seeks the advice of experts in the specific area of sciences to be studied in reviewing the proposals and annually convenes advisory councils of senior scholars from across the nation. Following the recommendation in the House-Senate Conference Report 95-1672 dated September 29, 1978, the National Science Foundation reviews the credentials of the members of the advisory councils and certifies their competence. The councils discuss and evaluate the proposals, taking into consideration the experts' opinions, and provide specific advice to the Smithsonian regarding the selection of proposals recommended for support and the priorities among them.

Foreign currency awards to other institutions are executed as normal Federal contracts, with the American grantee institutions providing for full fiscal accountability. The Smithsonian audits each grantee's periodic financial reports and where grantees maintain records abroad, conducts site audits to ensure that appropriate accounting procedures are followed.

Whether funded originally on a multi-year or on a one-year basis, projects lasting more than one year are subject to an annual review of scientific progress by the advisory councils before another year of funding is approved. In addition, Smithsonian staff scientists and program advisory council members visit projects in the field when firsthand scientific reports are considered necessary. Smithsonian policy requires that grantees publish scientific results and that scientific collections be readily accessible to the scholarly community.

The Importance to the Smithsonian of Awards for Research

Access to funds for independent research is an essential factor in enabling the Smithsonian to attract and retain leading researchers and thereby to maintain a standard of excellence as a research institution. In this context, the Institution's initial request in FY 1966 for an appropriation of excess foreign currencies made it clear that Smithsonian scholars would compete for these funds. The appropriation justification in that year stated that the Institution would "...award and administer foreign currency grants...for maximum benefit of all participating institutions, as well as the Smithsonian." This appropriation has provided Smithsonian scientists an opportunity to pursue new and innovative research.

Under the Special Foreign Currency Program guidelines, Smithsonian proposals are reviewed by the same councils of distinguished scholars as are proposals from other institutions. Continuing projects also are subject to annual reviews. (These processes are described above in the section entitled "Scientific Review under the Smithsonian Program.") The Special Foreign Currency Program awards to Smithsonian employees, as to

other scholars, often involve participants from other organizations and universities as collaborators. No Smithsonian employee, nor any other grantee, receives personal compensation to duplicate or supplement his salary. Program awards cover only field research costs in the excess currency country and travel to that country.

The awards to Smithsonian employees are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended in accordance with Federal procurement and personnel regulations.

FORWARD-FUNDED RESERVE FOR THE AMERICAN INSTITUTE FOR INDIAN STUDIES

Founded in 1961 by a consortium of 15 United States universities and colleges, the American Institute of Indian Studies' purpose is to promote American scholarship at the pre- and postdoctoral level on India in all recognized fields of the humanities and the social and natural sciences. Funding for U.S. administration is raised through dues paid by member institutions and from foundation grants from several sources. As of 1982 the number of consortium members has grown to 37 with about 100 fellows in India at any given time, in a variety of programs. Funding for research and local administration in India is primarily through the Smithsonian, with lesser amounts being contributed by the Department of Education (language teaching programs only), National Science Foundation (fellowships in specific disciplines), International Communications Agency (fellowships), and the Ford Foundation.

The Smithsonian and the AIIS share common purposes: education and scholarship, global intellectual understanding and the promotion of research. Research at the Institute takes several forms: individual research in any recognized field; joint projects such as the ones resulting in the publication of the Encyclopedia of India's Philosophies; long-term projects, one of which has been the continuing project at the Center of Art and Archeology at Benares which will make available an archive of photographs, largely of Indian temples and monuments, for students and the scholarly public; and language teaching programs, now given in six of the 14 major Indian languages.

Through its competitive grants program, the Smithsonian has provided annual funding to the American Institute of Indian Studies for fellowships, research, symposia and publications and for administrative costs. The Smithsonian has helped sustain this Institute and other American research centers abroad for more than a decade because of their significant contributions to scholarship and science without regard for national boundaries and their special service to American scholars conducting research.

While the amount of Indian currency available to the U.S. government is still large, it is a finite fund in inactive accounts. With inflation rates in India at a high level, it will probably disappear more quickly

than had been anticipated in the past. Various estimates are offered for when this may occur; some suggest as early as five years hence. Since the end of "excess" currency status historically has happened suddenly, the Institution proposes to reserve funds for the AIIS to avoid a situation similar to the one which developed in Egypt. (In late 1978, funds for new American research in Egypt dried up suddenly, placing in doubt the future of American archeology and cultural history studies there and jeopardizing the continued existence of the very successful Cairo Center of the American Research Center in Egypt.)

By building a substantial foreign currency reserve fund, the Smithsonian hopes to assure that AIIS will be financially secure on a long-term basis, and to encourage other such centers to make the effort necessary to develop funding from other sources for the period beyond that of support by the Smithsonian. Toward this end, the Smithsonian has received and obligated the amount of \$500,000 in Indian rupees, appropriated in FY 1980 to initiate the fund, and a further amount of \$750,000, appropriated in FY 1981. The reserve is to be maintained intact, until such time as the depletion of the United States Indian rupee account causes its removal from the "excess" currency list.

Long-term support for the AIIS is feasible and highly desirable. As a result of its long relationship with the AIIS, the Smithsonian has confidence that the mutually acceptable and beneficial working relationship can be continued. The AIIS is a very viable organization, standing in high regard with the Indian Government and the scholarly community.

Future requests are anticipated in succeeding fiscal years aimed at bringing the fund to a level capable of supporting basic AIIS activities for five years after the rupee is declared no longer to be "excess." In each fiscal year the funds will be obligated to AIIS but will not be made available for use until the end of the "excess" designation. Until that time the AIIS will continue to compete for Smithsonian grant funds as they do now and, given their past history of success, can be expected to receive continued support. A system of annual scholarly and financial review will be developed for the administration of the reserve fund.

INTERNATIONAL EFFORT TO SALVAGE MOENJODARO

In 1921, two important discoveries were made in the Indus Valley of India, now Pakistan, when archeologists discovered the remains of the cities of Harappa, near Lahore, and Moenjodaro, about 250 miles north of Karachi. These two cities apparently are the products of the Harappan civilization which flourished over 4,500 years ago, from about 3000 B.C. to 1500 B.C. Moenjodaro, a city of a square mile, is the larger and more impressive of the two sites. From the standpoint of planning, sanitation and social organization, this city anticipates developments which only blossomed several thousand years later.

The excavated ruins at Moenjodaro have been threatened since their discovery by two main causes of destruction: floods of the Indus River and highly saline ground waters have caused the serious deterioration of the excavated remains.

Since the 1960's, the Government of Pakistan has appealed to the international community for assistance in salvaging Moenjodaro by diverting the river, lowering the water table, providing remedial action to stabilize threatened buildings and preventing disintegration of those that have not yet been seriously damaged, and installing appropriate landscaping. UNESCO responded to Pakistan's appeal and, in 1974, agreed to lead an international fund raising campaign. In the interim, the Government of Pakistan, with the assistance of UNESCO, has conducted a series of technical studies relating to river control, dewatering and other methods conducive to the eventual preservation of the site.

On October 10, 1979, an agreement between UNESCO and the Government of Pakistan for the preservation and development of the monumental site of Moenjodaro was signed. Following this, an Executive Committee of the Campaign was set up to advise the Director - General of UNESCO on all aspects of the project. The Committee has held several meetings during which various aspects of the plans were reviewed. Tender documents are being prepared for water pumps and structures and planting the area with salt-resistant plants to consolidate the soil and provide suitable protection from wind-driven sands. To date, UNESCO has raised approximately \$1.3 million, mainly from governmental contributions of member states. The funds raised thus far have been deposited in an international trust fund for Moenjodaro. Considering that the total budget for the project is now estimated at more than \$13 million, the Committee is seeking new or additional contributions. The Smithsonian is confident that this project, long in the planning stage, is now well launched. Accordingly, the Institution plans to transfer to UNESCO in FY 1982, the appropriation of \$960,000 equivalent in nonconvertible Pakistani currency as an initial contribution from the United States toward this important project. Although the Smithsonian is not seeking funds for this project in FY 1983, requests for further installments are anticipated for the future, aiming at a total U.S. contribution of \$4,000,000 equivalent.

The Smithsonian is conveying this gift because of its traditional interest in archeology and cultural history. It was the agent for conveying the final United States' contribution to the International Campaign to Save the Nubian Monuments--the successful effort to move the Temples of Philae. The Smithsonian Special Foreign Currency Program has supported the significant archeological investigations of Moenjodaro and other Harappan sites which have added greatly to knowledge of this civilization.

As with the Nubian monuments of Egypt, preserving the remains of Moenjodaro will be of great benefit to generations of future scholars. The network of scholarly relations between American institutions and their counterparts in Pakistan will be developed and strengthened. Indeed, the maintenance of cultural ties between nations can provide a link which endures through the shifting of other relations and insures continued contact between nations. Finally, support by the United States for the preservation of this unique historic site is in the spirit of the UNESCO convention concerning the protection of the world culture and natural heritage (the World Heritage Convention) which was ratified by the United States in 1973.

SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

SUMMARY OF OBLIGATIONS, ACTUAL AND ESTIMATED
FY 1981, FY 1982, and FY 1983

Obligations of Funds by Program Area
(dollar equivalents)

	<u>FY 1981</u> <u>Actual</u>	<u>FY 1982</u> <u>Estimate</u>	<u>FY 1983</u> <u>Estimate</u>
Archeology and Related Disciplines	\$2,624,000 <u>1/</u>	\$3,115,000 <u>2/</u>	\$1,565,000
Systematic and Environmental Biology	402,000	555,000	285,000
Astrophysics and Earth Sciences	174,000	240,000	95,000
Museum Programs	216,000	251,000	130,000
Grant Administration <u>3/</u>	287,000 <u>3/</u>	40,000 <u>3/</u>	25,000 <u>3/</u>
Science Information Program (Translations) <u>4/</u>	<u>-0-</u>	<u>300,000</u> <u>4/</u>	<u>-0-</u>
Total	\$3,703,000	\$4,501,000	\$2,100,000

Obligations of Funds by Country
(dollar equivalents)

	<u>FY 1981</u> <u>Actual</u>	<u>FY 1982</u> <u>Estimate</u>	<u>FY 1983</u> <u>Estimate</u>
Burma	\$ 21,000	\$ 15,000	\$ 5,000
Egypt	769,000	-	-
Guinea	-0-	-0-	-0-
India	2,829,000 <u>1/3/</u>	3,135,000 <u>3/4/</u>	1,845,000 <u>3/</u>
Pakistan	<u>84,000</u>	<u>1,351,000</u> <u>2/4/</u>	<u>250,000</u>
Total	\$3,703,000	\$4,501,000	\$2,100,000

1/Includes obligation for AIIS forward-funded reserve:
FY 1981, \$750,000.

2/Includes obligation for U.S. contribution for Moenjodaro: FY 1982, \$960,000.

3/Includes transfers to the State Department for "Foreign Affairs Administrative Support."

4/Includes estimates for the Science Information Program for translations.

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

FISCAL YEAR 1981 - ACTUAL OBLIGATIONS

Actual Obligations by Program Area
(dollar equivalents)

	<u>Research Projects</u> <u>1/</u>	<u>Research Development</u> <u>1/</u>	<u>Total</u>
Archeology and Related Disciplines	\$2,615,000 <u>3/</u>	\$ 9,000	\$2,624,000
Systematic and Environ- mental Biology	338,000	64,000	402,000
Astrophysics and Earth Sciences	167,000	7,000	174,000
Museum Programs	<u>210,000</u>	<u>6,000</u>	<u>216,000</u>
TOTAL FOR RESEARCH	3,330,000	86,000	3,416,000
SFCP Grant Administration <u>2/</u>			287,000
Science Information Program-Translations			<u>-0-</u>
TOTAL			\$3,703,000

Actual Obligations by Country
(dollar equivalents)

	<u>Grant Administration and Agency Transfers</u>	<u>Research Projects</u>	<u>Research Development</u>	<u>Total</u>
Burma	\$ -0-	\$ 21,000	\$ -0-	21,000
Egypt	243,000	526,000	-0-	769,000
Guinea	-0-	-0-	-0-	-0-
India	44,000 <u>2/</u>	2,699,000 <u>3/</u>	86,000	2,829,000
Pakistan	<u>-0-</u>	<u>84,000</u>	<u>-0-</u>	<u>84,000</u>
TOTAL	\$287,000	3,330,000	86,000	3,703,000

1/These projects are described in the Grants List which follows.

2/Includes transfers to the State Department for "Foreign Affairs
Administrative Support."

3/Includes \$750,000 obligation for AIIS forward-funded reserve.

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

FISCAL YEAR 1982 - ESTIMATED OBLIGATIONS

Estimated Obligations by Program Area
(dollar equivalents)

	<u>Research Projects</u>	<u>Research Development</u>	<u>Total</u>
Archeology and Related Disciplines	\$3,093,000 <u>3/</u>	\$22,000	\$3,115,000
Systematic and Environ- mental Biology	534,000	21,000	555,000
Astrophysics and Earth Sciences	234,000	6,000	240,000
Museum Programs	<u>243,000</u>	<u>8,000</u>	<u>251,000</u>
TOTAL FOR RESEARCH	\$4,104,000	\$57,000	\$4,161,000
SFCP Grant Administration <u>1/</u>			40,000
Science Information Program -- Translations <u>2/</u>			<u>300,000</u>
TOTAL			\$4,501,000

Estimated Obligations by Country
(dollar equivalents)

	<u>Grant Administration & Science Information Program</u>	<u>Research Projects</u>	<u>Research Development</u>	<u>Total</u>
Burma	\$ 1,000	\$ 13,000	\$ 1,000	\$ 15,000
Guinea	-0-	-0-	-0-	-0-
India	262,000 <u>1/2/</u>	2,837,000	36,000	3,135,000
Pakistan	<u>77,000</u> <u>2/</u>	<u>1,254,000</u> <u>3/</u>	<u>20,000</u>	<u>1,351,000</u>
TOTAL	\$340,000	\$4,104,000	\$57,000	\$4,501,000

1/Includes transfers to the State Department for "Foreign Affairs
Administrative Support."

2/Includes estimates for the Science Information Program for translations.

3/Includes \$960,000 obligation for the U.S. contribution for Moenjodaro.

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

FISCAL YEAR 1983 - ESTIMATED OBLIGATIONS

Estimated Obligations by Program Area
(dollar equivalent)

	<u>Research Projects</u>	<u>Research Development</u>	<u>Total</u>
Archeology and Related Disciplines	\$1,553,000	\$12,000	\$1,565,000
Systematic and Environ- mental Biology	275,000	10,000	285,000
Astrophysics and Earth Sciences	92,000	3,000	95,000
Museum Programs	<u>127,000</u>	<u>3,000</u>	<u>130,000</u>
TOTAL FOR RESEARCH	\$2,047,000	\$28,000	\$2,075,000
SFCP Grant Administration <u>1/</u>			25,000
Science Information Program -- Translations <u>2/</u>			<u>-0-</u>
TOTAL			\$2,100,000

Estimated Obligations by Country
(dollar equivalents)

	<u>Grant Administration & Science Information Program</u>	<u>Research Projects</u>	<u>Research Development</u>	<u>Total</u>
Burma	\$ 1,000	\$ 4,000	-0-	\$ 5,000
Guinea	-0-	-0-	-0-	-0-
India	22,000 <u>1/</u>	1,799,000	24,000	1,845,000
Pakistan	<u>2,000</u>	<u>244,000</u>	<u>4,000</u>	<u>250,000</u>
TOTAL	\$25,000	2,047,000	\$28,000	2,100,000

1/Includes transfers to the State Department for "Foreign Affairs
Administrative Support."

2/Includes estimates for the Science Information Program for translations.

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAMS)

STATUS OF FUNDS
(dollar equivalents)

	<u>FY 1981</u> <u>Actual</u>	<u>FY 1982</u> <u>Estimated</u>	<u>FY 1983</u> <u>Estimated</u>
Unobligated Balance, Start of year	+ 23,000	+ 141,000	+ 60,000
Appropriation	+3,650,000	+ 4,320,000	+2,000,000
Recovery of Prior Years' Obligations	+ 171,000	+ 100,000	+ 100,000
Unobligated Balance, End of Year	- <u>141,000</u>	- <u>60,000</u>	- <u>60,000</u>
TOTAL OBLIGATIONS	3,703,000	4,501,000	2,100,000

SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)
Fiscal Year 1981

List of Grants

ARCHEOLOGY AND RELATED DISCIPLINES

The study of archeology, anthropology, and related fields such as ethnology, are studies of changes in the human condition brought about by the environment and by cultural factors. Societies such as ours that are undergoing rapid change are subject to increasing pressures to accommodate new factors. These societies must look to studies of the history of man as well as to studies of today's condition to find answers to such questions as:

- a) How have societies responded to similar pressures in the past?
- b) What are those elements in our condition that are biological imperatives or are so culturally interdependent that we dare not change them? For example, is the family unit essential to the survival of our civilization?
- c) What are the current options available to today's societies?

The urgency to understand the forces demanding change in human societies has caused scholars to study man and communities, past and present, for a better grasp of the process of social change.

Projects of United States institutions which contribute to understanding these processes and which received support in FY 1981, are listed below.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
BURMA			
1. RFTX101793	U. of Illinois Urbana, IL	J. Schober	\$10,040

An examination of the dynamics between religious ideas and their practical manifestations in several areas in Burma is contributing to an understanding of the practices of Theravada Buddhism.

2. RFTX102124	U. of Illinois Urbana, IL	M. Woodward	\$10,250
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Study of the temple complex at Mandalay Hill is focused on the history, iconography, political function and religious significance of the complex to contribute to further understanding of the Burmese royal cult.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
EGYPT			
3. FC80425800 Amend. 15	American Research Center in Egypt New York, NY	P. Walker	\$85,478 <u>1/</u>

The American Research Center in Egypt (ARCE) is a consortium of 27 United States universities and museums and over 600 individual scholars devoted to research and teaching about ancient and modern Egypt. The ARCE is a unique national resource because it is the principal source of money on an annual basis in the United States for the advancement of knowledge and understanding of ancient and Islamic Egypt as well as the training in Egypt of area specialists. Moreover, the ARCE has served the U.S. national interest by sustaining active scholarly collaboration between the U.S. and Egypt during the periods of political stress when other contacts have been interrupted. SFCP support of the ARCE has totalled \$5,926,038 equivalent in Egyptian pounds over a sixteen-year period for the support of research projects. Projects receiving new funds in FY 1981 are listed below.

a.	American Research Center in Egypt New York, NY	P. Walker	(\$10,000)
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Smithsonian grants to ARCE have supported the Cairo Center which serves as an American scholarly presence in Egypt by maintaining a reference library and by sponsoring lectures and symposia which involve the scholarly community in Egypt. The Cairo Center also provides administrative support for its members' research by obtaining research, import and export permits, housing, supplies and personnel, and by keeping project financial records and by publishing research results.

b.	U. of California Berkeley, CA	K. Weeks	(\$30,000)
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The preparation of a detailed map of archeological remains in the Theban necropolis on the West Bank at Luxor will provide a valuable research tool for Egyptologists.

c.	American Research Center in Egypt New York, NY	P. Walker	(\$44,800)
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Support was given to the ARCE Fellowship Program for research in ancient and modern Islamic thought, history and art. ARCE fellows receiving support during FY 1981 are listed below.

1/ Total for following parenthetical amounts (items 3a through 3c).

New York U.	Yitzhak Margowsky
Princeton U.	Timothy P. Mitchell
U. of Chicago	Peter A. Piccione Ann M. Roth
Yale U.	Anthony J. Spalinger

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
4. RFTX102157	U. of California Berkeley, CA	W. Brinner	\$2,595

Translation of the Arabic Tales of the Prophets.

5. FC80662700	Washington State U. Pullman, WA	F. Hassan	\$43,016
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The origins of agriculture and human cultural adaptation to a changing environment are being explored in a study of prehistoric groups engaged in hunting and dry farming the Siwa Oasis region.

6. FC8071640 Amend. 3	U. of Maryland College Park, MD	K. Stowasser	\$5,000
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Edition and annotated translation of al-Maqrizi's "The Book of Exhortations and Useful Lessons in Dealing with Lands and Historical Landmarks." a primary scholarly source of the history and topography of medieval, pre-Ottoman Egypt.

7. FC80185500 Amend. 6	Southern Methodist U. Dallas, TX	F. Wendorf	\$150,000
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Geological and archeological studies of the Egyptian desert are establishing a chronology of environmental changes and the appearance and development of early man. This study of the geological past has resulted in discovery of a great quantity of water available at shallow depth, which seems to be a useful source of water for modern agriculture.

INDIA

8. 10547300 & Amend. 1 & 00613900 Amend. 4 & TX100874	American Institute of Indian Studies Chicago, IL	E. Dimock, Jr.	\$913,903
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The American Institute of Indian Studies (AIIS) was founded in 1961 and today has a membership of 37 United States institutions. The AIIS is a unique national resource because it is the principal source of money supporting on an annual basis in the United States, the advancement of knowledge and understanding of India as well as the training in India of area specialists.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
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Moreover, the AIIS has served the U.S. national interest by sustaining active scholarly collaboration between the U.S. and India during periods of political stress when contacts have been interrupted. Disciplines sponsored by the AIIS are increasing from the original concentration on social sciences and the humanities to include the natural sciences as well. Smithsonian support of the AIIS has totalled more than \$6,705,700 equivalent in Indian rupees over a fourteen-year period.

a.	American Institute of Indian Studies Chicago, IL	E. Dimock, Jr.	(\$199,809)
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The AIIS provides administrative support for its fellows and for a major language program from a headquarters in New Delhi and small offices in Bombay, Calcutta, Madras, and Poona.

b.	American Institute of Indian Studies Chicago, IL	E. Dimock, Jr.	(\$714,094)
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The principal activity of the AIIS has been the appointment of fellows. The SFCP currently provides most of the funds for this fellowship program. AIIS fellows receiving support during FY 1981 are listed below.

Junior Fellows

U. of British Columbia	Carla Petievich
U. of California at Berkeley	Nancy Hock S.S. Johal David Roach Gordon Thompson
U. of Chicago	David Carpenter Robert Evans Nita Kumar
Columbia U.	Samuel Laeuchi
U. of Michigan	Thomas McCormick
U. of Minnesota	Catherine Asher Geri Hockfield Sharon Kemp Hazel Lutz
U. of Pennsylvania	Joseph Mosteller Gyan Prakash

U. of Washington	Edeltraud Harzer David Jackson
Wesleyan U.	Josepha Cormack
U. of Wisconsin	N.R. Farooqi

Senior, Faculty Training, Professional Development, Short-Term
and Travel Fellows

American U.	Partho Shome
U. of Arizona	Richard Eaton
Mary Baldwin College	Sandra Freitag
U. of California at Berkeley	Thomas Metcalf Ruth Schmidt
U. of Chicago	Joan Erdman Victoria Kennick A.K. Ramanujan
U. of Colorado	Jana Everett
Columbia U.	Jerrilyn Dodds Barbara Stoler Miller Alex Wayman
DePaul U.	David Barnum
Duke U.	Joseph DiBona Avinash Maheshwary
Harvard U.	Pramod Chandra Carl Ernst B.K. Ramanujam
U. of Hawaii	G.R. Kassebaum Burton Stein
U. of Illinois	P.R. Balgopal Bruno Nettel
Indiana U.	Joseph Olivelle
U. of Michigan	John Broomfield
U. of Minnesota	Indira Junghare David Lelyveld

Naropa Institute	Mark Tatz
Oakland U.	Richard Tucker
Ohio State U.	David Stampe
U. of Pennsylvania	Arjun Appadurai Gerhard Bowering Guy Welbon
U. of Pittsburgh	Fred Clothey
U. of Texas	Robert Hardgrave, Jr. Kenneth Jackson
U. of Victoria	Anthony Welch
Wesleyan U.	Jon Higgins Tanjore Viswanathan
Whittier College	Glenn Yocum
U. of Wisconsin	Robert Frykenberg

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
9. 007569 Amend. 1	American Institute of Indian Studies Chicago, IL	E. Dimock, Jr.	\$750,000

Incremental increase of the forward-funded reserve to support AIIS programs after the depletion of the U.S. Indian rupee account.

10. 108328	American Institute of Indian Studies Chicago, IL	E. Gerow	\$13,942
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U.S. participation in the Fifth World Sanskrit Congress at Benares.

11. FC80363800 Amend. 5	American Institute of Indian Studies Chicago, IL	J. Gutman	\$190
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Examination of 19th and early 20th century photographs in India will enable scholars to reconstruct the social history of the period.

12. RDTX102361, -2363	American Institute of Indian Studies Chicago, IL	N. Jairazbhoy	\$4,230
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Development of a center to document traditional Indian folk music.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
13. 10560600 & Amend. 2	American Institute of Indian Studies Chicago, IL	G. Possehl	\$278,900

The Center for Art and Archeology at Benares, India, is a vital research facility serving scholars of ancient and modern Indian from all over the world. The Center was established to apply rigorous scholarly standards to the massive job of photographing and indexing the art collections and temples and monuments of India which abound in every region of the sub-continent. The archive of more than 30,000 photographs continues to grow as important projects such as the photographing of collections in the Indian Museum in Calcutta are undertaken.

14. 10527300	American Institute of Indian Studies Chicago, IL	A.N. Sarkar	\$7,500
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Documentation on film of the annual bathing festival of Sitala, Goddess of Illnesses, as observed in West Bengal.

15. RFTX100869, -870, -872, -873, -875, -876, -877, -878, -921, -922, -923, -947, -5290	American Institute of Indian Studies Chicago, IL	H. Schiffman	\$21,776
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U.S. participation in the Fifth International Conference of Tamil Studies at Madurai

16. 10567500	The Asia Society New York, NY (agent for the American Panel of the Indo-U.S. Subcommission on Edu- cation and Culture)	T. Tanen	\$141,734
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The Indo-American Fellowship Program, established in late 1975, was created to widen the circle of scholarly/professional contacts and increase the extent of collaboration between the U.S. and India. Fellowships are granted for research in India, primarily at the postdoctoral or equivalent level with substantial collaboration with Indian colleagues. The fellows who received support in FY 1981 are:

Brown U.	John S. Emigh
U. of California at Berkeley	Robert Reed
Gallaudet College	James Woodward

George Washington U.	Alfred Hitlebeitel
U. of Hawaii	Anatole Lyovin
U. of Kentucky	Joseph Krislov
Long Island U.	Lucille Rhodes
U. of Missouri	David E. Ray
U. of New England	Wade C. Edmundson
Unaffiliated	John Arrucci
U. of Washington	Hiromi Sakata

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
17. RFTX101697, -1698, -1699, -1700	U. of California Berkeley, CA	J.D. Clark	\$10,723

Survey of prehistoric land-use in the upper Son Valley, Madhya Pradesh, will provide data for comparison with paleo-ecological events in Africa, showing to what extent cultural development in the subcontinent may have paralleled that in tropical Africa where current evidence predicts the development of humankind.

18. FC90377000 Amend. 3	U. of Wisconsin Madison, WI	J. Elder	\$15,000
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Preparation of documentary films on selected aspects of contemporary South Asian civilizations.

19. RDTX100948	U. of New Mexico Albuquerque, NM	J. Fritz	\$5,048
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Development of a study of the urban plan of the 14th-16th century imperial Hindu capital of Vijayanagara by an international team of scholars.

20. 10574700	Western Michigan U. Kalamazoo, MI	A. Helweg	\$34,620
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Widespread migration of professional and highly skilled Gujaratis is being studied to determine the little known effect of migration on the sending society.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
21. 10441700	Roosevelt U. Chicago, IL	R. Holloman	\$17,015

Teyyam dance rituals which are the focus of life in North Kerala for six months of the year are well studied and documented. This study is attempting to understand how Teyyam is intergrated into the daily lives of the individual villagers.

22. RFTX102204, -2205, -2206, -2207, -2222	Massachusetts Insti- tute of Technology Cambridge, MA	P. Kiparsky	\$9,000
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U.S. participation in the First International Congress on Panini at Poona.

23. 00606800 Amend. 1	Herbert H. Lehman College Bronx, NY	J. Mencher	\$45,000
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Anthropological investigations in three traditional rice-producing regions of India will outline the involvement of women in Indian agriculture.

24. RFTX100140 & Amend. 1, -2221	Central Washington U. Ellensburg, WA	G. Refai	\$17,600
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A study of Anglo-Indian relations before the British rule of India, documents the period of incubation of the British Empire.

25. RFTX001844	U. of Pennsylvania Philadelphia, PA	F. Southworth	\$546
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Travel of Indian participant in the symposium on "Approaches to Social Change in South India: Research and Applications."

26. 00690900	U. of Pennsylvania Philadelphia, PA	F. Southworth	\$7,600
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A comprehensive investigation of linguistic evidence for prehistory in the subcontinent will add a new tool for the interpretation of South Asian prehistory.

27. 005037	Southern Methodist U. Dallas, TX	F. Wendorf	\$1,507
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Publication of research results of Prehistory of Egypt project.

SYSTEMATIC AND ENVIRONMENTAL BIOLOGY

For much of our history as a nation, we have regarded technology as the key to the betterment of the human condition. It is a concept that once stood virtually unquestioned and which has profoundly influenced changing cultural patterns around the world. Today, however, it is becoming increasingly obvious that technology exacts its price, one that is multiplied by new levels of population. Biological scientists who once concerned themselves with laying the brick-work of the edifice of human knowledge now find themselves with a new responsibility. We now know that it is imperative to establish norms for our environmental systems, to monitor changes, and to predict the consequences of social policies that may have an injurious environmental impact. American scientists are again the leaders in international research efforts in these new fields. Through the long-term collaborative relationships between American and foreign institutions and scholars, research conducted under the Smithsonian Foreign Currency Program serves as a foundation for the intense efforts that will be required to solve the problems of biological science that transcend national boundaries.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
<u>BURMA</u>			
28. RFTX102367	Smithsonian Institution Washington, D.C.	M. Moynihan	\$355

Examination of coraciiform birds (kingfishers, bee-eaters, hornbills) in India and Burma is providing comparative data on this important tropical group.

EGYPT

29. FC809479	Duke U. Durham, NC	E. Simons	\$50,000
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The Fayum Province of Egypt is the only accessible site in Africa for recovery of land vertebrates dating to the Oligocene epoch some 35,000,000 years ago. Quarrying of this site promises to expand our knowledge of the early primate ancestors of man and related primates and to improve our understanding of their ecological setting.

INDIA

30. RFTX101514	Smithsonian Institution Washington, D.C.	E. Ayensu	\$2,970
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Development of a workshop and research program on endangered plants of economic value in India.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
31. RFTX1002209, -2210	U. of Maryland College Park, MD	E. Clark	\$5,952

Examination of fishes known to produce strong toxins is furthering the development of effective shark repellants from biologically active substances.

32. 108329	Southern Illinois U. Carbondale, IL	R. Corruccini	\$70,835
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Study of dental occlusal variation in transitional Indian populations is providing new data for understanding epidemiological changes from rural to urban populations.

33. RFTX101902	Carnegie Museum of Natural History Pittsburgh, PA	A. Sahni	\$1,800
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Participation in the International Symposium on Rodent Origins and Radiation.

34. RFTX101903	Smithsonian Institution Washington, D.C.	R. Gadagkar	\$2,082
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Travel to undertake fellowship at the Smithsonian Tropical Research Institute to study social behavior of wasps.

35. RDTX100795, -796	Carnegie Museum of National History Pittsburgh, PA	C. Gans	\$8,860
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Development of a survey of reptiles and amphibians of Northern India.

36. RFTX100707	Howard U. Washington, D.C.	S.T. Hussain	\$2,808
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U.S. participation in the 11th Himalayan Geology Seminar at Dehra Dun.

37. RFTX101861 -1862, -1863	Smithsonian Institution Washington, D.C.	R. Higgins	\$7,403
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Study of the interdependence of living organisms in some tropical freshwater Indian lakes is developing principles of management of biological productivity in these lakes and comparing results with similar studies of temperate lakes in North America, contributing to understanding the processes of life in all bodies of freshwater.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
38. RFTX003101	Smithsonian Institution Washington, D.C.	A.J.T. Johnsingh	\$184

Travel to undertake fellowship at the National Zoological Park to study methodology for immobilization-assisted ecological and behavioral research.

39. RFTX102182, -2203, -2376, -2378, -2379, -2434, -2435, -2436, -2437, -2438, -5325, -5344, -5345, -5346, -5347, -5380, -5381, -5392, -5393, -5394, -5417	U. of Georgia Athens, GA	C. Jordan	\$42,729
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Travel of U.S. participants in the Silver Jubilee Symposium of the International Society for Tropical Ecology at Bhopal, India.

40. RDTX102303	Southern Illinois U. Edwardsville, IL	R. Keating	\$3,325
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Study of the aroid plants of India will provide comparative data for a worldwide anatomical study of the flowering plant family Araceae.

41. RDTX100983	The New York Botanical Garden Bronx, NY	T. Koyama	\$3,240
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Development of a botanical survey the Cyperaceae of India.

42. RFTX101404	Smithsonian Institution Washington, D.C.	K. Krombein	\$3,404
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An examination of entomological specimens at the University of Agricultural Sciences, Bangalore is providing comparative material for related studies in Sri Lanka.

43. 108327	U. of Oregon Eugene, OR	J. Lukacs	\$22,705
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Examination of South Asian human skeletal remains of Late Stone Age (10,000 B.C.) to Iron Age (200 A.D.) for patterns of dental disease will provide information regarding the history of population migration into the Indian sub-continent.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
44. RFTX102377 & Amend. 1	Smithsonian Institution Washington, D.C.	G. Montgomery	\$1,531

Survey of the current population status of pelicans in India.

45. RFTX102367	Smithsonian Institution Washington, D.C.	M. Moynihan	\$5,820
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Examination of coraciiform birds (kingfishers, bee-eaters, hornbills) in India and Burma is providing comparative data on this important tropical group.

46. RDTX101115, -1116, -1117, -1118, -1120, -1121, -1122, -1123, -1124, -1126, -1127, -1128	National Association for Equal Opportunity in Higher Education Washington, D.C.	S. Myers	\$45,669
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Exchange visit to develop cooperative programs in the biological sciences and other areas of mutual interest.

47. RFTX102208	Smithsonian Institution Washington, D.C.	D. Nicolson	\$3,000
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Continuation of research on the Araceae of southwestern India.

48. RFTX102365, -2366, -2377, -5289, -5323, -5324	Smithsonian Institution Washington, D.C.	M. Robinson	\$21,076
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U.S. participation in the International Society of Tropical Ecology Silver Jubilee Symposium at Bhopal, India.

49. 10642800	Pomona College Claremont, CA	W. Bertsch & T. Soderstrom	\$25,102
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The attempt to control bamboo flowering artificially will increase significantly the chance for rational scientific and agricultural exploitation of this important group.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
50. RDTX101406, -1753, -1754	Smithsonian Institution Washington, D.C.	C. Wemmer	\$7,500

Development of a project on ungulate management within tiger reserves of the Indian sub-continent.

51. RDTX100356	Milwaukee Public Museum Milwaukee, WI	R. West	\$3,249
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Development of fossil studies in northwestern India for further interpretation of evolutionary knowledge of South Asia.

PAKISTAN

52. RFTX102203	Smithsonian Institution Washington, D.C.	F. Fosberg	\$1,044
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Comparative information for botanical studies in Sri Lanka will be sought in Pakistani herbaria.

53. 00845700	U. of Michigan Ann Arbor, MI	P. Gingerich	\$40,931
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A search for Paleocene and Eocene (55-65 million year old) fossil mammals in Pakistan will substantially contribute to our knowledge of the evolution of mammals and their geographic distribution.

54. 00352800	Howard U. Washington, D.C.	S. T. Hussain	\$33,305
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Field studies of recently discovered vertebrate fauna from the Miocene lower Siwaliks of Pakistan, includes six families of rodents and two of insectivores some of which are new to South Asian fossil deposits.

55. RFTX105108	Southern Methodist U. Dallas, TX	A. Woosley & M. McKean	\$8,844
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Examination of prehistoric and modern pollen samples in Pakistan will provide base data for the reconstruction of the paleo-environment of the Pre-Harappan and Harappan periods.

ASTROPHYSICS AND EARTH SCIENCES

The study of astrophysics and earth sciences is the study of man's available energy and mineral resources. Studies of the stars and their origins reveal much about the origin, composition, behavior and fate of the Earth. The forces governing the stars are the same as those governing the star which is our Sun. The Earth was born of solar minerals, and the Sun remains the source of all energy, fossil or otherwise, available to man today. Uranium, for example, which provides the fuel for atomic power plants, is present in the Sun as well as in the earth. Coal and oil are fossil remains of plants and animals which once relied on sunshine for life, just as all life does today.

Studies, like those listed below, which received Smithsonian Foreign Currency Program support in FY 1981 are contributing to knowledge essential to meet man's future energy and mineral needs, to understand and predict such natural phenomena as earthquakes, and to foster space age developments. Such projects help host nations, particularly the developing nations, improve their scientific output while providing United States institutions with collaborators, facilities or field research opportunities essential to the conduct of such studies, judged most likely to advance man's knowledge to his available energy and mineral resources.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
<u>EGYPT</u>			
56. FC80215700 Amend. 2 & RFTX10405, -5359	Smithsonian Institution Washington, D.C.	F. El-Baz	\$26,496

Data from surface surveys in the Western Desert of Egypt is being compared with information from satellite photographs to provide a description of desert erosion and sand movement for use in efforts to reverse nature's "desertization" process.

57. FC90878500 Amend. 2	U. of Pennsylvania Philadelphia, PA	H. Faul	\$268
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Studies of the geology and time sequences of the alkaline ring-like formations, which occur in the Eastern Desert of Egypt, shed new light on the fundamental earth processes associated with the birth of the oceans.

58. RFTX100912, -0972, -1701, -1702, -1703, -1704	U. of Pennsylvania Philadelphia, PA	R. Giegengack	\$14,007
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Libyan desert silica glass, a naturally occurring glass of unknown origin, is being studied in its field context in order to add new understanding of the mysterious origins of tektites and various impactite glasses.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
59. 10215300 & Amend. 1	The U. of Arizona Tucson, AZ	C. Haynes	\$98,373

Geological investigation of quaternary deposits of the Nubian Desert are undertaken to understand the factors controlling prehistoric occupation of the area and to predict future man-climatic factors on land use and conservation.

60. FC70225900 Amend. 3	Smithsonian Institution Washington, D.C.	M. Pearlman	\$10,842
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The operation of an Egyptian satellite tracking facility at Helwan Observatory adds another link in the Smithsonian Astrophysical Observatory's global tracking network which supports studies of the earth's motion and magnetism and of the upper atmosphere.

INDIA

61. FR546242 Amend. 3	Smithsonian Institution Washington, D.C.	M. Pearlman	\$8,300
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The operation of an Indian satellite tracking facility at Naini Tal adds another link in the Smithsonian's global tracking network which supports studies of the earth's motion and magnetism and of the upper atmosphere.

62. RFTX101344	U. of Texas Austin, TX	V Szebehely	\$3,717
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Continued analytical and numerical study is being undertaken on the long-time stability of the regions around the equilibrium points in the restricted problem of three bodies, under various physical conditions.

63. RFTX101279, -1280, -1281, -1282	Smithsonian Institution Washington, D.C.	R. Vessot	\$8,452
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U.S. participation in the International Symposium on Time and Frequency at New Delhi.

64. RDTX102302	Smithsonian Institution Washington, D.C.	T. Weekes	\$3,235
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Development of a conference on high energy gamma rays.

MUSEUM PROGRAMS

The scope of museum activities is growing and changing. The traditional museum role has been the care and preservation of scientific specimens and cultural objects for study and reevaluation as new techniques and data become available. Today museums also have a growing role in the transmission of man's cultural heritage to future generations, a role belonging traditionally to universities. They also play a growing role in communication between present-day cultures, drawing together peoples of different lands when language barriers prevent exchange of basic information. Museums are now making more use of their skilled personnel and their collections for popular education. Increasingly, museums are broadening the interpretation of museum collections to include living cultural traditions such as crafts and the performing arts.

Projects like those listed below, which received Smithsonian Foreign Currency Program support in FY 1981, support both the traditional and the newer roles of museums. These projects respond to those needs of the museum profession not met within the natural sciences and cultural history areas of the Smithsonian Foreign Currency Program.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
<u>EGYPT</u>			
65. RFTX100548, -549, -1643, -1644, -1645, -1646, -1647, -1842, -1843, -2300, -2301, K-4,179,135	Smithsonian Institution Washington, D.C.	E. Atil	\$40,686

A survey of Islamic art of the Mamluk period (1250 to 1517 A.D.), particularly the architectural monuments of Cairo, was undertaken for the development of a major exhibition and symposium.

INDIA

66. RDTX100209	American Institute of Indian Studies Chicago, IL	J. Gutman	\$5,704
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Development of an archives of photographic research in India.

67. RFTX100246,	Puppeteers of America Washington, D.C.	N. Jairazbhoy	\$14,639
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Documentation of Kathputli puppetry traditions of Rajasthan.

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
68. 10524600	The Asia Society (As agent for Indo- U.S. Subcommittee on Education & Culture) New York, NY	T. Tanen	\$155,000

Continuation of museum-related programs and exchanges under the Indo-U.S. Subcommittee on Education and Culture.

SFCP GRANTS ADMINISTRATION

<u>Obligation Number</u>	<u>Institution</u>	<u>Principal Investigator</u>	<u>\$ Eqv.</u>
<u>EGYPT</u>			
69. 90684400 Amend. 1	Smithsonian Institution Washington, D.C.		\$242,316

This obligation is for the development, conduct, and administration of Smithsonian/SFCP projects in Egypt, including multi-year obligations for future activities of ongoing projects.

INDIA

70. WCF115411 3300-11-01	Smithsonian Institution Washington, D.C.		\$17,817
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Indian rupees were transferred to the State Department for Foreign Affairs Administrative Support, the costs incurred by the State Department in providing administrative support to Foreign Currency Program grantees in the excess currency countries.

71. 100894, 100141, 105391	Smithsonian Institution Washington, D.C.		\$8,645
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This obligation supported inspection and audit of research projects and liaison with host country governments by Smithsonian staff and advisors.

72. 8FA1B101	Smithsonian Institution Washington, D.C.		\$18,000
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This obligation is for the development, conduct, and administration of Smithsonian/SFCP projects in India.

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