REPORT OF THE SECRETARY OF THE SMITHSONIAN INSTITUTION

AND

FINANCIAL REPORT OF THE EXECUTIVE COMMITTEE OF THE BOARD OF REGENTS

1936

SMITHSONIAN INSTITUTION
WASHINGTON, D. C.

REPORT OF THE SECRETARY OF THE SMITHSONIAN INSTITUTION

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FINANCIAL REPORT OF THE EXECUTIVE COMMITTEE OF THE BOARD OF REGENTS

FOR THE

YEAR ENDED JUNE 30

1936

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THE SMITHSONIAN INSTITUTION

June 30, 1936

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Frank M. Setzler, acting head curator; W. H. Egberts, chief preparator.

Division of Ethnology: H. W. Krieger, curator; H. B. Collins, Jr., assistant curator; Arthur P. Rice, collaborator.

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Section of Ceramics: Samuel W. Woodhouse, collaborator.

Division of Archeology: Neil M. Judd, curator; R. G. Paine, aid; J. Townsend Russell, honorary assistant curator of Old World archeology.

Division of Physical Anthropology: Aleš Hrdlička, curator; Thomas D. Stewart, assistant curator.

Collaborator in anthropology: George Grant MacCurdy; D. I. Bushnell, Jr.

Associate in historic archeology: Cyrus Adler.

DEPARTMENT OF BIOLOGY:

Leonhard Stejneger, head curator; W. L. Brown, chief taxidermist.

Division of Mammals: Gerrit S. Miller, Jr., curator; Remington Kellogg, assistant curator; A. J. Poole, scientific aid; A. Brazier Howell, collaborator.

Division of Birds: Herbert Friedmann, curator; J. H. Riley, associate curator; Alexander Wetmore, custodian of alcoholic and skeleton collections; Casey A. Wood, collaborator: Arthur C. Bent, collaborator.

Division of Reptiles and Batrachians: Leonhard Stejneger, curator; Doris M. Cochran, assistant curator.

Division of Fishes: George S. Myers, assistant curator; E. D. Reid, aid.

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Section of Myriapoda: O. F. Cook, custodian.

Section of Diptera: Charles T. Greene, assistant custodian.

Section of Coleoptera: L. L. Buchanan, specialist for Casey collection.

Section of Lepidoptera: J. T. Barnes, collaborator.

Section of Hemiptera: W. L. McAtee, acting custodian.

Section of Forest Tree Beetles: A. D. Hopkins, custodian.

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Division of Mollusks: Paul Bartsch, curator; Harald A. Rehder, assistant curator; Joseph P. E. Morrison, senior scientific aid; Mary Breen, collaborator.

Section of Helminthological Collections: Maurice C. Hall, custodian.

DEPARTMENT OF BIOLOGY—Continued.

Division of Echinoderms: Austin H. Clark, curator.

Division of Plants (National Herbarium): Frederick V. Coville, honorary curator; W. R. Maxon, associate curator; Ellsworth P. Killip, associate curator; Emery C. Leonard, assistant curator; Conrad V. Morton, aid; Egbert H. Walker, aid; John A. Stevenson, custodian of C. G. Lloyd mycological collection.

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Section of Higher Algae: W. T. Swingle, custodian.

Section of Lower Fungi: D. G. Fairchild, custodian.

Section of Diatoms: Paul S. Conger, custodian.

Associates in Zoology: C. Hart Merriam, Mary J. Rathbun, C. W. Stiles, Theodore S. Palmer, William B. Marshall.

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Associate in Marine Sediments: T. Wayland Vaughan.

Collaborator in Zoology: Robert Sterling Clark.

Collaborators in Biology: A. K. Fisher, David C. Graham.

DEPARTMENT OF GEOLOGY:

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Division of Physical and Chemical Geology (systematic and applied): W. F. Foshag, curator; Edward P. Henderson, assistant curator.

Division of Mineralogy and Petrology: W. F. Foshag, curator; Frank L. Hess, custodian of rare metals and rare earths.

Division of Stratigraphic Paleontology: Charles E. Resser, curator; Gustav A. Cooper, assistant curator; Margaret W. Moodey, aid for Springer collection.

Section of Invertebrate Paleontology: T. W. Stanton, custodian of Mesozoic collection; Paul Bartsch, curator of Cenozoic collection.

Division of Vertebrate Paleontology: Charles W. Gilmore, curator; C. Lewis Gazin, assistant curator; Norman H. Boss, chief preparator.

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Associate in Paleontology: E. O. Ulrich.

Associate in Petrology: Whitman Cross.

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Section of Mechanical Technology: Frank A. Taylor, in charge; Fred C. Reed, scientific aid.

Section of Aeronautics: Paul E. Garber, assistant curator.

Section of Mineral Technology: Carl W. Mitman, in charge.

Division of Textiles: Frederick L. Lewton, curator; Mrs. E. W. Rosson, aid.

Section of Wood Technology: William N. Watkins, assistant curator.

Section of Organic Chemistry: Aida M. Doyle, aid.

Division of Medicine: Charles Whitebread, assistant curator.

Division of Graphic Arts: R. P. Tolman, curator; C. Allen Sherwin, scientific aid.

Section of Photography: A. J. Olmsted, assistant curator.

DIVISION OF HISTORY: T. T. Belote, curator; Charles Carey, assistant curator; Mrs. C. L. Manning, philatelist.

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Assistant in radiation research.—LELAND B. CLARK.
Research associate.—FLORENCE E. MEIER.

REPORT OF THE SECRETARY OF THE SMITHSONIAN INSTITUTION

C. G. ABBOT

FOR THE YEAR ENDED JUNE 30, 1936

To the Board of Regents of the Smithsonian Institution.

GENTLEMEN: I have the honor to submit herewith my report showing the activities and condition of the Smithsonian Institution and the Government bureaus under its administrative charge during the fiscal year ended June 30, 1936. The first 20 pages contain a summary account of the affairs of the Institution, and appendixes 1 to 10 give more detailed reports of the operations of the National Museum, the National Gallery of Art, the Freer Gallery of Art, the Bureau of American Ethnology, the International Exchanges, the National Zoological Park, the Astrophysical Observatory, the Division of Radiation and Organisms, the Smithsonian library, and of the publications issued under the direction of the Institution. On page 101 is the financial report of the executive committee of the Board of Regents.

OUTSTANDING EVENTS

Notable progress has been made by the Institution in its varied fields of endeavor. Continuation of the study of the relation of our weather to changes in the sun's radiation led to apparent proof that the short-interval changes of solar radiation are of major influence on the weather for the following 2 weeks. Funds to establish seven additional observing stations to test this promising method of weather forecasting were provided in a bill passed by the Senate, but unfortunately the item was lost in conference. The Division of Radiation and Organisms has determined specifically the efficiency of different wave lengths of radiation in promoting photosynthesis and phototropism, and has developed new types of research apparatus of unequaled adaptability and power. The Institution published the latest results of the high-altitude rocket experiments of Dr. R. H. Goddard, whose early work was supported for 12 years by the Smithsonian. In his most recent trial flights the liquid-propelled rocket attained a height of 7,500 feet, its automatic stabilizer keeping the flight vertical. With the P. W. A. grant reported last year, three new modern

exhibition buildings are under construction at the National Zoological Park and are expected to be completed by January 1937.

Toward the end of the year a weekly radio program on the activities of the Smithsonian Institution was put on the air by the Office of Education, Department of the Interior, in cooperation with the National Broadcasting Company. The program consists of weekly half-hour dramatizations of science and art over a Nation-wide hook-up. The mail response from listeners has been enthusiastic. The sales of the Smithsonian Scientific Series, a set of 12 popular science volumes written by members of the Smithsonian staff and collaborators, have continued to increase until at the present time a total of nearly $150,000 has been received by the Institution in royalties for the furtherance of its researches. In the will of the late Dr. William L. Abbott, long a collaborator and friend of the Institution, a one-fifth share of his residuary estate was left to the Smithsonian to promote zoological researches. The executors state that this share will be in the neighborhood of $100,000.

The Institution has continued its work on the problem of Folsom man through the investigations of Dr. F. H. H. Roberts, Jr., near Fort Collins, Colo. Additional information has been obtained on this earliest known American aboriginal culture, as well as further evidence of the contemporaneity of Folsom man with extinct species of bison. In Alaska Dr. Aleš Hrdlička and Henry B. Collins, working independently, have continued to seek for direct evidence of the ancient migration of the American Indians from Asia, with valuable results.

Outstanding among the year's publications were: Solar Radiation and Weather Studies and The Dependence of Terrestrial Temperatures on the Variations of the Sun's Radiation, by C. G. Abbot, summarizing his investigations on the relationship of our weather to variation in the sun's radiation; An Introduction to Nebraska Archeology, by William Duncan Strong, a monographic work on the archeology of that important region; and Molluscan Intermediate Hosts of the Asiatic Blood Fluke, *Schistosoma japonicum*, and Species Confused with Them, by Paul Bartsch, a definitive classification of the intermediate hosts of this human parasite, which affects millions of Orientals, particularly the Chinese. Suggestions for its control are included.

SUMMARY OF THE YEAR'S ACTIVITIES OF THE BRANCHES OF THE INSTITUTION

National Museum.—For the maintenance of the National Museum the total appropriations were $760,742, an increase of $44,671 over those for 1935. Additions to the collections numbered 486,581 speci-

mens, coming mostly as gifts or as the result of Smithsonian expeditions. Perhaps the most outstanding single accessions in the various departments of the Museum were as follows: In anthropology, the Richard K. Peck collection of materials representing the Negritos and Papuans of Dutch New Guinea, the Dyaks of Borneo, and the Jivaro of Ecuador; in biology, an accession of 465 mammals from Africa, Asia, and South America, representing 300 forms not previously contained in the collections, by exchange from the Field Museum of Natural History; in geology, a notable series of Chilean minerals, including six new species, collected by Mark Bandy; in arts and industries, the airplane *Winnie Mae*, flown by Post and Gatty and later by Post alone in various record flights, purchased through special Congressional appropriation. A number of field expeditions went out during the year, financed mainly by Smithsonian private funds. Visitors to the various Museum buildings numbered 1,973,673. There were published 1 annual report, 11 Proceedings papers, and 1 paper in the series Contributions from the National Herbarium.

National Gallery of Art.—A large part of the year's work related to the care, protection, and restoration of paintings belonging to the Government. In the interests of the better preservation of works of art and of better working conditions, an air-conditioning unit was installed in the storage workroom. At the 15th annual meeting of the National Gallery of Art Commission on December 10, 1935, the death of Joseph H. Gest, chairman, was announced, and Charles L. Borie, Jr., was elected chairman. A number of portraits and other art works were accepted by the Commission for the Gallery. Four miniatures were acquired through the Catherine Walden Myer fund. The Gallery held eight special exhibitions, as follows: National and international high school art; intaglio prints and etchings by members of the Chicago Society of Etchers; miniatures by members of the American Society of Miniature Painters; paintings and etchings by Mons Breidvik; portraits by Bjorn P. Egeli; vitreous enamels by Frances and Richard McGraw; the First Annual Metropolitan State Art Contest; and paintings by children receiving free art instruction in the New York area.

Freer Gallery of Art.—The year's additions to the collection include a Persian brass box, four Chinese bronzes, and a sculptured Persian pediment, all shown in plates 1 and 2. There were also added four leaves from a sixteenth century Persian manuscript, two Indian and three Persian paintings, and in pottery one Chinese cup and a Syro-Egyptian bowl. Curatorial work was devoted to the study of Chinese, Japanese, Armenian, Arabic, Persian, and East Indian objects and of the texts and seals associated with them. During the year 673 objects and 225 photographs of objects were submitted to the curator for an

opinion as to their identity, meaning, or historical or esthetic significance, and 18 inscriptions for translation. Visitors totaled 123,418, and 96 groups were given docent service. A course of four lectures on Persian Painting was given at the Gallery by Eustache de Lorey, former Director of the French Institute of Arts and Archaeology, and 19 lectures and illustrated talks were given by members of the Gallery staff at Columbia University and at the Gallery.

Bureau of American Ethnology.—The researches of the Bureau on the American Indians included archeological and ethnological studies in Washington, in many other parts of the United States, in Canada, and in Central America. In the field of archeology, aid was given in establishing two P. W. A. projects at two important old sites in Florida; further investigation of the problem of Folsom man was carried out through excavations at the Lindenmeier site in northern Colorado; a joint Smithsonian-Peabody Museum expedition made important archeological discoveries in Honduras, notably that of a culture level apparently ancestral to that of the Maya. The year's ethnological investigations included linguistic studies of the Timucua and of the Indians of James and Hudson's Bay, Canada; study of the Mission Indians of California; field work among the Shoshoni, Bannock, and Gosiute Indians of Utah, Nevada, and Idaho; studies of the League of the Iroquois; and researches on Florida Indian music. The Bureau published an annual report and two bulletins.

International exchanges.—The exchange service is the official United States agency for the exchange with other countries of governmental and scientific documents. In carrying out this important work of aiding in the interchange of scientific thought among the nations of the world, the exchange service handled during the year a total of 596,951 packages weighing 618,789 pounds. The number of full and partial sets of governmental publications forwarded abroad is now 111, and 102 copies of the Congressional Record are sent to other countries in exchange for their parliamentary journals. The Exchange Agency in Peru, formerly conducted under the Ministerio de Fomento, Lima, is now under the jurisdiction of the Ministerio de Relaciones Exteriores, Sección de Propaganda y Publicaciones Lima carrying on the work. The agency for the Union of South Africa has been removed from Pretoria, Transvaal, to Capetown, Cape of Good Hope.

National Zoological Park.—Under a grant from the P. W. A. of $680,000, supplemented later by $191,575, work was begun during the year on five projects, namely, machine and carpenter shops and a garage; installation of three 250-h.p. boilers which will heat all exhibition buildings except the bird house; a building for small mammals and great apes; a building for large animals such as elephant, rhinoceros, and hippopotamus; and a new wing on the bird house.

With the completion of these projects, the Zoo will have four large modern exhibition buildings, and the new construction constitutes the greatest improvement in the history of the Park. Assignment of P. W. A. labor also enabled the Park to carry out a considerable number of lesser improvements, including work on roads, grounds, and buildings. Accessions of animals numbered 786. Losses by death and otherwise totalled 765, leaving the collection at the close of the year at 2,191 animals, representing 675 different species. Visitors numbered 2,235,850, including groups from 579 schools and organizations from 20 States and the District of Columbia.

Astrophysical Observatory.—Measurements of the solar constant of radiation have been continued on every possible day at the three Smithsonian stations at Table Mountain, Calif., Montezuma, Chile, and Mount St. Katherine, Egypt. The irregularity of the results at Table Mountain led to the development of a criterion for distinguishing unfavorable sky conditions, which will provide a new increase in the accuracy of measurement of the solar variability. Two papers published by Dr. Abbot appear to prove that the short-interval changes of solar radiation are of major influence on the weather for the ensuing 2 weeks or more. To test the use of this relationship in weather forecasting, seven additional observing stations are required. An amendment to the Urgent Deficiency Act providing the necessary funds was passed by the Senate, but was rejected in conference with the House. Preliminary studies were begun of the possibility of automatic determination of solar variability from sounding balloons.

Division of Radiation and Organisms.—The Division's investigations comprised the following: Continuation of work on the dependence of carbon dioxide assimilation in wheat upon the wave length of radiation; experiments on the effects of ultraviolet rays on algae; experiments on the effects of light of different wave lengths on growth of tomatoes; development of an extremely sensitive and quick-acting spectroscopic method for measuring carbon dioxide concentration; study of the dependence of photosynthesis in wheat on time factors; and the development of a highly sensitive thermocouple of great ruggedness.

THE ESTABLISHMENT

The Smithsonian Institution was created by act of Congress in 1846, according to the terms of the will of James Smithson, of England, who in 1826 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." In receiving the property and accepting the trust, Congress determined that the Federal Government was without authority to administer the trust directly, and, therefore,

constituted an "establishment" whose statutory members are "the President, the Vice President, the Chief Justice, and the heads of the executive departments."

THE BOARD OF REGENTS

The terms of the three Members of the House of Representatives on the Board of Regents, Representatives T. Alan Goldsborough, of Maryland; Charles L. Gifford, of Massachusetts; and Clarence Cannon, of Missouri, expired on December 25, 1935, and on January 9, 1936, they were reappointed by the Speaker of the House for the statutory term of 2 years. Mr. Frederic A. Delano, of Washington, D. C., whose term as a citizen Regent expired January 21, 1935, was reappointed for another 6 years by Joint Resolution of Congress approved August 7, 1935. By Joint Resolution of Congress approved February 21, 1936, Dr. Roland S. Morris, of Philadelphia, Pennsylvania, was appointed to fill the existing vacancy in the class of citizen Regents.

The roll of Regents at the close of the year was as follows: Charles Evans Hughes, Chief Justice of the United States, Chancellor; John N. Garner, Vice President of the United States; members from the Senate—Joseph T. Robinson, M. M. Logan, Charles L. McNary; members from the House of Representatives—T. Alan Goldsborough, Clarence Cannon, Charles L. Gifford; citizen members—Frederic A. Delano, Washington, D. C.; John C. Merriam, Washington, D. C.; R. Walton Moore, Virginia; Robert W. Bingham, Kentucky; Augustus P. Loring, Massachusetts; Roland S. Morris, Pennsylvania.

Proceedings.—The annual meeting of the Board of Regents was held on January 16, 1936. The Regents present were Chief Justice Charles Evans Hughes, Chancellor; Senators Joseph T. Robinson and M. M. Logan; Representatives Charles L. Gifford and Clarence Cannon; citizen Regents Frederic A. Delano, Augustus P. Loring; and the Secretary, Dr. Charles G. Abbot.

The Board elected Senator McNary a member of the Permanent Committee.

The Secretary presented his annual report, detailing the activities of the several Government branches and of the parent Institution during the year, and Mr. Delano presented the report of the Executive Committee, covering financial statistics of the Institution. The Secretary also presented the annual report of the National Gallery of Art Commission.

In his usual special report the Secretary briefly reviewed outstanding events of the year, and Assistant Secretary Wetmore detailed important activities in the National Museum.

FINANCES

A statement will be found in the report of the executive committee, page 101.

MATTERS OF GENERAL INTEREST

SMITHSONIAN RADIO PROGRAM

A new means of carrying on the diffusion of knowledge was made available to the Institution toward the end of the fiscal year, when the Office of Education, Department of the Interior, began, as a feature of the Radio Project of the Works Progress Administration, a series of weekly half-hour radio broadcasts, on a Nation-wide hook-up, on the activities of the Smithsonian Institution. These broadcasts, which constitute an innovation in the field of educational radio programs, take the form of dramatizations of the scientific research, exploration, museum exhibits, and art activities carried on under the Institution's direction. They form an N. B. C. blue network feature on Sunday mornings at 11:30 Eastern daylight saving time (red network, 11:30 Eastern standard time after September 27), and are presented through the cooperation of the National Broadcasting Co.

The first broadcast, produced on Sunday, June 7, 1936, dramatized the founding of the Smithsonian Institution and the stories of some of the famous exhibits in the Arts and Industries Building of the United States National Museum, including Colonel Lindbergh's *Spirit of St. Louis*, the Star Spangled Banner, the first Atlantic cable, and Alexander Graham Bell's early telephones. This, with the 13 other broadcasts listed below, were to comprise the first series:

The Smithsonian, and Famous Exhibits	June 7, 1936
Scientific Explorations	June 14, 1936
The Sun	June 21, 1936
The American Indian	June 28, 1936
Costumes of Ladies of the White House	July 5, 1936
Transportation	July 12, 1936
Meteorites	July 19, 1936
The Human Side of Art	July 26, 1936
Mammals	Aug. 2, 1936
Power	Aug. 9, 1936
The Story of Man in America	Aug. 16, 1936
Textiles	Aug. 23, 1936
Precious Stones	Aug. 30, 1936
Ship Models	Sept. 6, 1936

From the beginning this program has been enthusiastically received. Hundreds of letters were received at the Office of Education commending the dramatized form of educational broadcast as being both entertaining and instructive, and I may anticipate the next fiscal

year by saying that at the writing of this report in the early fall of 1936 the mail response had increased to an average of over 2,000 letters a week. A large number of the letters come from teachers and others particularly interested in education, many of whom state that the informative material contained in the dramatized stories of research, exploration and art, and in the advance summaries mailed out to those requesting them, is of real, practical use in their work.

The Institution is grateful to the Office of Education and to the National Broadcasting Co. for making possible this effective means of disseminating knowledge in the fields of science and art.

ROCKET EXPERIMENTS OF DR. R. H. GODDARD

For 12 years—from 1916 to 1928—the Institution supported through annual grants Dr. R. H. Goddard's investigations on rocket flight, with the primary purpose of supplying a means of exploring the unknown upper atmosphere. Dr. Goddard's pioneering researches on the design of the rocket itself and on the most effective rocket fuel and the means of utilizing it in the rocket led to a successful trial flight in July 1929, and in my annual report for 1930 I said:

> The apparently assured success of Dr. Goddard's experiments has drawn support from a source better equipped financially to provide it than the Smithsonian. The late Simon Guggenheim, at Colonel Lindbergh's suggestion, made a large grant of funds and set up an advisory committee, of which the Secretary, Dr. Abbot, is a member. Dr. Goddard's experiments are now going on under these auspices in New Mexico. It is a pleasure to record here that the Smithsonian has again been able to support during its more or less uncertain pioneering stages an investigation of great promise for the increase of knowledge.

Dr. Goddard has continued to advance the development of his liquid-propellant rocket with marked success, and early in 1936 he made a report on these later researches to the Daniel and Florence Guggenheim Foundation. From this report, which was published by the Smithsonian Institution on March 16, 1936, it will be of interest to quote a few paragraphs:

> Inasmuch as control by a small gyroscope is the best as well as the lightest means of operating the directing vanes, the action of the gyroscope being independent of the direction and acceleration of the rocket, a gyroscope having the necessary characteristics was developed after numerous tests.
>
> The gyroscope was set to apply controlling force when the axis of the rocket deviated 10° or more from the vertical. In the first flight of the present series of tests with gyroscopic control, on March 28, 1935, the rocket as viewed from the 1,000-foot shelter traveled first to the left and then to the right, thereafter describing a smooth and rather flat trajectory. * * *
>
> In subsequent flights, with adjustments and improvements in the stabilizing arrangements, the rockets have been stabilized up to the time propulsion ceased, the trajectory being a smooth curve beyond this point. * * * The oscillations each side of the vertical varied from 10° to 30° and occupied from 1 to 2

seconds. Inasmuch as the rockets started slowly, the first few hundred feet of the flight reminded one of a fish swimming in a vertical direction. * * *

The continually increasing speed of the rockets, with the accompanying steady roar, make the flights very impressive. In the two flights the rocket left a smoke trail and had a small, intensely white flame issuing from the nozzle, which at times nearly disappeared with no decrease in roar or propelling force. The occasional white flashes below the rocket are explosions of gasoline vapor in the air.

In the flight of October 14, 1935, the rocket rose 4,000 feet; in the flight of May 31, 1935, it rose 7,500 feet. * * *

As in the flights of 1930–32 to study rocket performance in the air, no attempt was made in the flights of 1934–35 to reduce the weight of the rockets, which varied from 58 to 85 pounds. A reduction of weight would be useless before a vertical course of the rocket could be maintained automatically. The speed of 700 miles per hour, although high, was not as much as could be obtained by a light rocket, and the heights also were much less than could be obtained by a light rocket of the same power.

It is worth mentioning that inasmuch as the delicate directional apparatus functioned while the rockets were in flight, it should be possible to carry recording instruments on the rocket without damage or changes in adjustment.

The next step in the development of the liquid-propellant rocket is the reduction of weight to a minimum. Some progress along this line has already been made. * * *

The chief accomplishments to date are the development of a combustion chamber, or rocket motor, that is extremely light and powerful and can be used repeatedly, and of a means of stabilization that operates automatically while the rocket is in flight.

WALTER RATHBONE BACON TRAVELING SCHOLARSHIP

DR. MOZLEY'S MOLLUSK INVESTIGATIONS

The Walter Rathbone Bacon Traveling Scholarship of the Smithsonian Institution granted to Dr. Alan Mozley for 1932 and 1933 for field studies of land and fresh-water mollusks in northern Asia, in order to correlate these with similar researches which he had made in the far north of North America, was extended for an additional season to permit the gathering of further data. This is the first report it has been possible to present on Dr. Mozley's later work.

Dr. Mozley intended to make a trip down the Lena River and to explore this stream and adjacent territory before attempting a final report, but for certain reasons it was not practicable for him to obtain the necessary permission for work in this territory. He therefore, with the sanction of the authorities of the Smithsonian Institution, shifted his field of exploration to Finland and northern Sweden, using Alvsky, Kabdalis, Östersund, Strömsund, Sveg, Orsa, Mora, Älvdalen, and Stockholm as bases for his quest.

At the close of the collecting season Dr. Mozley revisited England, where he continued museum studies of his catches, after which he

returned to the United States National Museum for his final endeavors. These are in part embodied in a paper entitled "The Fresh-Water and Terrestrial Mollusca of Northern Asia", published in the Transactions of the Royal Society of Edinburgh, vol. 58, pt. 3, no. 24, pp. 605–695, pls. 1–5, figs. 1–8, 1935–36. In this he describes the species collected by him and discusses their ecologic relationship.

The region embraced in this work includes the greater part of continental Asia north of latitude 50°, excepting outer Mongolia and Manchuria, and the Lake Baikal area with its peculiar fauna. In the region covered 67 species and subspecies were obtained and examined in detail. A certain number of forms are held in abeyance, to be discussed in a final report, upon the preparation of which Dr. Mozley is now engaged.

DR. BLACKWELDER'S STUDY OF THE STAPHYLINID FAUNA OF THE WEST INDIES

The Walter Rathbone Bacon Scholarship was awarded in June 1935 to Dr. Richard E. Blackwelder, of Stanford University, California. In his application for this scholarship the successful candidate indicated that his project would consist of a study of the staphylinid fauna of the West Indies, with especial reference to the subfamily Tachyporinae.

Accordingly Dr. Blackwelder set sail from New York late in June and commenced the field work necessary for the completion of the project. In succession he has visited the islands of Jamaica, Gaudeloupe, Hispaniola, Puerto Rico, Antigua, St. Thomas, Trinidad, Tobago, Grenada, Caracou, St. Vincent, Union, Barbados, St. Lucia, Martinique, Dominica, Montserrat, Antigua, and St. Kitts. Depending upon the size of the islands and the opportunities for collecting, Dr. Blackwelder has spent a longer or shorter time on each of these islands.

During the coming 6 months the islands of the Greater Antilles will be revisited, the second visit coming at a different time of year from the first, in that way making it possible to get species which were not found at the first attempt.

The results of his trip so far, as shown in his monthly reports, have been gratifying, many thousands of Staphylinidae having been already obtained, together with material in other groups of the animal kingdom. Material other than Staphylinidae has been of the Coleoptera, arachnids, diplopods, chilopods, and birds.

At the end of his field work in the West Indies it is intended that Dr. Blackwelder will return to Washington, there to prepare a series of the species which he has collected and which he will take to the British Museum for comparison with the types of described West Indian species. Upon his return from the British Museum Dr. Black-

welder will work over the entire collection and prepare a report upon this group of insects.

GRANTS

Kamerlingh Onnes Laboratorium der Rijks-Universiteit te Leiden.—In continuation of a number of previous grants to the Kamerlingh Onnes Laboratory, through its director, Prof. Dr. W. H. Keesom, the Institution contributed $500 toward the support of certain of the low-temperature researches now in progress at the laboratory. At the suggestion of the Secretary, a like contribution was also made by the Research Corporation of New York.

Dr. Erzsébet Kol.—A grant of $700 was made to Dr. Erzsébet Kol to enable her to study the biology of snow algae on the snow fields and glaciers of Alaska. Dr. Kol, a botanist of Szeged, Hungary, has come to this country through a fellowship from the American Association of University Women to study the snow algae on high mountains in the United States. The Smithsonian grant will enable her to extend the work to include Alaska. Dr. Kol's studies in the field of cryobiology have covered a period of 10 years and have included similar field work in the mountains of Switzerland, Norway, France, and Hungary.

Mount Washington Observatory.—A small contribution of $50 was made toward the continued support of Mount Washington Observatory. This high-level observatory (6,284 ft.) in New Hampshire is under direction of Dr. Charles F. Brooks, of the Harvard Blue Hill Meteorological Observatory. Its observations are at times the only upper air data available in the northeastern United States in periods of general storm or fog. All phases of ice formation on airplanes can readily be studied here on the ground, as the ice-forming wind rushes by at airplane speeds.

FIFTH ARTHUR LECTURE

The fifth Arthur Lecture was given in the auditorium of the National Museum February 25, 1936, by Dr. Earl S. Johnston, assistant director of the Division of Radiation and Organisms, Smithsonian Institution, under the title "Sun Rays and Plant Life." Dr. Johnston pointed out that the wide range in type of vegetation on the earth is due to the great variation in the solar energy reaching our planet. These variations relate to the duration, the intensity, and the quality or wave length of sunlight. The lecturer discussed the investigations by the Smithsonian Institution and other agencies of the harmful and beneficial effects upon plant growth of specific wave lengths of light.

The lecture will be published in the General Appendix to the 1936 Smithsonian Report.

SMITHSONIAN INSTITUTION EXHIBIT AT THE TEXAS CENTENNIAL EXPOSITION, DALLAS, TEX.

The Smithsonian Institution exhibit at the Texas Centennial Exposition June 6 to November 30, 1936, was concerned wholly with a presentation of the laboratory methods and processes involved in the preparation and restoration of a fossil dinosaur skeleton and with a picturization of the scientific knowledge of prehistoric reptilian life derived from laboratory studies. The exhibit formed one of a series of scientific exhibits entitled "The Story of Life", prepared by the combined efforts of the United States Public Health Service, the colleges and universities of Texas, and the Smithsonian Institution.

The Smithsonian Institution exhibit occupied a rectangular bay, the back wall of which was about 30 feet wide and the side walls of which were, roughly, 30 feet and 20 feet, respectively, in length. A railing prevented the visitors from approaching the rear wall closer than 15 feet and the side walls 3 feet. There was thus made available between the railing and the rear wall an area of approximately 15 feet by 30 feet for the carrying on of the regular laboratory work in plain view of the visitor. Here daily during the course of the exposition Norman H. Boss, chief preparator of the division of vertebrate paleontology in the National Museum, and an assistant, Gilbert Stucker, of Chicago, who was employed for the period of the exposition, carried on the intricate and varied work involved in working up in relief parts of the Jurassic dinosaur *Camarasaurus*.

On the back wall of the working area there was mounted a full-size line drawing of *Camarasaurus* and superposed on the drawing was the original skull and the first five vertebrae, which had been prepared in the National Museum laboratory prior to the exposition. These original parts, together with those gradually exposed by the preparators and the full-size profile drawing, gave the visitor a clear idea of the complicated nature of the preparatory work in this scientific field.

Five large masses of plaster-bandaged fossil in the rock, one weighing approximately 2½ tons and another 1½ tons, were shipped to Dallas and constituted the working material during the exposition. These masses are in the same form as received in 1923 by the United States National Museum from the Dinosaur National Monument quarry in Utah. The finished pieces were exhibited on available floor space in the working area of the exhibit.

Flanking the laboratory area there were exhibited two oil paintings 15 feet by 8 feet prepared by two Washington artists, Bruce Horsfall and Garnet W. Jex, respectively. The Jex painting portrays reptilian life in the Permian age of Texas. The Horsfall painting visualizes *Camarasaurus*, the fossil skeleton of which was being prepared, as he was supposed to have appeared in the flesh and in the environment of his time, namely, the Jurassic age. Both paintings were executed under the close supervision of C. W. Gilmore, curator of vertebrate paleontology in the National Museum, and are as scientifically correct in the topography, vegetation, and reptile restoration as can be done with oil paint and brush.

In addition to the oil painting on the right flanking wall of the area there was exhibited a well-executed diorama visualizing all known life of the Jurassic age. This yielded to the visitor an understanding of the reptilian associates of the *Camarasaurus* in Jurassic times and vividly indicated the swampy, moist character of the land area of that distant time.

Thus the visitor to the Smithsonian Institution exhibit at the Dallas exposition had revealed to him the manner in which the Division of Vertebrate Paleontology in the United States National Museum is acquiring scientific knowledge as to prehistoric life and utilizing that information in the advancement of knowledge.

SMITHSONIAN SCIENTIFIC SERIES

The Smithsonian Scientific Series, a set of 12 volumes written in popular style and profusely illustrated on the various branches of science covered by the Institution's research activities, was first put on the market in 1928. In entering into the agreement for the sale of this series, a departure from the normal free distribution of its publications, the Institution had two aims in view, namely, the wider diffusion of knowledge and the increase of its financial resources for the promotion of research. The books are published and sold by a private corporation of New York, the Smithsonian Institution Series, Inc., and the Institution receives a royalty on all sales.

As the series has not been mentioned in my annual reports for the past 2 years, it will be interesting to state the results of this enterprise up to the close of the fiscal year 1936. From 1928, when the first set was sold, to June 30, 1936, there have been sold a total of 12,917 sets. In royalties, the Institution has received to date in the neighborhood of $150,000, a definite proportion of which has been added to the Institution's permanent endowment, and the balance expended for the most pressing scientific investigations. As the sales of the series are continuing at an ever-increasing rate, the Institution's endow-

ment funds will eventually be substantially augmented, with a corresponding increase in the annual income for current researches.

BEQUESTS

William L. Abbott bequest.—Dr. William L. Abbott, associate in zoology since March 25, 1905, who had conducted and sponsored many field expeditions for the Institution, died April 2, 1936. Under the terms of Dr. Abbott's will, the Smithsonian Institution is to receive, in addition to any of his books and papers that they may desire, one-fifth of his residuary estate. According to advices from the executors of the estate, the Institution's share will be in the neighborhood of $100,000. This final expression of Dr. Abbott's friendship is very gratifying to the Institution, since he was one of its most valued collaborators and had contributed materially to the upbuilding of its biological and other collections.

Charles Dyke bequest.—In the will of Charles Dyke, probated in Corpus Christi, Tex., July 29, 1935, appears the following provision:

> Item three: All the rest, residue, and remainder of my estate * * * I give, devise, and bequeath to the Smithsonian Institute of Washington, District of Columbia, to be used in founding and endowing a chair in some branch of the Institution, to be designated as the branch of financial research, whose purpose is to take steps to capitalize on any inventions, discoveries in research, or through whatever other project seems most feasible. The aim of this bequest is to enhance the endowment funds of this Institution to the highest degree practicable in opulence through the efforts of said chair of financial research.

The Dyke estate is to remain in the hands of the executor during the life of the first beneficiary, after which the legacy will be paid to the Institution. Advice has been received from Mr. Dyke's attorney that the present value of the property is about $15,000.

EXPLORATIONS AND FIELD WORK

In the furtherance of its researches, the Institution sent out or took part in 15 expeditions to a number of foreign countries as well as to many localities in the United States. Dr. Charles W. Gilmore collected rare vertebrate fossils in Montana and Wyoming. Dr. Charles E. Resser studied the Cambrian rocks of the southern Appalachian Mountains. Dr. G. Arthur Cooper established stratigraphic correlations of Devonian rocks in the mid-western States and in New York State. Mark C. Bandy collected mineral specimens in the famous mineral localities of Chile. Gerrit S. Miller, Jr., studied the fauna of the Florida Keys, with particular reference to the mammals peculiar to that area. Dr. Doris M. Cochran investigated the amphibian life of Brazil. Dr. Waldo Schmitt, as a member of the Hancock Pacific Expedition to the west coast of Central and South

America and the Galapagos Islands, collected specimens of marine life. Capt. R. A. Bartlett led an expedition to the Arctic which studied and collected the interesting marine life of the coasts of Greenland. Dr. David C. Graham continued to collect specimens of the mammal, bird, and insect fauna of little-known areas of Szechwan, China.

Dr. Aleš Hrdlička continued his archeological excavations on Kodiak Island, Alaska. Neil M. Judd visited many of the antiquities of Mexico as a member of the United States delegation to the Seventh American Scientific Congress. Herbert W. Krieger studied the early Indian sites along the lower Potomac River in Maryland and Virginia. M. W. Stirling examined a number of ancient Maya sites in Central America. Dr. F. H. H. Roberts, Jr., continued his investigations of Folsom man in northern Colorado. Dr. Truman Michelson conducted Indian language studies on James and Hudson's Bays, Canada.

PUBLICATIONS

The several series of publications issued by the Institution and its branches constitute its chief means of carrying on the "diffusion of knowledge among men", as stipulated by its founder, James Smithson. The majority of these publications are technical in character, but many others are in popular demand, notably the Smithsonian Annual Reports, which summarize scientific progress each year in 25 or 30 semi-popular articles by leading authorities; the bulletins of the Bureau of American Ethnology on various phases of the study of the Indians; and certain of the bulletins of the National Museum, such as Bent's volumes on life histories of North American birds. The wider diffusion of scientific information has been aided in recent years by a service of popular science news releases, based on the researches of the Institution, which are widely used by leading newspapers, and this year by a weekly radio program on Smithsonian activities put on the air by the United States Office of Education in cooperation with the Institution's editorial office.

It is gratifying to report that this year a portion of the printing appropriation has been restored, so that it has been possible to resume publication in a small way of the bulletins and proceedings of the National Museum and the bulletins of the Bureau of American Ethnology, all of which had been practically suspended for 3 years because of drastically reduced printing appropriations. This suspension overburdened the Smithsonian Miscellaneous Collections, a series supported by the limited private funds of the Institution, with many papers which would normally have appeared in the other series.

The titles, authors, size, and date of appearance of all publications issued during the year are listed in the editor's report, appen-

dix 10. It may be said here that a total of 70 volumes and pamphlets were published; 54 of these were issued by the Institution proper, 13 by the National Museum, and 3 by the Bureau of American Ethnology. The number of publications distributed was 124,359.

LIBRARY

The Smithsonian library comprises 10 major and 35 minor units, which together contain a total of 860,000 volumes, pamphlets, and charts. The new accessions for the year numbered 11,215, most of these coming in exchange for the publications of the Institution and its branches. Outstanding among the accessions received were the semiprivate libraries of three of the members of the staff and associates of the Institution, namely, the invertebrate paleontology library of Dr. E. O. Ulrich, the collection of works on orthoptera of the late Dr. A. N. Caudell, and the anthropological library of the late Dr. Walter Hough. The routine work of the staff included cataloging 7,015 publications, preparing and filing 55,829 cards, entering 25,205 periodicals, and making 11,235 loans, of which 281 were to libraries outside the Smithsonian system. In addition, a large amount of cataloging and carding was accomplished in connection with the union catalog. The sorting, arranging, and labeling of the collection of thousands of miscellaneous items that had accumulated for years in the Smithsonian west stacks was practically finished, with the result that hundreds of needed publications were brought to light. It is significant in the growth of the library's usefulness that the staff was called on for even more reference and bibliographical service than usual, not only in connection with the Institution's own scientific work but also in response to inquiries from its correspondents throughout the country.

Respectfully submitted.

C. G. Abbot, *Secretary.*

APPENDIX 1

REPORT ON THE UNITED STATES NATIONAL MUSEUM

SIR: I have the honor to submit the following report on the condition and operation of the United States National Museum for the fiscal year ended June 30, 1936:

Appropriations for the maintenance of the National Museum for the year totaled $760,742, which was $44,671 more than for 1935.

COLLECTIONS

Material added to the collections during the year embodied a great variety of valuable accessions, coming mostly as gifts from individuals interested in the Museum and from expeditions sponsored by the Smithsonian. A total of 486,581 specimens were received, comprising 1,784 separate accessions and distributed among the five departments as follows: Anthropology, 4,856; biology, 263,705; geology, 213,024; arts and industries, 2,281; and history, 2,715.

The more important of these accessions are summarized as follows:

Anthropology.—Outstanding among the ethnological material received in the department of anthropology were the large Richard K. Peck collection of weapons, costumes, and other articles illustrating the decorative arts of the Negritos and Papuans of Dutch New Guinea and of the Dyaks of Borneo; and specimens illustrating the culture of the Jivaro Indians of Ecuador. In North American material the Sioux, Hopi, and Navaho Indian tribes were represented. President Franklin D. Roosevelt presented a collection of costumes, musical instruments, and weapons from the Cuna and Tule Indians of southeastern Panama. There came also ethnologic artifacts from West and South Africa, Australia, China, and Japan. The noteworthy Virgil M. Hillyer collection of articles illustrating the history of lighting, with an endowment to the Smithsonian of $7,000, was presented by Mrs. Hillyer. Over 200 specimens were added to the collection of musical instruments.

Of special interest among the archeological material received were the following: 557 Paleolithic artifacts from Palestine collected by the 1934 joint expedition of the British School of Archeology in Palestine and the American School of Prehistoric Research; several lots of earthenware, stone, shell, and other artifacts from Alabama, Alaska,

Costa Rica, Puerto Rico; and over 1,100 archeological specimens from Kodiak Island, Alaska, collected by Dr. A. Hrdlička in 1934 and now cataloged.

Skeletal material comprised about 500 specimens, mostly from Kodiak Island and from prehistoric graves in Crimea.

Biology.—The Museum was singularly fortunate during the year in acquiring older biological collections containing many type specimens and otherwise important historical material that has served as a basis for monographic studies by recognized authorities. Also there was a marked increase in the number of species and genera acquired not heretofore represented in the Museum.

In mammals the outstanding addition was 465 specimens from Africa, Asia, and South America, representing approximately 300 forms not previously available in our collections. Important bird specimens (skins and skeletons), many of them types, came from Siam, Rhodesia, Puerto Rico, Colombia, Honduras, West Africa, and Chile. There was added, in particular, a skin of the South Trinidad petrel (*Pterodroma arminjoniana*), the first received in North America. The largest accession of amphibians and reptiles of the year comprised 1,600 specimens from several south-central States collected by Dr. C. E. Burt. The ichthyological collections were enlarged by over 3,300 specimens, the most important single one being a large sailfish caught off Cocos Island, Costa Rica, by President Franklin D. Roosevelt and presented by him. Large series of fishes came from the Amazon River, as well as a representative lot from Virginia. Noteworthy among the insect accessions may be mentioned the valuable Bovie collection of weevils received as a gift from L. L. Buchanan; the Beutenmüller collection of Cynipidae; 20,000 vials of ectoparasites of rodents received from the National Institute of Health; the Alan S. Nicolay collection of clerid beetles; 12,000 Chinese insects from the Rev. D. C. Graham; and about 44,000 miscellaneous insects. Over 11,000 marine invertebrates of many kinds were added, including types of a number of new species. The mollusks totaled over 50,000 specimens (including 13,135 collected by Dr. J. P. E. Morrison, of the Museum staff, during several excursions into Virginia, West Virginia, Maryland, and the Carolinas). Over 54,000 plant specimens were added from many sources, outstanding among which was the large cactus collection of the late David Griffiths.

Geology.—Important acquisitions in mineralogy were obtained, as in former years, through the income from the Canfield, Roebling, and Chamberlain funds. An outstanding collection of Chilean minerals, including what proved to be six new species, was made for the Canfield collection by Mark Bandy. The Roebling collection was enhanced by much new mineral material obtained from various

sources. Donated specimens and those received through exchange comprised many valuable minerals from many parts of the world.

The total number of distinct meteorite representatives in the collection was increased from 592 to 606 during the year. The most important accession to the petrological collection was a series of anorthosites, interesting rock types, from Norway.

In stratigraphic paleontology an important addition was about 100,000 specimens illustrating the Middle Devonian faunas of central New York, collected by Dr. G. A. Cooper a number of years ago and received in exchange from Colgate University. About 100,000 others, Middle Paleozoic rock specimens, came from Illinois, Indiana, Iowa, and Michigan.

Invertebrate fossils added represented Chile (Jurassic), Timor (Permian), Portugal (Ordovician), Oklahoma (Carboniferous), Florida (Miocene), and Hawaii (Pleistocene). The paleobotanical collections were enriched by rare types of fossil cones from the Cretaceous of Maryland and the Eocene of North Dakota.

Field expeditions in vertebrate paleontology yielded the following rarities: From Wyoming a nearly complete articulated skeleton of the mammal *Coryphodon*, so far as known the second entire specimen as yet found; from Montana articulated parts of the little-known dinosaur *Procheniosaurus*, fragments of *Leptoceratops*, and an adult skull of *Brachyceratops*. There were also added a nearly complete skeleton of the edentate mammal *Scelidodon capellini* from South America and the only known complete skull of the Oligocene lizard *Glyptosaurus giganteus*.

Arts and industries.—The outstanding accession in aeronautics was the airplane *Winnie Mae*, flown by Wiley Post and Harold Gatty, and subsequently by Post alone in various record flights, which was purchased through funds provided by a special Congressional appropriation. The airplane *Polar Star*, of exploration fame, used by Lincoln Ellsworth in the first flight across Antarctica in November and December 1935, in an expedition sponsored by the National Geographic Society, was received as a gift from Mr. Ellsworth. Propellers from the airships *Macon* and *Akron* were transferred from the Navy Department. The collection of scale models of aircraft was increased by 14 specimens, including models of the following: The Short Brothers' airplane of 1911; the Breguet sesquiplane *Point d'Interrogation*; the first plane built by Glenn Martin in 1909; a V–F–7–H; and the *Baby Clipper*.

In mechanical technology the most important accession was the original locomotive *Atlantic*, built at Baltimore in 1832, and the first locomotive to enter the National Capital. A Ford model T touring car of 1913, given by Harvey C. Locke, proved the most popular

transportation accession of the year. Two ship models were received from President Roosevelt: One of the R. M. S. *Mauretania* and the other of a modern seagoing trading junk of the island of Hainan, China. Capt. John B. Harrison presented two models of Chesapeake Bay vessels.

Other important specimens, to the number of 951, were added to the collection of textiles, organic chemistry, wood technology, history of agriculture, and medicine, as well as many valuable drawings, water colors, photographs, prints, and photographic and printing equipment to the division of graphic arts.

History.—Over 2,700 articles of historical and antiquarian value were received, many of them pertaining to the lives and careers of eminent Americans, such as Brand Whitlock, Maj. Gen. George A. Custer, Maj. Gen. Adolphus W. Greely, and Rear Admiral Winfield Scott Schley. Included also were 85 coins and 1,907 stamps for the numismatic and philatelic series.

EXPLORATIONS AND FIELD WORK

Work in a number of interesting fields of exploration was carried forward during the year, mainly through grants from the income of the invested funds of the Smithsonian Institution.

Anthropology.—Frank M. Setzler, acting head curator, investigated a large shell midden on St. Simons Island, Ga., at the request of the Society for Georgia Archeology; he also made surface surveys at other Georgia localities.

Under the joint auspices of the National Geographic Society and the Smithsonian Institution, H. B. Collins, Jr., assistant curator of ethnology, conducted archeological investigations of the prehistoric Eskimo at Cape Wales, Alaska, pursuant to previous studies at Bering Strait, St. Lawrence Island, and Point Barrow.

H. W. Krieger, curator of ethnology, spent brief periods in the study of aboriginal culture in tidewater Virginia and Maryland.

Dr. Aleš Hrdlička, curator of physical anthropology, spent the summer of 1935 on Kodiak Island, Alaska, excavating at the same site where he worked during previous years.

Biology.—Important biological work, supplementing that done in previous years by Dr. H. M. Smith, was carried on in Siam under a cooperative arrangement with H. G. Deignan, who forwarded a large shipment of birds and mammals.

W. M. Perrygo, taxidermist, assisted by Carleton Lingebach, collected birds and mammals in the Appalachian region, in an effort to obtain for the Museum representative specimens for geographic distribution studies.

Dr. A. Wetmore, assistant secretary, made two collecting excursions to White Top Mountain and one to Spruce Knob and other moun-

tains in West Virginia, and obtained specimens of use in outlining the local ranges of certain birds.

Dr. G. S. Myers, assistant curator of fishes, collected fishes in Dismal Swamp and the Chowan-Roanoke River systems, in connection with a survey of Virginia fresh-water fishes begun in 1933.

Under a grant from the Smithsonian Institution, the curator of mollusks, Dr. Paul Bartsch, began some breeding experiments with the mollusk *Goniobasis virginica* of the Potomac drainage, in an attempt to ascertain the effect of different environmental conditions on animals from the upper and lower parts of the river. Dr. J. P. E. Morrison on his own initiative collected mollusks for the Museum in the Blue Ridge and Shenandoah country.

Other biological field work included that of Austin H. Clark in a study of Virginia butterflies, in which he made a preliminary survey of 75 counties of the State; of P. W. Oman, who made an extensive collection (about 40,000 specimens) of Homoptera in the West; of E. P. Killip, who collected plants on the Florida Keys; of Dr. C. E. Burt, who continued his collecting for the Museum of herpetological specimens from the south-central States; and of Dr. R. E. Blackwelder, holder of the Walter Rathbone Bacon Traveling Scholarship of the Smithsonian Institution, who visited many of the islands of the West Indies in a study of staphilinid beetles.

Geology.—Mark C. Bandy spent four months in the Atacama Desert region of Chile in the interests of the Museum mineral collections in cooperation with Harvard University.

At the end of the year Assistant Curator E. P. Henderson was collecting in an extensive limestone contact zone on Prince of Wales Island, Alaska.

Dr. G. A. Cooper, stratigraphic paleontologist, made a number of field trips—to Virginia, Maryland, Pennsylvania, and New York, as well as the Midwest and Ontario—to obtain Middle Devonian rocks and other geological specimens.

Dr. C. E. Resser, curator of stratigraphic paleontology, spent two months in the southern Appalachians studying Cambrian geology.

The field explorations of vertebrate fossils under the direction of C. W. Gilmore begun last year were continued, and collections were made in the Two Medicine formation of Montana and the Wasatch of the Big Horn Basin, Wyo., with good results.

Late in the year Dr. C. L. Gazin headed an expedition into the vertebrate-fossil fields of New Mexico and Arizona.

MISCELLANEOUS

Visitors.—Visitors to the various Museum buildings during the year totaled 1,973,673, an increase of 135,981 over last year and over 44,000 more than has ever before been recorded for a single year. The

312,031 visitors during August 1935 is the largest ever recorded for a single month. The annual attendance in the several buildings was recorded as follows: Smithsonian Building, 312,896; Arts and Industries Building, 873,533; Natural History Building, 635,561; Aircraft Building, 151,683.

Publications.—A small increase in the Museum allotment for printing resulted in a corresponding increase in the number of papers published. Thirteen publications were issued—the Annual Report, 11 Proceedings papers, and 1 number of the Contributions from the National Herbarium. These are listed elsewhere in this report (appendix 10). Volumes and separates distributed during the year to libraries and individuals throughout the world aggregated 33,936 copies.

Under direction of the Museum editor, Paul H. Oehser, a sizable start has now been made on the long task of compiling the comprehensive index to Museum publications, now 3 years in progress. The index now comprises about 183,500 cards and is complete through Bulletin 47 and Proceedings, volume 17.

Assistance from work-relief agencies.—Under supervision of the curatorial staff of the Museum, a great deal of work was performed during the year by personnel assigned to the Museum by the Federal Art Project, the Federal Emergency Relief Administration, and the Works Progress Administration, the latter two through the District of Columbia Government. The work performed was chiefly as follows: Checking, labeling, and repairing library material, preparing drawings and photographs, typing, preparing and mounting specimens and miscellaneous work on them, model making and repairing, labeling and drafting, translating, and work on plaster casts. The work aggregated 28,572 man-hours.

Special exhibitions.—Fifteen special exhibitions were held during the year under the auspices of various scientific, educational, and Government agencies, including, among others, the Association of Federal Architects, Washington Philatelic Society, Center of Inter-American Studies of George Washington University, District of Columbia Dental Society, and Works Progress Administration.

Changes in organization and staff.—Through a reorganization of the fiscal offices of the Institution effective July 1, 1935, all fiscal work was coordinated under the direction of N. W. Dorsey, accountant and auditor. All fiscal matters pertaining to Museum appropriations are now handled through Thomas F. Clark, assistant accountant and auditor. Frank M. Setzler, assistant curator of archeology, was advanced to the position of curator of anthropology on December 16, 1935, and at the same time was named acting head curator of the department of anthropology. Paul S. Conger, of the Carnegie Insti-

tution of Washington, was appointed honorary custodian of diatoms on February 29, 1936.

Royal H. Trembly was advanced on November 16, 1935, from assistant superintendent to superintendent of buildings and labor, succeeding J. S. Goldsmith, retired; and on February 16, 1936, Charles C. Sinclair, senior mechanic, was promoted to assistant superintendent. Lawrence L. Oliver, assistant property clerk, was advanced on October 1, 1935, to the position of property clerk, succeeding the late W. A. Knowles; and Stephen C. Stuntz was transferred on November 1, 1935, from the Smithsonian library and made assistant property clerk. Floyd B. Kestner was appointed junior photographer on September 3, 1935; William E. Wade, undermechanic, was promoted on September 1, 1935, to succeed George H. Sherwood as assistant engineer; Joseph H. Boswell was transferred to the Museum from the National Gallery of Art guard force on December 9, 1935, to succeed H. G. Lugenbeel as principal guard in the Freer Gallery.

Carl W. Mitman, head curator of arts and industries, was designated as Smithsonian contact officer in connection with the Texas Centennial Exposition; and Norman H. Boss, chief preparator in vertebrate paleontology, as exhibits supervisor of this exhibit.

Ten Museum employees were transferred from the active to the retired list for age or disability during the year, as follows: Earl V. Shannon, assistant curator of physical and chemical geology, on July 31, 1935, through disability; James S. Goldsmith, superintendent of buildings and labor, on October 31, 1935, through age, after 53 years of service; George H. Sherwood, assistant engineer, through age, and William J. Sammond, assistant engineer, for disability, on August 31, 1935 and May 31, 1936, respectively; John M. Barrett, junior scientific aid, on February 29, 1936, through age, after 45½ years of service; Harry G. Lugenbeel, sergeant of the Freer Gallery guard force, on October 12, 1935, through disability, after 42 years of service; John Hammerstrom, guard, through age, and Thomas N. Stanford, guard, through disability, on September 30 and November 29, 1935, respectively; and Mrs. Maria Ezell and Mrs. Maggie Johnson, of the char force, through disability.

Necrology.—The year was marked by the loss of several men long associated with the National Museum, including three active workers and four honorary staff members, as follows: Dr. Walter Hough, head curator of anthropology, who died on September 20, 1935, after almost 50 years of service; William A. Knowles, property clerk, who died on July 29, 1935, after 43 years of service; August Flegel, guard, on February 28, 1936, after 10 years of service; and, from the honorary staff, Dr. Albert Spear Hitchcock, custodian of grasses since October 10, 1912, who died on December 16, 1935; Andrew Nelson

Caudell, custodian of orthoptera since December 19, 1905, who died on March 1, 1936; Dr. William Louis Abbott, associate in zoology since March 25, 1905, who died on April 2, 1936; and Dr. August Frederick Foerste, associate in paleontology since September 1932, who died on April 23, 1936.

Respectfully submitted.

ALEXANDER WETMORE,
Assistant Secretary.

Dr. CHARLES G. ABBOT,
Secretary, Smithsonian Institution.

APPENDIX 2

REPORT ON THE NATIONAL GALLERY OF ART

Sir: I have the honor to submit the following report on the activities of the National Gallery of Art for the fiscal year ended June 30, 1936:

In the last 12 months much of the business of the Gallery has related to the care, protection, and restoration of paintings in the possession of the Government. Six were cleaned, relined, and restored for the United States National Museum. Forty-nine of the paintings in the White House were cleaned, varnished, and protected; one was mounted on masonite. The Harriet Lane Johnston paintings in the Gallery were all cleaned, varnished, and covered at the back with sisal kraft paper. Three of these were cleaned of varnish and carefully restored.

An air-conditioning unit for humidity and temperature control has been installed in the storage workroom. The temperature is maintained at from 70° to 78°, and the relative humidity is held to a variation of about 20 percent, from 50 to 70 percent, which is a great improvement over the conditions outside. In addition to the better preservation of our paintings and works of art, it would seem that the conditioned temperature and humidity would reduce the formation of mold and the activity of insects.

APPROPRIATIONS

For the administration of the National Gallery of Art by the Smithsonian Institution, including compensation of necessary employees, purchase of books of reference and periodicals, traveling expenses, uniforms for guards, and necessary incidental expenses, $34,275.00 was appropriated, of which $16,153.34 was expended for the care and maintenance of the Freer Gallery of Art, a unit of the National Gallery.

THE NATIONAL GALLERY OF ART COMMISSION

The fifteenth annual meeting of the National Gallery of Art Commission was held at the Smithsonian Institution on December 10, 1935. The members present were: Frank Jewett Mather, Jr., vice chairman; Dr. Charles G. Abbot (ex officio), secretary; and Herbert Adams,

Gifford Beal, Charles L. Borie, Jr., Frederick P. Keppel, John E. Lodge, Paul Manship, George B. McClellan, Charles Moore, Edward W. Redfield, and Mahonri M. Young. Ruel P. Tolman, curator of the division of graphic arts in the United States National Museum and acting director of the National Gallery of Art, was also present.

In response to a resolution adopted at the last meeting, a report on the future of the National Gallery of Art was presented by the executive committee.

The available sites for a National Gallery of Art and the announced plans of Andrew W. Mellon were discussed.

The death of Joseph H. Gest, chairman of the Commission, on June 26, 1935, was announced, and resolutions, submitted by Dr. Abbot, were adopted.

The following officers were elected for the ensuing year: Charles L. Borie, Jr., chairman; Frank Jewett Mather, Jr., vice chairman; and Dr. Charles G. Abbot, secretary; as well as the members of the executive committee: Charles Moore, Herbert Adams, and George B. McClellan. Charles L. Borie, Jr., as chairman of the Commission, and Dr. Charles G. Abbot, as secretary of the Commission, are ex officio members.

The Commission recommended to the Board of Regents the reelection for the succeeding term of 4 years of the following members: James E. Fraser, Frank J. Mather, Jr., and Edmund C. Tarbell.

Messrs. Borie, Keppel, and Young were appointed to suggest the names of three persons from which the Commission should select one for recommendation to the Board of Regents to fill the vacancy caused by the death of Joseph Gest.

The Commission viewed certain works of art offered to the Gallery within the year, and selected the following:

Portrait of Hon. John B. Henderson and portrait of Mrs. Henderson (Mary Newton Foote Henderson), by Jean Joseph Benjamin-Constant (1845–1902). Gift of the heirs of Mrs. Mary F. Henderson through Dr. Moore. (Accepted for the National Portrait Gallery.)

Portrait of His Majesty King George V of Great Britain, by Frank O. Salisbury. Presented to President Roosevelt for the American Nation by the artist. (Accepted for the National Portrait Gallery.)

A plaque of Francis Davis Millet (1846–1912), by Augustus St. Gaudens. Gift of Ernst G. Fischer.

A collection of 497 intaglio prints by members of the Chicago Society of Etchers. Gift of the Chicago Society of Etchers, through the president, Lee Sturgis, the executive board of the society, and Mrs. Bertha E. Jaques, its secretary-treasurer.

A collection of 47 fans. Gift of the estate of Virginia Woodbury Lowery Brunetti, Duchess of Arcos, deceased.

Four dry-points: "Antarctica", "The Rivals", "Twilight of the Gods", and "Scouts"; and two etchings: "Birds of the Sea" and "Witches' Sabbath à la Mode", by Paul F. Berdanier, Sr. Gift of the artist.

"Kayser's Pond" (Maine), by J. B. Bristol, N. A. Bequeathed to the United States National Museum by Martha L. Loomis, late of Framingham, Mass. Transferred to the National Gallery of Art.

THE CATHERINE WALDEN MYER FUND

One English and three Early American Miniatures, were acquired from the fund established through the bequest of the late Catherine Walden Myer, "for the purchase of first-class works of art for the use and benefit of the National Gallery of Art", as follows:

"Portrait of a Man", by Benjamin Trott (about 1770–1839); from Mrs. Alba D. Walling, Boston, Mass.

"A Colonial Gentleman", by artist undetermined; from Mrs. Wells Peckham (Mrs. Elliott Peckham), Washington, D. C.

"Portrait of a Man", by Robert Field (about 1769–1819), and "Portrait of a Man, I H", artist undetermined; from Miss M. V. Stiles, Savannah, Ga.

LOANS ACCEPTED BY THE GALLERY

Portrait (three-quarter length) of Dr. Charles Greeley Abbot, Secretary of the Smithsonian Institution, by Nicholas R. Brewer, 1935. Lent by the artist.

Portrait of the Honorable Charles Evans Hughes, Chief Justice of the United States and Chancellor of the Smithsonian Institution, by George Burroughs Torrey, 1935. Lent by Chief Justice Hughes.

Plaster bas-relief portrait of Honorable Charles Evans Hughes, by Harry Lewis Raul. Lent by Chief Justice Hughes.

LOANS BY THE GALLERY

The portraits of Cardinal Desire Joseph Mercier, Admiral Sir David Beatty, and Premier Georges Clemenceau, by Cecilia Beaux, N. A., leaders in the World War, from the National Art Committee collection for the National Portrait Gallery, were lent to The American Academy of Arts and Letters, New York City, for an exhibition from November 15, 1935, to May 1, 1936, of the works of Miss Beaux. Two were returned, and the portrait of Premier Georges Clemenceau was shipped from New York directly to the Texas Centennial Exposition.

A selection of nine paintings from the William T. Evans and other collections were lent to the Virginia Museum of Fine Arts, Richmond, to be shown in the inaugural exhibition of that museum from January 18 to March 1, 1936, as follows: "Villa Malta", by Sanford R. Gifford; "Aurora Borealis", by Frederic E. Church; "High Cliff, Coast of Maine", by Winslow Homer; "September Afternoon", by George Inness; "November", by Dwight Tryon; "The Cup of Death", by Elihu Vedder; "Water Lilies", by Walter Shir-

law; "Fired On", by Frederic Remington; "The Mirror", by Robert Reid. These paintings were returned to the Gallery March 2, 1936.

Five portraits which were lent to the Public Library of the District of Columbia for exhibition in the central library on June 18, 1935, were returned February 28, 1936. They are: "John Tyler", by George P. A. Healy; "A Lady", by Gilbert Stuart; "Col. Robert Charles Wetmore", by Henry Inman; "Andrew Jackson", by Rembrandt Peale; "Commodore Stephen Decatur", by Gilbert Stuart.

Three portraits and two subject-paintings were lent to the Public Library of the District of Columbia for exhibition in the central library on February 28, 1936, and are still in its custody at the close of the fiscal year. They are: "Portrait of Henry B. Fuller", by George Fuller; "Portrait of Jessie J. Burge", by Abbott H. Thayer; "Portrait of Wyatt Eaton", by J. Alden Weir; "The Visit of the Mistress", by Winslow Homer; "Moonlight", by Albert P. Ryder.

The Procurement Division of the United States Treasury, through Robert LeFevre, on April 24, 1936, borrowed, with the consent of their owner, William Kemeys, of Garrett Park, Md., two pieces of sculpture by Edward Kemeys: "Buffalo and Wolves" (bronze) and "Jaguar and Peccary" (plaster). They are now in the small meeting room in the Connecting Building, Constitution Avenue.

The painting by John La Farge entitled "Visit of Nicodemus to Christ" was lent to the Metropolitan Museum of Art, New York City, for an exhibition of the work of John La Farge from March 23 to April 26, 1936. This was returned to the Gallery on May 1, 1936.

The "Portrait of Walter Shirlaw", by Frank Duveneck, was lent to the Cincinnati Museum of Art, Cincinnati, Ohio, for an exhibition of the works of Duveneck from May 22 to June 21, 1936. Owing to the local interest shown in the work of this Ohio painter, permission was granted to extend the exhibition through September 7.

The painting "Fired On", by Frederic Remington, and the "Portrait of Premier Georges Clemenceau", by Cecilia Beaux, have been lent to The Dallas Museum of Fine Arts for exhibition at the Texas Centennial Exposition, 1936, Dallas, Tex., from June 6 to November 29, 1936; also two small bronzes by Edward Kemeys, "Bear" and "Coyote" from the Kemeys loan collection, with permission of their owner, William Kemeys.

The painting entitled "The Moose Chase", by George DeForest Brush, has been lent, through the Carnegie Public Library at Fort Worth, Tex., to the Fort Worth Frontier Centennial Exposition, being held at Fort Worth from July 1 to November 30, 1936.

WITHDRAWALS BY OWNERS

The four large portraits, George Washington, Andrew Jackson, Henry Clay, and W. W. Corcoran, lent to the Gallery through Chief

Justice J. Harry Covington in January 1917, during reconstruction of the Court building, were returned to the Supreme Court of the District of Columbia through Chief Justice Alfred A. Wheat in September 1935.

Walter A. Swinney, of Baltimore, Md., on August 1, 1935, withdrew his painting, The Holy Family, which had been in the care of the Gallery since February 1920.

The self portrait by George Catlin was returned on October 17, 1935, to Miss Mary Cogswell Kinney, of New York City, granddaughter of the subject, who lent it in July 1933.

An oil painting, On the Lido, Venice, by H. Corrodi, Rome, received in October 1927, was, on October 22, 1935, delivered, by direction of the owner, Mrs. Arthur T. Brice, to the Women's National Democratic Club, Washington, D. C.

Two early American portraits by Thomas Sully (1783–1872) of Mr. and Mrs. John Crathorne Montgomery, lent by Mrs. Mary Montgomery Norton in 1932, were, by authorization of Mrs. Norton, withdrawn on November 8, 1935, by Mr. Robert Montgomery, of Villanova, Pa.

The large painting by George DeForest Brush, Indian Burial, lent to the Gallery in July 1931 by Mr. and Mrs. Brush, was withdrawn by them on June 9, 1936.

The plaster death mask of Napoleon, signed Antommarchi, lent to the Gallery in April 1927 by Mrs. Louise Rochon Hoover, of Washington, D. C., was withdrawn by Mrs. Hoover in January 1936.

Eleven paintings and one marble, received as a loan in 1910 from the Duchess de Arcos, were withdrawn by her estate on February 18, 1936.

SPECIAL EXHIBITIONS

Eight exhibitions were held, as follows:

September 19 to October 6, 1935.—Exhibition of national and international high school art, sponsored by the American Federation of Arts and Scholastic, the American High School Weekly. Invitations to an informal opening and an illustrated catalog contained in a special number of Scholastic were issued by the sponsors.

October 18 to November 14, 1935.—Exhibition of 497 intaglio prints, etchings, engravings, and drypoints, executed by members of the Chicago Society of Etchers; offered as a gift to the Gallery by the president, Lee Sturgis, the executive board of the society, and Mrs. Bertha E. Jaques, its secretary-treasurer. Cards were issued by the Gallery; each print was labeled in lieu of a catalog.

December 5, 1935, to January 5, 1936.—Exhibition of miniatures (53) by members of the American Society of Miniature Painters, New York City, under the auspices of that society and Mrs. Elsie Dodge

Pattee, president. Cards were issued by the Gallery; each item was labeled in lieu of a catalog.

February 5 to 29, 1936.—Exhibition of pastels, water colors, etchings, drawings, and lithographs (70) by Mons Breidvik, Norwegian artist, of New York City. Cards were issued by the Gallery to an opening view, and the artist provided a small folder catalog.

February 5 to 29, 1936.—An exhibition of portraits (37) by Bjorn P. Egeli, of Washington, D. C. Cards to an opening view were issued by the Gallery, and the artist provided a folder catalog.

February 5 to 29, 1936.—Exhibition of vitreous enamels (six specimens) by Frances and Richard MacGraw, of New York and Washington. Cards to the opening view were issued by the Gallery; there was no catalog, labels telling the story.

April 8 to 29, 1936.—Exhibition of the First Annual Metropolitan State Art Contest, 1936; under the auspices of the Department of Fine Arts of the District of Columbia Federation of Women's Clubs, Mrs. Samuel A. Swiggett, chairman, cooperating with the following seven Washington art organizations: The Arts Club; the League of American Pen Women; Miniature Society; Society of Washington Artists; Washington Landscape Club; Washington Society of Etchers; Washington Water Color Club; and a free lance group. There were 339 exhibits, prints, paintings, and sculpture, by 170 artists; all were labeled. Cards were issued by the Gallery to an opening view.

June 10 to 30, 1936.—An exhibition of paintings, the work of children receiving free art instruction in 240 settlement houses and social agencies in the New York area, under the auspices of the Federal Art Project of the Works Progress Administration.

THE NATIONAL GALLERY REFERENCE LIBRARY

The library has been increased materially by numerous gifts and purchases. Miss Helen G. Rankin was temporarily employed as librarian.

SPECIAL DETAILS

The Acting Director was detailed from November 13 to 18, 1935, to attend the opening of the Cecilia Beaux exhibition at the gallery of the Society of Arts and Letters, New York City, and to study the art collections and methods of exhibiting in various art institutions, including the Morgan Library, the Museum of Modern Art, the Roerich Museum, the Museum of the City of New York, the Brooklyn Museum of Arts and Sciences, and the Metropolitan Museum of Art; and in Philadelphia, at the Pennsylvania Academy of the Fine Arts, the exhibit of contemporary American miniatures and water colors.

A second detail from February 6 to 9, 1936, was granted to visit the new Art Museum at Richmond, Va., as well as the Art Academy and the Valentine's Museum, but the real occasion of this trip was to study the 300 or more American miniatures assembled in the Gibbes Memorial Art Gallery at Charleston, S. C. This is one of a series of exhibitions of Early American miniatures which this gallery has brought together in the last few years. These exhibitions have been the means of discovering the names of artists not before known, as well as much new information about others.

PUBLICATIONS

Tolman, R. P. Report on the National Gallery of Art for the year ending June 30, 1935. Appendix 2, Report of the Secretary of the Smithsonian Institution for the year ending June 30, 1935, pp. 24–30.

Lodge, J. E. Report on the Freer Gallery of Art for the year ending June 30, 1935. Appendix 3, Report of the Secretary of the Smithsonian Institution for the year ending June 30, 1935, pp. 31–34, pls. 1–2.

Catalog: Smithsonian Institution, National Gallery of Art, Washington, D. C. Catalogue of the Works of Mons Breidvik, February 5 to 29, 1936. Folder of 4 pp. Privately printed.

Catalog: Smithsonian Institute[ion], National Gallery of Art, Washington, D. C. Portraits by Bjorn Egeli, February 5–29, 1936. Folder of 4 pp. Privately printed.

Catalog: Scholastic Art Exhibition. Illustrated Catalog of the Eighth Annual High School Art Exhibition, April 23 to May 12, Carnegie Galleries, 1935 (National Gallery of Art, U. S. National Museum, September 19 to October 6, 1935), pp. 1–16. Privately printed.

Respectfully submitted.

R. P. Tolman, *Acting Director.*

Dr. C. G. Abbot,
Secretary, Smithsonian Institution.

APPENDIX 3

REPORT ON THE FREER GALLERY OF ART

SIR: I have the honor to submit the sixteenth annual report on the Freer Gallery of Art for the year ending June 30, 1936:

THE COLLECTIONS

Additions to the collections by purchase are as follows:

BRASS

36.7. Persian, dated A. H. 607 (A. D. 1210). A pen-box; dark gray patina. The decoration is inlaid in silver and includes inscriptions in *naskhi* script embellished with human and animal heads. 0.050 by 0.314 by 0.064. (Illustrated.)

BRONZE

35.21–35.22. Chinese, early Chou dynasty. A pair of tigers. White bronze with an even green patina and traces of earth adhesions. Decoration in low relief.

.21. Length, 0.752, height, 0.252 over all, weight, 48½ lbs.

.22. Length, 0.759, height, 0.251 over all, weight, 53½ lbs.

(Illustrated.)

36.3. Chinese, earlier than the Han dynasty. A mirror-back. Dull brown patina with areas of green aerugo and earthy incrustation. Decorated with a design of dragons, inlaid in gold and silver. Diameter, 0.195. (Illustrated.)

36.4. Chinese, Han dynasty; dated in correspondence with A. D. 202. A mirror. Shiny black patina and occasional spots of light green aerugo. The back is decorated with figures of cosmic deities and symbols in high relief. Inscription. Diameter, 0.134. (Illustrated.)

36.6. Chinese, Chou dynasty. A ceremonial covered vessel of the type *huo*, in the form of an elephant; with a second elephant in miniature on the cover. Light apple-green patina. The surface is ornamented with formalized designs in low relief. 0.172 by 0.212 by 0.106 over all. (Illustrated.)

MANUSCRIPT

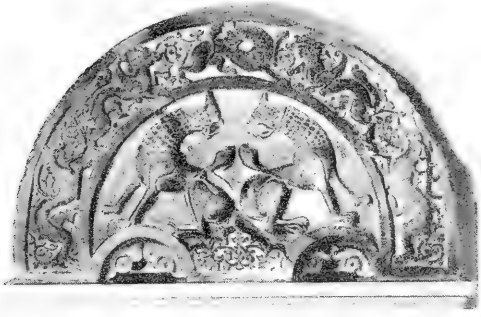
36.9–36.12. Persian, sixteenth century. Four leaves from a manuscript book of *Yūsuf u-Zulaikhā* by Jāmī. Each leaf of manuscript is inlaid in a larger leaf of colored paper upon which border-designs of animals, birds, plants, and rocks, or of floral scrolls, are executed in gold. 0.252 by 0.150 over all.

PAINTING

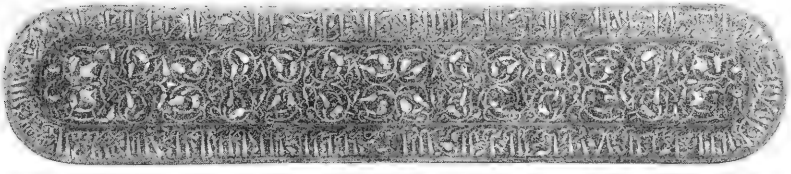
36.1. Indian, Mughal-Rājput, seventeenth century. Two ladies attended by serving women and musicians seated under a flowering locust tree. Delicate colors and gold on paper. 0.216 by 0.146.

36.3

36.4



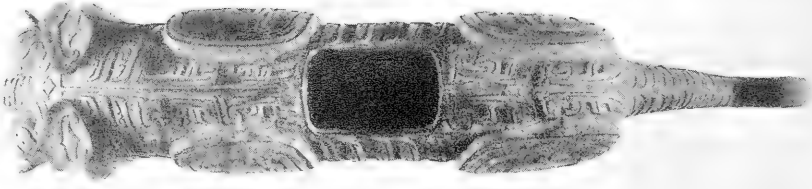
36.5



36.7

35.22

36.6



35.22

SOME RECENT ADDITIONS TO THE COLLECTIONS OF THE FREER GALLERY OF ART.

36.14. Indian, Mughal, seventeenth century. Prince Dārā Shikoh and two musicians visiting the ascetic Kamāl. Color and gold on paper. 0.254 by 0.147.

35.23–35.24. Persian, Mongol period, early fourteenth century. Two illustrations from a manuscript book of the *Shāh-nāma* of Firdausi. Full color and gold on paper:

.23. Alexander and the Talking Tree. 0.242 by 0.285.

.24. Bahrām Gūr in the treasure vault of golden animals filled with jewels. 0.208 by 0.285.

35.25. Persian, Ṣafawī period, sixteenth century. A woman in a green coat. Color and gold on paper, 0.200 by 0.141.

36.8. Persian, Mongol period, early fourteenth century. School of Tabrīz. Illustration from the *Jāmi 'ut-Tawārīkh* by Rashīd ud-Dīn: A parley between two groups of Moslem horsemen. Color and gold on paper, 0.131 by 0.226.

POTTERY

36.13. Chinese, Sung dynasty. *Kuan yao:* a cup with foliate edge; low foot with thin brown rim (chipped). Dense, hard clay; lustrous green-gray glaze. 0.039 by 0.084.

36.2. Syro-Egyptian, eleventh–twelfth century. A bowl, intact. Soft, sandy clay; brownish-cream glaze (crazed). The decoration, painted in gold luster with ruby reflections, is made up of the words for felicity, pleasure, and wealth executed in an ornamental Kufic script. 0.089 by 0.210.

SCULPTURE

36.5. Persian (Daghestan), twelfth–thirteenth century (?). Semicircular pediment (broken in two and repaired) from above a double window. Decoration of animals and plants in moderately high countersunk relief. Gray limestone. 0.785 by 1.320 by 0.165. (Illustrated.)

Curatorial work has largely consisted in the study of Chinese, Japanese, Armenian, Arabic, Persian, and East Indian objects in the collection, of the texts and seals associated with them, and in the preparation of this material for Gallery records. Much time has been devoted, also, to the examination of objects submitted to the Curator for expert opinion as to provenance, age, meaning, or other significance. Written or oral reports on these objects were made to the institutions or private owners who asked for this service. Six hundred and seventy-three objects, 225 photographs of objects, and 18 inscriptions for translation were dealt with in this way.

Changes in exhibition have involved a total of 99 objects, as follows:

Bronzes, Chinese	19
Paintings:	
American	42
Chinese	6
Japanese	20
Persian	11
Sculpture, Persian	1

ATTENDANCE

The Gallery has been open to the public every day from 9 until 4:30 o'clock, with the exception of Mondays, Christmas Day, and New Year's Day.

The total attendance of visitors coming in at the main entrance was 123,418. The total attendance for weekdays, exclusive of Mondays, was 85,697; for Sundays, 37,721. The average week-day attendance was 329; the average Sunday attendance, 725. The highest monthly attendance was reached in April (21,807) and August (13,919). The lowest monthly attendance was in December (5,460).

The total attendance of visitors on Mondays, by the south entrance, was 99, making a grand total attendance of 123,517.

There were 1,942 visitors to the offices during the year. The purposes of their visits were as follows:

For general information		346
To see objects in storage		545
Far Eastern paintings	134	
Near Eastern paintings and manuscripts	3	
Indian paintings and manuscripts	4	
American paintings	184	
Whistler etchings	14	
American pottery	2	
Oriental pottery, bronzes, jades, sculptures	158	
Washington Manuscripts	46	
To examine building and installation		23
To read in the library		235
To make tracings and sketches from library books		11
To obtain permission to photograph or sketch		24
To examine or purchase photographs		365
To submit objects for examination		153
To see members of the staff		240

LECTURES

A course of four lectures on Persian Painting was given by Eustache de Lorey, former Director of the French Institute of Arts and Archaeology, Damascus, Syria, as follows:

Wednesday, March 11:
Firdausi, Inspirer of Art.
Thursday, March 12:
Islam and China.
Friday, March 13:
The Height of Persian Miniature Painting, XV Century.
Saturday, March 14:
Behzad, the Great Painter of the Persian Renaissance.

The total attendance at these lectures was 634.

Nineteen lectures and illustrated talks were given by members of the staff—at Columbia University and at the Gallery.

DOCENT SERVICE

Ninety-six groups ranging from 1 to 41 persons (total 413) were given docent service in the exhibition galleries upon request (of these 19 groups, totaling 23 persons, came on Mondays). Thirteen groups, totaling 193 persons, were given instruction in Chinese and Japanese arts in the study rooms.

PERSONNEL

Grace T. Whitney worked intermittently at the Gallery between October 7, 1935, and June 24, 1936, on the translation of Persian and Arabic texts.

Frank West, laborer, died on October 26, 1935.

Grace Aasen Parler, librarian, resigned her position on December 16, 1935.

Elizabeth Hill, who first reported for duty on November 11, 1935, was appointed librarian on December 17, 1935.

Harry G. Lugenbeel, sergeant, who had served the Gallery faithfully and efficiently since December 6, 1921, retired on October 12, 1935. He was succeeded by Joseph H. Boswell, whose appointment as sergeant was made on December 9, 1935.

Respectfully submitted.

J. E. Lodge, *Curator.*

Dr. C. G. Abbot,
Secretary, Smithsonian Institution.

APPENDIX 4

REPORT ON THE BUREAU OF AMERICAN ETHNOLOGY

SIR: I have the honor to submit the following report on the field researches, office work, and other operations of the Bureau of American Ethnology during the fiscal year ended June 30, 1936, conducted in accordance with the act of Congress of February 2, 1935. The act referred to contains the following item:

American ethnology: For continuing ethnological researches among the American Indians and the natives of Hawaii, the excavation and preservation of archeologic remains under the direction of the Smithsonian Institution, including necessary employees, the preparation of manuscripts, drawings, and illustrations, the purchase of books and periodicals, and traveling expenses, $58,730.00.

SYSTEMATIC RESEARCHES

At the beginning of the fiscal year M. W. Stirling, Chief of the Bureau, was in southern Florida for the purpose of locating archeological sites which it was anticipated would be excavated later in the year with relief labor. Mr. Stirling returned to Washington the latter part of July. In December two Works Progress Administration archeological projects having been approved on request of the Florida State Archaeological Survey in cooperation with the Smithsonian Institution, Mr. Stirling again went to Florida in order to consult with Works Progress Administration officials and supervise the establishing of the projects in Hillsborough and Dade Counties. He returned to Washington December 22. During the visit of a Blackfoot Indian delegation to Washington in the month of March 1936 opportunity was taken to make further checks and modifications on the sign language material of the late Gen. Hugh L. Scott.

Dr. John R. Swanton, ethnologist, devoted the greater part of his time during the first half of the fiscal year to the arrangement of the Timucua linguistic material under stems. Further material was added to his large paper on the Indians of the Southeast. On December 26, 1935, Dr. Swanton was appointed by the President a member of a commission of seven "to study and report to the next session of Congress its recommendations for a suitable celebration of the four-hundredth anniversary of the expedition of Hernando de Soto."

A later act of Congress extends the time within which the report may be made to January 2, 1939. Since this appointment was made, the activities of the Commission have absorbed a great deal of his time, involving as they do the promotion of research in foreign depositories of manuscripts, particularly those of Spain, the translation of Spanish works, and especially a study and determination, as far as that is possible, of the route taken by the great explorer and his successor, Moscoso, through territories now covered by 10 States of the Union. This involves the use of library materials and direct study in the field. At the request of the other members of the Commission, Dr. Swanton acted in the capacity of temporary chairman in arranging the first meeting, March 5 to 7, in the Smithsonian Building. At this meeting Dr. Swanton accepted the permanent chairmanship of the Commission, with the understanding, however, that he was to serve only until the factual report is made. A second meeting was held at Tampa, Fla., on May 4 to 6. After this was over, he accompanied Col. J. R. Fordyce, vice-chairman of the Commission, in an investigation of parts of the route of De Soto between Florida and Mississippi, and May 30 to June 18 he made a second expedition to examine that section between South Carolina and the Mississippi River.

During the year an interesting and ethnologically important letter bearing on the Indians of Florida was brought to Dr. Swanton's attention by Dr. Lucy L. Wenhold, of Salem College, Winston-Salem, N. C. A negative photostat of this document is also in the possession of the Florida State Historical Society, which has kindly loaned the use of it in making a positive copy, and this is being prepared for publication in the Smithsonian Miscellaneous Collections with annotations by Dr. Swanton and Dr. Wenhold.

On July 3, 1935, Dr. Truman Michelson, ethnologist, started on an expedition to the region of James and Hudson Bays, made possible by a subvention from the American Council of Learned Societies. The object was to make a linguistic map of this area. He spent some weeks at Moose Factory, about 10 days at the Great Whale River, a little over 2 weeks at Fort George, and a day at Rupert's House, and returned to Washington September 20. Besides getting data from the Indians and Eskimos of these places, he was able to get in contact with one Indian from the East Main River, one Cree from Wenusk, on the west side of Hudson Bay, one Cree from the Albany River, who had also been at Attawapiskat, and one Ojibwa from the Albany River. Data from some of the more remote localities were obtained by indirect means. His observations indicate that the folklore and mythology of these northern tribes are far closer to those of the Central Algonquian tribes than is usually thought.

On June 5, under a new grant from the American Council of Learned Societies, Dr. Michelson left Washington to renew his studies among the Indians and Eskimos of the James and Hudson Bays region.

The entire fiscal year was spent by Dr. John P. Harrington, ethnologist, in study of the Mission Indians of California, compiling complete notes for the forthcoming edition of the Boscana manuscript of 1882, which tells in 15 chapters of the life and religion of these Indians. This important manuscript of the early Franciscan Father Boscana, a missionary born in Catalonia, Spain, and stationed for years among the Mission Indians, was recently discovered by Dr. Harrington and a literal English translation of it without notes has already been published.

As a byproduct of the preparation of these notes an interesting account of the ethnology of the Mission Indians has been assembled, covering their mode of life, dress, food, sociology, religion, language, and knowledge of nature. The presence of Mission Indians in Washington has constantly enhanced and perfected this work throughout the fiscal year.

At the beginning of the fiscal year Dr. Frank H. H. Roberts, Jr., was engaged in excavations at the Lindenmeier site north of Fort Collins, Colo. This work was continued until September 10. The Lindenmeier site is the location where the first series of stone implements definitely attributable to the Folsom complex, the oldest established horizon in the archeology of North America, was found in the autumn of 1934. The investigations of the 1935 season were a continuation of those begun the preceding fall and consisted of intensive excavation of certain portions of the site. The digging brought forth additional information which makes possible the drawing of more detailed conclusions on the material culture of Folsom man.

When the summer's project was brought to a close Dr. Roberts went to Globe, Ariz., at the request of the authorities at Gila Pueblo, for the purpose of conferring with members of the staff on the finds which they had made at Snaketown, a Hohokam site, near Phoenix. He also studied the collections in the Gila Pueblo Museum and visited the Snaketown site and Casa Grande. The latter was the scene of considerable activity on the part of Cosmos Mindeleff and Dr. J. Walter Fewkes, members of the staff of the Bureau of American Ethnology, 40 and more years ago. Dr. Roberts returned to Washington October 1.

In January he took part, by special invitation, in a symposium on Early Man in America which was held at the annual meeting of the Society of American Naturalists at St. Louis. He also prepared a manuscript detailing the work done during the summer. This report,

Additional Information on the Folsom Complex, Report on the Second Season's Investigations at the Lindenmeier Site in Northern Colorado, was issued on June 20 as Smithsonian Miscellaneous Collections, vol. 95, no. 10.

Dr. Roberts left Washington June 1 for Anderson, Iowa, to inspect a site where Folsom points and other material had been found. This proved to be a highly interesting place, as it marks the easternmost locality that the true or High Plains form of the Folsom point has been noted. While in Iowa he saw and studied numerous collections of specimens and found evidence of the Folsom complex at a number of sites. From Iowa he proceeded to Colorado, where he resumed excavations at the Lindenmeier site. By the end of the year, June 30, several trenches had been run through portions of the site and an area 20 by 30 feet had been completely cleared of the several feet of accumulated earth which had covered it. This area consisted of an old occupation level upon which the traces of Folsom man and his activities were numerous.

From July 1935 to January 1936 Dr. W. D. Strong, anthropologist, served as consultant in anthropology to the Bureau of Indian Affairs. In addition to office work in relation to numerous acculturation studies being made on various Indian reservations of the United States, Dr. Strong made two field trips to various reservations and administrative centers in New Mexico and Arizona in August and December, respectively. In November a trip of several weeks was made to the Chippewa reservations in Minnesota to advise on problems of tribal reorganization. On January 5, 1936, Dr. Strong left Washington for Honduras as leader of a joint archeological expedition from the Bureau of American Ethnology, Smithsonian Institution, and the Peabody Museum, Harvard University. He was assisted in the field by Alfred Kidder II and Drexel A. Paul, Jr., from the Peabody Museum. Establishing its base at Progreso, in the Ulua Valley, the expedition made stratigraphic excavations at several sites on the Ulua River. In March and April Dr. Strong, with Mr. Paul, conducted excavations around the north end of Lake Yojoa, while Mr. Kidder worked on the Comayagua River. In May and June the entire expedition worked sites on the Chemelicon River, including the site of Naco, first visited by Cortez and the early Spanish Conquistadores.

On the Ulua River excellent stratigraphic series were secured of the prehistoric polychrome pottery horizons. At Playa de los Muertos, on the Ulua, these horizons, corresponding roughly to the close of the Maya Old Empire, were found to overlay a much earlier living level marked by monochrome, polished, and incised pottery.

The work of the expedition approached conclusion in June, and on June 30 preparations for departure began. Throughout its entire work the expedition received cordial cooperation and assistance from

the government of the Republic of Honduras. It was also materially aided by the United Fruit Company, from whose employees it received unlimited hospitality. Without these much appreciated sources of cooperation its scientific results would have been much curtailed.

Dr. Julian H. Steward was appointed as associate anthropologist in the Bureau, effective October 21, 1935. During September 1935, prior to reporting to Washington, Dr. Steward traveled to Pendleton, Oreg., for the purpose of making a selection of 200 negatives of ethnological subjects taken by the late Maj. Lee Morehouse. These were purchased by the Bureau from Mrs. L. L. Cornelison, his daughter. From November 16 to December 10, 1935, Dr. Steward was engaged in conducting a W. P. A. archeological project in the vicinity of Miami, Fla. During this time he supervised the excavation of the large mound at Miami Beach and began work on a smaller mound several miles northwest of the city of Miami. Because of Dr. Strong's departure for Honduras, when Dr. Steward returned to Washington he was delegated to continue the cooperative work between the Bureau of Indian Affairs and the Bureau of American Ethnology previously conducted by Dr. Strong. In connection with these duties Dr. Steward made an extended trip from March 7 to April 15, 1936, in the interest of the Bureau of Indian Affairs. On June 19 he left Washington for the purpose of continuing his field work among the Shoshoni, Bannock, and Gosiute Indians of Utah, Nevada, and Idaho. During the winter and spring Dr. Steward prepared for publication a series of trait lists collected from the Shoshoni Indians of Nevada during the summer of 1935. From other material collected at the same time he completed two articles entitled "Shoshoni Polyandry" and "Panatubiji, a Biography of an Owens Valley Paiute." In addition, Dr. Steward completed for publication in the Smithsonian Annual Report an article entitled "Indian Petroglyphs of the United States."

J. N. B. Hewitt, ethnologist, completed a detailed study of the approximate position and territorial habitat of the northern Iroquoian tribes and of the contiguous Algonquian peoples as they were at the time these groups were first visited by the early explorers. Mr. Hewitt also made a historical study for the purpose of showing the marked influence of the principles and aims of the League of the Five Iroquois Tribes as founded by Deganawida in the early sixteenth century on those of the Constitution of the United States.

Mr. Hewitt had previously recorded from the late Chief J. A. Gibson two Onondaga versions of what is fundamentally a single ritual, namely, the Requickening Address. He made a new translation of these, having first revised both texts so that there should be no material differences in the meaning of the two. He also made a careful revision of the Onondaga texts and laws relating to the posi-

tion and powers and limitations of the Federal Chieftains, and also those governing the Chief Warriors.

He also added to the Bureau's collection of ritual wampum strings by completing two new sets of strings made from loose beads on patterns taken from originals in the Museum of the American Indian, Heye Foundation, and a set which was owned by the late Chief David Skye, of the Canadian Six Nations.

During the year Mr. Hewitt continued to represent the Bureau of American Ethnology on the Advisory Committee on Geographic Names, Department of the Interior.

On June 21, 1936, Mr. Hewitt left Washington on field duty, visiting the Tuscarora Reservation near Lewiston, N. Y., and then the Grand River Grant to the Six Nations in Ontario. On the latter reservation he obtained a short Delaware vocabulary and a fine Mohawk text embodying the so-called Handsome Lake Religion, the preparation of which was about completed by the end of the fiscal year.

SPECIAL RESEARCHES

Miss Frances Densmore, a collaborator of the Bureau of American Ethnology, in continuation of her study of Indian music, submitted a manuscript entitled "Dance Songs of the Seminole Indians", with phonograph records and transcriptions of 25 songs. These songs were recorded in February 1932 at Brighton, Fla., by Billie Stewart, one of the best singers in the Cow Creek group of the tribe. Five songs connected with the tribal ball game were presented, together with songs of the alligator, steal-partner, switch-grass, and buffalo dances. The songs of the ball game were sung to bring success and were accompanied by beating on a water-drum hung by a strap from the player's shoulder. A coconut-shell rattle accompanied the dances. All the songs of each series were recorded. This afforded an opportunity to note the maintaining of a fundamental pitch throughout the series, with a pleasing variation of rhythm in the several melodies.

EDITORIAL WORK AND PUBLICATIONS

The editing of the publications of the Bureau was continued through the year by Stanley Searles, editor. In addition to the current work of the office the comprehensive manuscript index of Bulletins 1–100 has been corrected. All entries have been verified.

An index of Schoolcraft's "Indian Tribes", in six volumes, is nearing completion. More than 30,000 entries have been made and are now being alphabetized.

Bulletin 112, "An Introduction to Pawnee Archeology", by Waldo Rudolph Wedel, and Bulletin 113, "The Troyville Mounds, Catahoula Parish, Louisiana", by Winslow M. Walker, were issued.

Work has been done on other manuscripts in the custody of the editor.

Publications distributed totaled 9,337.

LIBRARY

Miss Ella Leary continued in charge as librarian until February 29, 1936, when she was retired on account of ill health. Miss Miriam B. Ketchum was appointed to succeed her, effective April 1, 1936.

The following figures apply to bound books and pamphlets of 100 pages or over. Pamphlets of less than 100 pages are no longer accessioned.

Books received by purchase	18
Books received by exchange	62
Books received by gift	19
Total	99

Numerous pamphlets have been received, as well as the usual periodicals and society transactions, mostly by exchange or gift.

The library contains, as of June 30, 1936:

Total accession record	31,200
Total withdrawals and losses	661
Net total	30,539

There are also about 20,000 pamphlets and more than 3,000 volumes of unbound periodicals and society transactions.

It is planned to reclassify the library according to the Library of Congress scheme of classification, and copies of the scheme in the Bureau's field have been furnished by the Library of Congress. All new material is being put in the new classification, and it is hoped that a real start on older material can be made during the coming year. A shelf list has been begun and will be continued along with the reclassification.

A depository set of Library of Congress catalog cards is being established.

A beginning has been made on refiling the catalog and the task will be completed within the next few months.

ILLUSTRATIONS

Following is a summary of work accomplished by E. G. Cassedy, illustrator:

Graphs	29
Line drawings	163
Maps	12
Photos retouched	10
Tracings	18
Plates assembled	29
Lettering jobs	354
Negatives retouched	6
Photos colored	2
Total	623

COLLECTIONS

Accession number	
135,291.	Archeological material collected by M. W. Stirling from a village site formerly occupied by the Waccamaw Indians near Myrtle Beach, S. C.
138,344.	Two earthenware bowls from the Dragoon Mountains, southeastern Arizona.
138,501.	The Mrs. Charles D. Walcott collection of 27 pictures of Navaho sand paintings and four paintings of miscellaneous subjects.
139,472.	Ten photographs of Australian natives; 20 lithographs of Congo Negro subjects; 33 slides of subjects from Palestine, Tunis, Syria, etc.

MISCELLANEOUS

During the course of the year information was furnished by members of the Bureau staff in reply to numerous inquiries concerning the North American Indians, both past and present, and the Mexican peoples of the prehistoric and early historic periods. Various specimens sent to the Bureau were identified and data on them furnished for their owners.

Personnel.—Dr. J. H. Steward was appointed associate anthropologist October 21, 1935. Miss Edna Butterbrodt, junior stenographer, resigned January 12, 1936. Miss Helen Heitkemper was appointed January 28, 1936, to fill the vacancy.

Respectfully submitted.

M. W. Stirling, *Chief.*

Dr. C. G. Abbot,
Secretary, Smithsonian Institution.

APPENDIX 5

REPORT ON THE INTERNATIONAL EXCHANGE SERVICE

SIR: I have the honor to submit the following report on the activities of the International Exchange Service during the fiscal year ended June 30, 1936:

Congress appropriated for that year $44,262, which is an increase of $3,084 over the amount granted for the Service during 1935. The repayments from departmental and other establishments amounted to $3,563.30, making the total resources available for the exchanges during the year $47,825.30.

The total number of packages handled during 1936 was 596,951, a decrease of 57,180. The weight was 618,789 pounds, an increase of 58,408 pounds.

The material sent and received through the International Exchange Service is placed under three classes—parliamentary documents, departmental documents, and scientific and literary publications. The following table gives the number and weight of packages containing the publications coming under those headings.

	Packages		Weight	
	Sent	Received	Sent	Received
			Pounds	*Pounds*
United States parliamentary documents sent abroad	268,836		109,717	
Publications received in return for parliamentary documents		12,401		35,575
United States departmental documents sent abroad	103,544		112,124	
Publications received in return for departmental documents		9,748		32,678
Scientific and literary publications sent abroad	146,603		217,275	
Scientific and literary publications received from abroad for distribution in the United States		55,819		111,420
Total	518,983	77,968	439,116	179,673
Grand total	596,951		618,789	

During the year 2,475 boxes were shipped abroad, an increase of 288 over the preceding 12 months. Of these boxes, 529 were for the foreign depositories of full sets of United States governmental documents and the remainder (1,946) were for distribution to miscellaneous establishments and individuals.

As has been referred to in previous reports, in addition to the packages forwarded in boxes for distribution by foreign exchange bureaus, many are mailed directly to their destinations—some because

it is more economical to send by mail than by freight; some, like the daily issue of the Congressional Record, because treaty stipulations provide that they shall be so forwarded; and some for the reason that they are for places remote from existing exchange agencies. The total number of packages transmitted by mail during the year was 70,899, an increase of 12,026 over last year.

FOREIGN DEPOSITORIES OF GOVERNMENTAL DOCUMENTS

The number of full sets of governmental publications forwarded abroad is 61 and of partial sets 50, making a total of 111 sets. The depository of the partial set sent to Bengal has been changed from the Department of Education to the Bengal Legislative Council Department, Calcutta. A complete list of the depositories is given below:

DEPOSITORIES OF FULL SETS

ARGENTINA: Ministerio de Relaciones Exteriores, Buenos Aires.
BUENOS AIRES: Biblioteca de la Universidad Nacional de La Plata, La Plata. (Depository of the Province of Buenos Aires.)
AUSTRALIA: Library of the Commonwealth Parliament, Canberra.
NEW SOUTH WALES: Public Library of New South Wales, Sydney.
QUEENSLAND: Parliamentary Library, Brisbane.
SOUTH AUSTRALIA: Parliamentary Library, Adelaide.
TASMANIA: Parliamentary Library, Hobart.
VICTORIA: Public Library of Victoria, Melbourne.
WESTERN AUSTRALIA: Public Library of Western Australia, Perth.
AUSTRIA: National-Bibliothek, Wien I.
BELGIUM: Bibliothèque Royale, Bruxelles.
BRAZIL: Bibliotheca Nacional, Rio de Janeiro.
CANADA: Library of Parliament, Ottawa.
MANITOBA: Provincial Library, Winnipeg.
ONTARIO: Legislative Library, Toronto.
QUEBEC: Library of the Legislature of the Province of Quebec.
CHILE: Biblioteca del Congreso, Santiago.
CHINA: National Central Library, Nanking.
COLOMBIA: Biblioteca Nacional, Bogotá.
COSTA RICA: Oficina de Depósito y Canje Internacional de Publicaciones, San José.
CUBA: Secretaría de Estado (Asuntos Generales y Canje Internacional), Habana.
CZECHOSLOVAKIA: Bibliothèque de l'Assemblée Nationale, Prague.
DENMARK: Kongelige Bibliotheket, Copenhagen.
EGYPT: Bureau des Publications, Ministère des Finances, Cairo.
ESTONIA: Riigiraamatukogu (State Library), Tallinn.
FRANCE: Bibliothèque Nationale, Paris.
GERMANY: Reichstauschstelle im Reichsministerium des Innern, Berlin C 2.
BADEN: Universitäts-Bibliothek, Freiburg. (Depository of the State of Baden.)
BAVARIA: Bayerische Staatsbibliothek, München.
PRUSSIA: Preussische Staatsbibliothek, Berlin, N. W. 7.
SAXONY: Sächsische Landesbibliothek, Dresden—N. 6.
WURTEMBURG: Landesbibliothek, Stuttgart.

GREAT BRITAIN:
ENGLAND: British Museum, London.
GLASGOW: City Librarian, Mitchell Library, Glasgow.
LONDON: London School of Economics and Political Science. (Depository of the London County Council.)
HUNGARY: A Magyar országgyülés könyvtará, Budapest.
INDIA: Imperial Library, Calcutta.
IRISH FREE STATE: National Library of Ireland, Dublin.
ITALY: Ministero dell'Educazione Nazionale, Rome.
JAPAN: Imperial Library of Japan, Tokyo.
LATVIA: Bibliothèque d'État, Riga.
LEAGUE OF NATIONS: Library of the League of Nations, Geneva, Switzerland.
MEXICO: Biblioteca Nacional, Mexico, D. F.
NETHERLANDS: Royal Library, The Hague.
NEW ZEALAND: General Assembly Library, Wellington.
NORTHERN IRELAND: H. M. Stationery Office, Belfast.
NORWAY: Universitets-Bibliothek, Oslo. (Depository of the Government of Norway.)
PERU: Sección de Propaganda y Publicaciones, Ministerio de Relaciones Exteriores, Lima.
POLAND: Bibliothèque Nationale, Warsaw.
PORTUGAL: Bibliotheca Nacional, Lisbon.
RUMANIA: Academia Română, Bucharest.
SPAIN: Servicio de Cambio Internacional de Publicaciones, Paseo de Recoletos 20, Madrid.
SWEDEN: Kungliga Biblioteket, Stockholm.
SWITZERLAND: Bibliothèque Centrale Fédérale, Berne.
TURKEY: Ministère de l'Instruction Publique, Ankara.
UNION OF SOUTH AFRICA: State Library, Pretoria, Transvaal.
UNION OF SOVIET SOCIALIST REPUBLICS: State Central Book Chamber, Moscow 4.
UKRAINE: All-Ukrainian Association for Cultural Relations with Foreign Countries, Kiev.
URUGUAY: Oficina de Canje Internacional de Publicaciones, Montevideo.
VENEZUELA: Biblioteca Nacional, Caracas.
YUGOSLAVIA: Ministère de l'Éducation, Belgrade.

DEPOSITORIES OF PARTIAL SETS

AFGHANISTAN: Ministry of Foreign Affairs, Publications Department, Kabul.
AUSTRIA:
Vienna: Magistrat der Stadt Wien, Abteilung 51-Statistik.
BOLIVIA: Biblioteca del H. Congreso Nacional, La Paz.
BRAZIL:
MINAS GERAES: Directoria Geral de Estatistica em Minas, Bello Horizonte.
RIO DE JANEIRO: Bibliotheca da Assemblea Legislativa do Estado, Nictheroy.
BRITISH GUIANA: Government Secretary's Office, Georgetown, Demerara.
BULGARIA: Ministère des Affaires Étrangères, Sofia.
CANADA:
ALBERTA: Provincial Library, Edmonton.
BRITISH COLUMBIA: Provincial Library, Victoria.
NEW BRUNSWICK: Legislative Library, Fredericton.
NOVA SCOTIA: Provincial Secretary of Nova Scotia, Halifax.
PRINCE EDWARD ISLAND: Legislative Library, Charlottetown.
SASKATCHEWAN: Government Library, Regina.
CEYLON: Chief Secretary's Office (Record Department of the Library), Colombo.

China: National Library, Peiping.
Danzig: Stadtbibliothek, Danzig.
Dominican Republic: Biblioteca del Senado, Ciudad Trujillo.
Ecuador: Biblioteca Nacional, Quito.
Finland: Parliamentary Library, Helsingfors.
Germany:
Bremen: Senatskommission für Reichs- und Auswärtige Angelegenheiten.
Hamburg: Staats-und Universitäts-Bibliothek.
Hesse: Universitäts-Bibliothek, Giessen.
Lübeck: President of the Senate.
Thuringia: Rothenberg-Bibliothek, Landesuniversität, Jena.
Greece: Library of Parliament, Athens.
Guatemala: Biblioteca Nacional, Guatemala.
Haiti: Secrétaire d'État des Relations Extérieures, Port-au-Prince.
Honduras: Biblioteca y Archivo Nacionales, Tegucigalpa.
Iceland: National Library, Reykjavik.
India:
Assam: General and Judicial Department, Shillong.
Bengal: Secretary, Bengal Legislative Council Department, Council House, Calcutta.
Bihar and Orissa: Revenue Department, Patna.
Bombay: Undersecretary to the Government of Bombay, General Department, Bombay.
Burma: Secretary to the Government of Burma, Education Department, Rangoon.
Central Provinces: General Administration Department, Nagpur.
Madras: Chief Secretary to the Government of Madras, Public Department, Madras.
Punjab: Chief Secretary to the Government of the Punjab, Lahore.
United Provinces of Agra and Oudh: University of Allahabad, Allahabad.
Jamaica: Colonial Secretary, Kingston.
Liberia: Department of State, Monrovia.
Lithuania: Ministère des Affaires Étrangères, Kaunas (Kovno).
Malta: Minister for the Treasury, Valletta.
Newfoundland: Department of Home Affairs, St. John's.
Nicaragua: Superintendente de Archivos Nacionales, Managua.
Panama: Secretaría de Relaciones Exteriores, Panama.
Paraguay: Secretario de la Presidencia de la República, Asunción.
Salvador: Ministerio de Relaciones Exteriores, San Salvador.
Siam: Department of Foreign Affairs, Bangkok.
Straits Settlements: Colonial Secretary, Singapore.
Vatican City: Biblioteca Apostolica Vaticana, Vatican City, Rome, Italy.

INTERPARLIAMENTARY EXCHANGE OF THE OFFICIAL JOURNAL

The forwarding of the Congressional Record to the Province of Buenos Aires has been discontinued, and there has been added to the list of recipients of the Record the Biblioteca del Parlament de Catalunya, Barcelona, Spain. The depository in Guatemala has been changed to Biblioteca de la Asamblea Legislativa, Guatemala. The Record sent to Uruguay is now mailed to Diario Oficial, Montevideo.

The Federal Register has been added to the sendings of the Congressional Record. There now are 102 copies of the Record forwarded abroad. A complete list of the depositories is given below.

DEPOSITORIES OF CONGRESSIONAL RECORD

ALBANIA: Ministrija Mibretnore e Punëvetë Jashtme, Tirana.
ARGENTINA:
Biblioteca del Congreso Nacional, Buenos Aires.
Cámara de Diputados, Oficina de Información Parlamentaria, Buenos Aires.
AUSTRALIA:
Library of the Commonwealth Parliament, Canberra.
NEW SOUTH WALES: Library of Parliament of New South Wales, Sydney
QUEENSLAND: Chief Secretary's Office, Brisbane.
WESTERN AUSTRALIA: Library of Parliament of Western Australia, Perth.
AUSTRIA: Bibliothek des Hauses der Bundesgesetzgebung, Wien I.
BELGIUM: Bibliothèque de la Chambre des Représentants, Bruxelles.
BOLIVIA: Biblioteca del H. Congreso Nacional, La Paz.
BRAZIL:
Bibliotheca do Congresso Nacional, Rio de Janeiro.
AMAZONAS: Archivo, Bibliotheca e Imprensa Publica, Manáos.
BAHIA: Governador do Estado da Bahia, São Salvador.
ESPIRITO SANTO: Presidencia do Estado do Espirito Santo, Victoria.
RIO GRANDE DO SUL: "A Federação", Porto Alegre.
SÃO PAULO: Diario Official do Estado de São Paulo, São Paulo.
SERGIPE: Bibliotheca Publica do Estado de Sergipe, Aracajú.
BRITISH HONDURAS: Colonial Secretary, Belize.
CANADA:
Library of Parliament, Ottawa.
Clerk of the Senate, Houses of Parliament, Ottawa.
CHINA: National Central Library, Nanking.
CUBA: Biblioteca del Capitolio, Habana.
CZECHOSLOVAKIA: Bibliothèque de l'Assemblée Nationale, Prague.
DANZIG: Stadtbibliothek, Danzig.
DENMARK: Rigsdagens Bureau, Copenhagen.
DOMINICAN REPUBLIC: Biblioteca del Senado, Ciudad Trujillo.
DUTCH EAST INDIES: Volksraad von Nederlandsch-Indië, Batavia, Java.
EGYPT: Bureau des Publications, Ministère des Finances, Cairo.
ESTONIA: Riigiraamatukogu (State Library), Tallinn.
FRANCE:
Chambre des Députés, Service de l'Information Parlementaire Etrangère, Paris.
Bibliothèque du Sénat, au Palais du Luxembourg, Paris.
Bibliothèque, Direction des Accords commerciaux, Ministère du Commerce, Paris.
GERMANY:
Deutsche Reichstags-Bibliothek, Berlin, N. W. 7.
Reichsfinanzministerium, Berlin, W. 8.
ANHALT: Anhaltische Landesbücherei, Dessau.
BRAUNSCHWEIG: Bibliothek des Braunschweigischen Staatsministeriums, Braunschweig.
MECKLENBURG: Staatsministerium, Schwerin.
OLDENBURG: Oldenburgisches Staatsministerium, Oldenburg i. O.
PRUSSIA: Bibliothek des Preussischen Landtages, Berlin, S. W. 11.
SCHAUMBURG-LIPPE: Schaumburg-Lippische Landesregierung, Bücheburg.

GIBRALTAR: Gibraltar Garrison Library Committee, Gibraltar.
GREAT BRITAIN: Library of the Foreign Office, London.
GREECE: Library of Parliament, Athens.
GUATEMALA: Biblioteca de la Asamblea Legislativa, Guatemala.
HONDURAS: Biblioteca del Congreso Nacional, Tegucigalpa.
HUNGARY: A Magyar országgyülés könyvtará, Budapest.
INDIA: Legislative Department, Simla.
IRAN: Library of the Iranian Parliament, Téhéran.
IRAQ: Chamber of Deputies, Bagdad, Iraq (Mesopotamia).
IRISH FREE STATE: Dail Eireann, Dublin.
ITALY:
Biblioteca della Camera dei Deputati, Rome.
Biblioteca del Senato del Regno, Rome.
Ufficio degli Studi Legislativi, Senato del Regno, Rome.
LATVIA: Valsts Biblioteka, Riga.
LEAGUE OF NATIONS: Library of the League of Nations, Geneva, Switzerland.
LIBERIA: Department of State, Monrovia.
MEXICO: Secretaría de la Cámara de Diputados, Mexico, D. F.
AGUASCALIENTES: Gobernador del Estado de Aguascalientes, Aguascalientes.
CAMPECHE: Gobernador del Estado de Campeche, Campeche.
CHIAPAS: Gobernador del Estado de Chiapas, Tuxtla Gutierrez.
CHIHUAHUA: Gobernador del Estado de Chihuahua, Chihuahua.
COAHUILA: Periódico Oficial del Estado de Coahuila, Palacio de Gobierno, Saltillo.
COLIMA: Gobernador del Estado de Colima, Colima.
DURANGO: Gobernador Constitucional del Estado de Durango, Durango.
GUANAJUATO: Secretaría General de Gobierno del Estado, Guanajuato.
GUERRERO: Gobernador del Estado de Guerrero, Chilpancingo.
JALISCO: Biblioteca del Estado, Guadalajara.
LOWER CALIFORNIA: Gobernador del Distrito Norte, Mexicali, B. C., Mexico.
MEXICO: Gaceta del Gobierno, Toluca, Mexico.
MICHOACÁN: Secretaría General de Gobierno del Estado de Michoacán Morelia.
MORELOS: Palacio de Gobierno, Cuernavaca.
NAYARIT: Gobernador de Nayarit, Tepic.
NUEVO LEON: Biblioteca del Estado, Monterey.
OAXACA: Periódico Oficial, Palacio de Gobierno, Oaxaca.
PUEBLA: Secretaría General de Gobierno, Puebla.
QUERETARO: Secretaría General de Gobierno, Sección de Archivo, Queretaro.
SAN LUIS POTOSI: Congreso del Estado, San Luis Potosi.
SINALOA: Gobernador del Estado de Sinaloa, Culiacan.
SONORA: Gobernador del Estado de Sonora, Hermosillo.
TABASCO: Secretaría General de Gobierno, Sección 3a, Ramo de Prensa, Villahermosa.
TAMAULIPAS: Secretaría General de Gobierno, Victoria.
TLAXCALA: Secretaría de Gobierno del Estado, Tlaxcala.
VERA CRUZ: Gobernador del Estado de Vera Cruz, Departamento de Gobernación y Justicia, Jalapa.
YUCATÁN: Gobernador del Estado de Yucatán, Mérida, Yucatán.
NEW ZEALAND: General Assembly Library, Wellington.
NORWAY: Storthingets, Bibliothek, Oslo.
PERU: Cámara de Diputados, Lima.
POLAND: Ministère des Affaires Étrangères, Warsaw.
PORTUGAL: Secretario da Assemblea Nacional, Lisboa.

RUMANIA:
Bibliothèque de la Chambre des Députés, Bucharest.
Ministère des Affaires Étrangères, Bucharest.
SPAIN:
Biblioteca del Congreso Nacional, Madrid.
Catalunya: Biblioteca del Parlament de Catalunya, Barcelona.
SWITZERLAND:
Bibliothèque de l'Assemblée Fédérale Suisse, Berne.
SYRIA:
Ministère des Finances de la République Libanaise, Service du Matériel, Beirut.
Governor of the State of Alaouites, Lattaquié.
TURKEY: Turkish Grand National Assembly, Ankara.
UNION OF SOUTH AFRICA:
Library of Parliament, Cape Town, Cape of Good Hope.
State Library, Pretoria, Transvaal.
URUGUAY: Diario Oficial, Calle Florida 1178, Montevideo.
VENEZUELA: Biblioteca del Congreso, Caracas.
VATICAN CITY: Biblioteca Apostolica Vaticana, Rome, Italy.

FOREIGN EXCHANGE AGENCIES

The exchange agency in Peru, formerly conducted under the direction of the Ministerio de Fomento, is now under the Ministerio de Relaciones Exteriores, Sección de Propaganda y Publicaciones, Lima.

The agency in the Union of South Africa has been removed from Pretoria, Transvaal, to Capetown, Cape of Good Hope. The Government Printing and Stationery Office in Capetown now acts as the agency.

LIST OF EXCHANGE AGENCIES

ALGERIA, via France.
ANGOLA, via Portugal.
ARGENTINA: Comisión Protectora de Bibliotecas Populares, Canje Internacional, Calle Callao 1540, Buenos Aires.
AUSTRIA: Internationale Austauschstelle, National-Bibliothek, Wien, I.
AZORES, via Portugal.
BELGIUM: Service Belge des Échanges Internationaux, Bibliothèque Royale de Belgique, Bruxelles.
BOLIVIA: Oficina Nacional de Estadística, La Paz.
BRAZIL: Serviço de Permutações Internacionaes, Bibliotheca Nacional, Rio de Janeiro.
BRITISH GUIANA: Royal Agricultural and Commercial Society, Georgetown.
BRITISH HONDURAS: Colonial Secretary, Belize.
BULGARIA: Institutions Scientifiques de S. M. le Roi de Bulgarie, Sofia.
CANADA: Sent by mail.
CANARY ISLANDS, via Spain.
CHILE: Servicio de Canjes Internacionales, Biblioteca Nacional, Santiago.
CHINA: Bureau of International Exchange, National Central Library, Nanking.
COLOMBIA: Oficina de Canjes Internacionales y Reparto, Biblioteca Nacional, Bogotá.

COSTA RICA: Oficina de Depósito y Canje Internacional de Publicaciones, San José.
CUBA: Sent by mail.
CZECHOSLOVAKIA: Service Tchécoslovaque des Échanges Internationaux, Bibliothèque de l'Assemblée Nationale, Prague 1–79.
DANZIG: Amt für den Internationalen Schriftenaustausch der Freien Stadt Danzig, Stadtbibliothek, Danzig.
DENMARK: Service Danois des Échanges Internationaux, Kongelige Danske Videnskabernes Selskab, Copenhagen V.
DUTCH GUIANA: Surinaamsche Koloniale Bibliotheek, Paramaribo.
ECUADOR: Ministerio de Relaciones Exteriores, Quito.
EGYPT: Government Press, Publications Office, Bulaq, Cairo.
ESTONIA: Riigiraamatukogu (State Library), Tallinn.
FINLAND: Delegation of the Scientific Societies of Finland, Kasärngatan 24, Helsingfors.
FRANCE: Service Français des Échanges Internationaux, 110 Rue de Grenelle, Paris.
GERMANY: Amerika-Institut, Universitätstrasse 8, Berlin, N. W. 7.
GREAT BRITAIN AND IRELAND: Wheldon & Wesley, 2–4 Arthur St., New Oxford St. London, W. C. 2.
GREECE: Bibliothèque Nationale, Athens.
GREENLAND, via Denmark.
GUATEMALA: Instituto Nacional de Varones, Guatemala.
HAITI: Secrétaire d'État des Relations Extérieures, Port-au-Prince.
HONDURAS: Biblioteca Nacional, Tegucigalpa.
HUNGARY: Hungarian Libraries Board, Ferenciektere 5, Budapest, IV.
ICELAND, via Denmark.
INDIA: Superintendent of Government Printing and Stationery, Bombay.
ITALY: R. Ufficio degli Scambi Internazionali, Ministero dell' Educazione Nazionale, Rome.
JAMAICA: Institute of Jamaica, Kingston.
JAPAN: Imperial Library of Japan, Uyeno Park, Tokyo.
JAVA, via Netherlands.
KOREA: Sent by mail.
LATVIA: Service des Échanges Internationaux, Bibliothèque d'État de Lettonie, Riga.
LIBERIA: Bureau of Exchanges, Department of State, Monrovia.
LITHUANIA: Sent by mail.
LOURENÇO MARQUEZ, via Portugal.
LUXEMBOURG, via Belgium.
MADAGASCAR, via France.
MADEIRA, via Portugal.
MEXICO: Sent by mail.
MOZAMBIQUE, via Portugal.
NETHERLANDS: International Exchange Bureau of the Netherlands, Royal Library, The Hague.
NEW SOUTH WALES: Public Library of New South Wales, Sydney.
NEW ZEALAND: General Assembly Library, Wellington.
NICARAGUA: Ministerio de Relaciones Exteriores, Managua.
NORWAY: Service Norvégien des Échanges Internationaux, Bibliothèque de l'Université Royale, Oslo.
PALESTINE: Hebrew University Library, Jerusalem.

PANAMA: Sent by mail.
PARAGUAY: Sección Canje Internacional de Publicaciones del Ministerio de Relaciones Exteriores, Asunción.
PERU: Sección de Propaganda y Publicaciones, Ministerio de Relaciones Exteriores, Lima.
POLAND: Service Polonais des Échanges Internationaux, Bibliothèque Nationale, Warsaw.
PORTUGAL: Seccão de Trocas Internacionaes, Bibliotheca Nacional, Lisboa.
QUEENSLAND: Bureau of Exchanges of International Publications, Chief Secretary's Office, Brisbane.
RUMANIA: Bureau des Échanges Internationaux, Institut Météorologique Central, Bucharest.
SALVADOR: Ministerio de Relaciones Exteriores, San Salvador.
SIAM: Department of Foreign Affairs, Bangkok.
SOUTH AUSTRALIA: South Australian Government Exchanges Bureau, Government Printing and Stationery Office, Adelaide.
SPAIN: Servicio de Cambio Internacional de Publicaciones, Paseo de Recoletos 20, bajo derecha, Madrid.
SUMATRA, via Netherlands.
SWEDEN: Kongliga Svenska Vetenskaps Akademien, Stockholm.
SWITZERLAND: Service Suisse des Échanges Internationaux, Bibliothèque Centrale Fédérale, Berne.
SYRIA: American University of Beirut.
TASMANIA: Secretary to the Premier, Hobart.
TRINIDAD: Royal Victoria Istitute of Trinidad and Tobago, Port-of-Spain.
TUNIS: via France.
TURKEY: Robert College, Istanbul.
UNION OF SOUTH AFRICA: Government Printing and Stationery Office, Cape Town, Cape of Good Hope.
UNION OF SOVIET SOCIALIST REPUBLICS: Library of the Academy of Sciences of the U. S. S. R., Exchange Service, Leningrad V. O.
URUGUAY: Oficina de Canje Internacional de Publicaciones, Ministerio de Relaciones Exteriores, Montevideo.
VENEZUELA: Biblioteca Nacional, Caracas.
VICTORIA: Public Library of Victoria, Melbourne.
WESTERN AUSTRALIA: Public Library of Western Australia, Perth.
YUGOSLAVIA: Section des Échanges Internationaux, Ministère des Affaires Étrangères, Belgrade.

Respectfully submitted.

C. W. SHOEMAKER, *Chief Clerk.*

Dr. C. G. ABBOT,
Secretary, Smithsonian Institution.

APPENDIX 6

REPORT ON THE NATIONAL ZOOLOGICAL PARK

SIR: I have the honor to submit the following report on the operations of the National Zoological Park for the fiscal year ended June 30, 1936:

The regular appropriation made by Congress for the maintenance of the Park was $215,000. The total expenditures for the year from this appropriation were about $214,200.

IMPROVEMENTS

The fiscal year 1936 marked the beginning of more substantial improvements than had ever before been made in any one year or a considerable period of years in the Zoo. Under a grant from the Public Works Administration of $680,000, supplemented later by $191,575, contracts were let and work begun on five projects. These include machine and carpenter shops and a garage; the installation of three 250-horsepower down draft boilers, which will serve to heat all of the exhibition buildings with the exception of the bird house, which was considered as being too remote from the others to warrant a conduit being built to it; a brick exhibition building approximately 185 by 115 feet for small mammals and great apes; a stone exhibition building 227 by 90 feet to house large animals, such as elephant, rhinoceros, and hippopotamus; and a new wing to the bird house.

The machine shop and central heating plant will be completed in time to supply heat to the buildings in the fall. The other buildings should be finished by January 1, 1937.

The completion of these projects will give the Zoo four large, modern buildings containing numbers of new features for the exhibition of animals and is the greatest improvement in the history of the Zoo.

With the use of labor assigned to us through the District Works Progress Administration and some material from the same source, together with materials purchased from our regular appropriation, 5,083 linear feet of concrete road and walk curbing were constructed and 4,112 square yards of roads and walks were given bitulithic surfacings. Also 14,038 square yards of road were tarred, graveled, and rolled. The worst of the holes in the road between the mechanical shops and the crossroads at the Harvard Street entrance were repaired preparatory to a tar-gravel treatment when the construction

work at the shops is finished. Terra cotta sewer, 1,700 linear feet of 12-inch diameter, was laid from the District sewer along the creek to the vicinity of the great flight cage in the ravine. This was a step in the line of diverting all sanitary sewerage from the creek into the District's sanitary sewers. Repairs were also made to the storm water sewers in the same ravine, and 2,000 feet of various sized water lines were laid.

The improvement of the grounds by planting grass, shrubs, and trees, removal of objectionable or surplus vegetation, grading, and related grounds work has been carried on with very satisfactory results. Material progress has been made in the removal of poison ivy.

A small amount of miscellaneous repairs to buildings and fences has been carried out with funds from our regular appropriation and unskilled labor assigned to us under W. P. A. When certain W. P. A. clerical employees assigned to the Zoo were not urgently needed on routine work directly connected with the W. P. A., they rendered substantial assistance in repairing a considerable number of valuable pamphlets relating to zoology and in arranging them in the Zoo library. Just at the close of the year a bookbinder assigned to the Institution by the W. P. A. was detailed to this branch of the Smithsonian library. This arrangement is most promising for the binding and repairing of many valuable publications in our excellent vertebrate zoology library which otherwise would rapidly deteriorate.

VISITORS FOR THE YEAR

July	208,300	February	30,400
August	248,050	March	173,400
September	269,200	April	241,300
October	187,400	May	361,500
November	104,950	June	303,500
December	56,450		
January	51,400	Total	2,235,850

The attendance of organizations, mainly classes of students, of which there is definite record was 33,321 from 579 different schools in 20 States and the District of Columbia, as follows:

State	Number of persons	Number of parties	State	Number of persons	Number of parties
Connecticut	83	2	Ohio	896	20
Delaware	382	8	Oregon	35	1
District of Columbia	7,146	132	Pennsylvania	8,232	143
Georgia	92	3	South Carolina	112	4
Maine	70	2	South Dakota	32	1
Maryland	5,739	82	Tennessee	24	1
Massachusetts	373	9	Virginia	5,106	86
Michigan	220	5	West Virginia	595	7
New Hampshire	34	1	Conventions—Members of various States	160	2
New Jersey	2,132	30			
New Mexico	19	1			
New York	954	16	Total	33,321	579
North Carolina	885	23			

About 3 o'clock every afternoon, except Sunday, a census is made of the cars parked on the Zoo grounds. During the year 22,997 were so listed, representing every State in the Union, Hawaii, Canada, Canal Zone, Alaska, and Cuba. Since the total number is merely a record of those actually parked at one time, it is not of value as indicating a total attendance but is of importance as showing the percentage attendance by States, Territories, and countries. The District of Columbia comprised slightly over 52 percent; Maryland, 19 percent; Virginia, 11 percent; and the remaining cars were from other States, Territories, and countries. During years in which counts have been made on Sunday as well as during the week it has been found that the percentage of cars from the District of Columbia, Maryland, and Virginia is less, and the percentage of the more distant States is correspondingly increased. This is brought about by tourists coming to the Zoo on Sundays when other points of interest are closed to them.

ACCESSIONS

Gifts.—The collection was enriched by a number of important gifts. A Hood Island tortoise was received from Rear Admiral C. S. Freeman, United States Navy. From Mrs. A. N. Pack, Espanola, N. Mex., a splendid pair of pumas were received. Elisha Hansen, Washington, D. C., presented a black-striped wallaby. A number of rare frogs of the genera *Dendrobates* and *Atelopus* were received from Dr. E. R. Dunn, Haverford, Pa. Miss Gloria Hollister, of the New York Zoological Society, presented three Trinidad vampire bats. R. E. Stadelmann, traveling in Central and South America, continued his generosity and interest in the Park with several shipments of reptiles.

DONORS AND THEIR GIFTS

Mrs. Chas. L. Anderson, Washington, D. C., nighthawk.
A. G. Aquayo and P. J. Bermidez, Cuba, 6 diving anolis lizards.
M. C. Arner, Trinidad, British West Indies, giant centipede.
Miss Helen Ault, Washington, D. C., white-throated capuchin.
Miss Ellen Babcock, Alexandria, Va., 2 Pekin ducks.
Vernon Bailey, Washington, D. C., hog-nosed snake.
George W. Baker, Washington, D. C., hog-nosed snake.
D. S. Basin, Washington, D. C., raccoon.
Chas. A. Bechtold, Laurel, Md., blacksnake.
J. S. Beck, Washington, D. C., flying squirrel.
Mrs. E. M. Betts, Hampton, Va., alligator.
Marion Bird, La Crosse, Wis., spotted salamander.
Mr. and Mrs. J. S. C. Boswell, Alexandria, Va., corn snake, chicken snake.
E. S. Bowles, Washington, D. C., copperhead snake, coleonyx lizard.
Albert Bricker, Washington, D. C., weasel.
Ralph Britt, Chevy Chase, Md., barn owl.

J. L. Brooks, Washington, D. C., alligator.
G. A. and E. F. Brown, Washington, D. C., marine turtle.
Maurice M. Brown, Jr., Colonial Beach, Va., 2 little blue herons.
S. K. Brown, Eustis, Fla., coral snake, pine snake, corn snake.
F. R. Browne, Ashburn, Ga., hog-nosed snake, water snake, garter snake.
W. E. Buck, Camden, N. J., gaboon viper.
Eddie Buell, Washington, D. C., bald eagle.
Miss Brooksie Burnette, Silver Spring, Md., snapping turtle.
John F. Burrows, Washington, D. C., weasel.
Dr. Chas. E. Burt, Winfield, Kans., 11 gray skinks.
W. H. Calfee, Washington, D. C., common duck.
M. Wayne Carney, Washington, D. C., 2 skunks.
Wm. Carr, Bear Mountain Park, N. Y., watersnake, mole snake, garter snake.
E. W. Clark, Detroit, Mich., 3 massasaugas.
Mrs. L. P. Coakley, Washington, D. C., alligator.
Mrs. W. G. Cooper, Washington, D. C., Pekin duck.
A. C. Cornett, Smithfield, Va., hawk.
Jess S. Cottrell, Washington, D. C., alligator.
J. P. Crocker, Washington, D. C., great horned owl.
Mrs. Crowell, Washington, D. C., canary.
C. L. Cummell, Washington, D. C., barred owl.
L. Danaher, Meriden, Conn., hog-nosed snake.
Mrs. W. C. Daudt, Washington, D. C., Cumberland terrapin.
J. H. Davis, Hyattsville, Md., opossum.
Chas. F. Denley, Glenmont, Md., Lady Amherst's pheasant, Elliot's pheasant.
J. Dickson, Eheart, Va., banded rattlesnake.
Miss Helen Dougherty, Atlantic City, N. J., yellow-fronted parrot.
H. W. Draper, Washington, D. C., alligator.
Dr. E. R. Dunn, Haverford, Pa., 8 red dendrobates, 10 yellow atelopus.
Mr. Dureen, Washington, D. C., alligator.
Chas E. Eaton, Washington, D. C., 3 common chameleons.
David Elsasser, Johnstown, Pa., weeping capuchin.
Dr. W. O. Emery, Washington, D. C., 4 fire-bellied toads.
M. L. Ernst, Washington, D. C., rough-scaled green snake.
H. P. Erwin, Washington, D. C., Cooper's hawk.
Bobbie Farrington, Washington, D. C., ring-necked pheasant.
John C. Finch, Washington, D. C., rhesus monkey.
Florida Reptile Institute, Silver Springs, Fla., 6 scorpions, fox squirrel, blue land crab.
A. Foehl, Jr., Philadelphia, Pa., banded basilisk, 5 frogs.
Rear Admiral C. S. Freeman, U. S. N., Hood Island tortoise.
John Freeman, Washington, D. C., white-throated capuchin.
M. P. Freeman, Washington, D. C., raccoon.
Dick George, Washington, D. C., Pekin duck.
C. K. Gibson, Washington, D. C., 2 Pekin ducks.
Truxton Goodrell, Washington, D. C., pilot snake.
W. S. Green, Greenwood, Va., weeping capuchin.
Mrs. W. E. Gregg, Chevy Chase, Md., screech owl.
John F. Hamaker, Washington, D. C., crow.
J. E. Hanell, Washington, D. C., woodchuck.
Elisha Hansen, Washington, D. C., black-striped wallaby.
Geo. Hartnell, Cheltenham, Md., Florida gallinule.
Frank Harvey, Washington, D. C., grass paroquet, 2 canaries.

Ed. Harwell, Wetumpha, Ala., banded rattlesnake.
Harry B. Hawes, Washington, D. C., 2 southern mynahs.
Jas. F. Herbert, Washington, D. C., gray fox.
H. F. Herman, Washington, D. C., razor-billed curassow.
Christian Heurich, Washington, D. C., snapping turtle, blacksnake.
Mrs. Samuel B. Hill, Washington, D. C., California valley quail.
Miss Gloria Hollister, New York City, 3 Trinidad vampire bats.
Maj. J. M. Huddleston, U. S. A., rhesus monkey.
E. C. Hughes, Washington, D. C., copperhead snake.
Maj. E. E. Hume, U. S. A., pigeon.
David Humphrey, Cabin John, Md., copperhead snake.
Carl Imlay, Chevy Chase, D. C., bald eagle, red-shouldered hawk.
J. R. Johnson, Washington, D. C., 2 opossums.
Wm. Johnson, Silver Spring, Md., American coot.
Jos. W. Jones, Bristol, Tenn., horned lizard.
Raymond Kehr, Washington, D. C., yellow-shouldered parrot.
Miss Estelle King, Washington, D. C., red, blue, and yellow macaw.
W. T. King, Washington, D. C., copperhead snake.
Frank Kirby, Washington, D. C., white-throated capuchin.
F. Heber Knight, Washington, D. C., 2 copperhead snakes, screech owl, hog-nosed snake.
Miss Selma Krager, Washington, D. C., garter snake.
Mrs. J. A. Kramer, Washington, D. C., red-fronted parrot.
J. C. Lamon, Pickwick Dam, Tenn., hog-nosed snake.
Lester Leigh, Arcadia, Fla., glass snake, horn snake.
Mrs. M. E. Leishear, Washington, D. C., garter snake.
Mrs. Laura E. Lemon, Washington, D. C., domestic pigeon.
Jas. L. Leuenberger, Washington, D. C., goose.
Mrs. A. M. Lockamy, Washington, D. C., alligator.
Daniel C. Long, Washington, D. C., sidewinder rattlesnake.
Dr. J. A. Lyon, Rockville, Md., blue tanager.
J. S. Mansay, Washington, D. C., alligator.
R. W. Martin, LaGrange, Ga., glass snake.
Miss McAlister, Washington, D. C., red fox.
John T. McBurney, Chevy Chase, D. C., copperhead snake, blacksnake, fox snake.
Lt. Comm. W. E. McCain, Washington, D. C., yellow-naped parrot.
Chester McCall, Washington, D. C., rough-scaled green snake.
John R. McGrew, Bethesda, Md., blacksnake.
Mrs. A. B. McKean, Washington, D. C., 2 canaries.
F. McLemore, Lorman, Miss., coachwhip snake.
Mrs. Betty McShan, Silver Hill, Md., horned lizard.
Marquis Metts, Mt. Rainier, Md., red-tailed hawk.
A. L. Nelson and F. M. Uhler, Biological Survey, corn snake.
Ex-Postmaster Gen. New, Washington, D. C., barrel owl.
New York Zoological Park, New York City, 6 gaboon vipers, 5 puff adders.
Mrs. A. N. Pack, Espanola, N. Mex., 2 pumas.
Mrs. H. A. Page, Jr., Aberdeen, N. C., pigmy rattlesnake.
Mrs. N. D. Parker, Woodside, Md., 4 Pekin ducks, 7 white mice.
Mrs. Pawlowski, Washington, D. C., 3 canaries.
S. M. Peel, Washington, D. C., wood tortoise.
G. E. Pelton, Alexandria, Va., cow bird.
Mr. Perkins, Washington, D. C., chain or king snake.

J. P. Phillips, Washington, D. C., loon.
Gregory Pigg, Washington, D. C., opossum.
Bryan Pitt, Washington, D. C., grass paroquet.
G. F. Pollock, Washington, D. C., raven, 4 banded rattlesnakes.
Mrs. G. F. Pollock, Washington, D. C., blacksnake.
Mrs. A. E. Pyles, Friendship Heights, Md., raccoon.
David Rawlings, Chevy Chase, D. C., skunk.
Mrs. A. R. Rea, Washington, D. C., alligator.
Henry Renfrew, Washington, D. C., screech owl.
Dr. F. H. H. Roberts, Jr., Bureau of American Ethnology, 3 western rattlesnakes.
J. L. Robertson, U. S. Public Health Service, Washington, D. C., black widow spider.
Miss Mary Rogers, Washington, D. C., marine turtle.
Miss Eleanor Roosevelt, Washington, D. C., 9 alligators.
June Rosenthal, Washington, D. C., alligator.
Rotary Eagle Scout Troop #3, Reno, Nev., 5 Agassiz's tortoises.
Louis Ruhe, Inc., New York City, Old World wild cat, 2 blue honey-creepers.
Henry C. Sacra, Washington, D. C., red fox.
Andrew Santorios, Washington, D. C., 2 Greek partridges.
Mrs. J. H. Saum, Washington, D. C., canary.
Mrs. James W. Saunders, Washington, D. C., ring-necked dove.
Mrs. S. E. Schoof, Washington, D. C., woodchuck.
Miss Elizabeth Shorey, Washington, D. C., muscovy duck.
R. Shostick, Washington, D. C., salamander.
Dr. J. F. Simpson, Washington, D. C., alligator.
Mrs. H. R. Smith, Washington, D. C., woodchuck.
Norman Smith, Upper Marlboro, Md., great horned owl.
Mrs. Wesley Smith, Washington, D. C., black crowned night heron.
Spanish Legation, Washington, D. C., alligator.
H. V. Stabler, Washington, D. C., king snake, sparrowhawk.
R. E. Stadelmann, Tela, Honduras, 2 South American rat snakes, 2 geckos, green tree snake, tree boa, rainbow boa.
Cecil Strickland, Clendenin, W. Va., golden eagle.
Mrs. L. M. Sullivan, Washington, D. C., 4 Mexican grassquits.
John G. Taylor, Richmond, Va., white woodchuck.
Richard Taylor, Bethesda, Md., 3 fence lizards, 2 six-lined lizards.
Taxidermist Shop Staff, National Museum, Washington, D. C., 20 spring peepers.
Mrs. John Terrill, Lock Haven, Pa., double yellow-head parrot.
J. R. Thomas, Baltimore, Md., Javan macaque.
Mrs. W. D. Thomas, Washington, D. C., coyote.
Miss Florence Thwaite, Washington, D. C., praying mantis.
Mrs. V. H. Todd, Washington, D. C., opossum.
Toledo Zoological Park, Toledo, Ohio, ball python.
Mr. and Mrs. Jos. Truitt, Washington, D. C., 2 ferrets.
A. B. Turner, Washington, D. C., sparrowhawk.
Dr. Titus Ulke, Washington, D. C., red-tailed hawk, red-shouldered hawk.
U. S. Biological Survey, through Mr. Kelso, Washington, D. C., Cooper's hawk; through Jos. Keyes, Sacramento, Calif., 5 yellow-billed magpies; through C. C. Whitaker, Washington, D. C., bay lynx.
U. S. National Park Service, through E. A. Borrell, Grand Canyon, Ariz., Say's bull snake, 3 Holbrook's or earless lizards, 2 whiptail lizards, blue-bellied lizard.
Maj. Geo. L. Usher, U. S. A., alligator.

Miss Edna L. Vogel, Washington, D. C., alligator.
Clifton A. Wagner, Chevy Chase, Md., red salamander.
Robert Wallace, Washington, D. C., osprey.
Walter Reed Hospital, through Major Reynolds, Washington, D. C., 3 rhesus monkeys.
Mrs. L. T. Weir, Washington, D. C., alligator.
John Weismuller, Washington, D. C., southern skunk.
A. J. Wernig, Washington, D. C., opossum.
Dr. A. Wetmore, National Museum, Washington, D. C., flicker.
Chester Wetzel, Washington, D. C., 2 sparrowhawks.
Master Tom White, Washington, D. C., milk snake.
B. O. Wilbanks, Washington, D. C., copperhead snake.
O. L. Wilkins, West Augusta, Va., 2 banded rattlesnakes.
W. D. Wills, Silver Spring, Md., praying mantis.
B. F. Wood, Washington, D. C., milk snake.
Mrs. M. E. Woodward, Washington, D. C., goose.
G. E. Worthington, Washington, D. C., alligator.
Donor unknown, red-breasted or Brazilian cardinal.

Births.—There were 54 mammals born and 48 birds hatched in the Park during the year. These include the following:

MAMMALS

Scientific name	Common name	*Number*
Ammotragus lervia	Aoudad	4
Axis axis	Axis deer	2
Bison bison	American bison	4
Capra sibirica	Siberian ibex	2
Cervus canadensis	American elk or wapiti	1
Cervus duvaucelii	Barasingha deer	1
Cervus elaphus	Red deer	5
Dama dama	Fallow deer	7
Dolichotis patagonica	Patagonian cavy	1
Equus przewalskii	Mongolian wild horse	1
Equus quagga chapmani	Chapman's zebra	1
Felis onca	Jaguar	3
Lama glama	Llama	2
Marmota monax	Woodchuck	4
Odocoileus virginianus	Virginia deer	2
Oryx beisa annectens	Ibean beisa oryx	1
Sika nippon	Japanese deer	4
Taurotragus oryx	Eland	1
Thalarctos maritimus × *Ursus gyas*	Polar and Alaska brown bear hybrid	4
Ursus arctos	European brown bear	1
Ursus gyas	Alaska Peninsula bear	2
Zalophus californianus	California sea-lion	1

BIRDS

Ardea herodias × *A. occidentalis*	Hybrid heron	3
Larus delawarensis	Ring-billed gull	1
Larus novaehollandiae	Silver gull	13
Nycticorax nycticorax naevius	Black-crowned night heron	26
Pavo cristatus	Peafowl	4
Phalacrocorax auritus floridanus	Florida cormorant	1

Exchanges.—Notable additions obtained through the medium of exchange were 2 fennecs, 7 Jackson's bustards, an African black rail, 10 soft-shelled tortoises, 4 leopard tortoises, 2 puff adders and various small birds from Christoph Schulz, Arusha, East Africa. A black leopard was obtained from Ellis Joseph, New York City. From the Staten Island Zoo, through the Director, Carol Stryker, a shipment of especially rare specimens was received, including 4 mountain pit vipers, 6 sea snakes, 2 gliding snakes, 2 mangrove snakes, 3 Malay spitting cobras, and 6 prairie rattlesnakes.

Purchases.—Important purchases during the year were a pair of solenodons, a Grevy's zebra, and a trio of gayals, the latter the first ever exhibited at the Park.

REMOVALS

Deaths.—Important losses by death during the year include two jackass penguins, three pumas, a Chapman's zebra, a California sea-lion, and a lion.

During the year 406 specimens that died were sent to the National Museum.

ANIMALS IN COLLECTION THAT HAD NOT PREVIOUSLY BEEN EXHIBITED

MAMMALS

Scientific name	*Common name*
Bos frontalis	Gayal.
Felis sylvestris	Old World wildcat.
Desmodus rotundus murinus	Vampire bat.

BIRDS

Dissemurus paradiseus	Giant racquet-tailed drongo.
Hypomorphnus urubitinga	Brazilian eagle.

REPTILES

Deiroptyx vermiculatus	Diving anolis lizard.
Laticauda colubrina	Sea snake.
Naja flava	Golden cobra.
Sepedon haemachates	Rhingal or spitting cobra.
Trimeresurus monticola	Mountain pit viper.

Statement of the collection

Class	Presented	Born	Received in exchange	Purchased	On deposit	Total
Mammals	46	54	5	45	14	164
Birds	75	48	26	119	3	271
Reptiles	141	----	44	68	4	257
Amphibians	40	----	----	20	----	60
Fishes	10	----	----	10	----	20
Arachnids	9	----	----	----	----	9
Crustaceans	2	----	----	----	----	2
Insects	3	----	----	----	----	3
Total	326	102	75	262	21	786

Summary

Animals on hand July 1, 1935	2,170
Accessions during the year	786
Total animals in collection during year	2,956
Removal from collection by death, exchange, and return of animals on deposit	765
In collection June 30, 1936	2,191

Status of collection

Class	Species	Individuals	Class	Species	Individuals
Mammals	173	529	Insects	2	21
Birds	310	900	Mollusks	1	2
Reptiles	128	366	Crustaceans	1	2
Amphibians	29	184			
Fishes	28	184	Total	675	2,191
Arachnids	3	3			

ANIMALS IN THE NATIONAL ZOOLOGICAL PARK, JUNE 30, 1936

MAMMALS

Marsupialia:		
Didelphis virginiana	Opossum	6
Carnivora:		
Canis latrans	Coyote	8
	Albino coyote	1
Canis latrans × *domesticus*	Coyote × dog hybrid	2
Canis lycaon	Timber wolf	2
Canis nubilus	Plains wolf	8
Canis nubilus × *domesticus*	Wolf × dog hybrid	1
Chrysocyon jubata	Maned wolf	1
Civettictis civetta	Civet	1
Crocuta crocuta germinans	East African spotted hyena	1
Euarctos americanus	American black bear	6
Euarctos emmonsii	Glacier bear	2
Felis cattus	Siamese cat	2
Felis concolor azteca	Mexican puma	3
Felis concolor oregonensis	Puma	2
Felis leo	Lion	6
Felis onca	Jaguar	4
	Black jaguar	2
Felis pardus	Leopard	2
	Black leopard	1
Felis serval	Serval	1
Felis sylvestris	Old World wildcat	1
Felis temmincki	Golden cat	1
Felis tigris longipilis	Siberian tiger	2
Felis tigris sondaicus	Sumatran tiger	2
Fennecus zerda	Fennec	2
Galictis barbara barbara	White tayra	2
Genetta dongalana neumanni	Neumann's genet	1
Helarctos malayanus	Malay or sun bear	1

MAMMALS—continued

Carnivora—Continued.		
Herpestes birmanicus	Burmese mongoose	1
Hyaena brunnea	Brown hyena	2
Lutra canadensis vaga	Florida otter	2
Lycaon pictus	Cape hunting dog	1
Lynx baileyi	Bailey's lynx	1
Lynx caracal	Caracal	1
Lynx rufus	Bay lynx	5
Mellivora capensis	Ratel	1
Mephitis nigra	Skunk	4
Mustela eversmanni	Ferret	5
Nasua narica	Gray coatimundi	3
Nasua nelsoni	Nelson's coatimundi	1
Nyctereutes procyonoides	Raccoon dog	1
Otocyon megalotis	Long-eared fox	1
Potos flavus	Kinkajou	2
Procyon cancrivorus	Crab-eating raccoon	1
Procyon lotor	Albino raccoon	4
	Raccoon	17
Spilogale ambarvalis	Southern skunk	1
Thalarctos maritimus	Polar bear	2
Thalarctos maritimus × *Ursus gyas*	Polar × Alaska brown bear hybrid	3
Urocyon cinereoargenteus	Gray fox	5
Ursus arctos	European brown bear	4
Ursus gyas	Alaska peninsula brown bear	4
Ursus kidderi	Kidder's bear	2
Ursus middendorffi	Kodiak bear	3
Ursus sitkensis	Sitka brown bear	3
Ursus thibetanus	Himalayan bear	1
Viverra megaspila	Indian palm civet	3
Vulpes fulva	Red fox	8
Pinnipedia:		
Eumetopias jubatus	Steller's sea lion	1
Phoca richardii	Pacific harbor seal	3
Zalophus californianus	California sea lion	2
Primates:		
Cebus apella	Brown capuchin	1
Cebus capucinus	White-throated capuchin	5
Cebus fatuellus	Weeping capuchin	4
Cebus sp.	Gray capuchin	2
Cercocebus fuliginosus	Sooty mangabey	4
Cercopithecus albigularis	Sykes's guenon	2
Cercopithecus brazzae	DeBrazza's guenon	1
Cercopithecus callitrichus	Green guenon	3
Cercopithecus diana	Diana monkey	1
Cercopithecus griseoviridis	Grivet monkey	2
Cercopithecus petaurista	Lesser white-nosed guenon	2
Cercopithecus roloway	Roloway monkey	1
Cólobus caudatus	White-tailed guereza	1
Colobus polycomus	White-tailed colobus	1
Lagothrix lagotricha	Woolly monkey	1
Lemur varius	Ruffed lemur	1
Leontocebus geoffroyi	Marmoset	2

MAMMALS—continued

Primates—Continued.		
Macaca fuscata	Japanese macaque	2
Macaca mordax	Javan macaque	2
Macaca mulatta	Rhesus monkey	12
Macaca nemestrina	Pig-tailed monkey	1
Macaca silenus	Wanderoo monkey	2
Macaca sinica	Bonnet monkey	1
Macaca sp	Macaque monkey	1
Magus maurus	Moor monkey	1
Mandrillus leucophaeus	Drill	1
Mandrillus sphinx	Mandrill	3
Pan calvescens	Chimpanzee	1
Pan satyrus	Chimpanzee	1
Papio anubis	Anubis baboon	1
Papio cynocephalus	Golden baboon	3
Papio hamadryas	Hamadryas baboon	1
Papio porcarius	Chacma	2
Pongo abelii	Sumatran orangutan	1
Symphalangus syndactylus	Siamang gibbon	1
Theropithecus gelada	Gelada baboon	1
Rodentia:		
Acanthion brachyurum	Malay porcupine	2
Capromys pilorides	Hutia	6
Castor canadensis	Beaver	2
Cavia porcellus	Domestic guinea pig	1
Citellus mollis	Utah ground squirrel	1
Cuniculus paca virgatus	Central American paca	2
Cynomys ludovicianus	Prairie dog	1
Dasyprocta rubrata	Trinidad agouti	2
Dolichotis megallanica	Patagonian cavy	1
Dolichotis salinicola	Dwarf cavy	2
Glaucomys volans	Flying squirrel	8
Hystrix galeata	East African porcupine	2
Marmota monax	Woodchuck or groundhog	4
	Albino woodchuck or groundhog	1
Myocastor coypu	Coypu	4
Myoprocta sp.	Tailed agouti	1
Sciurus finlaysoni	Lesser white squirrel	3
Sciurus hoffmani sub. sp	Hoffman's squirrel	3
Sciurus niger	Fox squirrel	2
Sciurus sp	Squirrel	1
Lagomorpha:		
Oryctolagus cuniculus	Domestic rabbit	2
	Angora rabbit	1
Artiodactyla:		
Æpyceros melampus suara	East African impalla	1
Ammotragus lervia	Aoudad	9
Anoa depressicornis	Anoa	1
Antilope cervicapra	Black buck or Indian antelope	1
Axis axis	Axis deer	6
Babirussa alfurus	Babirussa	2
Bison bison	American bison	21
Bos frontalis	Gayal	3
Bos indicus	Zebu	3

MAMMALS—continued

Artiodactyla—Continued.		
Boselaphus tragocamelus	Nilgai	2
Bubalus bubalis	Indian buffalo	1
Camelus bactrianus	Bactrian camel	1
Camelus dromedarius	Arabian or single-humped camel	3
Capra sibirica	Siberian ibex	4
Cervus canadensis	American elk or wapiti	2
Cervus duvaucelii	Barasingha	4
Cervus elaphus	European red deer	17
Cervus xanthopygus	Bedford deer	2
Choeropsis liberiensis	Pigmy hippopotamus	2
Connochaetes gnu	White-tailed gnu	2
Connochaetes taurinus	Brindled gnu	1
Connochaetes taurinus albojubatus	White-bearded gnu	2
Dama dama	Fallow deer	13
	White fallow deer	18
Hemitragus jemlahicus	Tahr	4
Hippopotamus amphibius	Hippopotamus	1
Hyelaphus porcinus	Hog deer	2
Lama glama	Llama	7
Lama huanacus	Guanaco	2
Muntiacus sinensis	Barking or rib-faced deer	1
Odocoileus costaricensis	Costa Rican deer	2
Odocoileus virginianus	Virginia deer	6
Onotragus lechee	Lechee antelope	1
Oryx beisa annectens	Ibean beisa oryx	2
Ovis europaeus	Mouflon	5
Pecari angulatus	Collared peccary	3
Phacochoerus aethiopicus massaicus	East African wart hog	3
Poephagus grunniens	Yak	4
Rucervus eldii	Burmese deer	1
Rusa moluccensis	Molucca deer	2
Saiga tatarica	Saiga antelope	2
Sika nippon	Japanese deer	22
Sus scrofa	European wild boar	2
Taurotragus oryx	Eland	2
Tayassu pecari	White-lipped peccary	2
Perissodactyla:		
Diceros bicornis	Black rhinoceros	1
Equus grevyi	Grevy's zebra	1
Equus grevyi-asinus	Zebra-ass hybrid	1
Equus grevyi-caballus	Zebra-horse hybrid	1
Equus onager	Asiatic wild ass or kiang	2
Equus przewalskii	Mongolian wild horse	2
Equus quagga chapmani	Chapman's zebra	8
Equus zebra	Mountain zebra	2
Tapirella bairdii	Baird's tapir	1
Tapirus terrestris	Brazilian tapir	1
Proboscidea:		
Elephas indicus	Indian elephant	1
Elephas sumatranus	Sumatra elephant	1
Loxodonta africana oxyotis	African elephant	1
Edentata:		
Choloepus didactylus	Two-toed sloth	5

BIRDS

Ratitae:		
Casuarius unipendiculatus	Single-wattled cassowary	1
Dromiceius novaehollandiae	Common emu	2
Rhea americana	Common rhea or nandu	1
Struthio camelus	Ostrich	2
Pelecaniformes:		
Anhinga anhinga	Anhinga	2
Nannopterum harrisi	Flightless cormorant	2
Pelecanus californicus	California brown pelican	2
Pelecanus conspicillatus	Australian pelican	1
Pelecanus erythrorhynchos	American white pelican	8
Pelecanus erythrorhynchos × *P. occidentalis*	Hybrid pelican	1
Pelecanus occidentalis	Brown pelican	4
Pelecanus onacrotalus	European pelican	3
Pelecanus roseus	Rose-colored pelican	2
Phalacrocorax auritus albociliatus	Farallone cormorant	2
Phalacrocorax auritus floridanus	Florida cormorant	3
Sulu granti	Blue-footed booby	1
Ciconiiformes:		
Ajaja ajaja	Roseate spoonbill	1
Ardea herodias	Great blue heron	1
Ardea herodias × *A. occidentalis*	Heron hybrid	2
Ardea occidentalis	Great white heron	2
Balaeniceps rex	Shoe-bill heron	1
Cochlearius cochlearius	Boatbill heron	3
Dissura episcopus	Woolly-necked stork	1
Ephippiorhynchus senegalensis	Saddle-billed stork	1
Guara alba	White ibis	5
Guara alba × *G. rubra*	Hybrid scarlet—white ibis	1
Guara rubra	Scarlet ibis	2
Herodias egretta	American egret	1
Leptoptilus crumeniferus	Maribou	1
Leptoptilus dubius	Indian adjutant	1
Leptoptilus javanicus	Lesser adjutant	2
Mycteria americana	Wood ibis	1
Nycticorax nycticorax naevius	Black-crowned night heron	50
Scopus umbretta	Hammerhead	1
Threskiornis aethiopicus	Sacred ibis	2
Threskiornis melanocephalus	Black-headed ibis	2
Anseriformes:		
Aix sponsa	Wood duck	6
Alopochen aegyptiacus	Egyptian goose	2
Anas domestica	Peking duck	4
Anas platyrhynchos	Mallard	31
	Call duck (white)	2
Anas rubripes	Black or dusky mallard	2
Anas undulata	African yellow-billed duck	2
Anser albifrons	American white-fronted goose	3
Anser brachyrhynchus	Pink-footed goose	1
Anser fabalis	Bean goose	3
Branta bernicla glaucogastra	Brant	3
Branta canadensis	Canada goose	6

BIRDS—continued

Anseriformes—Continued.		
Branta canadensis hutchinsii	Hutchin's goose	4
Branta canadensis minima	Cackling goose	4
Branta canadensis occidentalis	White-cheeked goose	20
Branta leucopsis	Barnacle goose	1
Cairina moschata	Muscovy duck	3
Casarca variegata	Paradise duck	1
Cereopsis novaehollandiae	Cereopsis or Cape Barren goose	1
Chen atlantica	Snow goose	7
Chen caerulescens	Blue goose	9
Chenopis atrata	Black swan	1
Chloephaga leucoptera	Magellan goose	1
Cygnopsis cygnoides	Chinese goose	3
Cygnus columbianus	Whistling swan	3
Cygnus olor	Mute swan	2
Dafila acuta	Pintail duck	5
Dafila bahamensis	Bahaman pintail	1
Dafila acuta ×	Pintail hybrid	1
Dendrocygna arborea	Black-billed tree duck	5
Dendrocygna autumnalis	Black-bellied tree duck	4
Dendrocygna viduata	White-faced tree duck	1
Dendronessa galericulata	Mandarin duck	1
Leptotarsis eytoni	Eyton's tree duck	2
Mareca americana	Baldpate	2
Neochen jubata	Orinoco goose	2
Nesochen sandvicensis	Hawaiian goose	1
Nettion carolinense	Green-winged teal	1
Nyroca affinis	Lesser scaup	4
Nyroca americana	Redhead	1
Nyroca collaris	Ring-neck duck	1
Nyroca valisineria	Canvasback duck	2
Philacte canagica	Emperor goose	13
Plectropterus gambensis	Spur-winged goose	2
Querquedula cyanoptera	Cinnamon teal	1
Querquedula discors	Blue-winged teal	1
Sarkidiornis melanota	Comb duck	1
Tadorna tadorna	Shelldrake	1
Falconiformes:		
Aegypius monachus	Cinereous vulture	1
Aquila chrysaetos	Golden eagle	2
Buteo borealis	Red-tailed hawk	4
Buteo lineatus	Red-shouldered hawk	1
Buteo platypterus	Broad-winged hawk	1
Buteo swainsoni	Swainson's hawk	1
Cathartes aura	Turkey vulture	3
Coragyps atratus	Black vulture	1
Falco albigularis	White-throated bat-falcon	1
Falco sparverius	Sparrowhawk	4
Gymnogyps californianus	California condor	3
Gypaetus barbatus grandis	Lammergeyer	1
Gyps rueppelli	Ruppell's vulture	1
Haliastur indus	Malay brahminy kite	1
Haliaeetus leucocephalus	Bald eagle	17

BIRDS—continued

Falconiformes—Continued.		
Hypomorphnus urubitinga	Brazilian eagle	1
Milvus migrans	Yellow-billed kite	1
Pandion haliaetus carolinensis	Osprey or fish hawk	1
Polihierax semitorquatus	African pigmy falcon	5
Polyborus cheriway	Audubon's caracara	2
Polyborus plancus	South American caracara	1
Stephanoaetus coronatus	Crowned hawk-eagle	1
Torgos tracheliotus	African eared-vulture	1
Uroaetus audax	Wedge-tailed eagle	1
Vultur gryphus	South American condor	1
Galliformes:		
Alectoris graeca	Greek partridge	2
Argusianus argus	Argus pheasant	2
Calophasis ellioti	Elliot's pheasant	1
Chrysolophus amherstiae	Lady Amherst's pheasant	3
Chrysolophus amherstiae × *Syrmaticus reevesi.*	Hybrid	2
Chrysolophus pictus	Golden pheasant	4
Colinus virginianus	Bob-white	1
Crax globicera	Mexican curassow	1
Crax globulosa	Spix's wattled curassow	2
Crax panamensis	Panama curassow	1
Crossoptilon mantchuricum	Brown eared-pheasant	1
Gennaeus lineatus	Lineated pheasant	3
Gennaeus nycthemerus	Silver pheasant	2
Gennaeus nycthemerus bellii	Bell's silver pheasant	1
Hierophasis swinhoei	Swinhoe's pheasant	4
Lophophorus impeyanus	Himalayan Impeyan pheasant	2
Meleagris gallopavo	Domestic turkey	1
Mitu mitu	Razor-billed curassow	1
Mitu salvini	Salvini's curassow	1
Numida mitrata reichenowi	Reichenow's helmeted guinea fowl	3
Pavo cristatus	Blue peafowl	4
	White peafowl	1
Pavo muticus	Green peafowl	2
Penelope boliviana	Crested guan	1
Phasianus torquatus	Ring-necked pheasant	10
Syrmaticus reevesi	Reeve's pheasant	3
Gruiformes:		
Anthropoides virgo	Demoiselle crane	4
Antigone antigone	Saras crane	1
Antigone australasiana	Australian crane	1
Balearica pavonina	West African crowned crane	1
Balearica regulorum gibbericeps	East African crowned crane	1
Eurypyga helias	Sun bittern	2
Fulica americana	Coot	1
Gallinula chloropus cachinnans	Florida gallinule	1
Grus canadensis tabida	Sandhill crane	1
Grus leucauchen	White-naped crane	1
Grus leucogeranus	Siberian crane	2
Limnocorax flavirostra	African black rail	3
Otis cafra	Denham's bustard	1

BIRDS—continued

Gruiformes—Continued.		
Otis cafra jacksoni	Jackson's bustard	1
Porphyrio melanotus	New Zealand mud hen	1
Porphyrio poliocephalus	Gray-headed porphyrio	2
Psophia crepitans	Gray-backed trumpeter	1
Charadriiformes:		
Belonopterus cayennensis	South American lapwing	1
Haematopus ostralegus	European oyster catcher	2
Larus argentatus	Herring gull	3
Larus atricilla	Laughing gull	2
Larus delawarensis	Ring-billed gull	4
Larus novaehollandiae	Silver gull	49
Larus ridibundus	European gull	1
Philomachus pugnax	Ruff	2
Sarciophorus tectus	Black-headed plover	1
Columbiformes:		
Caloenas nicobarica	Nicobar pigeon	1
Columba guinea	Triangular-spotted pigeon	1
Columba leucocephala	White-crowned pigeon	1
Columba leuconota	Tibetan pigeon	2
Columba palumbus	Wood pigeon	2
Columba sp	Archangel pigeon	2
Columba sp	Fan-tailed pigeon	2
Goura sclateri	Sclater's crowned pigeon	1
Leptotila rufaxilla	Scaled pigeon	1
Ocyphaps lophotes	Crested pigeon	1
Pterocles orientalis	Oriental sandgrouse	2
Streptopelia risoria	Ring-necked dove	6
Streptopelia senegalensis	East African ring-necked dove	2
Turtur risorius	Turtledove	4
Zenaidura macroura	West Indian dove	3
Cuculiformes:		
Centropus sinensis	Sumatran coucal	1
Crotophaga ani	Ani or Savanna cuckoo	2
Cuculus canorus	European cuckoo	2
Psittaciformes:		
Agapornis lilianae	Nyassa lovebird	2
Amazona albifrons	White-fronted parrot	4
Amazona amazonica	Orange-winged parrot	2
Amazona arausiaca	Bouquet's parrot	1
Amazona auropalliata	Yellow-naped parrot	7
Amazona farinosa	Mealy parrot	1
Amazona festiva	Festive parrot	1
Amazona leucocephala	Cuban parrot	1
Amazona ochrocephala	Orange-fronted parrot	3
Amazona ochroptera	Yellow-shouldered parrot	3
Amazona oratrix	Double yellow-headed parrot	5
Amazona ventralis	Santo Domingo parrot	1
Amazona viridigenalis	Red-crowned parrot	3
Anodorhynchus hyacinthinus	Hyacinthine macaw	1
Aprosmictus erythropterus	Crimson-winged paroquet	1
Ara ararauna	Yellow and blue macaw	4
Ara macao	Red, yellow, and blue macaw	4

BIRDS—continued

Psittaciformes—Continued.		
Ara maracana	Illiger's macaw	4
Ara mexicana	Mexican green macaw	3
Ara severa	Severe macaw	1
Aratinga jendaya	Jenday conure	1
Aratinga holochlora	White-eyed parrot	2
Aratinga solstitialis	Yellow paroquet	2
Brotogeris jugularis	Tovi paroquet	2
Coracopsis nigra	Lesser vasa parrot	1
Cyanopsittacus spixi	Spix's macaw	3
Deroptyus accipitrinus	Hawk-head parrot	1
Eolophus roseicapillus	Roseate cockatoo	6
Eos reticulata	Blue-eared lory	2
Eos rubra	Red lory	1
Eupsittula aurea	Golden-crowned paroquet	1
Eupsittula canicularis	Petz's paroquet	2
Forpus guianensis	Green-rumped parrotlet	1
Kakatoe galerita	Sulphur-crested cockatoo	1
Kakatoe leadbeateri	Leadbeater's cockatoo	2
Kakatoe moluccensis	Great red-crested cockatoo	1
Kakatoe sulphurea	Lesser sulphur-crested cockatoo	1
Leptolophus novaehollandicus	Cockateel	2
Melopsittacus undulatus	Grass paroquet	26
Microglossus aterrimus	Great black cockatoo	1
Myopsitta monachus	Quaker paroquet	1
Nandayus nanday	Nanday paroquet	1
Nestor notabilis	Kea	4
Pionites xanthomera	Amazonian caique	2
Pionus menstruus	Blue-headed parrot	1
Psittacus erithacus	African gray parrot	1
Psittacus k. kremeri	Long-tailed paroquet	3
Psittacus nepalensis	Nepalese paroquet	1
Tanygnathus megalorhynchus	Great-billed parrot	1
Trichoglossus cyanogrammus	Green-naped lory	1
Trichoglossus forsteni	Forsten's paroquet	1
Trichoglossus novaehollandiae	Blue-bellied lory	1
Strigiformes:		
Bubo virginianus	Great horned owl	5
Otus asio	Screech owl	1
Strix varia varia	Barred owl	7
Caprimulgiformes:		
Chordeiles minor minor	Nighthawk	3
Coraciiformes:		
Buceros rhinoceros	Rhinoceros hornbill	1
Bucorvus abyssinicus	Abyssinian ground hornbill	2
Dacelo gigas	Kookaburra	4
Dichoceros bicornis	Concave-casqued hornbill	2
Piciformes:		
Aulacorhynchus erythrognathus	Venezuelan toucanette	1
Cyanops asiatica	Asiatic red-fronted barbet	1
Pteroglossus bitorquatus	Two-banded aracari	4
Ramphastos culminatus	White-breasted toucan	1
Ramphastos toco	Toco toucan	2

BIRDS—continued

Piciformes—Continued.		
Selenidera culik	Guiana toucanette	2
Thereiceryx lineatus	Streaked barbet	1
Passeriformes:		
Agelaius icterocephalus	Yellow-headed marsh bird	1
Amadina fasciata	Cut-throat finch	1
Amblyrhamphus holosericeus	Red-headed marsh troupial	1
Aphelocoma californica woodhousei	Woodhouse's jay	2
Calocitta formosa	Mexican magpie jay	1
Carduelis carduelis	European gold finch	1
Chasmorhynchus nudicollis	Naked-throated bell-bird	1
Cissa chinensis	Chinese cissa	2
Coliuspasser albonotatus	Yellow-shouldered whydah	1
Coliuspasser ardens	Red-necked whydah	4
Corvus albus	White-breasted crow	2
Corvus brachyrhynchos	American crow	2
Corvus corax sinuatus	American raven	1
Corvus coronoides	Australian crow	1
Corvus cryptoleucus	White-necked raven	9
Cosmopsarius regius	Splendid starling	3
Cyanerpes cyaneus	Blue honey-creeper	4
Cyanocorax chrysops	Pileated jay	2
Cyanocorax cyanopogon	White-naped jay	4
Dicrurus mirabilis	White-bellied drongo	1
Dissemurus paradiseus	Giant racquet-tailed drongo	1
Elathea jocosa	Red-eared bulbul	1
Fringilla montifringilla	Brambling finch	1
Galeopsar salvadorii	Crested starling	1
Gracula palawanensis	Palawan mynah	2
Gracula religiosa	Southern hill mynah	4
Gymnomystax mexicanus	Giant oriole	1
Icterus giraudi	Giraud's oriole	1
Kittacincla malabarica	Shama thrush	1
Lamprocolius sycobius	Southern glossy starling	1
Lanius dorsalis	Teita fiscal-shrike	2
Melanopteryx rubiginosus	Chestnut weaver	9
Molpastes haemorrhous	Black-headed bulbul	1
Momotus momotus parensis	Motmot	2
Padda oryzivora	White Java sparrow	2
Paradisea minor	Lesser bird-of-paradise	1
Paroaria cucullata	Red-crested or Brazilian cardinal	2
Pheucticus tibialis	Yellow grosbeak	1
Pica nuttalli	Yellow-billed magpie	4
Pica pica hudsonia	Magpie	7
Pitangus sulphuratus	Kiskadee flycatcher	3
Ploceus intermedius	Black-cheeked weaver	25
Pomatorhinus sp	Scimitar babbler	1
Psomocolax oryzivora	Rice grackle	1
Quelea sanguinirostris intermedia	Southern masked-weaver-finch	1
Seleucides niger	12-wired bird-of-paradise	2
Serinus canarius	Canary	19
Sicalis minor	Lesser saffron finch	1
Sporophila aurita	Hick's seedeater	5

BIRDS—continued

Passeriformes—Continued.		
Sporophila gutturalis	Yellow-bellied seedeater	2
Sporophila lineola	White-crowned seedeater	3
Steganura paradisea	Paradise whydah	2
Taeniopygia castanotis	Zebra finch	6
Tanagara fulvicrissa	Fulvous-vented euphonia	2
Tanagra luteicapilla	Yellow-crowned euphonia	9
Thraupis cana	Blue tanager	2
Tiaris canora	Melodius grassquit	2
Tiaris olivacea	Mexican grassquit	7
Turdus grayi	Bonaparte's thrush	1
Urocissa occipitalis	Red-billed blue magpie	2
Volatinia jacarini	Blue-black grassquit	4
Xanthocephalus xanthocephalus	Yellow-headed blackbird	3
Xanthoura luxuosa guatemalensis	Guatemala green jay	1
Xanthoura luxuosa sub. sp	Nicaragua green jay	1

REPTILES

Chelonia:		
Amyda ferox	Soft-shelled turtle	7
Chelodina longicollis	Australian snake-necked turtle	5
Chelydra osceola	Florida snapping turtle	1
Chelydra rossignonii	Rossignon's snapping turtle	1
Chelydra serpentina	Snapping turtle	8
Chrysemys picta	Painted turtle	2
Clemmys guttata	Spotted turtle	1
Clemmys insculpta	Wood turtle	3
Clemmys muhlenbergii	Muhlenberg's tortoise	1
Cyclemys amboinensis	Malayan box turtle	1
Gopherus agassizii	Agassiz's tortoise	1
Hydromedusa tectifera	South American snake-necked turtle	4
Kinosternon flavescens	Musk turtle	1
Kinosternon subrubrum	Musk turtle	6
Macrochelys temminckii	Alligator snapping turtle	1
Malaclemmys centrata	Diamond-back terrapin	11
Pelomedusa galeata	Common African water-tortoise	2
Platemys platycephala	Flat-headed turtle	1
Podocnemis expansa	South American river-tortoise	1
Pseudemys concinna	Cooter	7
Pseudemys decussata	Haitian tortoise	1
Pseudemys elegans	Cumberland terrapin	2
Pseudemys floridana	Florida terrapin	6
Pseudemys pseudogeographica	False geographic turtle	1
Pseudemys rugosus	Cuban turtle	1
Terrapene carolina	Box tortoise	20
Terrapene major	Florida box turtle	2
Terrapene ornata	Ornate box tortoise	2
Testudo elephantina	Elephant tortoise	2
Testudo ephippium	Duncan Island tortoise	7
Testudo hoodensis	Hood Island tortoise	2
Testudo pardalis	Leopard tortoise	1
Testudo radiata	Radiated tortoise	1

REPTILES—continued

Chelonia—Continued.		
Testudo tabulata	South American tortoise	1
Testudo torneri	Soft-shelled land tortoise	1
Testudo vicina	Albemarle Island tortoise	1
Crocodilia:		
Alligator mississipiensis	American alligator	30
Caiman sclerops	Spectacled caiman	3
Crocodylus acutus	American crocodile	1
Crocodylus cataphractus	West African crocodile	1
Crocodylus palustris	Marsh crocodile or mugger	1
Crocodylus porosus	Salt water crocodile	2
Osteolaemus tetraspis	Broad-nosed crocodile	1
Lacertilia:		
Agama stellio	Agama lizard	2
Anolis carolinensis	False chameleon	16
Anolis equestris	Giant anolis	8
Anolis porcatus	Cuban anolis	2
Basiliscus vittatus	Banded basilisk	1
Cnemidophorus sexlineatus	Six-lined lizard	1
Coleonyx sp	Coleonyx lizard	1
Conolophus subcristatus	Galapagos iguana	1
Crocodilurus lacertinus	Crocodile lizard	4
Crotaphytus collaris	Collared lizard	1
Cyclura cornuta	Rhinoceros iguana	1
Dracaena guianensis	Dragon lizard	2
Eumeces faciatus	Blue-tailed skink	2
Eumeces obsoletus	Brown skink	1
Gerrhosaurus validus	Robust plated lizard	1
Heloderma horridum	Beaded lizard	2
Heloderma suspectum	Gila monster	5
Leiocephalus cubensis	Cuban curl-tailed lizard	18
Ophisaurus ventralis	Glass snake	2
Phrynosoma cornutum	Horned lizard	1
Phrynosoma platyrhinos	Horned lizard	3
Physignathus lesueurii	Lesueur's water dragon	1
Plica plica	Plicated lizard	1
Sceloporus magister	Western spiny lizard	2
Sceloporus undulatus	Fence lizard	4
Tiliqua nigrolutea	Mottled lizard	1
Tiliqua scincoides	Blue-tongued lizard	2
Trachysaurus rugosus	Stump-tailed lizard	3
Tupinambis nigropunctatus	Tegu lizard	2
Urocentron azureum	Urocentron lizard	1
Uta stansburiana	Stansbury's lizard	1
Varanus gouldii	Gould's monitor	4
Varanus komodoensis	Komodo dragon	1
Zonurus giganteus	Spiny lizard	1
Ophidia:		
Abastor erythrogrammus	Hoop snake or rainbow snake	1
Agkistrodon mokasen	Copperhead snake	2
Agkistrodon piscivorus	Water moccasin	4
Alsophis angulifer	Jubo or Culebra snake	4
Bitis arietans	Puff adder	3

REPTILES—continued

Ophidia—Continued.

Boa canina	Green tree boa	2
Boa cookii	Cook's tree boa	1
Boiga dendrophila	Mangrove snake	1
Coluber c. constrictor	Black snake	2
Constrictor constrictor	Boa constrictor	1
Constrictor mexicana	Mexican boa	1
Crotalus adamanteus	Diamond-back rattlesnake	3
Crotalus cerastes	Sidewinder rattlesnake	1
Crotalus confluentus	Western rattlesnake	1
Crotalus horridus	Banded rattlesnake	1
Drymarchon corais cooperi	Indigo snake	2
Elaphe guttata	Corn snake	2
Elaphe laeta	Emory's snake	3
Elaphe obsoleta obsoleta	Pilot snake	2
Elaphe quadrivittata	Chicken snake	2
Elaphe vulpina	Fox snake	1
Epicrates angulifer	Cuban tree boa	2
Epicrates cenchris	Rainbow boa	12
Eryx johni	Sand boa	1
Eunectes murinus	Anaconda	4
Farancia abacura	Horn snake	1
Heterodon contortrix	Hog-nosed snake	1
Lampropeltis g. getulus	King or chain snake	2
Lampropeltis getulus holbrooki	Holbrook's king snake	2
Lampropeltis t. triangulum	Milk snake	1
Leimadophis andreae	Jubito or magdalena snake	1
Leptodira albofusca	Common tree snake	1
Liopeltis sp	Green snake	1
Masticophis f. flagellum	Coachwhip	2
Naja flava	Golden cobra	1
Naja tripudians	Indian cobra	1
Naja tripudians sumatrana	Sumatran black-headed cobra	1
Natrix cyclopion	Water snake	1
Natrix sp	Water snake	5
Opheodrys aestivus	Rough-scaled green snake	2
Phrynonax sulphureus	South American rat snake	1
Pituophis melanoleucus	Bull snake	1
Pituophis sayi	Pine snake	2
Python molurus	Indian python	1
Python regius	Ball python	1
Python reticulatus	Regal python	4
Sistrurus catenatus catenatus	Massasauga rattlesnake	2
Thamnophis sauritus proximus	Garter snake	1
Thamnophis sirtalis	Garter snake	3
Tretanorhinus variabilis	Cuban water snake	1
Trimeresurus monticola	Mountain pit viper	1

AMPHIBIANS

Caudata:

Amphiuma means	Blind eel or congo snake	1
Amphiuma tridactylum	Blind eel or congo snake	1
Cryptobranchus alleganiensis	Hellbender	7

AMPHIBIANS—continued

Caudata—Continued.		
Salamandra salamandra	Fire salamander	7
Triturus pyrrhogaster	Red-bellied Japanese newt	6
Triturus viridescens	Common newt	18
Salientia:		
Atelopus varius cruciger	Yellow atelopus	2
Atelopus v. *varius*	Red, yellow, and black atelopus	7
Bombina bombina	Bell toad	4
Bufo alvarius	Green toad	5
Bufo americanus	Common American toad	2
Bufo empusus	Sapo de concha	15
Bufo fowleri	Fowler's toad	1
Bufo marinis	Marine toad	6
Bufo peltocephalus	Cuban giant toad	1
Ceratophrys dorsata	Horned toad	3
Dendrobates auratus	Arrow-poison frog	37
Dendrobates minutus	Golden-striped frog	2
Dendrobates pumilio	Red dendrobates	5
Hyla caerulea	Australian tree frog	6
Hyla crucifer	"Spring peeper" tree frog	4
Hyla septentrionalis	Cuban tree frog	20
Pipa americana	Surinam toad	1
Rana catesbeiana	Bullfrog	5
	Bullfrog (albino)	1
Rana clamitans	Green frog	1
Rana grylio	Southern bullfrog	3
Rana palustris	Pickerel frog	1
Rana sphenocephala	Southern leopard frog	1
Xenopus mulleri	Muller's clawed frog	2

FISHES

Acanthopthalmus kuhlii		5
Barbus sp		8
Betta splendens	Siamese fighting fish	1
Brachydanion rerio	Zebra fish	5
Corydoras aeneus	Trinidad armored catfish	3
Corydoras melanistius	Armored catfish	1
Electrophorus electricus	Electric eel	2
Helostoma temminckii	Kissing gourami	2
Hemigrammus unilineatus		1
Heterandria formosa		8
Hyphessobrycon bifasciatus	Yellow characin	1
Hypostomus sp	Armored catfish	2
Jordanella floridae	American flag fish	9
Kryptopterus bicirrhus	Glass catfish	4
Lebistes reticulatus	Guppy	50
Lepidosiren paradoxa	South American lungfish	3
Leporinus fasciatus		1
Malopterurus electricus	Electric catfish	1
Monocirrhus polyacanthus	Leaf fish	2
Pantodon buchholzi	Butterfly fish	1
Platypoecilus maculatus	Goldplaties	40
Pristella riddlei		12

FISHES—continued

Protopterus annectens	African lungfish	2
Pterophyllum scalare	Angel fish	3
Rasbora heteromorpha		12
Trichogaster trichopterus	Three-spot gourami	3
Xiphophorus hellerii	Swordtail	2

ARACHNIDS

Eurypelma sp	Tarantula	1
Latrodectus mactans	Black widow spider	1
Mastigoproctus giganteus	Vinegarone or whip scorpion	1

INSECTS

Blabera sp	Giant cockroach	20
Pogonomyrmex badius	Agricultural ant	1 colony

MOLLUSKS

Achatina variegata	Giant land snail	2

CHILOPODA

Scolupendra sp	Giant centipede	1

CRUSTACEA

Cardisoma guanhumi	Great land crab	2

Respectfully submitted.

W. M. MANN, *Director.*

Dr. C. G. ABBOT,
Secretary, Smithsonian Institution.

APPENDIX 7

REPORT ON THE ASTROPHYSICAL OBSERVATORY

SIR: I have the honor to submit the following report on the activities of the Astrophysical Observatory for the fiscal year ended June 30, 1936:

As heretofore, our principal work has been the determination of the variability of the intensity of the sun's radiation as it would be found outside of our atmosphere; i. e., changes in the so-called solar constant of radiation. Measurements of the solar constant of radiation have been continued daily when possible at three stations: Table Mountain, Calif., Montezuma, Chile, and Mount St. Katherine, Egypt. Although to the eye the sky at Table Mountain seems equally as favorable to the work as that at the two foreign stations, the measurements at Table Mountain show much greater irregularity. Days that appear excellent there sometimes yield solar-constant values which are quite impossible. We suppose this is caused by invisible clouds of water vapor sweeping over the station through the canyons of the Sierra Madre Mountains.

We have attempted in the past year to develop a criterion based on the measurements which should inform us, before reducing an observation, whether it is affected by this invisible prejudicial sky condition, and in this search we have measurably succeeded. Finding it so useful for Table Mountain work, we have applied it also to the work of Montezuma and Mount St. Katherine, where much less frequently than at Table Mountain the results are similarly inexplicably bad. These investigations have occupied Mr. Aldrich and several computers at Washington for most of the year, but are now completed. They lead to a recomputation of all solar-constant measurements of recent years at all stations—a heavy task now under way.

Of the criterion itself, its technical character forbids a full description here. In brief, it comprises constructing families of standard curves representing average relationships of pyrheliometry to pyranometry at different air masses and different values of precipitable water. When the observations on any occasion depart from these standard curves beyond a certain tolerance, such observations are to be viewed with suspicion. In this way single observations of a given day may be rejected from the mean of the day. Also, suspicious days

at one station may be justifiably rejected, because of this sort of internal evidence, when they differ widely from reasonable results of other stations. The application of these criteria at the three stations will lead to a new increase in the accuracy with which we may measure the solar variability, and to a much closer agreement between the results of the three stations.

This long-desired improvement in accuracy is now shown to be indispensable to a proposed application of studies of solar variability to weather forecasting.

Dr. Abbot published in May and August of 1936 two papers entitled, respectively, "The Dependence of Terrestrial Temperatures on the Variations of the Sun's Radiation" and "Further Evidence on the Dependence of Terrestrial Temperatures on the Variations of Solar Radiation." These papers appear to prove that the short-interval changes of solar radiation, such as run their courses in a few days, are of major influence on the weather for the ensuing 2 weeks or more. Figure 2 of the first-mentioned paper shows such effects for the temperature of Washington. The curves shown each represent the average results for some 10 to 20 cases occurring in each of the months of the year of the years 1924–1935.

It is observed that opposite solar changes produce opposite temperature effects; that these effects differ from month to month; that other investigations reported in the papers cited show that they also differ from locality to locality; that the effects are of large magnitude, sometimes reaching 15° F., sufficient indeed to account for most variations from the normal temperature; that these effects follow solar changes seldom as great as 1.5 percent and averaging only about 0.7 percent.

After discussion of these results with the Chief of the United States Weather Bureau and with several gentlemen of the Weather Bureau Advisory Committee, these gentlemen all agreed that the investigations offered reasonable promise of a method of forecasting some features of the weather for at least 2 weeks in advance. They unitedly signed a memorandum recommending increased support to the Astrophysical Observatory to enable it to set up seven additional solar stations in the best localities of the world, and also to investigate the possibility of automatic determinations of solar variability from sounding balloons. This measure was approved by the President and the Bureau of the Budget, passed the Senate as an amendment to the Urgent Deficiency Act, but was rejected in conference with the House.

The Institution has since made a small grant from private funds to promote preliminary studies for the balloon investigation referred to, but the application of solar variation observations to weather fore-

casting must await Government support. The necessary expense will approximate $200,000 a year. It is necessary to observe the complete solar radiation of all wave lengths nearly every single day to an accuracy of ⅕ of a percent at mountain solar-constant stations, or else to observe daily the intensity of a certain band of ultraviolet solar rays from sounding balloons at an altitude of 100,000 feet or more, with an accuracy of 2 percent or better. Either plan involves difficulty and expense, but the probable advance in weather forecasting seems to justify it.

In August 1935 Dr. Abbot published a study of the variation found in the monthly mean values of the solar constant of radiation since the year 1920. This was entitled "Solar Radiation and Weather Studies." The following conclusions are quoted from the summary:

1. The output of radiation of the sun varies, as proved by simultaneous observations at three stations remote from each other.

2. The solar variation, seemingly irregular, really comprises 12 or more regular periodicities, which support successful predictions of solar changes for years in advance.

11. Forecasts based on these relations having been made to cover the years 1934, 1935, and 1936 for more than 30 stations in the United States, these forecasts are fairly well verified both as to temperature and precipitation in 1934.

Although, as stated in conclusion 11, fair success was achieved in the predictions for the year 1934, the success was less complete in 1935 and 1936. Weather details, though present, were found to be displaced in time so much as to invalidate the method for detailed predictions more than a year in advance. This partial failure is believed to be caused by the changes of phase of the subordinate periodicities which make up the 23-year cycle. It is hoped that further study may give means of predicting these changes of phase, and so of perfecting the method.

But while the prediction of details is thus unsatisfactory, certain large and prolonged features, like the great drought in the Northwest, seem to be very clearly previsioned by the cycle. This appears plainly in the accompanying figure 1, a reproduction of figure 26B of the article. It is very plain that the first decades of each of the five 23-year cycles shown there were marked by the fall of the level of Lake Huron, but that this depression in the first, third, and fifth cycles is outstanding. Thus there seems to be a 46-year cycle of great droughts, and while moderate drought conditions may be expected in the decade 1950–1960, a severe drought is probable in the decade 1975 to 1985.

The present drought seems comparable to those of the decades following 1840 and 1890, and may therefore be expected to last for a year, or possibly 2 years more before the initiation of recovery. But it would be rash to make a more definite prediction.

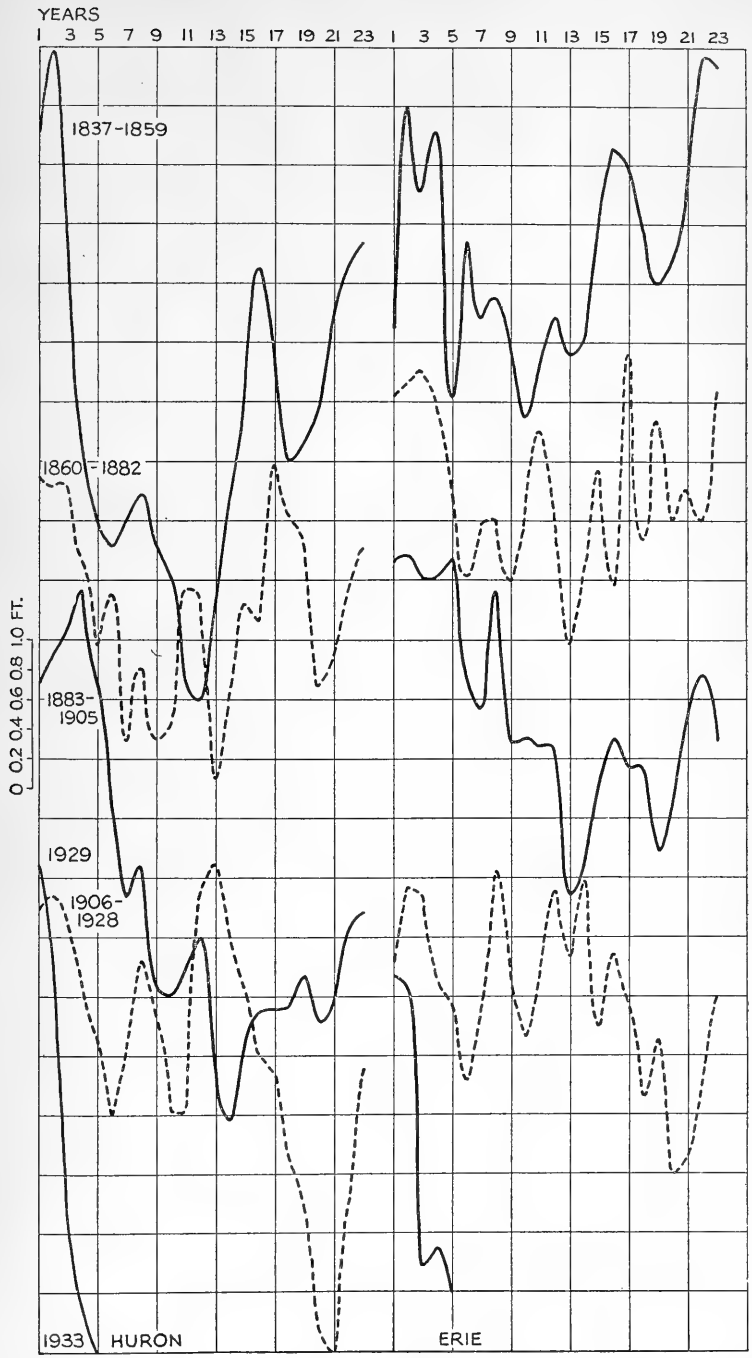


FIGURE 1.—Levels of Great Lakes, 23-year cycles. Note the marked subsidence culminating after 11 years in the full curves.

PERSONNEL

No changes of personnel have occurred other than the shifting of observers from one field station to another, except that on April 16, 1936, Alfred G. Froiland reported as bolometric assistant to take station at Mount St. Katherine.

SUMMARY

The year has been distinguished for the introduction of a new criterion for distinguishing unsatisfactory sky conditions at the solar-constant stations. This will add decidedly to the accuracy and harmony of the results. Studies of the variability of the sun over an interval of 15 years have disclosed many periodicities, all aliquot parts of 23 years, which altogether make up the apparently irregular solar variation of long term. The cycle of 23 years is abundantly evidenced in weather and things dependent thereon. Besides this it is shown that the weather is to a great extent governed for at least 2 weeks afterward by the initiation of incidental rising or falling solar radiation, usually of only a few days' duration. Expert opinion concurs that this affords a promising method of forecasting certain weather features for at least 2 weeks in advance. Unfortunately, it requires expansions of our solar-observation program, which thus far there are no funds to finance. Papers detailing these investigations were published by the Director in the Smithsonian Miscellaneous Collections under the following titles: "The Dependence of Terrestrial Temperatures on the Variations of the Sun's Radiation", "Further Evidence on the Dependence of Terrestrial Temperatures on the Variations of Solar Radiation", and "Solar Radiation and Weather Studies."

Respectfully submitted.

C. G. Abbot, *Director.*

The Secretary,
Smithsonian Institution.

APPENDIX 8

REPORT ON THE DIVISION OF RADIATION AND ORGANISMS

SIR: I have the honor to submit the following report on the activities of the Division of Radiation and Organisms during the year ended June 30, 1936:

This has been a year of large accomplishment in several fields. Mr. Hoover's work on the dependence of carbon dioxide assimilation in wheat on wave length of radiation has been amplified and rounded out for publication. This pioneering research has produced and checked a curve which gives the efficiency of the different-colored rays to promote photosynthesis. The curve starts at zero in the violet, runs to a maximum in the blue at about 4,400 A, continues of moderate intensity in the green and yellow, rises to its highest maximum in the red at 6,500 A, and then falls to zero.

Dr. Meier has continued her experiments on the effects of ultraviolet rays on algae. Besides checking former work and publishing on lethal effects, she has shown that ultraviolet rays of maximum lethal influence when applied in minute doses are stimulating. This behavior reminds us of the effects of certain poisonous drugs which in minute doses are stimulants.

Dr. Johnston has continued experiments on the effects of light of different wave lengths to promote growth effects of various kinds in tomatoes. His work has yielded much advance in the technique of these investigations. Among other results which stand out clearly, he finds that rest periods not only from radiation but of diminished temperature are necessary to these plants.

He gave the annual Arthur Lecture on the subject of the influences of the sun on plant growth.

Dr. McAlister has developed an extremely sensitive and quick-acting spectroscopic method for measuring carbon dioxide concentration. A concentration of 1/10,000 of 1 percent carbon dioxide in air is readily measured. The respiration and carbon dioxide assimilation of a single grain of wheat in its germination is readily observed. Studies of the dependence of photosynthesis in wheat on time factors are in progress and are yielding beautiful and remarkable results. Dr. McAlister also did interesting cooperative work with the Department of Agriculture on the germination of seeds.

Mr. Clark has made valuable developments in the technique of special lights useful for studies of plant growth. He has also made important improvements in thermoelectric junction material, having developed a couple of high sensitiveness and at the same time as rugged as ordinary wires of common metals of equal size. With Mr. Fillmen he has constructed much new apparatus for the uses of the Division.

The work finished or in hand will shortly afford publications of great interest to plant physiologists and others. Individuals of the Division have been of utmost value to the Astrophysical Observatory and other branches of the Institution, assisting in special problems.

Respectfully submitted.

C. G. Abbot, *Director.*

The Secretary,
Smithsonian Institution.

APPENDIX 9

REPORT ON THE LIBRARY

SIR: I have the honor to submit the following report on the activities of the Smithsonian library for the fiscal year ended June 30, 1936:

THE LIBRARY

The Smithsonian library, or library system, comprises 10 major and 35 minor units, each an important instrument in the work of the Institution or of one of its affiliated bureaus. They are as follows: The main library, or the Smithsonian deposit in the Library of Congress—a collection which, while somewhat general in character, is chiefly scientific and technical and contains extensive files of monographs and serials, American and foreign, including the reports, proceedings, and transactions of many learned societies and institutions; the library of the United States National Museum, which also concerns itself largely with natural history and technology, and has more or less closely connected with it the 35 sectional libraries of administration, administrative assistant's office, agricultural history, anthropology, archeology, biology, birds, botany, echinoderms, editor's office, engineering, ethnology, fishes, foods, geology, graphic arts, history, insects, invertebrate paleontology, mammals, marine invertebrates, medicine, minerals, mollusks, organic chemistry, paleobotany, photography, physical anthropology, property clerk's office, reptiles and batrachians, superintendent's office, taxidermy, textiles, vertebrate paleontology, and wood technology; the library of the Bureau of American Ethnology, concerned with the history, life, and culture of the early peoples of the Americas, notably the North American Indians; the library of the Astrophysical Observatory, on astrophysics and meteorology; the library of the Freer Gallery of Art, related to the special interests of the Freer Gallery, namely, the art and culture of the Far East, India, Persia, and the nearer East, and the art of James McNeill Whistler and other American painters, and containing the celebrated Biblical manuscripts of the fourth and fifth centuries, known as the Washington Manuscripts; the library of the National Gallery of Art, on the fine arts of Europe and America; the Langley aeronautical library—the famous collection of aeronautical publications, many of them very rare, that once belonged to Samuel Pierpont Langley,

Alexander Graham Bell, Octave Chanute, and James Means, and that since 1930, under its own name and book plate, has supplemented the Government collection on aeronautics in the Library of Congress; the Smithsonian office library, made up of general reference works, publications of the Institution and its branches as well as of various foreign learned societies and institutions, and a large number of popular books and magazines; the radiation and organisms library, pertaining to the studies the Institution is making of the influence of the sun on plant and animal life; and the library of the National Zoological Park, on animals and their care. In the libraries taken together there are about 860,000 volumes, pamphlets, and charts. This total does not include thousands of volumes awaiting completion, binding, and cataloging.

PERSONNEL

Four changes took place in the permanent staff during the year.

Miss Ella Leary, after a long service as librarian of the Bureau of American Ethnology, retired, and Miss Miriam B. Ketchum was transferred to the vacancy from the library of the Weather Bureau. Miss Ketchum received the B. A. and M. A. degrees from George Washington University, where two of her special interests were library science and anthropology. Before her appointment to the Weather Bureau in 1934 she served for some years on the library staff of the Naval Observatory.

Mrs. Grace A. Parler, who since 1930 had been in immediate charge of the library of the Freer Gallery of Art, resigned. She was succeeded by Miss Alice Elizabeth Hill, who had taken the B. A. degree at American University, studied library science in George Washington University, and obtained considerable experience at various times as a temporary employee of the Smithsonian library.

Miss Ruth E. Blanchard, a graduate in library science of the University of Oklahoma and for several years a member of the library staff of the university, was appointed to the position of minor library assistant in the Astrophysical Observatory, under an arrangement, however, by which part of her salary is paid by the National Zoological Park and part of her time given to its library.

Stephen Stuntz, who for 6 years had been assistant messenger, was promoted to a post elsewhere in the Institution, and the vacancy was filled by the selection of Carroll McKinley Martin.

The temporary assistants were Miss Margaret Link, Miss Helen Rankin, Miss Wilda Suter, and Mrs. Emma B. Thomsen. A number of workers under the F. E. R. A. were also assigned to the library for a time early in the year and toward its close several under the W. P. A.

EXCHANGE OF PUBLICATIONS

As usual, although some of the accessions for the year were presented by friends of the Smithsonian or were purchased, most of them came in exchange for the publications of the Institution and its branches. The packages received by mail numbered 21,808 and through the International Exchange Service 2,368—an increase of 1,920 over the previous year. Especially noteworthy were the sendings from the R. Deputazione di Storia Patria per le Provincie di Romagna, Bologna; the Academia Română, Bucharest; the Carlisle Natural History Society, Carlisle; the Erdélyi Múzeum, Cluj; the Instituto Nazionale di Ottica, Firenze; the Naturforschende Gesellschaft zu Leipzig, Leipzig; the Société Géologique de Belgique, Liège; the Isle of Wight Natural History and Archaeological Society, Newport; the Nigerian Field Society, Ondo; the R. Laboratorio Centrale di Idrobiologia, Rome; the Fauna och Flora, Stockholm; the Botanisches Institut, Franz-Josefs Universität, Szeged; the Knox Academy of Arts and Sciences, Thomaston; the Japanese Pathological Society, Tokyo; and the Instytut Popierania Nauki, Warsaw. More detailed mention should be made of two sendings—one that of 41 monographs and bulletins, from the Oriental Institute, Chicago; the other of 156 publications—some long since out of print—from the Museum of Comparative Zoölogy, Cambridge. The last two sendings were obtained by the library under a special exchange arrangement, the latter by returning to Harvard some of the university's publications that had found their way into the Smithsonian duplicate collection. These many unusual sendings added materially to the resources of the Smithsonian deposit and the library of the National Museum.

Among the publications received were 7,021 dissertations from the Academy of Freiberg, the Agricultural School of Bonn-Poppelsdorf, the universities of Basel, Berlin, Bern, Bonn, Breslau, Budapest, Erlangen, Freiburg, Giessen, Greifswald, Halle, Heidelberg, Jena, Johns Hopkins, Kiel, Köln, Leipzig, Lund, Marburg, Neuchâtel, Pennsylvania, Rostock, Tübingen, Utrecht, Würzburg, and Zürich, and the technical schools of Berlin, Braunschweig, Delft, Dresden, Karlsruhe, and Zürich.

In connection with the exchange and other activities of the library the staff wrote 2,651 letters, or 516 more than the year before, arranged for 300 new exchanges, or 36 more than in 1935, and obtained, in response to 584 request cards, 6,422 volumes and parts needed in the libraries of the Institution. It should be pointed out, however, that, thanks to the recent organization of the Smithsonian duplicates, many of these publications were found in this collection—a fact that was particularly true of the large number sent to the Smithsonian deposit

and the libraries of the Astrophysical Observatory, Bureau of American Ethnology, and National Museum. Several thousand documents of foreign governments were forwarded by the library, as usual, to the division of documents in the Library of Congress.

GIFTS

Among the gifts of the year at least two were notable. They were the collections—each numbering many thousands—of publications on invertebrate paleontology and orthoptera gathered, respectively, during a long period of service in the National Museum by Dr. E. O. Ulrich and the late Dr. A. N. Caudell and presented, each with a complete card index, by Dr. Ulrich and Mrs. Caudell. It is gratifying to know that these unique and valuable semiprivate libraries are not to be dispersed but are to remain permanently as instrumentalities of research in the sections where they have grown up. A similar collection—or, at least part of it—namely, that of the late Dr. Walter Hough on anthropology, also became the property of the library during the year. Special mention should be made, too, of the gift of a generous number of its own publications from the Philosophical Society of Washington, to be used by the library for exchange purposes. Other large gifts were received from the Bureau of the International Catalogue of Scientific Literature, the American Association for the Advancement of Science, the Geophysical Laboratory of the Carnegie Institution, the Anthropological Society of Washington, and the Washington Academy of Sciences, as well as from the estate of the late Dr. W. L. Abbott and from W. P. Hay, son of the late Dr. O. P. Hay. One of the most welcome gifts came from the Library of Congress. It was a complete set—the fourth presented to the Institution—of printed cards covering the publications of the Smithsonian and its bureaus, for filing in the sectional catalogs of the Museum. The smaller gifts included Contribution à l'étude des Pilons Océaniens, by His Excellency Governor L. J. Bouge, of Guadeloupe, from the author; Zoologische Ergebnisse einer Reise nach Bonaire, Curaçao und Aruba im Jahre 1930, 3 volumes, from Dr. P. W. Hummelinck; Beiträge zur Mineralogie von Japan, by T. Wada, from T. Ito; Charles F. Dowd, by Charles N. Dowd, from Ralph W. Lester; Japanese Works of Art, 6 volumes, selected from the Moslé Collection, from Alexander G. Moslé; Moss Flora of North America North of Mexico, volume II, parts 1–3, by A. J. Grout, from the author; Back to Newton, a Challenge to Einstein's Theory of Relativity, by George de Bothezat, from the author; The Microscope and Its Revelations, by William B. Carpenter, Atlas der Diatomaceen-kunde, by Adolf Schmidt, and Diatommentafeln Zusammen-

gestellt für Einige Freunde—from Mrs. John V. C. Parker, from the library of her father, the late Stephen S. Day; Hunting Wild Life with Camera and Flashlight, 2 volumes, by George Shiras 3d, from Dr. Gilbert Grosvenor; Cumulative Index to the National Geographic Magazine, 1899 to 1934, Inclusive, 2 copies, from the National Geographic Society; Cyrus Hall McCormick, volume 2 (2 copies), by William T. Hutchinson, from the McCormick Historical Association; A History of the College of Charleston, by J. H. Easterby, from the college; 26 reports on the work of the *Discovery*, from Dr. Stanley Kemp, director; 7 volumes of collected works on hydroids, from Mrs. C. C. Nutting; Biographical Memoir of Joseph Saxton, by Joseph Henry, from J. S. Pendleton; Collected Papers of Dr. George J. Conley, edited by Yale Castlio, and Principles of Osteopathy, by Yale Castlio, from the Kansas City College of Osteopathy and Surgery.

There were also gifts from Secretary Abbot, Assistant Secretary Wetmore, Mrs. Charles D. Walcott, and the following other members, associates, and friends of the Smithsonian staff: L. B. Aldrich, Dr. E. A. Chapin, A. H. Clark, Dr. D. M. Cochran, W. L. Corbin, F. E. Fowle, Dr. Herbert Friedmann, J. E. Graf, L. C. Gunnell, Mrs. Walter Hough, A. H. Howell, Dr. Aleš Hrdlička, N. M. Judd, G. D. McCoy, Mrs. C. L. Manning, Dr. W. C. Mansfield, Dr. W. M. Maxon, G. S. Miller, Jr., Dr. Harold Morrison, C. F. W. Muesebeck, Dr. G. S. Myers, P. H. Oehser, R. G. Paine, Dr. M. J. Rathbun, J. H. Riley, Dr. W. L. Schmitt, F. M. Setzler, R. E. Snodgrass, and W. P. True.

SOME STATISTICS

The accessions may be summarized as follows:

Library	Volumes	Pamphlets and charts	Total
Astrophysical Observatory	99	150	249
Bureau of American Ethnology	99		99
Freer Gallery of Art	365	119	484
Langley Aeronautical	38	14	52
National Gallery of Art	314	236	550
National Museum	1,669	966	2,635
National Zoological Park	84	14	98
Radiation and Organisms	9	2	11
Smithsonian deposit, Library of Congress	3,456	3,401	6,857
Smithsonian office	166	14	180
Total	6,299	4,916	11,215

According to data available at the close of the year for the various libraries of the Institution, the number of publications cataloged was approximately 7,015; of cards prepared and filed, 55,829; of periodicals entered, 25,205; of loans made, 11,235, of which 281 were

to libraries outside of the Smithsonian system. The number of items borrowed from the Library of Congress was 2,330, and from other libraries 484.

The following will show the work done on the union catalog:

Volumes cataloged	4,397
Pamphlets and charts cataloged	2,423
New serial entries made	195
Typed cards added to catalog and shelf list	6,415
Library of Congress cards added to catalog and shelf list	18,749

SPECIAL ACTIVITIES

Among the special activities of the year, a few may be mentioned as indicating further progress toward making the library system a more complete and efficient instrument in the work of the Institution and its branches.

The slow and tedious task of sorting, arranging, and labeling the large collection of miscellaneous material, including many thousands of scientific and technical serials, that had accumulated for years on the second and third floors of the west stacks of the Smithsonian Building—an undertaking referred to in several annual reports as receiving special attention—was at last practically finished, with the gratifying result that, as in 1934 and 1935, hundreds of publications were brought to light that were needed in the libraries of the Institution. It is hoped that the unchecked material on the first floor can receive similar treatment during the coming year, in connection particularly with the reorganization of the office library and the rearrangement, and possible reassignment, of the Watts de Peyster collection.

The staff sorted and arranged the 7,000 and more publications that were recently given to the library by the International Catalogue of Scientific Literature, selecting 1,019 for the National Museum, 108 for the Astrophysical Observatory, and 235 for the Smithsonian deposit. Most of these found their way into the active sets; the others into the reserve file—a collection, begun a year or two ago, of standard scientific works designed to meet the future requirements of the Institution. To this file will probably be added many of the remaining items, especially some of the longer runs, in this noteworthy gift. It is expected that permanent shelf room will be provided for the reserve collection in the west end of the Smithsonian Building when disposal is made of the duplicates now occupying this space.

The staff also continued the task of reorganizing the technological library and several of the sectional libraries, notably that of administration, in the Arts and Industries Building; advanced the work of classifying the Bell aeronautical clippings; withdrew 913 reprints and sep-

arates from the natural history library and sent them to the curators concerned; sorted according to subject the set of 27,200 printed cards covering to date the publications of the Institution and its branches, that was presented during the year by the Library of Congress, and forwarded them to the sectional libraries for filing; picked out 603 surplus maps from the collection in the National Museum and transferred them to the Smithsonian deposit, where they would be preserved against possible future need; prepared 300 volumes for the bindery, to be sent early in July as the first installment of several thousand publications to be bound with the deficiency appropriation made to the Smithsonian for this purpose toward the close of the fiscal year; checked and rearranged the reference collection in the office library; continued to date the index of Smithsonian publications and contributed substantially to the index of exchange relations; brought nearly to completion the seven library sets of Smithsonian publications—a piece of work that has required years of special search for missing items, many long since out of print; and finished cataloging the Chinese and Japanese publications in the library of the Freer Gallery of Art, as well as the field collection that had been returned to the Gallery from China the year before.

They sent back to the Superintendent of Documents a large number of Government publications that either were duplicates or were not pertinent to the work of the Institution; turned over many thousands of other items not in the immediate field of Smithsonian interest to the libraries of the Army Medical Museum, Department of Agriculture, Office of Education, and Geological Survey, and the Public Library of the District of Columbia; assisted further the American Association for the Advancement of Science in its effort, begun the year before and shared in at that time by the library, to complete its office set of Science by presenting to the Association 448 more numbers of this publication; made generous sendings of duplicates, under a special exchange arrangement, to the Musée Nationale d'Histoire Naturelle, Paris, the John Crerar Library, Chicago, the Marine Biological Laboratory, Woods Hole, and the libraries of the following colleges and universities: Brown, Catholic, Columbia, Hamilton, Harvard, Pennsylvania, Princeton, Vanderbilt, and Yale. From these institutions, as well as from Cornell University, Massachusetts Institute of Technology, and the American Academy of Arts and Sciences, were received many valuable publications, most of which, if it had not been for the special exchange arrangement referred to, the library would have had to buy.

Finally, the staff was called on for even more reference and bibliographical service than usual, not only in connection with the regular interests of the Institution in science, technology, and art, but in

response to inquiries of a miscellaneous character from correspondents throughout the country.

NEEDS

The needs of the library remain the same—more trained assistants, more funds for binding and for purchasing necessary books and periodicals that cannot be obtained in exchange, and more shelf room for several of the important collections that have outgrown their accommodations.

Respectfully submitted.

WILLIAM L. CORBIN, *Librarian.*

Dr. C. G. ABBOT,
Secretary, Smithsonian Institution.

APPENDIX 10

REPORT ON PUBLICATIONS

SIR: I have the honor to submit the following report on the publications of the Smithsonian Institution and the Government branches under its administrative charge during the year ended June 30, 1936:

The Institution published during the year 29 papers in the series of Smithsonian Miscellaneous Collections, 1 annual report, and pamphlet copies of the 21 articles contained in the report appendix, and 3 special publications.

The United States National Museum issued 1 annual report, 11 Proceedings papers, and 1 number of the Contributions from the National Herbarium.

The Bureau of American Ethnology issued 1 annual report and 2 Bulletins.

Of the publications there were distributed 124,359 copies, which included 75 volumes and separates of the Smithsonian Contributions to Knowledge, 56,495 volumes and separates of the Smithsonian Miscellaneous Collections, 20,765 volumes and separates of the Smithsonian Annual Reports, 3,134 Smithsonian special publications, 33,936 volumes and separates of the National Museum publications, 9,337 publications of the Bureau of American Ethnology, 76 publications of the National Gallery of Art, 22 publications of the Freer Gallery of Art, 21 Annals of the Astrophysical Observatory, 20 reports of the Harriman Alaska Expedition, and 478 reports of the American Historical Association.

SMITHSONIAN MISCELLANEOUS COLLECTIONS

Of the Smithsonian Miscellaneous Collections, volume 91, there were issued 4 papers; volume 93, 1 paper; volume 94, 12 papers and title page and table of contents; and volume 95, 12 papers, making 29 papers in all, as follows:

VOLUME 91

Reports on the collections obtained by the first Johnson-Smithsonian Deep-Sea Expedition to the Puerto Rican Deep.

No. 21. Fourteen new species of foraminifera, by Joseph A. Cushman. 9 pp., 3 pls. (Publ. 3327.) July 23, 1935.

No. 22. Two new foraminifera of the genus *Textularia*, by Cecil G. Lalicker. 2 pp., 1 pl. (Publ. 3328.) July 22, 1935.

No. 23. A new genus of opisthognathid fishes, by George S. Myers. 5 pp., 1 text fig. (Publ. 3347.) December 24, 1935.

No. 24. Four new brittlestars from Puerto Rico, by Austin H. Clark. 8 pp., 3 pls. (Publ. 3378.) February 8, 1936.

VOLUME 93

No. 10. An introduction to Nebraska archeology, by William Duncan Strong. 315 pp., 25 pls., 30 figs. (Publ. 3303.) July 20, 1935.

Title page and table of contents. (Publ. 3340.)

VOLUME 94

No. 6. The abdominal mechanisms of a grasshopper, by R. E. Snodgrass. 89 pp., 41 figs. (Publ. 3335.) September 25, 1935.

No. 7. A new and important copepod habitat, by Charles Branch Wilson. 13 pp., 8 figs. (Publ. 3336.) September 20, 1935.

No. 8. The Manahoac tribes in Virginia, 1608, by David I. Bushnell, Jr. 56 pp., 21 pls., 11 figs. (Publ. 3337.) October 9, 1935.

No. 9. Review of the genus *Chlaenobia* Blanchard (Coleoptera: Scarabaeidae), by Edward A. Chapin. 20 pp., 12 figs. (Publ. 3338.) September 23, 1935.

No. 10. Solar radiation and weather studies, by C. G. Abbot. 89 pp., 3 pls., 38 figs. (Publ. 3339.) August 15, 1935.

No. 11. Melanesians and Australians and the peopling of America, by Aleš Hrdlička. 58 pp. (Publ. 3341.) October 18, 1935.

No. 12. Mount St. Katherine, an excellent solar-radiation station, by C. G. Abbot. 11 pp., 2 pls., 1 fig. (Publ. 3342.) October 5, 1935.

No. 13. Morphology of the coleopterous family Staphylinidae, by Richard E. Blackwelder. 102 pp., 30 figs. (Publ. 3343.) March 2, 1936.

No. 14. A caddo burial site at Natchitoches, Louisiana, by Winslow M. Walker. 15 pp., 6 pls., 3 figs. (Publ. 3345.) December 17, 1935.

No. 15. Aerial fertilization of wheat plants with carbon-dioxide gas, by Earl S. Johnston. 9 pp., 6 pls. (Publ. 3346.) December 20, 1935.

No. 16. The genus *Panscopus* Schoenherr (Coleoptera: Curculionidae), by L. L. Buchanan. 18 pp., 2 figs. (Publ. 3376.) February 6, 1936.

No. 17. Growth of a green alga in isolated wave-length regions, by Florence E. Meier. 12 pp., 1 pl., 1 fig. (Publ. 3377.) February 21, 1936.

Title page and table of contents. (Publ. 3387.)

VOLUME 95

No. 1. Observing the sun at 19,300 feet altitude, Mount Aunconquilcha, Chile, by C. P. Butler. 4 pp., 1 fig. (Publ. 3379.) February 18, 1936.

No. 2. Lethal effect of short wave lengths of the ultraviolet on the alga *Chlorella vulgaris*, by Florence E. Meier. 19 pp., 2 pls., 2 figs. (Publ. 3380.) March 20, 1936.

No. 3. Liquid-propellant rocket development, by Robert H. Goddard. 10 pp., 11 pls., 1 fig. (Publ. 3381.) March 16, 1936.

No. 4. Second contribution to nomenclature of Cambrian trilobites, by Charles Elmer Resser. 29 pp. (Publ. 3383.) April 1, 1936.

No. 5. Molluscan intermediate hosts of the Asiatic blood fluke, *Schistosoma japonicum*, and species confused with them, by Paul Bartsch. 60 pp., 8 pls. (Publ. 3384.) May 11, 1936.

No. 6. New species of American Edrioasteroidea, by R. S. Bassler. 33 pp., 7 pls. (Publ. 3385.) May 4, 1936.

No. 7. The gold-banded skipper (*Rhabdoides cellus*), by Austin H. Clark. 50 pp., 8 pls., 4 figs. (Publ. 3386.) May 6, 1936.

No. 8. Thomas Walter, botanist, by William R. Maxon. 6 pp. (Publ. 3388.) April 22, 1936.

No. 9. Preliminary observations on growth and phototropic response of oat seedlings, by Enoch Karrer. 4 pp., 1 fig. (Publ. 3389.) June 2, 1936.

No. 10. Additional information on the Folsom complex: Report on the second season's investigations at the Lindenmeier site in northern Colorado, by Frank H. H. Roberts, Jr. 38 pp., 12 pls., 5 figs. (Publ. 3390.) June 20, 1936.

No. 11. Influence of planetary configurations upon the frequency of visible sun spots, by Fernando Sanford. 5 pp. (Publ. 3391.) June 5, 1936.

No. 12. The dependence of terrestrial temperatures on the variations of the sun's radiation, by C. G. Abbot. 15 pp., 7 figs. (Publ. 3392.) May 23, 1936.

SMITHSONIAN ANNUAL REPORTS

Report for 1934.—The complete volume of the Annual Report of the Board of Regents for 1934 was received from the Public Printer in October 1935.

Annual Report of the Board of Regents of the Smithsonian Institution showing operations, expenditures, and condition of the Institution for the year ending June 30, 1934. xiv+448 pp., 73 pls., 45 text figs. (Publ. 3305.)

The appendix contained the following papers:

The new world-picture of modern physics, by Sir James H. Jeans.

The markings and rotation of Mercury, by E. M. Antoniadi.

British Polar Year Expedition to Fort Rae, Northwest Canada, 1932–33, by J. M. Stagg.

Protium-deuterium-tritium, the hydrogen trio, by Hugh S. Taylor.

Some chemical aspects of life, by Sir Frederick Gowland Hopkins.

Commercial extraction of bromine from sea water, by Leroy C. Stewart.

Before papyrus—beyond rayon, by Gustavus J. Esselen.

The variety in tides, by H. A. Marmer.

Modern seismology, by F. J. Scrase.

A generation's progress in the study of evolution, by Edwin G. Conklin.

How the fishes learned to swim, by Anatol Heintz.

Curious and beautiful birds of Ceylon, by Casey A. Wood.

The influence of civilization on the insect fauna in cultivated areas of North America, by Roger C. Smith.

Arctic butterflies, by Austin H. Clark.

Grasses, what they are and where they live, by A. S. Hitchcock.

Phototropism: A specific growth response to light, by Earl S. Johnston.

An outline development of highway travel, especially in America, by Carl W. Mitman.

Via Appia in the days when all roads led to Rome, by Albert C. Rose.

Smithsonian archeological projects conducted under the Federal Emergency Relief Administration, 1933–34, by M. W. Stirling.

Indian cultures of northeastern South America, by Herbert W. Krieger.

Commerce, trade, and monetary units of the Maya, by Frans Blom.

Report for 1935.—The report of the Secretary, which included the financial report of the executive committee of the Board of Regents,

and will form part of the annual report of the Board of Regents to Congress, was issued in January 1936.

Report of the Secretary of the Smithsonian Institution and financial report of the executive committee of the Board of Regents for the year ending June 30, 1935. 90 pp., 2 pls. (Publ. 3344.)

The report volume, containing the general appendix, was in press at the close of the year.

SPECIAL PUBLICATIONS

Biographical sketch of James Smithson. 17 pp., 4 pls. (Reprint.) 1936.

Explorations and field work of the Smithsonian Institution in 1935. 80 pp., 85 figs. (Publ. 3382.) April 20, 1936.

Illustrations of North American pitcherplants, by Mary Vaux Walcott. Descriptions and notes on distribution by Edgar T. Wherry. Notes on insect associates by Frank Morton Jones. 4°. 34 pp., 15 color pls., 10 figs. October 1935.

PUBLICATIONS OF THE UNITED STATES NATIONAL MUSEUM

The editorial work of the National Museum has continued during the year under the immediate direction of the editor, Paul H. Oehser. There were issued 1 annual report, 11 separates from the Proceedings, and one number from the Contributions from the National Herbarium, as follows:

MUSEUM REPORT

Report on the progress and condition of the United States National Museum for the year ended June 30, 1935. 8vo, iii+121 pp. January.

CONTRIBUTIONS FROM THE NATIONAL HERBARIUM: VOLUME 26

Part 8. New species of *Pilea* from the Andes. By E. P. Killip. Pp. i–viii, 367–394. January 30, 1936.

PROCEEDINGS: VOLUME 83

No. 2979. New West Indian cerambycid beetles. By W. S. Fisher. Pp. 189–210. September 9, 1935.

No. 2980. Two new species of tapeworms from carnivores and a redescription of *Taenia laticollis* Rudolphi, 1819. By Mary Scott Skinker. Pp. 211–220, pls. 19–21. October 25, 1935.

No. 2981. Paleocene mammals from the Fort Union of Montana. By George Gaylord Simpson. Pp. 221–244. October 18, 1935.

No. 2982. Five new genera and two new species of unstalked crinoids. By A. H. Clark. Pp. 245–250. March 14, 1936.

No. 2983. Notes on the butterflies of the genus *Enodia* and description of a new fritillary from Peru. By A. H. Clark. Pp. 251–259, pl. 22. April 11, 1936.

No. 2984. Polychaetous annelids from Amoy, China. By Aaron L. Treadwell. Pp. 261–279, figs. 18–20. June 10, 1936.

No. 2985. A study of the fossil horse remains from the Upper Pliocene of Idaho. By C. Lewis Gazin. Pp. 281–320, figs. 21–24, pls. 23–33. June 1, 1936.

No. 2986. A new genus and species of trematodes from the little brown bat

and a key to the genera of Pleurogenetinae. By Ralph W. Macy. Pp. 321–324, fig. 25. May 19, 1936.

No. 2987. Two new cottid fishes from the western Pacific, with a revision of the genus *Stlengis* Jordan and Starks. By Rolf L. Bolin. Pp. 325–334, figs. 26–27, pl. 34. June 15, 1936.

No. 2988. Tertiary plants from Venezuela. By Edward W. Berry. Pp. 335–360, figs. 28–31. June 12, 1936.

No. 2989. Three new millipeds of the order Colobognatha from Tennessee, Texas, and Lower California, with records of previously known species. By H. F. Loomis. Pp. 361–368, fig. 32. May 11, 1936.

PUBLICATIONS OF THE BUREAU OF AMERICAN ETHNOLOGY

The editorial work of the bureau has continued under the immediate direction of the editor, Stanley Searles. During the year one annual report and two bulletins were issued, as follows:

Fifty-second Annual Report on the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1934–1935. 8 pp.

Bulletin 112. An introduction to Pawnee archeology. By Waldo Rudolph Wedel. 122 pp., 12 pls., 10 maps, 12 figs.

Bulletin 113. The Troyville mounds, Catahoula Parish, La. By Winslow M. Walker. 73 pp., 16 pls., 15 figs.

REPORT OF THE AMERICAN HISTORICAL ASSOCIATION

The annual reports of the American Historical Association are transmitted by the association to the Secretary of the Smithsonian Institution and are communicated by him to Congress, as provided by the act of incorporation of the association.

Volume II of the report for 1931, Writings in American History, 1931, was issued during the year. The annual report for 1935, including the proceedings of the association for 1933 and 1934, and the supplemental volumes to the reports for 1932 and 1933, Writings in American History, 1932 and 1933, were in press at the close of the year.

REPORT OF THE NATIONAL SOCIETY, DAUGHTERS OF THE AMERICAN REVOLUTION

The manuscript of the Thirty-eighth Annual Report of the National Society, Daughters of the American Revolution, was transmitted to Congress, in accordance with law, December 10, 1935.

ALLOTMENTS FOR PRINTING

The congressional allotments for the printing of the Smithsonian Annual Reports to Congress and the various publications of the Government bureaus under the administration of the Institution were virtually used up at the close of the year. The appropriation

for the coming year ending June 30, 1937, totals $55,500, allotted as follows:

Smithsonian Institution	$12,400
National Museum	25,000
Bureau of American Ethnology	9,000
International Exchange Service	200
National Zoological Park	200
Astrophysical Observatory	400
American Historical Association	8,000
National Gallery of Art	300

In addition to these amounts, an appropriation of $12,000 for printing and binding was included in the Urgent Deficiency Bill. This will be used for urgent binding.

Respectfully submitted.

W. P. True, *Editor.*

Dr. C. G. Abbot,
Secretary, Smithsonian Institution.

REPORT OF THE EXECUTIVE COMMITTEE OF THE BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION

FOR THE YEAR ENDED JUNE 30, 1936

To the Board of Regents of the Smithsonian Institution:

Your executive committee respectfully submits the following report in relation to the funds of the Smithsonian Institution, together with a statement of the appropriations by Congress for the Government bureaus in the administrative charge of the Institution.

SMITHSONIAN ENDOWMENT FUND

The original bequest of James Smithson was £104,960 8s. 6d.—$508,318.46. Refunds of money expended in prosecution of the claim, freights, insurance, etc., together with payment into the fund of the sum of £5,015, which had been withheld during the lifetime of Madame de la Batut, brought the fund to the amount of	$550,000.00
Since the original bequest the Institution has received gifts from various sources, chiefly in the years prior to 1893, the income from which may be used for the general work of the Institution.	
To these gifts has been added capital from savings on income, gain from sale of securities, etc., bringing the total endowment for general purposes to the amount of	1,117,419.22

The Institution holds also a number of endowment gifts, the income of each being restricted to specific use. These are invested and stand on the books of the Institution as follows:

Arthur, James, fund, income for investigations and study of sun and lecture on the sun	$40,606.64
Bacon, Virginia Purdy, fund, for a traveling scholarship to investigate fauna of countries other than the United States	50,869.12
Baird, Lucy H., fund, for creating a memorial to Secretary Baird	9,207.86
Barstow, Frederic D., fund, for purchase of animals for the Zoological Park	772.34
Canfield Collection fund, for increase and care of the Canfield collection of minerals	38,833.61
Casey, Thomas L., fund, for maintenance of the Casey collection and promotion of researches relating to Coleoptera	7,846.82
Chamberlain, Francis Lea, fund, for increase and promotion of Isaac Lea collection of gems and mollusks	28,592.33
Hillyer, Virgil, fund, for increase and care of Virgil Hillyer collection of lighting objects	6,673.02
Hodgkins fund, specific, for increase and diffusion of more exact knowledge in regard to nature and properties of atmospheric air	100,000.00

Special Research fund, gift, in form of real estate	$20,946.00
Hughes, Bruce, fund, to found Hughes alcove	15,382.40
Myer, Catherine Walden, fund, for purchase of first-class works of art for the use of and benefit of the National Gallery of Art	19,246.73
Pell, Cornelia Livingston, fund, for maintenance of Alfred Duane Pell collection	2,450.56
Poore, Lucy T. and George W., fund, for general use of the Institution when principal amounts to the sum of $250,000	66,201.14
Reid, Addison T., fund, for founding chair in biology in memory of Asher Tunis	29,293.14
Roebling fund, for care, improvement, and increase of Roebling collection of minerals	122,533.38
Rollins, Miriam and William, fund, for investigations in physics and chemistry	53,568.12
Springer, Frank, fund, for care, etc., of Springer collection and library	18,207.84
Walcott, Charles D., and Mary Vaux, research fund, for development of geological and paleontological studies and publishing results thereof	10,718.44
Younger, Helen Walcott, fund, held in trust	50,112.50
Zerbee, Frances Brincklé, fund, for endowment of aquaria	772.75
Total endowment for specific purposes other than Freer endowment	692,834.74

The capital funds of the Institution, except the Freer funds, are invested as follows:

Fund	United States Treasury	Consolidated fund	Separate fund	Total
Arthur, James		$40,606.64		$40,606.64
Bacon, Virginia Purdy		50,869.12		50,869.12
Baird, Lucy H		9,207.86		9,207.86
Barstow, Frederic D		772.34		772.34
Canfield Collection		38,833.61		38,833.61
Casey, Thomas L		7,846.82		7,846.82
Chamberlain		28,592.33		28,592.33
Hillyer, Virgil		6,673.02		6,673.02
Hodgkins, specific	$100,000			100,000.00
Special Research			$20,946.00	20,946.00
Hughes, Bruce		15,382.40		15,382.40
Myer, Catherine W		19,246.73		19,246.73
Pell, Cornelia Livingston		2,450.56		2,450.56
Poore, Lucy T. and George W	26,670	39,531.14		66,201.14
Reid, Addison T	11,000	13,793.14	4,500.00	29,293.14
Roebling Collection		122,533.38		122,533.38
Rollins, Miriam and William		44,068.12	9,500.00	53,568.12
Smithsonian unrestricted:				
Special			1,400.00	1,400.00
Avery	14,000	37,807.71		51,807.71
Endowment		177,090.38		177,090.38
Habel	500			500.00
Hachenberg		4,083.16		4,083.16
Hamilton	2,500	409.87		2,909.87
Henry		1,227.97		1,227.97
Hodgkins (general)	116,000	30,446.49		146,446.49
Parent	727,640	1,239.50		728,879.50
Rhees	590	480.33		1,070.33
Sanford	1,100	903.81		2,003.81
Springer		18,207.84		18,207.84
Walcott, Charles D. and Mary Vaux		10,718.44		10,718.44
Younger, Helen Walcott			50,112.50	50,112.50
Zerbee, Frances Brincklé		772.75		772.75
Total	1,000,000	723,795.46	86,458.50	1,810,253.96

FREER GALLERY OF ART FUND

Early in 1906, by deed of gift, Charles L. Freer, of Detroit, gave to the Institution his collection of Chinese and other oriental objects of art, as well as paintings, etchings, and other works of art by Whistler, Thayer, Dewing, and other artists. Later he also gave funds for the construction of a building to house the collection, and finally, in his will, probated November 6, 1919, he provided stock and securities to the estimated value of $1,958,591.42 as an endowment fund for the operation of the gallery. From the above date to the present time these funds have been increased by stock dividends, savings of income, etc., to a total of $4,651,867.07. In view of the importance and special nature of the gift and the requirements of the testator in respect to it, all Freer funds are kept separate from the other funds of the Institution, and the accounting in respect to them is stated separately.

The invested funds of the Freer bequest are classified as follows:

Court and grounds fund	$521,158.68
Court and grounds maintenance fund	131,062.81
Curator fund	530,333.92
Residuary legacy	3,469,311.66
	4,651,867.07

SUMMARY

Invested endowment for general purposes	$1,117,419.22
Invested endowment for specific purposes other than Freer endowment	692,834.74
Total invested endowment other than Freer endowment	1,810,253.96
Freer invested endowment for specific purposes	4,651,867.07
Total invested endowment for all purposes	6,462,121.03

CLASSIFICATION OF INVESTMENTS

Deposited in the U. S. Treasury at 6 percent per annum, as authorized in the U. S. Revised Statutes, sec. 5591		$1,000,000.00
Investments other than Freer endowment (cost or market value at date acquired):		
Bonds (20 different groups)	$334,888.21	
Stocks (55 different groups)	428,954.79	
Real estate and first-mortgage notes	41,746.00	
Uninvested capital	4,664.96	
		810,253.96
Total investments other than Freer endowment		1,810,253.96

Investments of Freer endowment (cost or market value at date acquired):		
Bonds (42 different groups)	$2,153,477.00	
Stocks (50 different groups)	2,458,494.73	
Real estate first-mortgage notes	37,500.00	
Uninvested capital	2,395.34	
		$4,651,867.07
Total investments		6,462,121.03

CASH BALANCES, RECEIPTS, AND DISBURSEMENTS DURING THE FISCAL YEAR [1]

Cash balance on hand June 30, 1935		$578,572.12
Receipts:		
Cash income from various sources for general work of the Institution	$66,611.05	
Cash gifts and contributions expendable for special scientific objects (not to be invested)	23,998.62	
Cash gifts for special scientific work (to be invested)	7,000.00	
Cash income from endowments for specific use other than Freer endowment and from miscellaneous sources (including refund of temporary advances)	60,089.96	
Cash received as royalties from Smithsonian Scientific Series	37,875.92	
Cash capital from sale, call of securities, etc. (to be reinvested)	151,534.99	
Total receipts other than Freer endowment		347,110.54
Cash receipts from Freer endowment: Income from investments, etc	259,420.73	
Cash capital from sale, call of securities, etc. (to be reinvested)	1,175,874.51	
Total receipts from Freer endowment		1,435,295.24
Total		2,360,977.90
Disbursements:		
From funds for general work of the Institution:		
Buildings, care, repairs, and alterations	$3,988.87	
Furniture and fixtures	438.79	
General administration [2]	27,002.60	
Library	2,208.85	
Publications (comprising preparation, printing, and distribution)	16,555.16	
Researches and explorations	17,090.34	
International Exchanges	4,788.30	
		72,072.91

[1] This statement does not include Government appropriations under the administrative charge of the Institution.

[2] This includes salary of the Secretary and certain others.

Disbursements—Continued.		
From funds for specific use, other than Freer endowment:		
Investments made from gifts, from gain from sale, etc., of securities and from savings on income	$11,608.81	
Other expenditures, consisting largely of research work, travel, increase and care of special collections, etc., from income of endowment funds and from cash gifts for specific use (including temporary advances)	94,450.36	
Reinvestment of cash capital from sale, call of securities, etc	164,432.67	
		$270,491.84
From Freer endowment:		
Operating expenses of the gallery, salaries, field expenses, etc	67,882.17	
Purchase of art objects	213,876.72	
Investments made from gain from sale, etc., of securities	75,756.14	
Reinvestment of cash capital from sale, call of securities, etc	1,431,373.56	
Accrued interest on bonds purchased	7,072.13	
		1,795,960.72
Cash balance June 30, 1936		222,452.43
Total		2,360,977.90

EXPENDITURES FOR RESEARCHES IN PURE SCIENCE, PUBLICATIONS, EXPLORATIONS, CARE, INCREASE, AND STUDY OF COLLECTIONS, ETC.

Expenditures from general funds of the Institution:		
Publications	$16,555.16	
Researches and explorations	17,090.34	
		$33,645.50
Expenditures from funds devoted to specific purposes:		
Researches and explorations	57,669.45	
Care, increase, and study of special collections	12,545.96	
Publications	6,033.72	
		76,249.13
Total		109,894.63

The practice of depositing on time in local trust companies and banks such revenues as may be spared temporarily has been continued during the past year, and interest on these deposits has amounted to $925.30.

The Institution gratefully acknowledges gifts or bequests from the following:

Mrs. Laura Welsh Casey, for further contributions to Thomas Lincoln Casey fund, for investigations in Coleoptera.

Mrs. Virgil M. Hillyer, for the establishment of a fund the income from which is to be used in the care and increase of the Virgil Hillyer collection of lighting objects.

Research Corporation, for further contributions for researches in radiation.

Mrs. Mary Vaux Walcott, for contribution for the purchase of certain specimens and a collection of pamphlets on anthropology.

All payments are made by check, signed by the Secretary of the Institution on the Treasurer of the United States, and all revenues are deposited to the credit of the same account. In many instances deposits are placed in bank for convenience of collection and later are withdrawn in round amounts and deposited in the Treasury.

The foregoing report relates only to the private funds of the Institution.

The following annual appropriations were made by Congress for the Government bureaus under the administrative charge of the Smithsonian Institution for the fiscal year 1936:

Salaries and expenses		$36,326.00
International Exchanges		44,262.00
American Ethnology		58,730.00
Astrophysical Observatory		30,846.00
National Museum:		
Maintenance and operation	$125,672.00	
Preservation of collections	594,578.00	
		720,250.00
National Gallery of Art		34,275.00
Printing and binding		37,500.00
National Zoological Park		215,000.00
		1,177,189.00

Provision was made for participation by the Smithsonian Institution in the following expositions:

California Pacific International Exposition (unexpended balance of allotment made last year, made available until January 1, 1937)	$916.19
Texas Centennial Exposition	10,000.00
Great Lakes Exposition	700.00

An appropriation was also made providing $25,000 for the purchase of the airplane *Winnie Mae* and equipment used by Wiley Post in his world flight.

The report of the audit of the Smithsonian private funds is printed below:

AUGUST 28, 1936.

EXECUTIVE COMMITTEE, BOARD OF REGENTS,
Smithsonian Institution, Washington, D. C.

SIRS: Pursuant to agreement we have audited the accounts of the Smithsonian Institution for the fiscal year ended June 30, 1936, and certify the balance of cash on hand June 30, 1936, to be $224,352.43 (which includes $1,900 cash in safe).

We have verified the record of receipts and disbursements maintained by the Institution and the agreement of the book balances with the bank balances.

We have examined all the securities in the custody of the Institution and in the custody of the banks and found them to agree with the book records.

We have compared the stated income of such securities with the receipts of record and found them in agreement therewith.

We have examined all vouchers covering disbursements for account of the Institution during the fiscal year ended June 30, 1936, together with the authority therefor, and have compared them with the Institution's record of expenditures and found them to agree.

We have examined and verified the accounts of the Institution with each trust fund.

We found the books of account and records well and accurately kept and the securities conveniently filed and securely cared for.

All information requested by your auditors was promptly and courteously furnished.

We certify the balance sheet, in our opinion, correctly presents the financial condition of the Institution as at June 30, 1936.

Respectfully submitted.

WILLIAM L. YAEGER & CO.,
WILLIAM L. YAEGER,
Certified Public Accountant.

Respectfully submitted.

FREDERIC A. DELANO,
R. WALTON MOORE,
JOHN C. MERRIAM,
Executive Committee.

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