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U. S. National Museum

REPORT OF THE SECRETARY
OF THE SMITHSONIAN
INSTITUTION

AND

FINANCIAL REPORT OF
THE EXECUTIVE COMMITTEE OF
THE BOARD OF REGENTS

1938

SMITHSONIAN INSTITUTION
WASHINGTON, D. C.



REPORT OF THE SECRETARY
OF THE SMITHSONIAN
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AND

FINANCIAL REPORT OF
THE EXECUTIVE COMMITTEE OF
THE BOARD OF REGENTS

FOR THE

YEAR ENDED JUNE 30

1938



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CONTENTS

	Page
List of officials	v
Outstanding events	1
Summary of the year's activities of the branches of the Institution	2
The establishment	6
The Board of Regents	7
Finances	8
Matters of general interest	8
The Smithsonian Gallery of Art	8
Smithsonian radio program	9
Walter Rathbone Bacon Traveling Scholarship	11
Smithsonian Institution exhibit at the Paris International Exposition, 1937	11
Seventh Arthur lecture	12
Explorations and field work	12
Publications	14
Library	14
Appendix 1. Report on the United States National Museum	16
2. Report on the National Gallery of Art	27
3. Report on the National Collection of Fine Arts	35
4. Report on the Freer Gallery of Art	41
5. Report on the Bureau of American Ethnology	46
6. Report on the International Exchange Service	53
7. Report on the National Zoological Park	62
8. Report on the Astrophysical Observatory	93
9. Report on the Division of Radiation and Organisms	98
10. Report on the library	101
11. Report on publications	107
Report of the executive committee of the Board of Regents	113

THE SMITHSONIAN INSTITUTION

June 30, 1938

Presiding officer ex officio.—FRANKLIN D. ROOSEVELT, President of the United States.

Chancellor.—CHARLES EVANS HUGHES, Chief Justice of the United States.

Members of the Institution:

FRANKLIN D. ROOSEVELT, President of the United States.

JOHN N. GARNER, Vice President of the United States.

CHARLES EVANS HUGHES, Chief Justice of the United States.

CORDELL HULL, Secretary of State.

HENRY MORGENTHAU, Jr., Secretary of the Treasury.

HENRY HINES WOODRING, Secretary of War.

HOMER S. CUMMINGS, Attorney General.

JAMES A. FARLEY, Postmaster General.

CLAUDE A. SWANSON, Secretary of the Navy.

HAROLD L. ICKES, Secretary of the Interior.

HENRY A. WALLACE, Secretary of Agriculture.

DANIEL C. ROPER, Secretary of Commerce.

FRANCES PERKINS, Secretary of Labor.

Regents of the Institution:

CHARLES EVANS HUGHES, Chief Justice of the United States, Chancellor.

JOHN N. GARNER, Vice President of the United States.

M. M. LOGAN, Member of the Senate.

CHARLES L. McNARY, Member of the Senate.

ALBEN W. BARKLEY, Member of the Senate.

T. ALAN GOLDSBOROUGH, Member of the House of Representatives.

CHARLES L. GIFFORD, Member of the House of Representatives.

CLARENCE CANNON, Member of the House of Representatives.

FREDERIC A. DELANO, citizen of Washington, D. C.

JOHN C. MERRIAM, citizen of Washington, D. C.

R. WALTON MOORE, citizen of Virginia.

ROLAND S. MORRIS, citizen of Pennsylvania.

HARVEY N. DAVIS, citizen of New Jersey.

ARTHUR H. COMPTON, citizen of Illinois.

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

Keeper ex officio.—CHARLES G. ABBOT.

Assistant Secretary.—ALEXANDER WETMORE.

Administrative assistant to the Secretary.—HARRY W. DORSEY.

Treasurer.—NICHOLAS W. DORSEY.

Editor.—WEBSTER P. TRUE.

Librarian.—WILLIAM L. CORBIN.

Personnel officer.—HELEN A. OLMSTED.

Property clerk.—JAMES H. HILL.

UNITED STATES NATIONAL MUSEUM

Keeper ex officio.—CHARLES G. ABBOT.

Assistant Secretary (in charge).—ALEXANDER WETMORE.

Associate director.—JOHN E. GRAF.

SCIENTIFIC STAFF

DEPARTMENT OF ANTHROPOLOGY:

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

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

Section of Musical Instruments: Hugo Worch, custodian.

Section of Ceramics: Samuel W. Woodhouse, collaborator.

Division of Archeology: Neil M. Judd, curator; Waldo R. Wedel, assistant 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.

Collaborators 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; H. Harold Shamel, senior 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: Leonard P. Schultz, curator; E. D. Reid, aid.

Division of Insects: L. O. Howard, honorary curator; Edward A. Chapin, curator; William Schaus, honorary assistant curator; B. Preston Clark, collaborator.

Section of Hymenoptera: S. A. Rohwer, custodian; W. M. Mann, assistant custodian; Robert A. Cushman, assistant custodian.

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.

Division of Marine Invertebrates: Waldo L. Schmitt, curator; C. R. Shoemaker, assistant curator; James O. Maloney, aid; Mrs. Harriet Richardson Searle, collaborator; Max M. Ellis, collaborator; Maynard M. Metcalf, collaborator; J. Percy Moore, collaborator; Joseph A. Cushman, collaborator in Foraminifera; Charles Branch Wilson, collaborator in Copepoda.

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:

Division of Echinoderms: Austin H. Clark, curator.

Division of Plants (National Herbarium): W. R. Maxon, 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.

Section of Grasses: Agnes Chase, custodian.

Section of Cryptogamic Collections: O. F. Cook, assistant curator.

DEPARTMENT OF BIOLOGY—Continued.

Division of Plants, etc.—Continued.

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.

Associate Curator in Zoology: Hugh M. Smith.

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:

R. S. Bassler, head curator; Jessie G. Beach, aid.

Division of Physical and Chemical Geology (systematic and applied): W. F. Foshag, curator; Edward P. Henderson, assistant curator; Bertel O. Reberholt, senior scientific aid.*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.

Associate in Mineralogy: W. T. Schaller.

Associate in Paleontology: E. O. Ulrich.

Associate in Petrology: Whitman Cross.

DEPARTMENT OF ARTS AND INDUSTRIES:

Carl W. Mitman, head curator.

Division of Engineering: Frank A. Taylor, curator.

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:

Division of Medicine: Charles Whitebread, assistant curator.*Division of Graphic Arts*: R. P. Tolman, curator.

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

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

Chief of correspondence and documents.—H. S. BRYANT.*Assistant chief of correspondence and documents.*—L. E. COMMERFORD.*Superintendent of buildings and labor.*—R. H. TREMBLY.*Assistant superintendent of buildings and labor.*—CHARLES C. SINCLAIR.*Editor.*—PAUL H. OEHSER.*Engineer.*—C. R. DENMARK.*Accountant and auditor.*—N. W. DORSEY.*Photographer.*—A. J. OLMSTED.*Property clerk.*—LAWRENCE L. OLIVER.*Assistant librarian.*—LEILA F. CLARK.

NATIONAL GALLERY OF ART

Trustees:

The CHIEF JUSTICE of the UNITED STATES.
The SECRETARY OF STATE.
The SECRETARY of the TREASURY.
The SECRETARY of the SMITHSONIAN INSTITUTION.
PAUL MELLON.
DAVID K. E. BRUCE.
DUNCAN PHILLIPS.
DONALD D. SHEPARD.
FERDINAND L. BELIN.

President.—PAUL MELLON.

Vice president.—DAVID K. E. BRUCE.

Secretary and treasurer.—DONALD D. SHEPARD.

Director.—DAVID E. FINLEY.

NATIONAL COLLECTION OF FINE ARTS

Acting director.—RUEL P. TOLMAN.

FREER GALLERY OF ART

Director.—JOHN ELLERTON LODGE.

Associate in archeology.—CARL WHITING BISHOP.

Assistant director.—GRACE DUNHAM GUEST.

Associate in research.—ARCHIBALD G. WENLEY.

Superintendent.—JOHN BUNDY.

BUREAU OF AMERICAN ETHNOLOGY

Chief.—MATTHEW W. STIRLING.

Senior ethnologists.—JOHN P. HARRINGTON, TRUMAN MICHELSON, JOHN R. SWANTON.

Senior archeologist.—FRANK H. H. ROBERTS, JR.

Senior anthropologist.—JULIAN H. STEWARD.

Editor.—STANLEY SEARLES.

Librarian.—MIRIAM B. KETCHUM.

Illustrator.—EDWIN G. CASSEDY.

INTERNATIONAL EXCHANGES

Secretary (in charge).—CHARLES G. ABBOT.

Chief clerk.—COATES W. SHOEMAKER.

NATIONAL ZOOLOGICAL PARK

Director.—WILLIAM M. MANN.

Assistant director.—ERNEST P. WALKER.

ASTROPHYSICAL OBSERVATORY

Director.—CHARLES G. ABBOT.

Assistant director.—LOYAL B. ALDRICH.

Senior astrophysicist.—WILLIAM H. HOOVER.

DIVISION OF RADIATION AND ORGANISMS

Director.—CHARLES G. ABBOT.

Assistant director.—EARL S. JOHNSTON.

Senior physicist.—EDWARD D. McALISTER.

Senior mechanical engineer.—LELAND B. CLARK.

Associate plant physiologist.—FLORENCE E. MEIER.

REPORT OF THE SECRETARY OF THE SMITHSONIAN INSTITUTION

C. G. ABBOT

FOR THE YEAR ENDED JUNE 30, 1938

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, 1938. The first 15 pages contain a summary account of the affairs of the Institution, and appendixes 1 to 11 give more detailed reports of the operations of the National Museum, the National Gallery of Art, the National Collection of Fine Arts, 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 113 is the financial report of the executive committee of the Board of Regents.

OUTSTANDING EVENTS

The past year witnessed a further stimulus to the art feature of the Smithsonian Institution in the passage by Congress of a resolution authorizing the President to designate a tract of land on the Mall for a Smithsonian Gallery of Art and authorizing an appropriation of \$40,000 to obtain preliminary plans for such a building. It is the expectation that the building itself will be financed by private funds. The year also marked the completion of the foundations of the new National Gallery of Art now under construction which is to house the Andrew W. Mellon art collection given by Mr. Mellon to the Nation through the Smithsonian Institution. The building is expected to be completed in 1940. The Smithsonian solar observing station on Mount St. Katherine in Egypt was abandoned owing to the excessive isolation of that station and other cogent reasons, and construction of a new station on Burro Mountain near Tyrone in New Mexico was begun. June 1938 marked the completion of 2 full years of the Smithsonian radio program in cooperation with the United

States Office of Education. These educational broadcasts have continued in favor with a very large listening audience as witnessed by the nearly quarter of a million letters received as the result of the program.

Among the large amount of material received by the National Museum, an outstanding accession is a collection of mollusks obtained through the Frances Lea Chamberlain fund which numbered well over a million specimens. The Bureau of American Ethnology dispatched an expedition to South America to make extensive studies of the Indian tribes of the western part of that continent. New apparatus and new methods have been developed in the Division of Radiation and Organisms, and investigations have yielded important results particularly in the field of photosynthesis.

The Board of Regents lost three of its members by death, Senator Joseph T. Robinson, Ambassador Robert W. Bingham, and Augustus P. Loring. To fill the vacancies thus created, three new members were appointed, namely, Senator Alben W. Barkley, of Kentucky; Dr. Harvey N. Davis, of New Jersey; and Dr. Arthur H. Compton, of Illinois.

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

National Museum.—The total appropriation for the maintenance of the Museum was \$775,720, an actual increase of \$11,750 over the previous year. Specimens added to the collections, mainly as gifts or through Smithsonian expeditions, numbered 312,729. In this large amount of new material some of the more important accessions were as follows: In anthropology, nearly a hundred vessels and fragments from Honduras, obtained by the joint expedition with the Peabody Museum of Harvard University, and other archeological collections from Denmark, South Africa, and the Temple Mound in Le Flore County, Okla.; in biology, large additions to the collections of mammals, birds, reptiles, fishes, marine invertebrates, and insects, the latter including 54,000 insects transferred from the United States Bureau of Entomology and Plant Quarantine; in geology, specimens representing 62 distinct meteoric falls, largely purchased by the Roebling Fund, 790 specimens pertaining to mineralogy and petrology obtained through the Chamberlain Fund and the Canfield Fund, and an unparalleled collection of Devonian invertebrates made by Dr. G. Arthur Cooper and Preston Cloud in the Lower Peninsula of Michigan; in arts and industries, the first cable car to operate in Seattle, Wash. (1889), presented by the city of Seattle, 1,500 specimens pertaining to textiles, and a number of models of famous air-

planes added to the aeronautical collection; and in history, more than 2,500 objects of historic and antiquarian value, including a number of objects relating to the scientific career of Dr. Charles D. Walcott, fourth Secretary of the Smithsonian Institution, the gift of Mrs. Walcott. A number of expeditions went out during the year in the interests of the Museum's researches in anthropology, biology, and geology. These were financed principally by Smithsonian private funds or by the assistance of friends of the Museum. Seventeen special exhibitions were held during the year under the auspices of various educational, scientific, and governmental agencies. The number of visitors to the several Museum buildings totaled 2,408,170, an increase of 119,638 over the previous year. The Museum published an annual report, 5 bulletins, and 19 Proceedings separates.

National Gallery of Art.—The first annual report of the National Gallery of Art reviews the establishment of the Gallery by joint resolution of Congress following the munificent gift to the Nation by the late Andrew W. Mellon of his great collection of art works, together with funds for the erection of a gallery building and for an endowment. The trustees announced the death of Andrew W. Mellon and S. Parker Gilbert, leaving two vacancies on the board which were filled by the election of Paul Mellon and Ferdinand Lamot Belin as general trustees. An organization meeting of the trustees was held on March 9, 1938, at which bylaws were adopted and executive officers were elected as follows: Paul Mellon, president; David K. E. Bruce, vice president; Donald D. Shepard, secretary and treasurer; and David E. Finley, director. Executive, acquisitions, and finance committees were named. At the close of the fiscal year the foundations of the gallery were substantially completed, and it is expected that the building will be completed by September 1940. A list of the paintings in the Mellon collection, now in storage at the Corcoran Gallery of Art, is presented in the report.

National Collection of Fine Arts.—The National Collection of Fine Arts is the name used to designate the art collections administered by the Smithsonian Institution with the exception of those that will be included in the National Gallery of Art, now under construction. A bill authorizing the Institution to obtain plans for a building to contain these collections and to be known as the "Smithsonian Gallery of Art" was passed at the last session of Congress. The bill also authorized the President to select a site for the gallery on the Mall between Fourth and Fourteenth Streets and authorized the soliciting of funds for its construction and for an endowment for the purchase of works of art. The seventeenth annual meeting of the National Gallery of Art Commission was held on December 7,

1937. As the name "National Gallery of Art" has been assigned to the gallery building now being erected to contain the Mellon art collections, the name of the Commission was changed to "Smithsonian Art Commission." A wood gravure of "Rockwell Studio," by Macowin Tuttle, was accepted by the Commission for the collection. Five miniatures were acquired through the Catherine Walden Myer fund. Six special exhibitions were held as follows: The art of the Mexican school children, 262 items; joint exhibition of the Twenty Women Painters and the Landscape Club, of Washington, D. C.; 74 water colors by William Spencer Bagdatopoulos; 85 paintings, 20 framed and 41 unframed water colors, 34 etchings, and 33 pieces of sculpture from the National Collection of Fine Arts; 3 portraits by Henrique Medina; and 260 naval historical prints from the Eberstadt Collection.

Freer Gallery of Art.—Additions to the collections included Chinese bronze, gold, and jade objects; Arabic manuscripts; Chinese, Indian, and Persian paintings; Chinese porcelain; Persian pottery; and Egyptian stone sculpture. The year's curatorial work has been devoted to the study of Chinese, Japanese, Arabic, Persian, Aramaic, and Armenian art objects and of associated texts, inscriptions, or seals. The results of these studies have been incorporated in the Gallery records. Many similar objects have been brought or sent to the Director by their owners for expert opinion on their identity, age, etc. Changes in exhibition in the Gallery have involved a total of 75 objects. The number of visitors for the year was 120,427. Two lectures on Musulman painting were given by Eustache de Lorey, of Paris; 9 groups were given instruction in the study rooms, and 10 groups were given docent service in the exhibition galleries.

Bureau of American Ethnology.—Mr. Stirling, chief, besides his administrative duties, made a reconnaissance trip to Mexico, during which he selected a site in the Canton of Tuxtlas south of Vera Cruz for archeological excavation during the coming year. Dr. Swanton devoted most of the year to field work and investigations relating to his work as chairman of the United States De Soto Expedition Commission. Dr. Michelson undertook field work among the Montagnais-Naskapi Indians of the northern shore of the St. Lawrence River and vicinity. Dr. Harrington completed a comparative study of the Tano-Kiowan family of languages. Dr. Roberts continued his archeological work at the Lindenmeier site in northern Colorado, where he unearthed a large collection of specimens relating to Folsom man, so far as known the earliest of New World inhabitants. Dr. Steward completed his final report on the tribes of the Great Plains-Plateau area. In April 1938, he left for Ecuador to begin extensive

ethnological studies in the western part of South America. The Bureau published an annual report and three bulletins.

International Exchanges.—The International Exchange Service under the Smithsonian Institution acts as the official agency of the United States for the interchange with other countries of governmental and scientific documents. During the year the service handled 719,121 packages of such matter, an increase of 61,775 over the previous year. The weight of these packages was 656,119 pounds. The Government franking privilege was extended to cover a number of South and Central American countries, and packages for those countries were therefore sent direct to their destinations by mail instead of through the respective exchange bureaus. Shipments of exchanges to Spain have been suspended since August 1936, and those to China since August 1937. At the close of the year, however, a large consignment was being prepared for shipment to the Chinese Bureau of International Exchanges, which had moved its office from Nanking to Chungking.

National Zoological Park.—The outstanding feature of the year was the addition to the collection of the large number of animals, birds, and reptiles brought back by the National Geographic Society-Smithsonian Expedition to the East Indies. The actual number of specimens was 879, consisting of 121 mammals of 46 species, 649 birds of 93 species, and 109 reptiles of 30 species. The new large mammal house described in last year's report was stocked with animals during August and September 1937, the difficult task of transferring such large creatures as elephants, hippopotamuses, and rhinoceroses being accomplished without mishap. Visitors for the year again increased in number, the total reaching 3,127,650. This included 1,374 organizations, mainly schools, with a total of 70,371 individuals. Among the additions to the animal collection may be mentioned 34 mammals born and 30 birds hatched in the Park. The total number of animals in the collection at the close of the year was 2,754, an increase of 412 over last year. The most urgent need of the Park is a new building for the restaurant and concession stand.

Astrophysical Observatory.—The main business of the year was the recomputation of all solar-constant values from 1923 to the present time. This immense task was nearly completed at the close of the year, and it is hoped that by January 1939 a homogeneous series of daily values will be available. A highly sensitive instrument to measure the distribution of energy in the spectra of some of the brighter stars was constructed by Dr. Abbot and Mr. Hoover, and in May 1938 Mr. Hoover took the apparatus to Mount Wilson, Calif., to make new measurements of the stellar spectrum energy and also

to make studies of the growth of plants in monochromatic rays. By way of anticipating next year's report, it may be said that gratifying progress was made in both researches. At the request of the Weather Bureau, construction was begun of a duplicate of the atmospheric turbidity and moisture apparatus used by the Institution in testing the desirability of mountain sites for solar observatories. Dr. Abbot made further progress in the development of devices for utilizing solar radiation. The solar-radiation station on Mount St. Katherine in Egypt was abandoned for several reasons in December 1937, and a new station was located on Burro Mountain near Tyrone, N. Mex. It is hoped to begin observations there by November 1938. Dr. Brian O'Brien, aided by Smithsonian grants, has made further progress in the development of methods and apparatus for measuring solar variation in the ultraviolet from sounding balloons, and he hopes soon to be able to compare this method with the results of the Smithsonian solar-constant observations.

Division of Radiation and Organisms.—Many investigations relating to plant growth and radiation have been fruitfully pursued during the year. An improved method has been developed for measuring plant growth substances concerned in the bending of plants toward the light. Several members of the staff have collaborated in preparing a new automatic apparatus for measuring and recording photosynthesis continuously, as well as an apparatus for the determination of chlorophyll. Preparations are under way for the investigation of photosynthesis in algae. Studies were continued of mixtures of artificial lights suitable to promote satisfactory plant growth under laboratory conditions. Dependence of the induction periods in the photosynthesis of wheat on the length of previous dark exposures was further investigated, and in addition important results were obtained on the chlorophyll—CO₂ ratio during photosynthesis. Members of the staff published five papers on the results of these and other investigations during the year.

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

During the year the Board of Regents lost three of its members by death, namely, Senator Joseph T. Robinson, of Arkansas, on July 14, 1937; Ambassador Robert W. Bingham, of Kentucky, on December 18, 1937; and Mr. Augustus P. Loring, of Massachusetts, on March 17, 1938. Senator Alben W. Barkley, of Kentucky, was appointed by the President of the Senate on November 15, 1937, to succeed Senator Robinson; by joint resolution of Congress approved June 15, 1938, Dr. Harvey N. Davis, of New Jersey, was appointed to succeed Ambassador Bingham; and by joint resolution approved June 20, 1938, Dr. Arthur H. Compton, of Illinois, was appointed to succeed Mr. Loring. Also by joint resolution approved June 20, 1938, Hon. R. Walton Moore, of Virginia, was reappointed to succeed himself.

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—M. M. Logan, Charles L. McNary, Alben W. Barkley; members from the House of Representatives—T. Alan Goldsborough, Charles L. Gifford, Clarence Cannon; citizen members—Frederic A. Delano, Washington, D. C.; John C. Merriam, Washington, D. C.; R. Walton Moore, Virginia; Roland S. Morris, Pennsylvania; Harvey N. Davis, New Jersey; Arthur H. Compton, Illinois.

Proceedings.—The annual meeting of the Board of Regents was held on January 13, 1938. The Regents present were Chief Justice Charles Evans Hughes, Chancellor; John N. Garner, Vice President of the United States; Senators M. M. Logan and Alben W. Barkley; Representatives T. Alan Goldsborough, Charles L. Gifford, and Clarence Cannon; citizen Regents Frederic A. Delano and John C. Merriam; and the Secretary, Dr. Charles G. Abbot.

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, the name of which was changed, by a resolution adopted by the Regents at this meeting, to the Smithsonian Art Commission.

In his usual special report the Secretary presented to the Regents a brief review of important activities carried on by the Institution and members of the staff during the year.

In addition to the annual meeting, there was a special meeting of the Board of Regents on May 11, 1938, at which the following Regents were present: Chief Justice Charles Evans Hughes, Chancellor; Representatives T. Alan Goldsborough, Charles L. Gifford, and Clarence Cannon; citizen Regents Frederic A. Delano, R. Walton Moore, and Roland S. Morris; and the Secretary, Dr. Charles G. Abbot. This meeting was called to consider several urgent matters that had arisen, including a pending joint resolution of Congress (which was afterward approved on May 17, 1938) setting apart public ground for the Smithsonian Gallery of Art, and establishing the Smithsonian Gallery of Art Commission, to make preliminary investigations and to secure appropriate designs, by competition or otherwise, for a Smithsonian Gallery of Art. The joint resolution also authorized an appropriation of \$40,000 for expenses of the Commission, which amount was included in the deficiency appropriation bill approved June 25, 1938.

FINANCES

A statement will be found in the report of the executive committee, page 113.

MATTERS OF GENERAL INTEREST

THE SMITHSONIAN GALLERY OF ART

In my last report I spoke of a resolution introduced at the first session of the Seventy-fifth Congress to establish a Smithsonian Gallery of Art to house the national art collections. The resolution did not pass that session of Congress, but it was introduced again at the third session, passed both houses of Congress, and was approved by the President on May 17, 1938. The resolution authorized the President to set apart ground for such a gallery on the Mall between Fourth and Fourteenth Streets and Constitution and Independence Avenues. A commission was set up, to be called the Smithsonian Gallery of Art Commission, who were authorized to secure appropriate designs for a gallery building, and \$40,000 was authorized to be appropriated for this purpose. The Regents of the Institution were authorized to solicit and receive subscriptions of funds for the construction of a building. In addition to providing space for the present National Collection of Fine Arts, administered by the Institution and other art works belonging to the Government, the Smithsonian Gallery of Art is authorized by the resolution to hold public exhibitions, to acquire and sell contemporary works of art, to employ artists and other personnel, and to award scholarships.

The \$40,000 authorized to be appropriated was actually provided in the Second Deficiency Act approved June 25, 1938.

The Smithsonian Gallery of Art Commission as designated in the resolution held its first meeting on May 25, 1938, at the Smithsonian Institution. Five of the eight members constituting the Commission were present, namely, Edward Bruce, Frederic A. Delano, Hon. Kent E. Keller, Charles L. Borie, Jr., and Dr. Charles G. Abbot. Two of the remaining members, Senator Alben W. Barkley and Gilmore D. Clarke, were unable to be present, and the eighth member, a representative of the Board of Regents of the Institution, had not yet been designated. Mr. Delano was elected chairman of the Commission and Dr. Abbot secretary. A ways and means committee was appointed to consider the matter of soliciting funds from prospective donors for the construction of the gallery building, and an outline of the characteristics of a desirable type of building was presented by the chairman. The meeting adjourned subject to call by the chairman.

The Smithsonian Institution is indeed gratified that at last there is real promise of a suitable gallery building to house the valuable art collections in its custody formerly known as the National Gallery of Art and since 1937 as the National Collection of Fine Arts. Such a gallery, together with the National Gallery of Art now under construction and the Freer Gallery of Art, all associated with the Smithsonian Institution, will undoubtedly go far toward placing America among the forefront of nations in the field of art and will eventually make of the Nation's Capital an art center comparable with those of the Old World.

SMITHSONIAN RADIO PROGRAM

In June 1938 was completed the second full year of "The World is Yours," the weekly radio program put on the air by cooperation between the United States Office of Education, the National Broadcasting Co., and the Smithsonian Institution, with the financial support of the Works Progress Administration. The series was begun in June 1930 as an experiment in the field of educational radio. The Smithsonian editorial office worked out a widely diversified but carefully balanced series of subjects in the various fields of the Institution's activities—science, invention, history, and art—and these subjects were presented to listeners as half-hour dramatizations every Sunday over an NBC network. The number of stations carrying the programs was small at first, but increased gradually until in June 1938 "The World is Yours" went on the air over 57 stations and 2 short-wave stations.

In my last report were listed the subjects covered in the first year's programs. From July 1, 1937, to June 30, 1938, the following subjects were presented:

	<i>1937</i>
Revolutionary Relics.....	July 4
Life in the Sea.....	July 11
Pharmaceutical Products.....	July 25
Automobiles.....	Aug. 1
Men of Science.....	Aug. 8
Medals.....	Aug. 15
Glass.....	Aug. 22
Egyptian Antiquities.....	Aug. 29
Rubber.....	Sept. 5
Refrigeration.....	Sept. 12
Cutlery.....	Sept. 19
Surgery.....	Sept. 26
Tin.....	Oct. 3
Flying the Oceans.....	Oct. 10
Lace.....	Oct. 17
Radiation.....	Oct. 24
Famous Swords.....	Oct. 31
Science Advance of the Year.....	Nov. 7
John Smith and the Virginia Indians.....	Nov. 14
Romance of Surveying.....	Nov. 21
Capturing Live Animals in Sumatra.....	Nov. 28
Diamond.....	Dec. 5
Aztec Civilization.....	Dec. 12
Drugs and Medicines.....	Dec. 19
Christmas in the Colonies.....	Dec. 26
	<i>1938</i>
The True De Soto.....	Jan. 2
Masters Behind the Mellon Masterpieces.....	Jan. 9
Land versus Weather.....	Jan. 16
The Saga of the Sewing Machine.....	Jan. 23
Whales, Largest of Mammals.....	Jan. 30
Four Principles of Mechanics.....	Feb. 6
Snakes, Big and Little.....	Feb. 13
The Lincoln Legend.....	Feb. 20
The Story of Electricity.....	Feb. 27
Man Against Insects.....	Mar. 6
Conquest Underground.....	Mar. 13
Rockets and Planets.....	Mar. 20
Saving the Forests.....	Mar. 27
Birds of Prey.....	Apr. 3
Introducing the Universe.....	Apr. 10
The Inca Empire of the Sun.....	Apr. 17
Silver Through the Centuries.....	Apr. 24
Exploration for Science.....	May 1
Primitive Music.....	May 8
Air Mail.....	May 15
American Food Plants.....	May 22
Rare Metals.....	May 29

1937

Twentieth Century Physics.....	June 5
Jacques Marquette on the Mississippi.....	June 12
Industrial Chemistry.....	June 19
Life Under the Microscope.....	June 26

According to the large amount of mail received at the Office of Education after each week's program goes on the air, the series has maintained a widespread popularity among listeners of all ages and occupations in the United States, Canada, and some foreign countries. During the two years "The World is Yours" has been on the air, close to a quarter of a million letters have been received, only a very small fraction of 1 percent of which have contained adverse criticism. Many, on the other hand, have been enthusiastic in their praise of the efforts of the Smithsonian and the Office of Education to make available via radio the wealth of information in science, history, and art contained in the exhibits and laboratories of the Smithsonian Institution.

Again I wish to express the Institution's gratitude to the Office of Education, the National Broadcasting Company, and the W. P. A. for making this educational radio program possible. It supplements admirably the Institution's previous methods of accomplishing one of its primary functions, the diffusion of knowledge. The financial support of the W. P. A. now seems assured for the continuation of the program during the coming fiscal year.

WALTER RATHBONE BACON TRAVELING SCHOLARSHIP

The Walter Rathbone Bacon Traveling Scholarship of the Smithsonian Institution was awarded for a third consecutive year commencing June 15, 1937, to Dr. Richard E. Blackwelder.

At the beginning of the period Dr. Blackwelder spent about 6 weeks in England where he studied the West Indian collections of Staphylinidae belonging to the British Museum and to Dr. Malcolm Cameron. Upon his return to this country he prepared his final report which takes the form of a revision of the West Indian components of the beetle family Staphylinidae.

SMITHSONIAN INSTITUTION EXHIBIT AT THE PARIS INTERNATIONAL EXPOSITION, 1937

In order to conform to the general theme of the Paris International Exposition, that is, "Arts and Technique of Modern Life," the Smithsonian Institution selected as its contribution a small exhibit which aimed to show the technique and variety of media originally used by the North American Indian for his artistic expressions. It was entitled "Arts and Crafts of the North American Indian." The exhibit formed

one of a series of Federal exhibits occupying a portion of the United States Building in the Exposition grounds.

The exhibit consisted of 41 carefully selected specimens from the vast ethnological collections of the United States National Museum. They included examples indicative of the Indians' skill in wood and stone carving; skin dressing; application of vegetable dyes; basket weaving; embroidery work with split and died porcupine quills and with glass beads; sewed feather designs; and free-hand painting of decorative and symbolic designs. The craftsmanship of some 15 American Indian tribes was represented in the exhibit including the Comanche, Sioux, Cheyenne, Shoshone, Poma, Apache, Chippewa, and Kiowa.

The exhibit was arranged in two exhibition cases especially designed for the purpose, and with each object there were placed brief descriptive labels in both English and French.

SEVENTH ARTHUR LECTURE

The seventh Arthur lecture, *The Sun and the Atmosphere*, was given by Dr. Harlan True Stetson, of the Massachusetts Institute of Technology, in the auditorium of the National Museum on the evening of February 24, 1938. Dr. Stetson, one of the world's leading authorities on the solar-terrestrial relationship, discussed particularly the sunspots and their effect upon various terrestrial matters. The lecture will be published in the General Appendix to the 1938 Smithsonian Report.

The Arthur lecture was provided for in the will of the late James Arthur, of New York City, who left to the Institution in 1931 a sum of money, part of the income from which should be used for an annual lecture on some aspect of the study of the sun.

EXPLORATIONS AND FIELD WORK

Twenty-four expeditions during the last calendar year took Smithsonian representatives to 13 States in the United States and many foreign countries to collect specimens and data needed in the scientific researches of the Institution.

Dr. Charles W. Gilmore directed exploration for dinosaur and mammalian fossils in Utah and Arizona. Dr. Charles E. Resser studied the Cambrian rocks of New York, Vermont, and Quebec. Dr. G. Arthur Cooper collected fossils needed in current investigations in Michigan, Pennsylvania, New York, and Canada. E. P. Henderson, representing the Smithsonian at the International Geological Congress in Moscow, had an opportunity to study the minerals of Russia.

Dr. Alexander Wetmore visited Venezuela to observe the bird life of that part of South America. A collection of birds, including the

very rare Asiatic fin foot and the Malayan ring plover, was made by H. G. Deignan in Siam. Gerrit S. Miller, Jr., spent 3 months in Panama collecting animals and plants. Watson M. Perrygo, continuing the work begun last year, went to Tennessee to obtain bird and mammal specimens needed for the Museum collections. Dr. William M. Mann directed the National Geographic Society-Smithsonian Expedition to the East Indies to collect living animals, birds, and reptiles for the National Zoological Park. William N. Beach obtained in Alaska some fine specimens of moose and caribou for the National Museum's exhibition series. Capt. Robert B. Bartlett, who for several years has been carrying on investigations in the Arctic region, visited the west coast of Greenland, sending back to the Smithsonian many specimens of marine life as well as specimens of birds and plants. Dr. Waldo L. Schmitt participated in an expedition to the West Indies and obtained, in addition to many new marine forms, two porpoises, which are among the rarest things in museums. Dr. Paul Bartsch took part in an expedition for the collection of marine organisms in West Indian waters. Dr. Bartsch also continued his heredity experiments, begun in 1912, using young specimens of a species of fresh-water mollusk as his subjects and various rivers and creeks in Virginia and West Virginia as breeding grounds. Dr. Edward A. Chapin collected some 50,000 specimens of insects on the Island of Jamaica, among them three species of scarabs new to science. Austin H. Clark hunted the "invisible butterfly," the Brazilian skipper, in Virginia, and although he was unable to find one of these butterflies, he obtained specimens of other rare species. Paul S. Conger explored the lakes of northern Wisconsin for diatoms.

Dr. Aleš Hrdlička went again to Alaska to further his study of the earliest occupation of that region, and spent 3 months on a series of the Aleutian Islands and on the Commander Islands, collecting 51 boxes and barrels of important anthropological material. Dr. Herbert W. Krieger conducted an archeological expedition to explore a large shell mound on the Island of Anegada, the most northerly of the British Virgin Islands, the objective being a comparison of the Indian relics recovered there with the large collection obtained by previous Smithsonian expeditions to the West Indies. Waldo R. Wedel inaugurated an archeological survey of Kansas, spending 3½ months in reconnaissance excavations in the northeastern part of the State and unearthing a wealth of important and varied archeological remains. David I. Bushnell, Jr., visited ancient Indian sites on the banks of the Rappahannock in Virginia and recovered many cultural objects shedding light on the manners and ways of life of the early inhabitants of the valley. Dr. John R. Swanton engaged in two field trips for the purpose of tracing De Soto's trail across America to the Mississippi. Dr. Frank H. H. Roberts, Jr., obtained addi-

tional evidence at the Lindenmeier site in Colorado of the existence of Folsom man, one of the earliest known inhabitants of the New World. Dr. Truman Michelson spent the summer of 1937 among the Montagnais-Naskapi Indians in Canada for the purpose of completing a linguistic map showing the distribution and interrelations of the Cree and the Montagnais-Naskapi dialects.

PUBLICATIONS

The Institution and its branches issued during the year a total of 68 publications. Of this number, 38 were issued by the Smithsonian proper, 26 by the National Museum, and 4 by the Bureau of American Ethnology. The titles, authors, and other information regarding all these publications will be found in the report of the editor, appendix 11. The total number of copies of publications distributed was 129,478.

The Institution depends in large part upon its series of publications to carry out one of its primary functions—the diffusion of knowledge. Its other means—its museum and art gallery exhibits, its extensive correspondence, its science news releases, and educational radio programs—are also important, but in its publications are presented in permanent form the results of researches by the scientific staffs of the Institution, the National Museum, the Bureau of American Ethnology, and other branches. These publications are regularly distributed free to a large list of libraries and educational institutions, where they are readily available to students and to other scientific workers.

Among the larger publications of the year there may be mentioned as particularly outstanding a work by Henry B. Collins, Jr., entitled "Archeology of St. Lawrence Island, Alaska," in which he summarizes the results of several years' work in the far north on the prehistory of the Eskimo; "Preliminary Report on the Smithsonian Institution-Harvard University Archeological Expedition to Northwestern Honduras, 1936," by William Duncan Strong, Alfred Kidder II, and A. J. Drexel Paul, Jr.; "The Oxystomatous and Allied Crabs of America," by Mary J. Rathbun, another in her series of monographs on American crabs; and "Historical and Ethnographical Material on the Jivaro Indians," by M. W. Stirling, an account of the Jivaro head-hunters of Ecuador based on first-hand information obtained by Mr. Stirling on a recent expedition to the region occupied by these Indians.

LIBRARY

Accessions to the Smithsonian library for the year numbered 10,892 items, received mostly through exchange and gift. These bring the total number of items in the library to 887,414, exclusive of thousands of volumes incomplete or unbound. The outstanding gift of the year was a collection of 1,186 volumes and pamphlets on the history and

culture of China, presented by Mrs. William Woodville Rockhill. The Geophysical Laboratory presented 3,312 miscellaneous publications, the American Association for the Advancement of Science, 653; and the American Association of Museums, 209. Besides the extensive exchange work, which involved 25,264 packages of publications, the staff of the library recorded 23,992 periodicals, cataloged 6,449 publications, prepared and filed 42,568 catalog and shelf list cards, made 11,380 loans, and did a considerable amount of work on the union catalog. The chief need of the library is more funds for binding.

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, 1938:

Funds provided for the maintenance of the National Museum for the year totaled \$775,720, representing an increase of \$20,250 over the previous year. Owing to a compulsory administrative deduction of \$8,500, however, this increase actually amounted only to \$11,750.

COLLECTIONS

Material added to the Museum collections during the year came in 1,713 separate accessions totaling 312,729 specimens. These additions were mostly gifts from individuals or represented expeditions sponsored by the Smithsonian Institution. The specimens were distributed among the five departments as follows: Anthropology, 2,162; biology, 244,761; geology, 60,927; arts and industries, 2,297; and history, 2,582. All the accessions are listed in detail in the full report on the Museum, printed as a separate document, but the more important are summarized as follows:

Anthropology.—Archeological accessions of importance included nearly one hundred vessels and fragments from Honduras, obtained by the 1936 joint expedition with the Peabody Museum of Harvard University; a lot of Stone Age, Bronze Age, and Iron Age objects from Denmark; Neolithic stone implements from South Africa; and a collection of artifacts from the Temple Mound in Le Flore County, Okla.

As in previous years, C. C. Roberts donated many articles of ethnological interest from West Africa. Various objects came from the Eskimo in Alaska and the Hudson Bay region. Navaho, Pueblo, and Ojibwa blankets, beadwork, pottery, and baskets came from several donors. Seventy-eight ceramic specimens were received, 10 musical instruments, and 57 objects representing period art and textiles.

In the division of physical anthropology 555 specimens, including much skeletal material, were received. Of these, 291 were obtained by Dr. Aleš Hrdlička in Alaska during his field explorations; 144 from an Indian site in Stafford County, Va., were donated by the

late Judge W. J. Graham; and 67 from another important Indian site at Accokeek, Md., were presented by Mrs. A. L. L. Ferguson.

Biology.—Biological specimens added during the year numbered over 240,000, and the total in this department now exceeds 12,500,000. Of the mammals received, more than 1,200 were transferred from the United States Biological Survey. A particularly welcome gift was that of a mounted specimen of a Montana grizzly bear of a form now extinct (true *Ursus horribilis*) from Dr. C. Hart Merriam. A fine lot of cetacean material also was received. Important avian accessions included birds collected in Venezuela by Dr. Alexander Wetmore, in Siam by H. G. Deignan, in Tennessee by W. M. Perrygo, and in China by Dr. D. C. Graham. New reptile and amphibian material came from many places, notably reptiles from the Lesser Antilles, Siam, Ceram, and Sumatra, Tennessee, Florida, Texas, Maine, and Vermont; frogs and toads from Brazil; and salamanders from Central America. About 5,100 fishes were transferred to the Museum collection from the United States Bureau of Fisheries; 12,780 specimens from the middle Atlantic coast were presented by the Bingham Oceanographic Foundation of Yale University and the United States Bureau of Fisheries; the Carnegie Institution of Washington gave 6,200 fishes collected by the late Dr. W. H. Longley from the Tortugas and the Dutch West Indies; and many hundreds of others came from the National Geographic-Smithsonian Expedition in Sumatra, the Smithsonian-Hartford Expedition of 1937, the Tennessee Valley Authority, the United States Biological Survey, the Bass Biological Laboratory, and H. G. Deignan, to name but a few of the many donors. The more important accessions of insects include the following: The Blackmore collection of Lepidoptera (2,111 specimens), the Quirsfeld collection of weevils (1,157 specimens), 15,000 ants donated by Dr. M. R. Smith, 10,000 Chinese insects collected by Dr. D. C. Graham, and 54,000 insects transferred from the United States Bureau of Entomology and Plant Quarantine. The 15,300 marine invertebrates added consisted mostly of specimens new to the collections or type material. Over 1,000 specimens of marine invertebrates were added through the explorations of Capt. Robert A. Bartlett in West Greenland in 1937, and another large group from the West Indies resulted from the Smithsonian-Hartford Expedition. The outstanding accession of mollusks was the Bohumil Shimek collection of loess shells, obtained through the Frances Lea Chamberlain Fund. This collection, of both recent and fossil species, consisted of nearly 25,000 lots and aggregated more than a million individual specimens. About 36,500 plants were added to the herbarium collections, from many points of North, South, and Central America.

Geology.—Important accessions in mineralogy were made possible by several Smithsonian funds. Through the Canfield fund were purchased minerals from Japan, Sardinia, Rumania, Greece, Austria, California, Arkansas, Arizona, and Montana; through the Roebing fund, seven American diamonds; and through the Chamberlain fund, four cut gem stones. In all, 790 specimens pertaining to mineralogy and petrology were received. Seventy meteorite specimens, many purchased by the Roebing Fund, representing 62 falls new to the collection, were added during the year, the largest number since the acquisition of the Shepard collection in 1915.

In the field of vertebrate paleontology, the collections benefited especially by the field expedition of C. W. Gilmore, and by material presented by the United States Texas Centennial Commission. In all, 69 fossil vertebrates were added, including the partial skeleton of a very large sauropod dinosaur of the family Titanosauridae, the first to be found in North America.

Chiefly through the efforts of members of the staff, about 60,000 specimens were added to the collections in stratigraphic paleontology, the most extensive and valuable accession of the year in this field being an unparalleled collection of Devonian invertebrates made by Dr. G. Arthur Cooper and Preston Cloud in the Lower Peninsula of Michigan. Others came from the Chazyan rocks of northeastern New York and Quebec. Rare brachiopods were obtained from Canada and Nevada, and Devonian corals and crinoids from Michigan. Transfers from the United States Geological Survey included collections in Ozarkian, Canadian, and Chazyan brachiopods, numbering more than 22,000 specimens.

Arts and industries.—Models of the following airplanes were added to the aeronautical collections: The Vickers Vimy plane that made the first nonstop trans-Atlantic flight in 1919; the Sikorsky S-40, the first of the clipper planes on airways over Florida, the West Indies, and South America; the Wilford gyro; the low-wing tractor monoplane *Mohawk* made for Col. Charles A. Lindbergh; and several historic airmail planes, including the *Queen Bleriot* (1911), the Curtiss modified "R" (1916), and the Northrop airplane that held the 1934 record for transcontinental mail transport. The first cable car to operate in Seattle, Wash. (1889), was presented to the Museum by the City of Seattle. Several interesting original builders' models of watercraft also were received. Many miscellaneous objects pertaining to communication, metrology, refrigeration, photography, and tools and crafts continued to come in as gifts and loans, welcome additions to these sections, and nearly 1,500 specimens pertaining to textiles, organic chemistry, wood technology, and medicine were received during the year. To the graphic arts display were

added 321 specimens showing printing processes (in 8 exhibition cases) received from the United States Government Printing Office.

History.—More than 2,500 objects of historic and antiquarian value were received, chiefly portraits, costumes, medals, mementos, and furniture of historic characters. The series of awards and personal mementos was enriched by a number of objects relating to the scientific career of Dr. Charles D. Walcott, fourth Secretary of the Smithsonian Institution, a gift of Mrs. Walcott. Several pieces of parlor furniture made in Paris for President James Monroe in 1817 and used in the White House from then until 1937 were lent to the Museum by the White House for an indefinite period. The numismatic collection was increased by 366 coins and medals, including a bronze medal commemorating the invention of the bifocal lens by Benjamin Franklin in 1784. The philatelic collection was increased by the transfer from the Post Office Department of 2,088 specimens of foreign postage stamps, cards, and envelopes.

EXPLORATIONS AND FIELD WORK

The scientific explorations of the year by members of the Museum staff were financed principally by grants from the private funds of the Smithsonian Institution or by contributions from friends of the Institution. The investigations were varied in nature and brought highly important results in additions to scientific knowledge and in contributions of specimens to the national collections.

In May, Dr. Alexander Wetmore, Assistant Secretary, as representative of the Smithsonian Institution, and chairman of the official delegation of the United States, was in attendance at the Ninth International Ornithological Congress, held in Rouen, France. At the close of the meetings it was voted to hold the next Congress, which will come in 1942, in the United States. Dr. Wetmore was then elected President. Following the meetings he visited museums and laboratories in Switzerland, particularly in Bern and Basel, and later worked at the British Museum (Natural History) in London.

Anthropology.—During April and May 1938 Frank M. Setzler, head curator of the department of anthropology, continued an archeological program in the trans-Pecos area of southwestern Texas. Since 1931 Mr. Setzler has been attempting, as opportunity permitted, to outline the aboriginal culture status of the cave dwellers in the Big Bend region of Texas. His previous excavations at the mouth of the Pecos contributed largely to knowledge of the unusual physical types of this simple nonpottery-making horizon. This year, through the L. L. Wilson fund, he was enabled to excavate a large cave in the northeast corner of Terrell County. Though this produced no skeletal material, the 9-foot deposits of burnt rocks and

ashes contained sufficient aboriginal artifacts to show a direct cultural relationship with regions to the south and west in the Chisos Mountains and near Alpine. After examining additional material from the Guadalupe Mountains, in the Carlsbad Archeological and Historical Society Museum, and a small collection from caves around Albuquerque, N. Mex., Mr. Setzler concludes that this prehistoric phase has a much wider distribution than heretofore recognized, especially in the eastern part of New Mexico. The exact period of occupation of these caves can only be surmised; but since no evidence of European materials has been reported in association with the sandals, baskets, and other artifacts, he concludes that the caves were abandoned before any of the early Spanish explorers visited the area. Since most of their material culture comprises baskets instead of earthenware vessels, they may have become isolated before the manufacture of aboriginal pottery became so widespread and indispensable among the prehistoric inhabitants in either the Southwest or the Mississippi Valley. The chronological relationship, if any exists, between the Big Bend Cave Dwellers and the Basketmaker phase in northern New Mexico and Arizona as yet remains unsolved.

On October 14, Herbert W. Krieger, curator of ethnology, sailed from New York for Charlotte Amalie, St. Thomas, to conduct archeological investigations in the Virgin Islands under a grant from the Smithsonian Institution. The expedition was undertaken as a result of information conveyed by Robert Nichols, superintendent of agriculture of St. Thomas, to the effect that a large shell mound existed on the Island of Anegada, the northernmost of the British Virgin Islands. The immediate objective was an exploration of the Anegada mound, which required the cooperation of the United States Coast Guard Service. A survey of the shell mound led to the conclusion that the culture represented was similar to that of other nonpottery-producing cultures discovered on previous Smithsonian expeditions to the Dominican Republic, Haiti, and Cuba. At the conclusion of the Anegada survey a trial excavation was made of the Indian midden east of Road Town on the Island of Tortola. Later, excavations were carried out in considerable detail on the A. S. Fairchild property at Magens Bay on the Island of St. Thomas, and later at Ackles on United States Government property on the Island of St. Croix.

These investigations led to the discovery of three distinct cultures, all of which may be of Arawak origin—the shell culture on the Anegada site, the early Arawak culture type of the Road Town site and to a certain extent of the Magens Bay area, and the late Arawak culture of the Ackles site. An overlapping of the Arawak I and Arawak II phases was strikingly illustrated in the excavations at Magens Bay. A chronology of West Indian aboriginal cultures has consequently assumed form. The sequence of the three main culture types

just indicated permits of the dovetailing as subcultures for Arawak I (early Arawak) and for Arawak II (late Arawak) of the material from certain sites in the Dominican Republic and Haiti excavated by former Smithsonian expeditions from 1928 to 1931. It is quite clear that the shell middens of the caves of the south shore of Samaná Bay (Smithsonian expedition, 1928) and of the Île á Vache shell midden (Smithsonian expedition, 1931) are culturally related to the Anegada shell midden. The expedition to the Virgin Islands thus has crystallized tentative conclusions with regard to the classification of West Indian culture sequences based on numerous investigated sites.

Dr. Aleš Hrdlička, curator of physical anthropology, assisted by six students, spent the greater part of June, July, and August, 1937, in archeological investigations on the Aleutian Islands. After reaching the Aleutian Islands the party received permission to work in the Commander Islands in Soviet territory, but because of unforeseen circumstances the visit had to be very short. Although there was little time for scientific work, enough information was gained to encourage the arrangement for another visit. The Institution in its northern work is once more deeply indebted to the United States Coast Guard for its excellent cooperation, which made possible the work not only in the Aleutian Islands but in the Commander group. In 1938, again through the cooperation of the United States Coast Guard, archeological work was continued in the Aleutian Chain and was well under way at the close of the fiscal year.

From the beginning of the fiscal year until September 13, 1937, Dr. Waldo R. Wedel, assistant curator of archeology, was occupied in an archeological survey in Kansas, beginning a long-term program that is planned to cover a complete survey of the entire State in an attempt to establish the outlines of the aboriginal Indian cultures throughout that region. It should also reveal answers to some of the puzzling problems relating to prehistoric cultures in the Mississippi Valley and in the Western Plains. By using early documentary accounts some of the historic Indian sites can be definitely identified, and thereby they may reveal a complex of material culture traits that can be identified with their prehistoric antecedents. Dr. Wedel's investigations of 1937 included excavations at three village sites along the bluffs of the Missouri River and above Kansas City, and two in the Kansas River Valley near Manhattan. In the prolific site on Line Creek, northwest of Kansas City, evidences were found of an extended occupation of prehistoric origin containing two diagnostic types of earthenware vessels. One type has a general cord-roughened decoration, while directly associated with it was a superior ware bearing decorations closely comparable to the Hopewellian type

of the Mississippi Valley and never before reported as far west as Kansas City. An early Kansa Indian Village was also investigated near the old river town of Doniphan, Kans. This village was visited by early explorers in 1724 and again by Lewis and Clark in 1804. A few miles below the mouth of the Blue River a circular house site was excavated in an old Kansa village visited and described by Major Long's expedition in 1819. Dr. Wedel again resumed his explorations in Kansas on May 11, 1938, and was in the field at the close of the fiscal year.

Since Judge W. J. Graham's death on November 10, 1937, arrangements have been made for Dr. T. Dale Stewart, assistant curator of physical anthropology, to take over the excavations on an Indian site at Potomac Creek, Va., and to advance the work from the point reached by Judge Graham. During the latter part of the fiscal year Dr. Stewart made several visits to the site for preliminary surveys.

Biology.—Through the friendly cooperation of William N. Beach and J. Watson Webb, the National Museum has secured a valuable collection of large mammals from the Rainy Pass region beyond Mount McKinley in Alaska. In preparation for this work pack horses under charge of Harry Boyden were sent to Alaska in June. Mr. Beach and Mr. Webb, accompanied by W. L. Brown, chief taxidermist of the National Museum, arrived at McKinley Park Station on the Alaska Railroad on the evening of August 13 and continued through the park to join the pack outfit on the McKinley River. Work in this field continued until the middle of September and resulted in obtaining fine material for a habitat group of moose, which will be mounted for exhibition. The largest bull moose secured has a fine heavy set of horns with a spread of 65 inches. In addition, the party obtained caribou and other mammals much needed for the National Museum.

In continuation of work begun last year in West Virginia, Watson M. Perrygo, scientific aid, made collections of birds and mammals in Tennessee to obtain needed material for the National Museum. Mr. Perrygo left for the field early in April, accompanied by Carleton Lingeback as assistant, and began work in the Mississippi bottoms near Memphis. Work continued around Reelfoot Lake, on the Cumberland Plateau, and in the high mountains along the western border of the State, terminating on July 15 for the summer. In mid-September the party left for the field again, Mr. Lingeback being replaced by Henry R. Schaefer. The first collections were made on Roan Mountain, one of the highest mountains in the Eastern United States, with a summer temperature reputed to be the coldest for the entire Southeast in the summer season. Following

this, collections were made in the Clinch Mountains, and then the party again visited the area about Reelfoot Lake to follow the fall migration in that region. After further investigations in the central and southern part of the State, they returned to Washington the middle of November. The excellent collections of birds and mammals secured will form the basis of reports similar to those prepared for the work in West Virginia of last year. The work was carried on under the W. L. Abbott fund.

During October and November Dr. Alexander Wetmore, Assistant Secretary, traveled in northwestern Venezuela to make studies of the birds through arrangements perfected under the friendly cooperation of the American Minister, the Hon. Meredith Nicholson, and the gracious assistance of Dr. E. Gil Borges, Ministro de Relaciones Exteriores of Venezuela. In this work a survey was made of the bird life along a line extending from Ocumare de la Costa on the sea coast through the mountain range of the Cordillera de la Costa to Maracay and from there to the northern Llanos, in the vicinity of El Sombrero. In addition to securing an important collection of specimens, Dr. Wetmore made many observations on birds in life.

Capt. Robert A. Bartlett again visited the western coast of Greenland during the summer of 1937 on his schooner *Morrissey* and secured important gatherings of marine animals that were presented to the National Museum. Collections were made from Cape York north by way of Northumberland and Hakluyt Island, to Smith Sound.

Dr. D. C. Graham continued his collecting work in western China, forwarding many specimens of insects and of birds and other vertebrates.

Geology.—Dr. Charles E. Resser, curator of stratigraphic paleontology, studied Cambrian rocks on the flanks of the Adirondack Mountains in New York and Vermont and along the St. Lawrence River in Quebec, making investigations in Pennsylvania en route. In addition to collecting invertebrate fossils he was occupied in checking the relations of the various strata examined in connection with his work in the laboratory.

Dr. G. Arthur Cooper, assistant curator of stratigraphic paleontology, accompanied by P. E. Cloud, returned early in the year from a month's investigations of the Devonian of Michigan. In the latter half of September Dr. Cooper and Dr. Josiah Bridge visited the Champlain Valley to study the Chazyan rocks, both trips yielding excellent fossils. Dr. Cooper made a third trip in August, in company with Dr. Bradford Willard, of the Pennsylvania Topographic and Geologic Survey, to study the Tully formation along the Allegheny Front and from Lock Haven to the Schuylkill Valley.

E. P. Henderson was abroad from early in May until October 1937. Two months were occupied in attendance at the Seventeenth International Geological Congress at Moscow, in visiting important museums, and in collecting minerals in the Kola Peninsula and the Ural Mountains. The remaining time was occupied in Ceylon studying the gem deposits of that island, and in Japan in visiting mineralogical institutions and dealers from whom interesting specimens were obtained. Important mineralogical and geological collections were made, but the more important results are the contacts and exchanges either made, or initiated, by which a large quantity of Russian, Norwegian, Swedish, Scottish, and Japanese material will be received.

As the field expedition of 1937 under C. W. Gilmore, curator of vertebrate paleontology, extended well into the present fiscal year, but brief mention was made of it in last year's report. This expedition in the Upper Cretaceous of the North Horn area in central Utah, and in the Triassic of the Petrified Forest region of Arizona, met with most gratifying results. The Utah area was a virgin field so far as professional collecting was concerned, and the results obtained fully justified the venture. A good beginning was made in the development of a fauna for the North Horn formation of the Upper Cretaceous, and a small collection of mammalian remains indicated for the first time the presence of Paleocene strata in this geologic section. The finding of a large sauropod dinosaur skeleton in association with Upper Cretaceous dinosaur remains is a discovery of much interest and fully establishes the fact that this group of reptiles in North America lived into the Upper Cretaceous. Most of the specimens obtained are new to science. From the Triassic of Arizona important phytosaurian and amphibian remains were collected that go far in filling gaps in our permanent collections. The collections obtained filled 13 large cases having a combined weight of nearly 3 tons. George F. Sternberg, as in previous seasons, rendered efficient assistance, and George B. Pearce ably assisted as field assistant.

In May, Dr. C. L. Gazin, assistant curator of vertebrate paleontology, left Washington to head an expedition that will continue the explorations in central Utah so auspiciously begun last season. This will be followed by work in the Upper Eocene deposits of the Uinta Basin.

MISCELLANEOUS

Visitors.—Since the year 1932–33, when a low point was reached presumably as a result of unfavorable economic conditions, the number of visitors to the various Museum buildings has steadily mounted.

This year there were 119,638 more visitors than last, bringing the total up to 2,408,170, which is our greatest annual attendance to date. The attendance in the four Museum buildings was recorded as follows: Smithsonian Building, 371,770; Arts and Industries Building, 1,094,254; Natural History Building, 750,307; Aircraft Building, 191,839.

Publications and printing.—The sum of \$21,000 was available during the year for the publication of the Museum annual report, bulletins, and Proceedings. Twenty-six publications were issued—the annual report, 1 volume of Proceedings completed, 5 bulletins, and 19 separate Proceedings papers. These aggregated 1,640 octavo pages and 242 plates, an increase of 36 pages and 107 plates over last year. The five bulletins issued were as follows: No. 100, volume 6, part 9, The Tree Snails of the Genus *Cochlostyla* of Mindoro Province, Philippine Islands, by Dr. Paul Bartsch; No. 166, The Oxystomatous and Allied Crabs of America, by Dr. Mary J. Rathbun; No. 168, Nearctic Collembola, or Springtails, of the Family Isotomidae, by the late Dr. Justus W. Folsom; No. 169, The Fort Union of the Crazy Mountain Field, Montana, and Its Mammalian Fauna, by Dr. George Gaylord Simpson; and No. 171, The Pleistocene Vertebrate Fauna from Cumberland Cave, Maryland, by the late Dr. James W. Gidley and Dr. C. Lewis Gazin.

Volumes and separates distributed during the year to libraries and individuals throughout the world aggregated 57,761.

Assistance from work relief agencies.—The Works Progress Administration of the District of Columbia continued the assignment of relief workers to Museum offices, and during the course of the year the number of such workers increased from 88 to 167. The work performed totaled 130,205 man-hours, and embraced such tasks as checking, labeling, and repairing library material; preparing drawings and photographs; typing notes and records; model making and repair; preparing, mounting, cataloging, numbering, and checking specimens; labeling and drafting; translating; and assisting with plaster casts.

Special exhibitions.—Seventeen special exhibitions were held during the year under the auspices of various educational, scientific, and governmental agencies. The division of graphic arts featured 17 special exhibits—8 in graphic arts and 9 in photography.

CHANGES IN ORGANIZATION AND STAFF

During the year there were few changes in the scientific staff. In the Department of Anthropology, Frank M. Setzler was appointed head curator on July 1, 1937, and Harry B. Collins, Jr., was advanced

to associate curator, Division of Ethnology, on February 17, 1938. In the Department of Biology, Dr. Leonard P. Schultz was made curator of the Division of Fishes on January 16, 1938, and H. Harold Shamel was advanced to senior scientific aid in the Division of Mammals on September 3, 1937. In the Department of Geology, Bertel O. Reberholt, by reallocation was advanced to senior scientific aid in the Division of Physical and Chemical Geology, November 1, 1937. William E. Moran was appointed junior scientific aid in the Division of Vertebrate Paleontology on June 16, 1938. In the Department of Arts and Industries, Kenneth M. Perry was appointed assistant exhibits worker in the Division of Mechanical Technology, on October 16, 1937.

On January 1, 1938, Norman H. Boss, chief preparator, Division of Invertebrate Paleontology, returned to duty from detail to the Greater Texas and Pan American Exposition at Dallas, where he was assigned as exhibit supervisor for the Smithsonian Institution.

The Museum lost through death during the year three employees: Arthur J. Poole, scientific aid in the Division of Mammals, on July 3, 1937, after 22 years 7 months of service; Daniel Clark, skilled laborer, on August 23, 1937, after 28 years of service; Jacob Willy, lieutenant of guard, on January 25, 1938, with 16 years of service; and William Robinson, laborer, on May 14, 1938, with 20 years of service. From the honorary staff the Museum lost through death Dr. Maurice C. Hall, honorary custodian of helminthological collections, on May 2, 1938.

Respectfully submitted.

ALEXANDER WETMORE, *Assistant Secretary.*

DR. CHARLES G. ABBOT,

Secretary, Smithsonian Institution.

APPENDIX 2

REPORT ON THE NATIONAL GALLERY OF ART

SIR: Pursuant to the provisions of section 5 (b) of Public Resolution No. 14, Seventy-fifth Congress, approved March 24, 1937, I have the honor, on behalf of the trustees of the National Gallery of Art, to submit the first annual report of the Board, covering the fiscal year ended June 30, 1938, on its operations under the aforementioned joint resolution.

Under the joint resolution of Congress it appropriated to the Smithsonian Institution the area bounded by Seventh Street, Constitution Avenue, Fourth Street and North Mall Drive (now Madison Drive) Northwest, in the District of Columbia, as a site for a National Gallery of Art; authorized the Smithsonian Institution to permit The A. W. Mellon Educational and Charitable Trust, a public, religious, educational, and charitable trust, established by the late Hon. Andrew W. Mellon, of Pittsburgh, Pa., to construct thereon a building to be designated the "National Gallery of Art"; and created, in the Smithsonian Institution, a bureau to be directed by a board to be known as the "Trustees of the National Gallery of Art," charged with the maintenance and administration of the National Gallery of Art. This act provides that the board be comprised of the Chief Justice of the United States, the Secretary of State, the Secretary of the Treasury, and the Secretary of the Smithsonian Institution, ex-officio, and five general trustees. The general trustees first taking office were to be chosen by the Board of Regents of the Smithsonian Institution; and their successors are to be chosen by the majority vote of the general trustees.

On June 24, 1937, the Board of Regents of the Smithsonian Institution appointed the following as general trustees of the National Gallery of Art:

Donald D. Shepard, for the term expiring July 1, 1939;
S. Parker Gilbert, for the term expiring July 1, 1941;
Duncan Phillips, for the term expiring July 1, 1943;
David K. E. Bruce, for the term expiring July 1, 1945;
Andrew W. Mellon, for the term expiring July 1, 1947.

The Trustees deeply regret to report that Andrew W. Mellon, the donor of the great art collection which has been deeded to the Gallery

as well as the funds for the erection of the the gallery building to house the collection, died on August 26, 1937; also that S. Parker Gilbert, one of the original general trustees, died on February 23, 1938. On March 9, 1938, the three surviving general trustees, at a meeting duly held at Washington, D. C., elected Paul Mellon to serve the unexpired term of his father, the late Andrew W. Mellon, and Ferdinand Lamot Belin was elected to serve the unexpired term of the late S. Parker Gilbert.

On March 9, 1938, an organization meeting of the Trustees was held in the Regents Room of the Smithsonian Institution and, after full consideration by the Trustees, a draft of bylaws submitted at the meeting was adopted as the bylaws of the Trustees of the National Gallery of Art.

The bylaws provide that the executive officers shall consist of the chairman of the Board, president, vice president, secretary, treasurer, director, administrator, assistant director, chief curator, and such other executive officers as the Board shall determine. The Chief Justice of the United States, ex-officio, is the chairman of the Board.

At this meeting it was determined that the regular annual meeting of the Board shall be held on the second Monday in February of each year, at 9:30 a. m.

Also the Trustees elected the following executive officers:

Paul Mellon, president;
David K. E. Bruce, vice president;
Donald D. Shepard, secretary;
Donald D. Shepard, treasurer;
David E. Finley, director.

The officers elected stated they would serve without compensation for the time being. It was decided by the Trustees that the matter of their later compensation, if any, should be considered at a subsequent meeting of the Board. The following Trustees were elected as members of the three standing committees, provided for in the bylaws:

EXECUTIVE COMMITTEE

Chief Justice of the United States;
Dr. C. G. Abbot;
Paul Mellon;
David K. E. Bruce;
Donald D. Shepard.

ACQUISITIONS COMMITTEE

Paul Mellon;
David K. E. Bruce;
David E. Finley;
Duncan Phillips;
Ferdinand Lamot Belin.

FINANCE COMMITTEE

Hon. Henry Morgenthau, Jr. ;
Hon. Cordell Hull ;
Paul Mellon ;
David K. E. Bruce ;
Ferdinand Lamot Belin.

Appropriate resolutions were passed relating to the reproduction by photographs, or otherwise, of works of art controlled by the Board, the use of such reproductions, the viewing and care of the collection. The Board directed the treasurer, under the supervision and subject to the approval of the finance committee, to cause to be established an appropriate accounting system, including provisions for the keeping of necessary books and records, so that the works of art now under the control of the Board and all funds, securities, and works of art and other properties of whatsoever character belonging to or under the control of the Board and of such additions and receipts thereto and disposition, withdrawals and disbursements therefrom, may be properly recorded.

Under the trust indenture of June 24, 1937, between the Trustees of The A. W. Mellon Educational and Charitable Trust, the Smithsonian Institution, and the Trustees of the National Gallery of Art, the Smithsonian Institution received title to the works of art given by The A. W. Mellon Educational and Charitable Trust, upon the understanding that pending completion of the Gallery, the donor would retain custody of the gift, at its expense, and that upon delivery, the gift would form part of the permanent collection in the custody of the Trustees of the National Gallery of Art. Pursuant to its offer, accepted by the Trustees of the National Gallery of Art at its meeting on March 9, 1938, The A. W. Mellon Educational and Charitable Trust has defrayed the current administrative expenses of the Gallery, as well as the expense of storage and the care of the collection pending the completion of the National Gallery of Art. During the 18 months ended June 30, 1938, the total of such administrative expenses and expenses of storage amounted to about \$150,000 principally accounted for by insurance premiums on policies expiring in 1940. The collection is now stored in the Corcoran Gallery of Art. The collection is in excellent condition and is being well protected and cared for. The current expenses for the custody of the collection are at the rate of approximately \$12,000 per annum. Such expenses are being paid by The A. W. Mellon Educational and Charitable Trust and, of course, are not recorded on the books of account of the National Gallery of Art.

Pursuant to the joint resolution and the trust indenture of June 24, 1937, The A. W. Mellon Educational and Charitable Trust is also proceeding, at its expense, with the construction of the National

Gallery of Art on the site set aside for it by the Congress. At June 30, 1938, \$1,796,147.29 had been expended upon construction, and the foundations of the Gallery were substantially completed. We are advised that if no unusual delay, occasioned by conditions beyond the contractor's control, is encountered, the Gallery will be completed by September 1940, and sufficient Gallery rooms will be available for the display of the works of art by November 1940. We are advised that the Trustees of The A. W. Mellon Educational and Charitable Trust estimate that the total cost of the building will exceed \$15,000,000. Recording of such expenditures in the books of account of the National Gallery of Art will be deferred until completion of the construction of the Gallery.

Section 4 (b) of the joint resolution authorizes the Trustees to accept and administer gifts of money or securities. In a letter dated February 16, 1937, from the late Hon. A. W. Mellon to Hon. Kent E. Keller, chairman of the Committee on the Library of the House of Representatives, Mr. Mellon stated that the endowment fund for the Gallery, as proposed in his letter to the President of the United States, had been fixed at an amount of \$5,000,000. It is understood that this fund is expected to be received by the Trustees of the National Gallery of Art from the Trustees of The A. W. Mellon Educational and Charitable Trust, at or about the time of the completion of the National Gallery of Art.

There were no additions to the collection of the National Gallery of Art during the year. However, the Gallery has received a number of offers of gifts of works of art. Such offers were referred to the acquisitions committee for consideration. Also there were no loans of works of art under the control of the Trustees of the Gallery during the year. No appropriation was made by Congress for the National Gallery of Art during the fiscal year ended June 30, 1938, and no public or private funds received or disbursed during the year.

Pursuant to instructions, Price, Waterhouse & Co., a nationally known firm of public accountants, has made an examination of the accounting records of the National Gallery of Art, the accounting system having been installed upon the recommendation of that firm. Price, Waterhouse & Co. report that, based upon its examination, the books of account of the National Gallery of Art fairly present, in accordance with the accepted principles of accounting, the position of the National Gallery of Art at June 30, 1938. Copy of the certificate of Price, Waterhouse & Co., dated August 26, 1938, is attached hereto and made a part of this report. It should be noted that the only entry on the books of account of the National Gallery of Art, as of June 30, 1938, was the opening journal entry of June

24, 1937, recording its acquisition of the collection of works of art, there being no other transactions to June 30, 1938, which should be recorded in the books of account. The gift of June 24, 1937, was recorded on the books of account at \$31,303,162.31, representing, according to available information, the cost to the last person to acquire the works of art by purchase. Of this amount \$19,893,162.31 represented purchases of works of art by the late Hon. Andrew W. Mellon, and \$11,410,000 represented purchases by The A. W. Mellon Educational and Charitable Trust. A list of the works of art which were the subject of the gift of June 24, 1937, is attached to this report. The certificate of Price, Waterhouse & Co. states that the receipt of title to this gift was recorded properly in the Gallery's books by the opening journal entry.

The certificate of Price, Waterhouse & Co. follows:

AUGUST 26, 1938.

Mr. DONALD D. SHEPARD,

*Treasurer, National Gallery of Art,
716 Jackson Place NW., Washington, D. C.*

DEAR SIR: Pursuant to your instructions, we have made an examination of the accounting records of the National Gallery of Art and other documentary evidence, and have obtained information and explanations from its officers. The only entry in its books of account as at June 30, 1938, was the opening journal entry dated June 24, 1937, recording its acquisition of works of art; our examination disclosed no other transactions to June 30, 1938, which should be recorded in the books of account.

Pursuant to joint resolution of Congress, approved March 24, 1937, and trust indenture dated June 24, 1937, The A. W. Mellon Educational and Charitable Trust, at its expense, is proceeding with construction of the National Gallery of Art. The recording of such expenditures in the books of account of the National Gallery of Art is deferred until completion of construction.

By the aforementioned trust indenture title was acquired to the works of art given by The A. W. Mellon Educational and Charitable Trust. Pending construction of the Gallery, these works of art remain in the custody of the donor to be cared for at its expense. This gift was recorded in the books of account at \$31,303,162.31, representing, according to available information, the cost to the last person to acquire the works of art by purchase. Of this amount, \$19,893,162.31 represented purchases by Mr. A. W. Mellon and \$11,410,000.00 represented purchases by The A. W. Mellon Educational and Charitable Trust. The receipt of title to this gift was recorded properly in the Gallery's books by the opening journal entry previously referred to.

An endowment fund of \$5,000,000 is expected to be received from The A. W. Mellon Educational and Charitable Trust at about the time of completion of the Gallery.

In our opinion, based upon our examination, the books of account fairly present, in accordance with accepted principles of accounting, the position of the National Gallery of Art at June 30, 1938.

Yours very truly,

(Signed) PRICE, WATERHOUSE & Co.

LIST OF WORKS OF ART DEEDED TO NATIONAL GALLERY OF ART JUNE 24, 1937

Name of artist	Title of picture
Fra Angelico.....	The Madonna and Child.
Antonello da Messina....	Do.
Do.....	Portrait of a Member of the Contarini Family.
Giovanni Bellini.....	The Flight Into Egypt.
Do.....	Portrait of Young Man in Red Coat.
Botticelli.....	Adoration of the Magi.
Do.....	The Madonna and Child.
Do.....	Portrait of a Young Man in Brown Coat and Red Hat.
Do.....	Portrait of a Young Man in Mauve Coat and Red Hat.
Byzantine Master.....	The Madonna and Child.
(circa 1200)	
Castagno, Andrea del....	Portrait of a Young Man.
Chardin.....	La Maitresse d'École.
Do.....	The House of Cards.
Christus, Petrus.....	The Nativity.
Cimabue.....	Christ Between St. Peter and St. James (a triptych).
Conegliano, Cima da....	The Madonna and Child With St. John the Baptist and St. Anthony.
Constable.....	A View of Salisbury Cathedral.
Cuyp.....	Herdsman Tending Cattle.
Gerard David.....	Rest During the Flight Into Egypt.
Duccio di Buoninsegna..	The Nativity With the Prophets Isaiah and Ezekiel.
Dürer.....	Portrait of a Man in Dark Cloak With Fur Collar.
El Greco.....	San Ildefonso of Toledo.
Do.....	St. Martin and Beggar.
Gainsborough.....	Portrait of Georgiana, Duchess of Devonshire.
Do.....	Portrait of George IV When Prince of Wales.
Do.....	Landscape With a Bridge.
Do.....	Portrait of Miss Catherine Tatton.
Do.....	Portrait of Mrs. John Taylor.
Do.....	Portrait of Mrs. Richard Brinsley Sheridan.
School of Giotto.....	Large Panel Representing St. Paul.
Giovanni di Paolo.....	The Adoration of the Magi.
Goya.....	Portrait of Senora Sebasa Garcia.
Do.....	Portrait of the Marquesa de Pontejos.
Do.....	Portrait of King Carlos IV of Spain.
Do.....	Portrait of Queen Maria Luisa of Spain.
Frans Hals.....	Portrait of Balthasar Coymans.
Do.....	Portrait of an Officer With a Red Sash.
Do.....	Portrait of Nicholas Berghem.
Do.....	Portrait of an Old Lady Seated.
Do.....	Portrait of a Young Man.
Hobbema.....	La Ferme au Soleil.
Do.....	The Holford Landscape.
Do.....	Village Scene.
Hans Holbein (The Younger).....	Portrait of Sir Bryan Tuke.
Do.....	Portrait of Edward VI as a Boy.
Pieter de Hoogh.....	A Dutch Courtyard.
Hoppner.....	The Frankland Sisters.
Lancret, Nicholas.....	The Dancer, La Camargo.

Name of artist	Title of picture
Lawrence.....	Lady Templetown and Child.
Lippi, Filippino.....	The Madonna and Child With Angel.
Luini.....	Portrait of a Lady.
Mantegna.....	St. Jerome in the Wilderness.
Maes, Nicholas.....	Portrait of an Old Lady at Prayer.
Masaccio.....	Profile Portrait of a Young Man.
Do.....	The Madonna of Humility.
Masolino da Panicale....	The Annunciation.
Matteo di Giovanni.....	The Adoration of the Magi.
Do.....	The Virgin and Child With Angels.
Memling.....	Portrait of a Man With an Arrow.
Do.....	The Madonna and Child With Angels.
Lippo Memmi.....	The Madonna and Child.
Metsu.....	The Intruder.
Master Michael.....	Portrait of a Donor (A Knight of the Order of Calatrava).
Moro.....	Self-Portrait With his Dog.
Neroccio dei Landi.....	The Vestal Claudia Quinta.
Allegretto Nuzi da Fabriano.....	The Virgin Enthroned (a triptych).
Perugino.....	Crucifixion With the Virgin, SS. John, Magdalen, and Jerome (a triptych).
Pisanello.....	A Portrait of a Lady Presumed to be Isotta degli Atti.
Raeburn.....	Portrait of Colonel Francis James Scott.
Do.....	Portrait of John Tait and His Grandson.
Do.....	Portrait of Miss Eleanor Urquhart.
Raphael.....	The Madonna and Child (known as the Niccolini or Cowper Madonna).
Do.....	Madonna of the House of Alba.
Do.....	St. George and the Dragon.
Rembrandt.....	Portrait of an Old Lady Seated in an Armchair.
Do.....	Lucretia.
Do.....	Portrait of Himself, Dated 1659.
Do.....	Portrait of a Polish Nobleman.
Do.....	Portrait of a Young Woman Holding a Pink.
Do.....	Joseph and Potiphar's Wife.
Do.....	Portrait of a Girl With a Broom.
Do.....	Portrait of a Young Man at Table.
Reynolds.....	Portrait of Lady Betty Delmé and Her Children.
Do.....	Portrait of Lady Caroline Howard.
Do.....	Portrait of Lady Betty Compton.
Romney.....	Portrait of Lady Broughton.
Do.....	Portrait of Mrs. Davenport.
Do.....	Portrait of Miss Willoughby.
Rubens.....	Portrait of Isabella Brant, First Wife of the Artist.
Do.....	Portrait of Suzanne Fourment and Daughter.
Starnina.....	The Virgin Enthroned with SS. Mark, Benedict, Bernard and Catherine (a triptych).
Terborch.....	A Gentleman Greeting a Lady.
Titian.....	The Madonna and Child With the Infant St. John in Landscape.
Do.....	Portrait of a Man (Andrea dei Franceschi).
Do.....	The Toilet of Venus.

Name of artist	Title of picture
Turner.....	Mortlake Terrace (Summer Evening).
Do.....	Approach to Venice.
Rogier van der Weyden.....	Portrait of a Lady in a White Veil.
Do.....	The Risen Saviour Appearing to His Mother.
Van Dyck.....	Portrait of Lord Phillip Wharton.
Do.....	Portrait of William II of Nassau and Orange.
Do.....	Portrait of the Marchesa Balbi.
Van Eyck.....	The Annunciation.
Velasquez.....	Portrait of Pope Innocent X.
Do.....	Portrait of a Young Man.
Do.....	Woman Sewing.
Vermeer, Jan.....	Girl With a Red Hat.
Do.....	The Lace Maker.
Do.....	Smiling Girl.
Veneziano, Domenico.....	Portrait of a Member of the Olivieri Family
Veronese.....	The Finding of Moses.

SCULPTURES

Name of sculptor	Title of sculpture
Agostino di Duccio.....	Madonna and Child (marble bas relief).
Amadeo.....	2 marble plaques with bust portraits in relief of Lodovico Sforza and Gian Galeazzo Sforza.
Giovanni da Bologna.....	A bronze statue representing Mercury.
Donatello.....	Bust of Youthful St. John the Baptist (painted terra cotta).
Do.....	Painted terra cotta statuette representing Madonna and Child.
Fiesole, Mino da.....	2 marble plaques representing Charity and Faith.
Do.....	Madonna and Child (marble relief).
Laurana.....	White marble bust of a Princess of Aragon.
Luca della Robbia.....	The Madonna and Child (tondo) (enameled terra cotta relief).
Do.....	The Madonna and Child (upright) (enameled terra cotta relief).
Do.....	The Virgin Adoring the Child (unglazed terra cotta).
Rossellino, Antonio.....	The Madonna and Child (terra cotta).
Sansovino, Jacopo.....	Life size statue in bronze representing Bacchus and a Young Faun.
Do.....	Life size statue in bronze representing Venus Anadyomene.
Desiderio da Settignano.....	Bust of Giovanna Degli Albizzi.
Do.....	Christ and St. John the Baptist in Their Childhood (marble relief).
Do.....	Life size marble bust of boy.
Do.....	The Madonna and Child (marble relief).
Verrocchio.....	Statuette of Boy Poised on Globe (terra cotta).
Do.....	Bust of Giovanna Tornabuoni (terra cotta).
Do.....	Bust of Giuliano de Medici (terra cotta).

Respectfully submitted.

PAUL MELLON,
President, National Gallery of Art.

APPENDIX 3

REPORT ON THE NATIONAL COLLECTION OF FINE ARTS

SIR: I have the honor to submit the following report on the activities of the National Collection of Fine Arts for the fiscal year ended June 30, 1938:

The name "National Collection of Fine Arts," which has now been in existence for a year and a quarter, is perhaps still not well understood. I wish to call attention, therefore, to the fact that the National Collection of Fine Arts is the name now used to designate the art collections administered by the Smithsonian Institution, with the exception of those which the Andrew W. Mellon Charitable and Educational Foundation will place in the building now under construction which will be known as the "National Gallery of Art."

Congress, late in the last session, passed a bill authorizing the Smithsonian Institution to obtain plans for a building to be known as the "Smithsonian Gallery of Art," and authorizing the President to select a site for it on the Mall between Fourth and Fourteenth Streets. This new building will house the art collections under the charge of the Smithsonian Institution which are not to be in the National Gallery of Art. The bill also authorized the soliciting of funds for the construction of the Smithsonian Gallery of Art, and for an endowment to be used in purchasing works of art.

There were 484 visitors to the main office during the year. Many submitted art objects for examination and identification, and others sought general information.

APPROPRIATIONS

For the administration of the National Collection of Fine Arts 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 was appropriated. This amount was reduced \$750, bringing it to \$33,525, of which \$16,542 was expended for the care and maintenance of the Freer Gallery of Art, a unit of the National Collection of Fine Arts. The balance of \$16,982.94 was spent for the care and upkeep of the National Collection of Fine Arts, nearly all of this sum being required for the payment of salaries, traveling expenses, books, periodicals, and other necessary disbursements for the care of the col-

lections, so that only a very small sum was available for improvements in the exhibition halls.

THE NATIONAL GALLERY OF ART COMMISSION

The seventeenth annual meeting of the National Gallery of Art Commission was held on December 7, 1937. The members met at 10:30 at the rooms of the National Collection of Fine Arts, in the Natural History Building, where, as the advisory committee on the acceptance of works of art which had been submitted during the year, they accepted the following:

A wood gravure of "Rockwell Studio," by Macowin Tuttle. Gift of Mrs. Mary E. Lathrop, Rockford, Ill.

The members then proceeded to the Smithsonian Building, where the annual meeting was called to order by the chairman, Mr. Borie. The members present were: Charles L. Borie, Jr., chairman; Frank Jewett Mather, Jr., vice chairman; Dr. Charles G. Abbot (ex officio), secretary; and Herbert Adams, Gifford Beal, George H. Edgell, James E. Fraser, John E. Lodge, Paul Manship, George B. McClellan, 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 Collection of Fine Arts, was also present.

The following resolutions on the death of Mr. Andrew W. Mellon were submitted and adopted, and Secretary Abbot was requested to convey a copy to Mr. Mellon's family:

Whereas The National Gallery of Art Commission has learned of the death, on August 26, 1937, of Andrew W. Mellon, a member of this Commission since 1934; therefore be it

Resolved, That the Commission records its sincere sorrow at the passing of Mr. Mellon, who devoted many years of his long life to assembling an exceptionally fine collection of paintings and sculpture. With patriotic generosity he gave in 1937 this outstanding collection of masterpieces to the Smithsonian Institution for the United States with the hope that Washington would become the art center of the world. At the same time he provided funds for a monumental marble building to be known as the National Gallery of Art, and arranged for an endowment, proposed to be \$5,000,000. No other gift of art has ever equalled this one.

Mr. Mellon had a deep interest also in the great building program of the Government, and did much, as Secretary of the Treasury, to promote it. Although he lived to a great age, the Commission deeply deplores the untimely death of Mr. Mellon before he could see and enjoy the full fruition of his work and his beneficence.

Resolved, That these resolutions be spread upon the records of the Commission and that the Secretary be requested to convey a copy to the family of Mr. Mellon.

The Commission recommended to the Board of Regents the name of David E. Finley to fill the vacancy caused by the death of Mr. Mellon.

It also recommended to the Board of Regents the reelection for the succeeding term of 4 years of the following members: Charles L. Borie, Jr., Frederick P. Keppel, George B. McClellan, and Mahonri Young.

The following officers were reelected 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 of the executive committee).

The advisability of recommending to the Board of Regents a change in the name of the Commission was considered and the following minute was agreed upon:

Owing to the appropriation of the name "National Gallery of Art" to the gallery being erected to contain the gift of Mr. Mellon, the Commission recommends to the Board of Regents of the Smithsonian Institution that its name be changed from "National Gallery of Art Commission" to "Smithsonian Gallery of Art Commission."¹

The question of a building for the Smithsonian Gallery of Art, to contain the National Collection of Fine Arts, and of a site for such a gallery, was discussed, and Dr. Abbot, Messrs. Borie, McClellan, Moore, and Keppel (with the addition of Mr. Edgell in case Mr. Keppel was not available) were appointed to consider the two pending Congressional resolutions on this subject (S. J. Res. 99, by Senator Walsh, and H. J. Res. 280, by Representative Keller).

It was decided that future annual meetings should be held on the first Tuesday in December of each year.

THE CATHERINE WALDEN MYER FUND

Five miniatures were acquired from the fund established through the bequest of the late Catherine Walden Myer, as follows:

"Portrait of Henry Trescot," painted in 1822 by Charles Fraser (1782–1860); from Mrs. Grace M. Trescot, Washington, D. C.

"Portrait of Elizabeth Knapp," by James Peale, 1802; from H. D. Miller, Baltimore, Md.

"Portrait of Charles Frederick Vogel," attributed to Rembrandt Peale; from Mrs. Margaret G. Mack Harrison, Raleigh Court, University, Va., through Miss Leila Mechlin.

"Portrait of Dr. George Ackerly," by Henry Inman (1801–1846); from Mrs. Josephine C. Gager, Washington, D. C.

"Portrait of Napoleon III," signed "F. de Fournier, Paris, 52;" from Miss Marion Lane, Washington, D. C.

¹The Board of Regents, after careful consideration, decided that the name should be "Smithsonian Art Commission."

LOANS ACCEPTED

Two portraits in pastel, by James Sharples (c. 1751–1811) of General James Miles Hughes (1756–1802), original member of the Society of the Cincinnati, and Mrs. James Miles Hughes, his wife, were lent by Madame Florian Vurpillot, Washington, D. C.

LOANS MADE

“The Cup of Death,” by Elihu Vedder, was lent to The American Academy of Arts and Letters, New York, N. Y., for a Memorial Exhibition planned for the period November 18, 1937, to May 1, 1938, but the picture was returned April 12, 1938.

“Portrait of Thomas Hopkinson,” by Robert Feke, and “Portrait of Mary Hopkinson,” by Benjamin West, from the George Buchanan Coale (1819–87) Collection, Baltimore, were lent to the United States Constitution Sesquicentennial Commission for a historical loan exhibition of authentic portraits of the Signers of the Declaration of Independence and the Deputies to the Constitutional Convention, held at the Corcoran Gallery of Art from November 27, 1937, to March 1, 1938. (Returned March 3, 1938.)

“Cliffs of the Upper Colorado River, Wyoming Territory,” by Thomas Moran, was lent to the Whitney Museum of American Art, New York, N. Y., for “A Century of American Landscape Painting,” which was held from January 19 to February 27, 1938.

At the conclusion of the above exhibition, the painting “Cliffs of the Upper Colorado River, Wyoming Territory,” by Thomas Moran, was forwarded to The Springfield Museum of Fine Arts, Springfield, Mass., for “A Century of American Landscape Painting 1800–1900” which was held from March 8 to 28, 1938. (Returned April 2, 1938.)

The following 20 paintings were lent to the Howard University Gallery of Art for an exhibition of American paintings from May 2 to June 13, 1938:

- At Nature's Mirror, by Ralph A. Blakelock.
- Caresse Infantine, by Mary Cassatt.
- Portrait Sketch of Walter Shirlaw, by Frank Duveneck.
- A Pool in the Forest, by Benjamin R. Fitz.
- Birch-Clad Hills, by Ben Foster.
- Ideal Head, by George Fuller.
- Portrait of Mrs. Albert J. Myer, by George P. A. Healy.
- The Visit of the Mistress, by Winslow Homer.
- Friendly Neighbors, by Alfred C. Howland.
- Georgia Pines, by George Innes.
- Evening on the Seine, by Homer D. Martin.
- Great Silas at Night, by Robert C. Minor.
- Cliffs of the Upper Colorado River, Wyoming Territory, by Thomas Moran.

The Path to the Village, by J. Francis Murphy.

Moonlight, by Albert P. Ryder.

Late Afternoon (The Alcazar, Segovia), by Wells M. Sawyer.

Portrait of Joseph Head, by Gilbert Stuart.

Edwin M. Stanton, by Henry Ulke.

Roosevelt Haunts, Early Autumn, by Emile Walters.

Autumn at Arkville, by Alexander H. Wyant.

(Returned June 14, 1938.)

LOANS RETURNED

Three paintings, "Madonna with Halo of Stars," "Adoration of the Christ Child," and "The Christ Child with Cross and Torch," by undetermined artists, lent to the Public Library of the District of Columbia, December 16, 1936, were returned September 27, 1937.

A bronze statue of Lincoln, by Augustus Saint Gaudens, lent, with the consent of the owners, the Estate of Mrs. John Hay, to the Great Lakes Exposition, Cleveland, Ohio, was returned October 5, 1937.

WITHDRAWALS BY OWNERS

An oil painting entitled "The Immaculate Conception with the Mirror," by Murillo, lent in 1930; withdrawn by the owner, DeWitt V. Hutchings, Riverside, Calif., on November 19, 1937.

Two portraits, "Miss Jessie Jay Burge," by Abbott H. Thayer, and "Miss Elizabeth Ellery Burge," by Thomas Mathewson, lent in 1922; withdrawn by the owners, the Misses Marie Louise and Jessie Jay Burge, Wickford, R. I., on March 3, 1938.

Portrait of Abraham Lincoln, by M. S. Nachtrieb, lent in 1921; withdrawn by the owner, Anton Heitmuller, Washington, D. C., on April 11, 1938.

One Sevres porcelain statuette, by Paul Dubois, entitled "Le Courage Militaire," lent in 1930; withdrawn by the owner, Hon. Hoffman Philip, Washington, D. C., on May 17, 1938.

"A Madonna," by Giovanni Battista Salvi (called Il Sassoferrato), lent in 1929; withdrawn by the owner, Mrs. Charles J. Fox, La Jolla, Calif., on May 31, 1938.

THE HENRY WARD RANGER FUND PURCHASES

The paintings purchased during the year by the Council of the National Academy of Design from the fund provided by the Henry Ward Ranger Bequest, which, under certain conditions, are prospective additions to our collections, and the names of the institutions to which they have been assigned, are as follows (these are the first purchases since April 1933):

Title	Artist	Date of purchase	Assignment
112. Medieval Art.....	Edwin H. Blashfield, N. A. (1848-1936).	December 1937.	William Rockhill Nelson Gallery of Art, Kansas City, Mo.
113. Fifteenth Century French Madonna and Child.	Harry W. Watrous, N. A.....	do.....	Not assigned.
114. Boxholder No. 27.....	Francis Speight, A. N. A. (elect).	do.....	Trustees of the Wood Art Gallery, Montpelier, Vt.

THE NATIONAL COLLECTION OF FINE ARTS REFERENCE LIBRARY

The 795 publications accessioned during the year were obtained through purchase, transfer, gift, and exchange.

SPECIAL EXHIBITIONS

Six exhibitions were held as follows:

August 2 to 8, 1937.—A special exhibition of the art of Mexican school children, 262 items, sponsored by the Ministry of Education, Mexican Government, through Dr. L. S. Rowe, of the Pan American Union.

October 15 to 31, 1937.—Joint exhibition of the Twenty Women Painters and the Landscape Club, of Washington, D. C. Fifty-two paintings were exhibited by the Twenty Women Painters and 61 by the Landscape Club.

February 4 to 27, 1938.—A special exhibition of 74 water colors by William Spencer Bagdatopoulos.

April 6 to 29, 1938.—A special exhibition of 85 paintings, 20 framed and 41 unframed water colors, 34 etchings, and 33 pieces of sculpture from the National Collection of Fine Arts.

April 13 to May 7, 1938.—A special exhibition of three portraits by Henrique Medina, sponsored by Dr. João Antonio de Bianchi, Minister from Portugal.

June 3 to 30, 1938.—A special exhibition of 260 naval historical prints from the Eberstadt Collection, lent by the Naval Historical Foundation. (This exhibition was extended through August.)

PUBLICATIONS

TOLMAN, R. P. Report on the National Collection of Fine Arts for the year ending June 30, 1937. Appendix 2, Report of the Secretary of the Smithsonian Institution for the year ending June 30, 1937, pp. 35-42.

LODGE, J. E. Report of the Freer Gallery of Art for the year ending June 30, 1937. Appendix 3, Report of the Secretary of the Smithsonian Institution for the year ending June 30, 1937, pp. 43-47.

Respectfully submitted.

R. P. TOLMAN, *Acting Director.*

Dr. C. G. ABBOT,

Secretary, Smithsonian Institution.

APPENDIX 4

REPORT ON THE FREER GALLERY OF ART

SIR: I have the honor to submit the eighteenth annual report on the Freer Gallery of Art for the year ending June 30, 1938:

THE COLLECTIONS

Additions to the collections by purchase are as follows:

BRONZE

- 38.5. Chinese, Chou dynasty. A ceremonial vessel of the type *kuang*. White bronze with a smooth apple-green patina; traces of red earth adhesions. The decoration is delicately cut in low and incised relief. Inscriptions in vessel and cover. 0.235 by 0.310 by 0.112. (Illustrated.)
- 38.6. Chinese, Chou dynasty. A ceremonial vessel of the type *chih*. White bronze having a silvery-green patina, with areas of rough green; earthy adhesions. The decoration is in low relief. 0.190 by 0.089. (Illustrated.)
- 38.7. Chinese, fifth-third centuries, B. C. Period of the Warring States. A food-vessel; four animalistic knobs on the cover and mask-and-ring handles on the body. White bronze having a smooth gray-green patina, with areas of incrustation outside; a rough green *aerugo* inside. The decoration is inlaid with silver and turquoise. 0.148 by 0.222.
- 38.8. Chinese, T'ang dynasty. A mirror. The surface shows a lustrous gray patina with areas of green and black, and patches of earthy adhesions. The decoration consists of a dragon in clouds, executed in low relief. 0.212 (diameter).

GOLD

- 37.45. Chinese, Ch'ing, eighteenth century, period of Ch'ien Lung. A *ju-i* sceptre of gold filigree adorned with turquoise inlays. The designs of the latter include those of the "Eight Treasures." A silk tassel is attached through a turquoise bead. Length, 0.240 (exclusive of tassel). (Illustrated.)

JADE

- 38.16. Chinese, fifth-third centuries, B. C. Period of the Warring States. The figure of a female dancer, carved in translucent white nephrite; an eyelet for attachment. Height, 0.080.

MANUSCRIPT

- 37.46. Arabic (Persia), twelfth century. A bound volume of the *Qur'ân* (incomplete). The text is written on paper leaves in Persian *kūfī* script in black ink with diacritics in red and green, 10 lines on a page. Chapter titles, marginal marks, and verse-stops are illuminated. 0.314 by 0.202 (average leaf).

- 38.15. Arabic, fourteenth century. A paper leaf from a *Qur'ān*. Illuminated title-piece, marginal ornaments and verse-stops. The text is written in *naskhī* script in gold and blue, 11 lines on a page. 0.344 by 0.259.

PAINTING

- 38.4. Chinese, Sung period, thirteenth century. By Kung K'ai. Chung K'uei, the demon-queller, on his travels. Ink on paper. Signature and inscription by the artist; 22 other inscriptions; 138 seals plus one seal on the label. Makimono: 0.328 by 1.695.
- 38.9. Chinese, Yüan dynasty, A. D. 1362. By Ni Tsan (1301-1374). Landscape. Ink on paper. Signature, dated. Forty-five seals on the painting; two on the mount. Nine inscriptions. Makimono: 0.300 by 0.503.
- 38.17. Indian, Rājput, about 1600. Hanumān standing before Rāma and Sītā, enthroned and attended by Lakṣmaṇa. Opaque color and gold on paper. 0.163 by 0.245.
- 38.1. Persian (Mesopotamia), Baghdad school, A. D. 1222. By 'Abdallāh ibn al-Faḍl. Two physicians cutting a plant. In opaque colors and gold on paper. This leaf is from the well-known Arabic translation of the *Materia Medica* of Dioscorides; the text is written in *naskhī* script in brown ink with headings and punctuation in red. 0.330 by 0.249 (leaf).
- 38.2. Persian, early fourteenth century. An illustration from a *Manafī' al-Hayawān*: a deer and magpies. In transparent colors, black and slight gold on paper. Titles (*recto* and *verso*) are written in monumental *kūfī* script in blue; the text in a small *naskhī* hand in black and red. 0.260 by 0.200 (leaf).
- 38.3. Persian, Mongol school, fourteenth century. An illustration from a *Shāhnāmāh* of Firdawsī: the bier of Iskandar (Alexander the Great). In colors, black and gold on paper. The title of the painting is written above it in gold *naskhī* script; the text in black *naskhī*. 0.408 by 0.298 (leaf). 0.250 by 0.280 (painting).
- 38.14. Persian, early Timurid period, Mongol school. Fourteenth century. Two women carrying a tray with cups and a spouted pot. Ink outline, with additions of gold, and transparent red, blue, and green, on paper. 0.195 by 0.158.

PORCELAIN

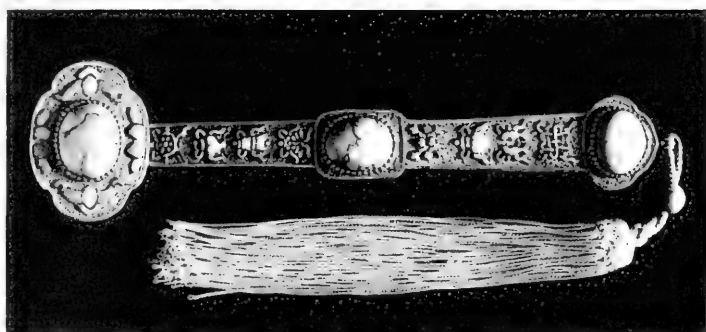
- 38.10. Chinese, eighteenth century, period of Ch'ien Lung (A. D. 1736-95). A vase. Hard, semitranslucent clay; brilliant gray-white glaze. Decorated with landscape designs painted in colored enamels over glaze. Inscription and three seals painted over glaze; a date-mark in underglaze blue under the foot. 0.244 by 0.132.

POTTERY

- 38.12. Persian, thirteenth century. Rhages (Raiy). A bowl (broken and repaired). Soft sandy, white clay; opaque white glaze (crazed); blue border outside, and blue wash over the foot. The decoration is painted in polychrome enamels and gold; inside, two seated figures; outside, a formal pattern. 0.088 by 0.230. (Illustrated.)



38.12



37.45



38.6



38.5

- 38.13. Persian, thirteenth century. Rhages (Raiy). A bowl. Soft, sandy, white clay; opaque grayish-white glaze (crazed and clouded). The decoration is painted in polychrome enamels, on both inner and outer surfaces, including a medallion under the foot. An auspicious inscription executed in *kūfī* script in white reserve on a blue ground. 0.086 by 0.205.

STONE SCULPTURE

- 38.11. Egyptian, Old Kingdom, IV-V Dynasty. The head of a young king wearing the crown of Upper Egypt. (The beard and one eye-ball are missing; one ear is chipped; the tip of the crown has been broken off and replaced). Diorite. The right eye-ball is made of fine marl, originally held in place by a copper band of which two small fragments (completely oxidized) remain. Height, 0.580.

Curatorial work during the past year has been devoted to the study of Chinese, Japanese, Korean, Tibetan, East Indian, Egyptian, Arabic, Persian, Aramaic, and Armenian objects of art, including manuscripts, and of the texts, inscriptions, or seals associated with them—and in the preparation of this material for Gallery records. Other things from some of these fields, and also Assyrian, Cretan, Byzantine, and European objects were sent or brought to the Director by their owners for expert opinion as to identity, provenance, age, quality, and so on. In all, 810 objects and 316 photographs of objects were submitted, and written or oral reports were made to the institutions or private owners who asked for this service. Written translations of 20 inscriptions in Oriental languages also were made upon request.

Changes in exhibition have involved a total of 75 objects, as follows:

Arabic and Persian calligraphy-----	20
Persian painting-----	18
Chinese bronze-----	14
Chinese gold-----	1
Chinese gold and iron-----	2
Chinese painting-----	5
Chinese porcelain-----	6
Chinese pottery-----	9

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 120,241. One hundred eighty-six other visitors on Mondays makes the grand total 120,427. The total attendance for week-days, exclusive of Mondays, was 86,652; Sundays, 33,589. The average week-day attendance was 279; the average Sunday attendance, 646.

The highest monthly attendance was reached in July, 18,182; the lowest in December, 5,827.

There were 1,646 visitors to the main office during the year. The purposes of their visits were as follows:

For general information-----	466
To see objects in storage-----	503
Far Eastern paintings-----	109
Tibetan paintings-----	1
Near Eastern paintings and manuscripts-----	41
East Indian paintings and manuscripts-----	3
American paintings-----	50
Whistler prints-----	15
Oriental pottery, jade, bronzes, sculptures-----	195
East Christian paintings-----	2
<i>Washington Manuscripts</i> -----	87
To read in the library-----	192
To make tracings and sketches from library books-----	6
To see building and installation-----	11
To obtain permission to photograph or sketch-----	10
To examine or purchase photographs-----	388
To submit objects for examination-----	168
To see members of the staff-----	173
To see the exhibition galleries on Mondays-----	53

LECTURES AND DOCENT SERVICE

Two illustrated lectures on Musulman Painting were given by Eustache de Lorey, Paris, Former Director of the French Institute of Arts and Archaeology, Damascus, Syria:

Friday, April 8: Wāsītī, a 13th century painter in Baghdad.

Saturday, April 9: Islam at grips with China.

One hundred and twenty-six persons attended these lectures.

Upon request, 9 groups, ranging from 6 to 17 persons (total 89), were given instruction in the study rooms. One group of 17 persons was given instruction in the storage rooms, and 10 groups ranging from 7 to 50 persons (total 213) were given docent service in the exhibition galleries.

PERSONNEL

On October 1, 1937, to the regret of all those associated with him, occurred the death of Frederick R. Brill, watchman, who had been at the Gallery since July 1, 1925.

William R. B. Acker, student assistant, returned from Japan on December 22, 1937.

On January 1, 1938, the title "Curator" was changed to "Director" and on May 11 the following titles of members of the staff became effective:

Grace Dunham Guest, assistant director.

Carl W. Bishop, associate in archeology.

Archibald G. Wenley, associate in research.

Grace T. Whitney worked intermittently at the Gallery between October 20, 1937, and June 30, 1938, on translations of Persian texts. Respectfully submitted.

J. E. LODGE, *Director.*

Dr. C. G. ABBOT,

Secretary, Smithsonian Institution.

APPENDIX 5

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, 1938, conducted in accordance with the act of Congress of June 28, 1937. 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.

SYSTEMATIC RESEARCHES

During the greater part of the fiscal year, M. W. Stirling, Chief of the Bureau, was in Washington engaged in administrative duties and in preparation of various publications.

From the latter part of January until the middle of March, 1938, Mr. Stirling was in Mexico examining archeological sites and museum collections. A site in the Canton of the Tuxtlas south of Vera Cruz was selected for excavation during the winter of 1938-39.

At the beginning of the fiscal year, Dr. John R. Swanton, ethnologist, was engaged in the preparation of the final report of his researches in the interests of the United States De Soto Expedition Commission, of which he is chairman. One field expedition was undertaken in connection with this research. It was directed in the first instance to the southern part of Clarke County, Alabama, at the invitation of James Y. Brame, Jr., of Montgomery, an indefatigable student of the route of De Soto, who hoped that he had discovered the site of the old town of Mabila, where occurred a notable battle between the Spaniards and Indians on October 18, 1540. The site in question, at a place called Lower James Hammock, on the bluff above Choctaw Lake, proved to be an interesting one and specimens of certain novelty types of pottery were obtained, but the question as to its identity with Mabila is still in doubt, the evidence being rather negative. After this work was finished an attempt was made to locate other Indian town sites in the southeastern part of the county, but, aside from a very small one previously identified by Mr.

Brame, nothing was found, there being, in fact, a singular dearth of Indian remains in this county in the section where it would be natural to look for Mabila. In the southwestern part of the county, however, there is a spot to which the Indians resorted for salt, one noted on early French maps, and here a considerable collection of potsherds was made and a number of pictures of the site taken. While Dr. Swanton was engaged in this investigation, the Choctaw Hunting and Fishing Club kindly extended the use of its camp at Choctaw Bluff.

After returning to Montgomery, Dr. Swanton proceeded to Tuscaloosa and David De Jarnette, assistant to Prof. Walter S. Jones, took him to Scottsboro and afterward on a number of trips along the part of the Tennessee River valley believed to have been traversed by De Soto. It seems to be indicated rather clearly that the Spaniards crossed and recrossed this several times. Before returning to Washington Dr. Swanton attended a meeting on October 29–30 called by the De Soto Committee of the Society of the Colonial Dames of America in preparation for a celebration of the quadricentennial of the passage of the Mississippi by De Soto, and he delivered an address at one of the sessions.

Dr. Swanton has also added some further material to his large paper on the Indians of the Southeast.

In December he presided as vice-president over several sessions of Section H, American Association for the Advancement of Science, at Indianapolis.

In March he was appointed to the United States Board of Geographical Names to occupy the place made vacant by the death of J. N. B. Hewitt, and he attended the twelfth annual meeting on May 23.

Dr. Truman Michelson, ethnologist, left Washington early in July 1937 to undertake field work among the Montagnais-Naskapi Indians of the northern shore of the St. Lawrence River and vicinity. This work was made possible through a generous grant-in-aid made by the American Council of Learned Societies. He arrived at Natashquan July 12 and spent 18 days there, following which he continued his investigations at Seven Islands, Moisie, and Bersimis. Owing to the migratory habits of the Indians Dr. Michelson was able to get data not only on Indians of the localities named but also others in this region, including Mingan, St. Margeret's River, Godbout, Shelterbay, and Sheldrake. He was also able to check up his previous information on the Indians of Davis Inlet, far north on the Labrador coast; and by good fortune came in contact with an Indian of a band from the northeast corner of Lake Kaniapiskau—a band barely known to the scientific world. The principal object was to complete

a map showing the distribution and interrelations of the Cree and Montagnais-Naskapi dialects. In addition to the linguistic work which was the primary purpose of the trip, many new ethnological data were obtained, together with certain observations in physical anthropology. The remainder of the year was spent in Washington in the preparation of manuscripts and in routine work.

At the beginning of the fiscal year Dr. John P. Harrington, ethnologist, finished a comparative study of the Tano-Kiowan family of languages, a compact body of dialects which have inherited the same phonetics, grammatical peculiarities, and vocabulary, although the Tanoan branch is typically Pueblo in culture while the Kiowa branch is equally typical of the Western Plains culture. No linguistic study shows better how habitat has produced two cultures by migration from a linguistic nucleus which had perhaps originally a third culture—possibly like that of the Flatheads of the northern Rockies, from which region the linguistic progenitors of both Tanoans and Kiowans apparently came. The Tano-Kiowan situation, however, is clearer than the surprisingly similar Athapascan situation, since there is historic information on the northern original of the Kiowa, whereas the migration of any body of southern Athapascans from the north still remains theoretical. It is established that both the Tanoans and the southern Athapascans of the southwestern United States are of comparatively recent northern origin, at least as far as their language-transmitting ancestors are concerned.

Returning to the study of the Devils Tower, which has a bearing on the Tano-Kiowan provenience problem, Dr. Harrington was assisted materially by Newell F. Joyner, custodian of the Devils Tower National Monument, Devils Tower, Wyo., who supplied a mass of material including maps and other data. If the Kiowas came from the somewhat far north, it is certain that their linguistic relatives, the Tanoans, did also.

Working by similar methods, Dr. Harrington also made a study of the Athapascan peoples. Here we have a northern linguistic nucleus still extant, not of the past but of the present, and a family of languages more intimately associated with the problem of the original entry of man from Siberia into America, since if we exclude the somewhat aloof-standing Eskimo, all the territory of America nearest Asia is occupied by the Athapascan and related Tlingit tongues.

Following up Goddard's discovery that the Kiowa-Apache-Lipan-Jicarilla form a separate language group, having shifted over-aspirated *tx* to *kh*, that is, the *x* having assimilated the *t* to its articulatory position, Thomas' recent work on the Prairie Apaches was found of interest. A considerable list of the Prairie Apaches are

known to us by name through the old Spanish historical documents of New Mexico, showing that the *kh* language was spoken by many tribes which covered a large area of the High Plains. The northernmost of these tribes is reported in old Spanish sources from what is now northeastern Colorado, only 150 miles south of the Black Hills. This takes away the element of novelty from the fact that the Kiowa-Apache joined the Kiowa in the Black Hills region about the year 1800 or earlier, and shows that the Kiowa-Apache also were merely one of the *kh* speaking tribes, typically Prairie Apaches, and not an Athapascan people en route migrating from Canada, as Goddard at first conjectured. A report was finished on the northern provenience of the Navaho and Apache.

Considerable time was also spent on a new sign language study, through Kiowa informants and other sources, bringing out additional information regarding the nature and structure of this interesting Plains Indian invention.

At the beginning of the fiscal year Dr. Frank H. H. Roberts, Jr., archeologist, was conducting excavations at the Lindenmeier Site north of Fort Collins, Colo. This was a continuation of the program of investigations started in the fall of 1934 and carried on during succeeding summers. The location is one where Folsom man, one of the earliest known New World inhabitants, camped and made the weapons and tools that were used in killing and dressing the big game that constituted his main source of sustenance. Work was resumed in 1937 at the point where the 1936 activities terminated and at the end of the summer an area of some 2,800 square feet had been uncovered and numerous traces of occupation noted and studied. Several places were found where bison and other large animals had been dismembered, cooking fires lighted, and a feast enjoyed. At other places there were indications that individuals had been seated there manufacturing stone projectile points, knives, and scrapers. Many charts were drawn recording the nature of the assemblages of bones and stone implements and showing their distribution. In addition, 133 diagrams illustrating the character of the overlying deposits were prepared as the excavations progressed. These, together with the extensive notes on the work, add valuable data to the body of information on the mode of life and customs of the people. A collection of 735 specimens was obtained and among them were several new forms of knives, scrapers, and points. These broaden the knowledge relative to the general complex and nature of the material culture.

At the close of the excavating season Dr. Roberts proceeded to North Platte, Nebr., where he inspected a number of collections belonging to local residents and visited the sites where many of them

were found. Through the interest of R. R. Langford, of North Platte, he was able to see a number of locations where Folsom-type objects have been found and add to the series of notes that is being kept on the subject of Folsom distribution. From North Platte Dr. Roberts returned to Washington.

The winter and spring months were devoted to office duties. These included the study of the material obtained during the summer's excavations and the revision and completion for publication of a manuscript on archeological work done in the Whitewater District in eastern Arizona. Besides completely revising the text of this report, 15 additional plans and diagrams were drawn to augment those already prepared. This manuscript was turned over to the editor and is to appear as Bulletin 121 of the Bureau of American Ethnology. With the permission of the Chief of the Bureau and the Secretary of the Smithsonian Institution, several short manuscripts were prepared for publication in anthropological journals and other professional papers.

Dr. Roberts left Washington on June 7, 1938, for Fort Collins, Colo., and again resumed excavations at the Lindenmeier Site. At the close of the fiscal year the diggings had been reopened and a number of specimens obtained. These included several pieces of bone that bear evidence of attempts at engraving designs on them and give some indications of a certain amount of artistic effort on the part of Folsom men.

Dr. J. H. Steward, ethnologist, remained in Washington during the greater part of the fiscal year and completed his final report on the tribes of the Great Basin-Plateau area. This was submitted to the editor and will appear as Bulletin 120 of the Bureau. In anticipation of an extended expedition to South America, Dr. Steward spent considerable time in making preparations for his projected ethnological studies in the western part of South America. On April 20 he left Washington for Ecuador in order to begin this work. The end of the fiscal year found him still in Ecuador working among the highland Indians.

EDITORIAL WORK AND PUBLICATIONS

The editing of the publications of the Bureau was continued through the year by Stanley Searles, editor.

BULLETINS ISSUED DURING THE YEAR

115. *Journal of Rudolph Friederich Kurz*, edited by J. N. B. Hewitt.
116. *Ancient Caves of the Great Salt Lake Region*, by Julian H. Steward.
117. *Historical and Ethnographical Material on the Jivaro Indians*, by M. W. Stirling.

RELEASED FOR PUBLICATION

118. An Archaeological Survey of the Norris Basin in Eastern Tennessee, by Maj. William S. Webb.

The index of Schoolcraft's Indian Tribes has been almost completed.

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

Publications distributed totaled 16,569.

LIBRARY

There has been no change in the library staff. Accessions during the fiscal year totaled 395.

Eight new exchanges were added during the year, three of these being large, important sets, one domestic and two foreign.

Library of Congress cards have been obtained for practically all of the new material received as well as for some older items. Analytical entries have been made for all periodical items in the Bureau's field received since April 1936. The depository set of Library of Congress catalog cards is now installed in working order and has proved to be a great help to the staff as well as to those in the library.

The librarian attended the meetings of the Inter-American Bibliographical and Historical Association in February 1938, and made arrangements to exchange cards for South and Central American Indian languages and folk-lore entries with Dr. Boggs, of the University of North Carolina.

ILLUSTRATIONS

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

Line drawings-----	175
Maps-----	25
Photos retouched-----	28
Lettering jobs-----	96
Plates assembled-----	213
Drawings, etc., prepared for engraver-----	415
Diagrams and charts-----	7
Graphs-----	6
Mechanical drawings-----	4
Wash drawings-----	1
	970
Total-----	970

Accession
No.

COLLECTIONS

144,343. One earthenware water jar from the pueblo of Acoma, and one decorated basket made by the Aleuts of southwestern Alaska. (2 specimens.)

Accession
No.

- 146,287. Three figurine pottery fragments and three figurine pottery heads from a railway cut near the Aguan River, Maloa District, north-east Honduras, Central America. Purchased from J. R. Allsopp. (6 specimens.)
- 146,639. Potsherds, arrowpoints, shell bead, and fragment of worked shell from Liberty and Dade Counties, Fla. Collected by M. W. Stirling. (6 specimens.)
- 148,063. Earthenware vessels and fragments from Uluá River, Comayagua River, and Lake Yojoa regions of Honduras, collected in 1936 by Smithsonian-Harvard University Expedition under Dr. W. D. Strong. (93 specimens.)

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. W. D. Strong, anthropologist, resigned August 31, 1937. J. N. B. Hewitt, ethnologist, died October 14, 1937.

Respectfully submitted.

M. W. STIRLING, *Chief.*

DR. C. G. ABBOT,

Secretary, Smithsonian Institution.

APPENDIX 6

REPORT ON THE INTERNATIONAL EXCHANGE SERVICE

SIR: I beg to submit the following report on the activities of the International Exchange Service during the fiscal year ended June 30, 1938:

The amount granted by Congress for that year was \$44,260, the same as appropriated for 1937. The collections from repayments were \$3,577.12, making the total resources available \$47,837.12.

The number of packages handled was 719,121, a gain of 61,775. The weight was 656,119 pounds, an increase of 4,658 pounds.

The number and weight of packages sent and received through the Exchange Service is given below:

	Packages		Weight	
	Sent	Received	Sent	Received
United States parliamentary documents sent abroad.....	363, 823		<i>Pounds</i> 135, 064	<i>Pounds</i>
Publications received in return for parliamentary documents.....		9, 607		26, 711
United States departmental documents sent abroad.....	123, 182		122, 300	
Publications received in return for departmental documents.....		10, 231		33, 537
Miscellaneous scientific and literary publications sent abroad.....	154, 730		225, 006	
Miscellaneous scientific and literary publications received from abroad for distribution in the United States.....		57, 548		113, 501
Total.....	641, 735	77, 386	482, 370	173, 749
Grand total.....	719, 121		656, 119	

There were shipped abroad 2,639 boxes, an increase of 19 over the preceding year. Of these boxes, 538 were for depositories of full sets of United States governmental documents, and the remainder (2,101) were for distribution to miscellaneous establishments and individuals. There were transmitted by mail 111,475 packages, an increase over last year of 24,179.

For a number of years the government franking privilege has been in existence between the United States and Canada, Cuba, Mexico, Newfoundland, and Panama, and exchange packages for these countries, therefore, have been sent direct to their destinations by mail and not through the exchange bureaus in the respective countries. In recent months this privilege has been extended. The complete list of the countries with which this privilege is now in effect is as

follows: Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Mexico, Newfoundland (including Labrador), Nicaragua, Panama, Paraguay, Peru, Salvador, Uruguay, and Venezuela.

Shipments of exchanges to Spain, owing to the disturbed political conditions in that country, have been suspended since August 1936.

Owing to the war in China, consignments to that country were suspended in August 1937. The Chinese Bureau of International Exchange, having moved its office from Nanking to Chungking, requested the Institution to forward shipments to its new address, and at the close of the year a large consignment was being prepared for transmission to that bureau.

Packages for the National Library of Peiping, the Engineering Reference Library, Nanking, and the Library Association of China, instead of being included with the regular consignments to the new address of the Chinese Exchange Bureau, are being forwarded to Hong Kong in care of the Fung Ping Shan Chinese Library, at the request of Dr. T. L. Yuan, who is officially connected with those organizations.

FOREIGN DEPOSITORIES OF GOVERNMENTAL DOCUMENTS

There are forwarded to foreign depositories 111 sets of United States official publications, 61 being full sets and 50, partial sets. The depository of the full set sent to Chile has been changed from Biblioteca del Congreso to Biblioteca Nacional, Santiago; the depository in Mexico, from Biblioteca Nacional to Departamento Autónomo de Publicidad y Propaganda, Mexico; and the depository in the Soviet Republic, from State Central Book Chamber to All-Union Lenin Library, Moscow.

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: Commonwealth Parliament and National Library, 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.

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 Nacional, Santiago.
- CHINA: Bureau of International Exchange, Ministry of Education, Chungking.
- COLOMBIA: Biblioteca Nacional, Bogotá.
- COSTA RICA: Oficina de Depósito y Canje Internacional de Publicaciones, San José.
- CUBA: Secretaría de Estado, Dirección de Relaciones Culturales, Habana.
- CZECHOSLOVAKIA: Bibliothéque de l'Assemblée Nationale, Prague.
- DENMARK: Kongelige Bibliotheket, Copenhagen.
- EGYPT: Bureau des Publications, Ministère des Finances, Cairo.
- ESTONIA: Riigiraamatukogu (State Library), Tallinn.
- FRANCE: Bibliothéque Nationale, Paris.
- GERMANY: Reichstauschstelle im Reichsministerium des Innern, Berlin C 2.
- AUSTRIA: National Bibliothek, Wien, I.
- 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.
- WURTEMBERG: 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 országgyűlés könyvtará, Budapest.
- INDIA: Imperial Library, Calcutta.
- IRELAND: National Library of Ireland, Dublin.
- ITALY: Ministero dell'Educazione Nazionale, Rome.
- JAPAN: Imperial Library of Japan, Tokyo.
- LATVIA: Bibliothéque d'État, Riga.
- LEAGUE OF NATIONS: Library of the League of Nations, Geneva, Switzerland.
- MEXICO: Departamento Autónomo de Prensa y Publicidad, 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: Bibliothéque Nationale, Warsaw.
- PORTUGAL: Bibliotheca Nacional, Lisbon.
- RUMANIA: Academia Română, Bucharest.
- SPAIN: Servicio de Cambio Internacional de Publicaciones, Paseo de Recoletos 20, Madrid. Shipments suspended since August 1936.
- SWEDEN: Kungliga Bibliotheket, Stockholm.
- SWITZERLAND: Bibliothéque Centrale Fédérale, Berne.
- TURKEY: Ministère de l'Instruction Publique, Ankara.
- UNION OF SOUTH AFRICA: State Library, Pretoria, Transvaal.
- UNION OF SOVIET SOCIALIST REPUBLICS: All-Union Lenin Library, Moscow 115.
- 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.
- BOLIVIA: Biblioteca del H. Congreso Nacional, La Paz.
- BRAZIL:
- MINAS GERAES: Directoria Geral de Estatistica em Minas, Belo Horizonte.
- RIO DE JANEIRO: Bibliotheca da Assembleia 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: Legislative Library, Regina.
- CEYLON: Chief Secretary's Office (Record Department of the Library), Colombo.
- CHINA: National Library of Peiping, % Fung Ping Shan Chinese Library, Hong Kong.
- DANZIG: Stadtbibliothek, Danzig.
- DOMINICAN REPUBLIC: Biblioteca del Senado, Ciudad Trujillo.
- ECUADOR: Biblioteca Nacional, Quito.
- FINLAND: Parliamentary Library, Helsingfors.
- GERMANY:
- BREMEN: Staatsbibliothek.
- HAMBURG: Staats-und Universitäts-Bibliothek.
- HESS: Universitäts-Bibliothek, Giessen.
- LÜBECK: President of the Senate.
- THURINGIA: Rothenberg-Bibliothek, Landesuniversität, Jena.
- VIENNA: Magistrat der Stadt Wien, Abteilung 51-Statistik.
- 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, Italy.

INTERPARLIAMENTARY EXCHANGE OF THE OFFICIAL JOURNAL

The total number of copies of the Congressional Record and Federal Register sent to foreign depositories has been reduced to 104, the copies sent to the Governor of Latakia having been discontinued. Several changes have been made in the establishments to which those documents are sent. A list of the depositories now receiving those documents is given below:

DEPOSITORIES OF CONGRESSIONAL RECORD

ALBANIA: Ministrija Mbretnore e Punëvetë Jashtme, Tirana.
 ARGENTINA:
 Biblioteca del Congreso Nacional, Buenos Aires.
 Cámara de Diputados, Oficina de Información Parlamentaria, Buenos Aires.
 Boletín Oficial de la República Argentina, Ministerio de Justicia e Instrucción Pública, 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.
 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, Manãos.
 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.
 SERGIPE: Bibliotheca Publica do Estado de Sergipe, Aracajú.
 SÃO PAULO: Diário Oficial do Estado de São Paulo, São Paulo.
 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.
 DENMARK: Rigsdagens Bureau, Copenhagen.
 DOMINICAN REPUBLIC: Biblioteca del Senado, Ciudad Trujillo.
 NETHERLANDS INDIES: Volksraad von Nederlandsch-Indië, Batavia, Java.

EGYPT:

Chambre des Députés, Cairo.
Sénat, Cairo.

FRANCE:

Chambre des Députés, Service de l'Information Parlementaire Étrangère,
Paris.
Bibliothèque du Sénat, au Palais du Luxembourg, Paris.
Bureau de Documentation Générale, Ministère des Finances, Paris I.
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.
AUSTRIA: Bibliothek im Parlamentsgebäude, Wein, I.
BRAUNSCHWEIG: Bibliothek des Braunschweigischen Staatsministeriums,
Braunschweig.
MECKLENBURG: Staatsministerium, Schwerin.
OLDENBURG: Oldenburgisches Staatsministerium, Oldenburg i. O.
SCHAUMBURG-LIPPE: Schaumburg-Lippische Landesregierung, Bückeburg.

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 országgyűlés könyvtára, Budapest.

INDIA: Legislative Department, Simla.

INDOCHINA: Gouverneur Général de l'Indochine, Hanoi.

IRAN: Library of the Iranian Parliament, Téhéran.

IRAQ: Chamber of Deputies, Baghdad.

IRISH FREE STATE: Dail Éireann, 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.

LEBANON: Ministère des Finances de la République Libanaise, Service du Matériel, Beirut.

LIBERIA: Department of State, Monrovia.

MEXICO: Departamento Autónomo de Prensa y Publicidad, 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 LEÓN:** Biblioteca del Estado, Monterey.
- OAXACA:** Periódico Oficial, Palacio de Gobierno, Oaxaca.
- PUEBLA:** Secretaría General de Gobierno, Puebla.
- QUERETARO:** Secretaria general de Gobierno, Sección de Archivo, Queretaro.
- SAN LUIS POTOSÍ:** Congreso del Estado, San Luis Potosí.
- 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:** Biblioteka Narodowa, Warsaw.
- PORTUGAL:** Secretario da Assembleia 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:** Bibliothéque de l'Assemblée Fédérale Suisse, Berne.
Bern: Staatskanzlei des Kantons Bern.
St. Gallen: Staatskanzlei des Kantons St. Gallen.
Schaffhausen: Staatskanzlei des Kantons Schaffhausen.
Zürich: Staatskanzlei des Kantons Zürich.
- 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, Vatican City, Italy.

FOREIGN 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 Internacionais, Bibliotheca Nacional, Rio de Janeiro.
- BRITISH GUIANA:** Royal Agricultural and Commercial Society, Georgetown.
- BRITISH HONDURAS:** Colonial Secretary, Belize.
- BULGARIA:** Institutions Scientifiques de S. M. de Bulgarie, Sofia.
- CANADA:** Sent by mail.
- CANARY ISLANDS,** via Spain.
- CHILE:** Sent by mail.
- CHINA:** Bureau of International Exchange, Ministry of Education, Chungking.
- COLOMBIA:** Sent by mail.
- COSTA RICA:** Sent by mail.
- CUBA:** Sent by mail.
- CZECHOSLOVAKIA:** Service Tchecoslovaque 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.
- DOMINICAN REPUBLIC:** Sent by mail.
- ECUADOR:** Sent by mail.
- 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 Earnshaw St., New Oxford St., London, W. C. 2.
- GREECE:** Bibliothèque Nationale, Athens.
- GREENLAND,** via Denmark.
- GUATEMALA:** Sent by mail.
- HAITI:** Sent by mail.
- HONDURAS:** Sent by mail.
- HUNGARY:** Hungarian Libraries Board, Ferenciektere 5, Budapest, IV.
- ICELAND,** via Denmark.
- INDIA:** Superintendent of Government Printing and Stationery, Bombay.
- ITALY:** Ufficio degli Scambi Internazionali, Ministero dell' Educazione Nazionale, Rome.
- JAMAICA:** Institute of Jamaica, Kingston.
- JAPAN:** Imperial Library of Japan, Ueno Park, Tokyo.
- JAVA,** via Netherlands.
- LATVIA:** Service des Échanges Internationaux, Bibliothèque d'Etat 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.
- NEWFOUNDLAND and LABRADOR**: Sent by mail.
- NEW SOUTH WALES**: Public Library of New South Wales, Sydney.
- NEW ZEALAND**: General Assembly Library, Wellington.
- NICARAGUA**: Sent by mail.
- NORWAY**: Service Norvégien des Échanges Internationaux, Bibliothèque de l'Université Royale, Oslo.
- PALESTINE**: Jewish National and University Library, Jerusalem.
- PANAMA**: Sent by mail.
- PARAGUAY**: Sent by mail.
- PERU**: Sent by mail.
- POLAND**: Service Polonais des Échanges Internationaux, Bibliothèque Nationale, Warsaw.
- PORTUGAL**: Secção 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**: Sent by mail.
- 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. Shipments suspended since August 1936.
- SUMATRA**: via Netherlands.
- SURINAM**: Surinaamsche Koloniale Bibliotheek, Paramaribo.
- SWEDEN**: Kongliga Svenska Vetenskaps Akademien, Stockholm.
- SWITZERLAND**: Service Suisse des Échanges Internationaux, Bibliothèque Centrale Fédérale, Berne.
- SYRIA**: Sent by mail.
- TASMANIA**: Secretary to the Premier, Hobart.
- TRINIDAD**: Royal Victoria Institute 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**: Canje Internacional de Publicaciones, Ministerio de Relaciones Exteriores, Montevideo.
- VENEZUELA**: Sent by mail.
- 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 7

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, 1938.

The regular appropriation made by Congress for the maintenance of the Park was \$225,000, all of which was expended.

IMPROVEMENTS

The stone large-mammal house, which had been completed in the previous fiscal year, was stocked with animals during August and September 1937, and was opened to the public October 13, 1937, at the same time the giraffes, tapirs, African buffaloes, and gaurs that had been obtained on the National Geographic-Smithsonian Expedition were moved into it. This building was described and pictured in the last annual report.

W. P. A. work ceased on January 27, 1937, and was not resumed until September 1937. From this date until the close of the fiscal year W. P. A. workers were engaged mainly in cutting down the hill between the new large-mammal house and the refreshment stand, and in the construction of a stone retaining wall around the base of the hill. This work had not been completed at the close of the fiscal year. In addition, they demolished the octagonal elephant house—the first building ever constructed in the Zoo—which had been vacated when the elephants were moved to the new large-mammal house, and they also demolished the brick elephant house in accordance with the plans developed when the small-mammal house was placed immediately adjacent to it. The area occupied by these two buildings and the vicinity thereof was partially graded preparatory to the placing thereon of other small exhibits and the providing of pleasing open spaces. A small amount of work was accomplished in connection with other minor grounds improvement, tree surgery, and miscellaneous improvements.

Moving into the new quarters in the large-mammal house meant several days of big jobs. A contract was entered into with a concern equipped for moving large, heavy objects, and from September 1 to September 22, as the African and Sumatran elephants, the hippo-

potamus, and rhinoceros could be induced to enter large substantial crates, they were moved from their old quarters into the new, large-mammal house. Almost a full day was required for each animal moved, and in some cases the gates of the Park were closed so that visitors would not be in the way and would not be jeopardized should an accident occur. Every possible precaution had been taken to insure the successful accomplishment of the moves, and there was no unhappy incident. The suggestion had been frequently made that the elephants might be walked up to the building, but they had not been accustomed to discipline outside of their yards, and it was deemed inadvisable to do this. The crate used to move the elephants was 10 feet 10 inches high, 7 feet 4 inches wide, and 18 feet long, overall, and weighed $5\frac{1}{2}$ tons. Other smaller animals, such as the tapirs and pigmy hippopotami, were moved by the Park force.

THE NATIONAL GEOGRAPHIC SOCIETY—SMITHSONIAN INSTITUTION EXPEDITION TO THE EAST INDIES

As was recorded in the previous annual report, this expedition left Washington in two sections. On January 19, 1937, Dr. Mann, director of the Park, Mrs. Mann, and Dr. Maynard Owen Williams, chief of the foreign editorial staff of the National Geographic Magazine, sailed from Vancouver, B. C., for the Orient. Making various stops en route, and visiting zoos in Japan, China, and Malaya, they finally reached Pematang Siantar, in Sumatra, where the base camp was established. On February 9, Roy Jennier, assistant head keeper, and Malcolm Davis, keeper of the National Zoological Park, left Washington with 28 American animals and, sailing by way of Cape of Good Hope, arrived at the Sumatra base camp on March 22.

While the headquarters had been near the north end of the Island of Sumatra, the animals were assembled from widely scattered points in the southern Asiatic and Malayan region. Dr. and Mrs. Mann had made trips to Siam, Johore, Singapore, Java, Celebes, and the Moluccas, and had arranged with numerous parties to assist in the collection of specimens. Noteworthy help was obtained from J. A. Coenraad, director of the zoo at Siantar; J. M. Lynkamp, manager of the Naga Hoeta Tea Estate, in Sumatra; and A. Baron Van Styrum, of the Deli Railroad. The giraffes and African buffaloes were loaded at Port Sudan, in accordance with arrangements that had been made with the game warden of the Khartoum Government, Egyptian Sudan.

His Highness, the Crown Prince of Johore, presented the expedition with a pair of black leopards and a fine Bennett's cassowary. From the Zoo at Fort de Kock, through C. Grootes, and from the Zoo at Batavia, through J. M. N. A. Niemanns, were received a number of

valuable specimens. W. L. Basapa, of Singapore, presented a Baska turtle, and Dr. Harold Coolidge of the Harvard Primate Expedition, a pair of Himalayan bears.

This expedition was financed by the National Geographic Society, and the results to the Zoo were highly gratifying. On its return all members of the party except Dr. Williams arrived in New York September 27, 1937, where the shipment of 193 crates of animals was divided. Seventeen hoofed animals were placed in quarantine in the Bureau of Animal Industry's station at Athenia, N. J., and the remaining animals were brought to Washington by express. They were sorted at the express car and loaded into trucks destined to the respective buildings in the Zoo, and by noon of September 28 a large proportion of them were in their new quarters, taking baths, grooming themselves, and otherwise getting ready to receive visitors who were already arriving.

After the animals were finally counted and identified, it was found that the expedition had brought in the following:

*Summary of animals brought back by the National Geographic Society—
Smithsonian Institution East Indies Expedition, 1937*

Class	Species	Individuals
Mammals -----	46	121
Birds -----	93	649
Reptiles and amphibians -----	30	109
Total -----	169	879

The collection included numerous species never before exhibited in the Zoo, and other species that had been badly needed. Among them were Asiatic tapirs, both species of orang-utans, a pair of gaur, 16 birds of paradise of 4 different species, and a great many other desirable birds. In the reptile collection were four species of cobras, including two fine specimens of Hamadryads.

NEEDS OF THE ZOO

In the previous annual report under this topic, the following appeared:

The old frame shelter now housing the restaurant and concession stand is badly deteriorated and entirely inadequate to accommodate the large volume of business that has developed with the increasing attendance at the Zoo.

Construction of a suitable building would be a self-liquidating undertaking, as the annual revenue derived from the restaurant concession has been \$6,012 per annum for the three years prior to July 1937, and for the following three years will be \$9,012 per annum. This money is deposited in the United States Treasury to the credit of the General Fund, District of Columbia, and not available to the Zoo.

VISITORS FOR THE YEAR

There were substantial increases in the attendance for the year, both in individuals and in groups.

July	313, 700	February	165, 100
August	227, 000	March	290, 000
September	280, 400	April	313, 100
October	408, 300	May	359, 700
November	289, 500	June	225, 500
December	123, 050		
January	132, 300	Total	3,127, 650

The attendance of organizations, mainly classes of students, of which there is definite record, was 70,371 from 1,374 different schools in 23 States and the District of Columbia, as follows:

State	Number of persons	Number of parties	State	Number of persons	Number of parties
Alabama.....	20	1	New Hampshire.....	72	1
Connecticut.....	379	10	New Jersey.....	5, 768	66
Delaware.....	772	15	New York.....	3, 252	38
District of Columbia.....	14, 554	306	North Carolina.....	2, 507	73
Florida.....	107	1	Ohio.....	1, 813	51
Georgia.....	991	25	Pennsylvania.....	15, 408	308
Indiana.....	30	1	Rhode Island.....	75	2
Kentucky.....	25	1	South Carolina.....	609	18
Maine.....	134	3	Tennessee.....	202	6
Maryland.....	11, 866	195	Virginia.....	9, 695	209
Massachusetts.....	382	8	West Virginia.....	1, 052	22
Michigan.....	402	8			
Missouri.....	256	6	Total.....	70, 371	1, 374

About 3 o'clock every afternoon, except Sundays and holidays, a census is made of the cars parked on the Zoo grounds. During the year, 31,159 were so listed, representing every State in the Union, Canada, Mexico, Canal Zone, Alaska, Cuba, Panama, Hawaii, and Puerto Rico. 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 51 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.—A number of specimens were received as gifts during the year. Among the most interesting additions were two East African

hedgehogs from President Franklin D. Roosevelt; a Chapman's zebra from Mrs. Robert C. Winmill, Warrenton, Va.; a pair of dingos, one South African spitting cobra, one golden cobra, and one puff adder from the New York Zoological Park. From the Firestone Rubber Plantations, Liberia, through George Siebold, manager, were received a chimpanzee and a young leopard. The Florida Boy Scout contingent attending the jamboree in the city presented a collection of 33 reptiles from their State.

The field representatives of the United States Biological Survey continued their generosity in the form of various gifts, most important of which were two bison (one an albino) from the National Bison Range, Moiese, Mont.; three California murrets, and one tufted puffin, through O. J. Murie, Seattle, Wash.

DONORS AND THEIR GIFTS

- Miss Nelda Acker, Washington, D. C., 2 Pekin ducks.
 Paul Akers, East Radford, Va., hog-nosed snake, fence lizard, 2 salamanders.
 S. S. Alderman, Washington, D. C., Pekin duck.
 H. A. Allard, Arlington, Va., raccoon.
 Mrs. Archambault, Washington, D. C., great horned owl.
 L. M. Ashley, Takoma Park, Md., American egret.
 Atherton's Bird Store, Washington, D. C., Patas monkey.
 Miss Selden Babcock, Washington, D. C., weasel.
 Miss Amy Bailey, Washington, D. C., sparrow hawk.
 B. D. Bailey, Wilson, N. C., barn owl.
 S. M. Baker, Tomsbrook, Va., common crow.
 A. T. Baldwin, Benning, D. C., double yellow-head parrot.
 Baltimore Humane Society, Baltimore, Md., white-throated capuchin, sulphur-crested cockatoo.
 Dr. Thomas Barbour, Cambridge, Mass., rhinoceros iguana, soft-shelled turtle, chicken tortoise.
 G. Barksdale, Washington, D. C., silver pheasant.
 Dr. R. S. Bassler, Washington, D. C., horned lizard.
 J. H. Batt, Washington, D. C., opossum.
 T. M. Battle, Washington, D. C., brown capuchin.
 Bakai Baysoy, Washington, D. C., grass paroquet.
 Miss Helen Beal, Washington, D. C., 2 ducks.
 Philip M. Blossom, Ann Arbor, Mich., 6 gnome or kangaroo mice, desert kangaroo rat, bushy tailed woodrat.
 C. F. Borden, Washington, D. C., 4 pigeons.
 Boulder Dam Recreational Area, Boulder City, Nev., 2 chuckwallas, collared lizard.
 Boy Scout Contingent, Florida, 2 Florida box turtles, gopher tortoise, pigmy rattlesnake, diamond-back rattlesnake, 2 water moccasins, 2 water snakes, chicken snake, corn snake, 2 garter snakes, 2 coachwhip snakes, horn snake, indigo snake, black snake, Florida king snake.
 Mrs. M. Bradburn, Washington, D. C., vervet guenon.
 Bradford Armstrong Farm, Wheaton, Md., 6 mallards.

- Brookgreen Gardens, through P. L. Hovey, Georgetown, S. C., 6 southern fox squirrels.
- Edward Brooks, Washington, D. C., opossum.
- F. Charles Brown, Washington, D. C., barred owl.
- Mrs. J. W. Brown, Washington, D. C., alligator.
- B. J. Buck, Washington, D. C., black mallard.
- G. R. Campbell, Lake Worth, Fla., coral snake, 2 rough-scaled green snakes, hog-nosed snake, yellow-lipped snake.
- Wm. H. Carrico, Washington, D. C., mud puppy, common newt.
- Martin Carter, York Harbor, Me., coatimundi.
- H. L. Cassiday, Richmond, Va., red-shouldered hawk.
- Miss Edith Chinn, Chevy Chase, Md., black widow spider.
- Miss Nellie L. Condon, New York City, hog-nosed snake.
- Miss Isabelle Cooke, Washington, D. C., tarantula.
- R. T. Cox, Washington, D. C., Javan macaque.
- G. L. Crawford, Mayaguez, Puerto Rico, rock iguana.
- Ralph Crone, Washington, D. C., barn owl.
- L. B. Cross, Washington, D. C., raccoon.
- Culver Summer School, through Capt. S. R. Esten and Adm. Hugh Rodman, Culver, Ind., snapping turtle, box turtle, 7 geographic turtles, 16 painted turtles, 3 musk turtles, Cumberland turtle, spotted turtle, 4 chicken turtles, soft-shelled turtle, Blanding's turtle.
- John M. Davis, Arlington, Va., 2 black raccoons.
- Charles F. Denley, Glenmont, Md., Siamese crested fire-back pheasant, cheer pheasant, Soemmerring's copper pheasant.
- G. L. Dowden, San Gabriel, Calif., western bullsnake.
- Herbert Eaton, Chevy Chase, Md., 3 opossums.
- W. D. Eliot, Washington, D. C., Florida gallinule.
- Eugene Ferson, Washington, D. C., 2 common iguanas.
- Firestone Rubber Plantations, through George Seibold, Monrovia, Liberia, African leopard, chimpanzee.
- Mr. and Mrs. C. O. Fisher, Brentwood, Md., 2 cardinals.
- A. T. Ford, Washington, D. C., red fox.
- M. B. Foster, Orlando, Fla., worm snake, yellow-lipped snake.
- Marty Gallagher, Washington, D. C., raccoon.
- Arthur Garden, Washington, D. C., woodchuck or groundhog.
- Joseph Gatti, Washington, D. C., blue jay.
- Mr. Gaw, Washington, D. C., great white heron.
- Miss Virginia Glass, Spring Lake, N. J., barred owl.
- C. S. Goetz, Washington, D. C., yellow-naped parrot.
- L. W. Gordon, Washington, D. C., 2 woodchucks or groundhogs.
- Clarence L. Green, Cortland, N. Y., 4 garter snakes.
- Gude Brothers, Florist, Washington, D. C., alligator.
- Miss Mary Hamilton, Washington, D. C., grass parouquet.
- H. H. Harland, Washington, D. C., sparrow hawk.
- Louis A. Harris, Takoma Park, Md., albino squirrel.
- Mrs. A. Hayden, Washington, D. C., alligator.
- Charles Henderson, Concord, Mass., raccoon.
- G. B. Howard, Washington, D. C., snapping turtle.
- Mrs. W. W. Hughes, Washington, D. C., alligator.
- H. N. Hunter, Washington, D. C., flying squirrel.
- Laine Ilgenfritz, Washington, D. C., alligator.

- Mrs. Ingham, Arlington, Va., kinkajou.
 H. W. Irwin, Arlington, Va., white-throated capuchin.
 W. T. Jewell, Arlington, Va., 4 skunks.
 Ellis S. Joseph, New York City, 6 long-tailed finches.
 W. A. Kearney, Washington, D. C., red fox.
 Olive Kinsman, Silver Spring, Md., 5 skunks.
 Mrs. F. C. Kleindeinst, Washington, D. C., rabbit, guinea pig.
 Albert Koontz, Washington, D. C., black widow spider.
 Mrs. J. R. Kump, Washington, D. C., alligator.
 John Landrum, East Radford, Va., black mallard.
 David Lawson, Washington, D. C., nighthawk.
 Otto M. Locke, New Braunfels, Tex., 50 horned lizards, 10 scaly lizards.
 C. E. Loomis, Washington, D. C., yellow-naped parrot.
 Joseph N. Lowe, Washington, D. C., 4 skunks.
 Richard Lowe, Chevy Chase, Md., ferret.
 P. D. Lowell, Chevy Chase, Md., 3 barn owls.
 Carl Lutz, Washington, D. C., sparrow hawk.
 Howard Maben, Washington, D. C., coyote.
 Charles T. Malone, Somerset, Md., 3 flying squirrels.
 L. R. Mark, Washington, D. C., rhesus monkey.
 Raymond Martin, Washington, D. C., alligator.
 Mrs. Marx, Washington, D. C., small bird.
 J. McDonald, Washington, D. C., Brazilian cardinal.
 Mrs. O. McNey, Bethesda, Md., 2 guinea pigs.
 George P. Meade, Gramercy, La., copperhead snake, DeKay's snake, smooth-scaled green snake, rough-scaled green snake, 3 Holbrook's king snakes, 3 hog-nosed snakes, 2 water snakes.
 Bob Morgan, Miami, Fla., 2 alligators.
 E. T. Morrison, Hanover, Va., gray fox.
 Museum of Vertebrate Zoology, through Dr. Joseph Grinnell, D. H. Johnson, and Dale Arvey, Berkeley, Calif., 2 Great Basin pocket mice, Nevada pocket mouse, kangaroo pocket mouse, 2 sagebrush chipmunks.
 Miss Mildred Myers, Washington, D. C., alligator.
 Miss Gladys Necker, Suitland, Md., white-throated capuchin.
 Mr. Nees, Riverdale, Md., red fox.
 New York Zoological Park, New York City, 2 dingos, South African spitting cobra, golden cobra, puff adder.
 Col. Newbold Noyes, Washington, D. C., American black bear.
 Robert Nye, Washington, D. C., red-tailed hawk.
 Paramount Aquarium, through Mr. Danisch, New York City, 2 large-headed Chinese turtles.
 Lieut. E. M. Perkins, Washington, D. C., coyote.
 Philadelphia Zoological Garden, Philadelphia, Pa., 6 European vipers.
 G. Phillips, Washington, D. C., woodchuck or groundhog.
 James Phillips, Golden Hill, Md., American white-fronted goose.
 G. H. Pollock, Washington, D. C., banded rattlesnake.
 Ramadi Bunnay Rajamatri, Washington, D. C., small turtle.
 Raymond Rapp, Washington, D. C., 2 Pekin ducks.
 Wm. E. Reeser, Bay Ridge, Md., black snake.
 Lawrence Reid, Langley, Va., American barn owl.
 Mrs. Mabel T. Reid, Washington, D. C., titi monkey.
 Lowry Riggs, Rockville, Md., spur-winged goose, toucanette.

- Ralph C. Ringler, Grafton, W. Va., barred owl.
 Mrs. R. C. Roberts, Chevy Chase, Md., opossum.
 Mr. Rogers, Washington, D. C., Bonaparte's weasel.
 Buddy Roland, Washington, D. C., opossum.
 President Franklin D. Roosevelt, The White House, 2 East African hedgehogs.
 Paul Rose, Washington, D. C., black snake.
 Louis Ruhe, Inc., New York City, slender-billed cockatoo, 2 Chilean flamingoes.
 Mrs. B. F. Schoff, Washington, D. C., woodchuck or groundhog.
 Carolyn Sheldon, Woodstock, Va., 8 Eastern chipmunks.
 Fred Simpich, Washington, D. C., nine-banded armadillo.
 Mrs. G. B. Smith, Washington, D. C., zebra finch, orange-cheeked waxbill, society finch.
 R. N. Smith, Washington, D. C., green guenon.
 "Smoki People," through Paxson C. Hayes and G. C. Barnes, Prescott, Ariz., 5 Western bullsnakes, 2 red rattlesnakes, 2 Mexican rattlesnakes.
 Prof. E. L. Strickland, Canal Port, Fla., scarlet snake.
 D. R. Strohl, Arlington, Va., 2 Pekin ducks.
 B. T. Tarman, Washington, D. C., American magpie.
 Texas Cooperative Wildlife Service, through John Wood and H. R. Siegler, Huntsville, Tex., 2 nine-banded armadillos.
 Henry Trefflich, Inc., New York City, spider monkey.
 Mrs. Trundle, Washington, D. C., blue-fronted parrot.
 U. S. Biological Survey, through O. J. Murie, Seattle, Wash., 3 California murre, tufted puffin; National Bison Range, Moiese, Mont., American bison, albino bison; Rodent and Predatory Animal Control Division, Washington, D. C., meadow mouse, Lemming mouse, jumping mouse, red-backed mouse, white-footed mouse, pine mouse; Chandler R. Young, Lacreek Migratory Waterfowl Refuge, Martin, S. D., 2 minks.
 U. S. National Park Service, through A. E. Borell, Albuquerque, N. Mex., 3 spotted ground squirrels.
 Miss Anna Van Bibbler, Washington, D. C., guinea pig.
 E. G. Vaughn, Salisbury, Md., 3 red-shouldered hawks.
 Adolph L. Vlasski, Washington, D. C., 2 Texas armadillos.
 H. C. Walford, Washington, D. C., domestic goose.
 Ernest P. Walker, Washington, D. C., western bullsnake, 2 dwarf rabbits, 4 long-tailed tree mice, grasshopper mouse, 8 salamanders, garter snake.
 Miss Edith H. Ward, Washington, D. C., green pheasant.
 Miss Mary Warren, Washington, D. C., 2 false chameleons.
 Miss Leola Washburn, Washington, D. C., eastern mole.
 Washington Humane Society, Washington, D. C., robin.
 Mrs. E. Weeks, Washington, D. C., alligator.
 R. Wheat, Erlanger, N. C., flying squirrel.
 C. T. White, Norfolk, Va., golden eagle.
 F. S. White, Washington, D. C., common boa.
 K. C. White, Washington, D. C., 2 barn owls.
 Miss L. Wilkins, Washington, D. C., alligator.
 Billy Williams, Washington, D. C., alligator.
 Mrs. Robert C. Winmill, Warrenton, Va., Chapman's zebra.
 Fred J. Young, Washington, D. C., skunk.
 Donor unknown, 3 Harris antelope squirrels.

Births.—There were 34 mammals born and 30 birds hatched in the Park during the year. Among the birds were two jackass penguins.

MAMMALS

Scientific name	Common name	Number
<i>Ammotragus lervia</i>	Aoudad.....	3
<i>Axis axis</i>	Axis deer.....	1
<i>Bison bison</i>	American bison.....	2
<i>Bos frontalis</i>	Gayal.....	1
<i>Canis rufus</i>	Texas red wolf.....	4
<i>Capromys pilorides</i>	Hutia.....	4
<i>Cervus elaphus</i>	Red deer.....	5
<i>Choeropsis liberiensis</i>	Pigmy hippopotamus.....	1
<i>Dama dama</i>	Fallow deer.....	2
<i>Equus quagga chapmani</i>	Chapman's zebra.....	1
<i>Felis onca</i>	Jaguar.....	1
<i>Hemiragrus jemlahicus</i>	Tahr.....	1
<i>Lama glama</i>	Llama.....	2
<i>Macaca mordax</i>	Javan macaque.....	1
<i>Oryx beisa annectens</i>	Ibean beisa oryx.....	1
<i>Ovis europaeus</i>	Mouflon.....	1
<i>Sika nippon</i>	Japanese deer.....	2
<i>Taurotragus oryx</i>	Eland.....	1

BIRDS

<i>Anas domestica</i>	Pekin duck.....	3
<i>Anas rubripes</i>	Black or dusky mallard.....	9
<i>Branta canadensis</i>	Canada goose.....	5
<i>Larus novaehollandiae</i>	Silver gull.....	11
<i>Spheniscus demersus</i>	Jackass penguin.....	2

Exchanges.—Among important specimens received in exchange from various sources were: One South American lesser tiger cat, one hairy armadillo, one tamarin, three smooth-clawed frogs, one pair dwarf cavies, one giant anteater, and one Sumatran gibbon.

Purchases.—Important purchases during the year were a pair of Pacific otters, a pair of ring-tailed lemurs, a pair of cheetas, a pair of Tasmanian devils, a red ouakari monkey, a pair of brush-tailed porcupines, two pottos, one gaboon viper, two tree vipers, one leaf toad, and one giant frog (*Rana goliath*), the first of its kind ever exhibited at the Park.

REMOVALS

Deaths.—The death on August 12, 1937, of "Babe," the Indian elephant presented to the Park in May 1934 by Ringling Brothers-Barnum and Bailey Circus, removed a famous animal with a record of 51 years with circuses, and more than 3 years in the Zoo. Other major losses included two Asiatic tapirs, one Bactrian camel, and a Steller's sea lion.

All specimens of scientific value that died during the year were sent to the National Museum.

ANIMALS IN COLLECTION THAT HAD NOT PREVIOUSLY BEEN EXHIBITED

MAMMALS

Scientific name	Common name
<i>Arctonyx collaris</i>	Hog badger.
<i>Callosciurus piceus</i>	Beautiful squirrel.
<i>Charronia flavigula henrici</i>	Asiatic marten.
<i>Cuon javanicus sumatrensis</i>	Sumatran wild dog.
<i>Cynopithecus tonsus</i>	Black macaque.
<i>Jaculus jaculus</i>	Egyptian jerboa.
<i>Mico rufimanus</i>	Tamarin or black marmoset.
<i>Micraonyx leptonyx</i>	Small-clawed otter.
<i>Mystax mystax</i>	White-lipped tamarin.
<i>Nycticebus coucang</i>	Slow loris.
<i>Presbytis pyrrhus</i>	Javan langur or lotong.
<i>Ratufa bicolor</i>	Javan giant squirrel.
<i>Ratufa macroura</i>	Ceylon giant squirrel.
<i>Thecurus sumatrae</i>	Sumatran brush-tailed porcupine.
<i>Tomeutes notatus</i>	Javan brown squirrel.
<i>Tupaia siaca</i>	Tree shrew.

BIRDS

<i>Aplonis chalybea</i>	Glossy aplonis.
<i>Berenicornis comatus</i>	Long-crested hornbill.
<i>Calyptorhynchus magnificus</i>	Banksian cockatoo.
<i>Chalcopsitta atra</i>	Black lory.
<i>Ducula pinon</i>	Red-eyed fruit pigeon.
<i>Fregata ariel</i>	Lesser frigate bird.
<i>Ibis cinereus</i>	Malay stork.
<i>Irena puella</i>	Fairy blue bird.
<i>Ketupa ketupu</i>	Malay fishing owl.
<i>Lamprotereron jambu</i>	Pink-headed fruit pigeon.
<i>Lophura diardi</i>	Siamese crested fire-back pheasant.
<i>Lophura rubra</i>	Malayan fire-back pheasant.
<i>Manucodia atra</i>	Black manucode.
<i>Megapodius freycineti</i>	Molucca megapode.
<i>Mesia argentauris</i>	Silver-eared mesia.
<i>Myristicivora bicolor</i>	Pied imperial pigeon.
<i>Oriolas chinensis</i>	Sumatran oriole.
<i>Podargus strigoides</i>	Tawny frogmouth.
<i>Pseudeos fuscata</i>	Dusky lory.
<i>Psittichas fulgidas</i>	Vulturine parrot.
<i>Ptilinopus humeralis</i>	Purple-shouldered fruit pigeon.
<i>Ptilinopus regina</i>	Purple-capped fruit pigeon.
<i>Ptilonorhynchus violaceus</i>	Satin bower bird.
<i>Rallus</i> sp.....	Sumatran rail.
<i>Spilornis nipalensis</i>	Serpent eagle.
<i>Tanygnathus muelleri</i>	Mueller's parrot.
<i>Uria aalge californica</i>	California murre.

REPTILES

<i>Acanthosaura armata</i>	Armed tree lizard.
<i>Alligator sinensis</i>	Chinese alligator.
<i>Batagur baska</i>	Baska turtle.
<i>Boiga cynodon</i>	Cat-eyed tree snake.
<i>Denisonia superba</i>	Australian copper-head snake.
<i>Geoclemys subtrijuga</i>	Siamese field turtle.
<i>Geomyda spinosa</i>	Spiny hill tortoise.
<i>Notechis scutatus</i>	Australian tiger snake.
<i>Physignathus cocincinus</i>	Siamese water dragon.
<i>Python amethystinus</i>	Amethystine python.
<i>Rana goliath</i>	Giant frog.
<i>Trimeresurus sp</i>	Palm viper.
<i>Trionyx cartilagineus</i>	Asiatic soft-shelled turtle.

Statement of accessions

Class	Received from National Geographic-Smithsonian Institution East Indies Expedition	Presented	Born	Received in exchange	Purchased	On deposit	Total
Mammals.....	121	118	34	16	18	9	316
Birds.....	649	74	30	13	24	8	798
Reptiles.....	108	167		25	28	5	333
Amphibians.....	1	10		3	10		24
Fishes.....					18		18
Arachnids.....		3					3
Mollusks.....					5		5
Total.....	879	372	64	57	103	22	1,497

Summary

Animals on hand July 1, 1937.....	2,342
Accessions during the year.....	1,497
<hr/>	
Total animals in collection during year.....	3,839
Removal from collection by death, exchange, and return of animals on deposit.....	1,085
<hr/>	
In collection June 30, 1938.....	2,754

Status of collection

Class	Species	Individuals	Class	Species	Individuals
Mammals.....	239	699	Arachnids.....	2	7
Birds.....	367	1,264	Insects.....	1	100
Reptiles.....	134	432	Mollusks.....	1	6
Amphibians.....	28	129			
Fishes.....	21	117	Total.....	793	2,754

ANIMALS IN THE NATIONAL ZOOLOGICAL PARK, JUNE 30, 1938

MAMMALS

MARSUPIALIA

	Number
Didelphidae:	
<i>Didelphis virginiana</i>	Opossum..... 4
<i>Metachirus opossum</i>	Zorro or banana opossum..... 1
Dasyuridae:	
<i>Dasyurus viverrinus</i>	Viverrine native cat..... 1
<i>Sarcophilus ursinus</i>	Tasmanian devil..... 2
Phalangeridae:	
<i>Petaurus breviceps</i>	Lesser flying phalanger..... 3
<i>Trichosurus vulpecula</i>	Vulpine opossum..... 1
Macropodidae:	
<i>Dendrolagus inustus</i>	Tree kangaroo..... 2
<i>Dendrolagus ursinus</i> × <i>D. inustus</i>	Hybrid tree kangaroo..... 1

INSECTIVORA

Erinaceidae:	
<i>Atelerix hindei</i>	East African hedgehog..... 2

CARNIVORA

Felidae:	
<i>Acinonyx jubatus</i>	Cheeta..... 2
<i>Felis concolor</i>	Puma..... 5
<i>Felis leo</i>	Lion..... 6
<i>Felis ocreata</i>	African wild cat..... 1
<i>Felis onca</i>	{ Jaguar..... 3
	{ Black jaguar..... 2
<i>Felis pardalis</i>	Ocelot..... 1
<i>Felis pardinoides</i>	Lesser tiger cat..... 1
<i>Felis pardus</i>	{ Leopard..... 5
	{ Black leopard..... 3
<i>Felis pardus suahelicus</i>	East African leopard..... 1
<i>Felis tigris longipilis</i>	Siberian tiger..... 2
<i>Felis tigris sondaicus</i>	Sumatran tiger..... 4
<i>Lynx baileyi</i>	Bailey's lynx..... 1
<i>Lynx caracal</i>	Caracal..... 1
<i>Lynx rufus</i>	Bay lynx..... 5
<i>Neofelis nebulosa</i>	Clouded leopard..... 1
<i>Profelis temmincki</i>	Bay or golden cat..... 3
Viverridae:	
<i>Arctictis binturong</i>	Binturong..... 5
<i>Civettictis civetta</i>	Civet..... 1
<i>Genetta dongalana neumanni</i>	Neumann's genet..... 1
<i>Moschothera megalaspila</i>	Civet..... 2
<i>Paradoxurus hermaphrodytus</i>	Small-toothed palm civet..... 4
Hyaenidae:	
<i>Crocota crocuta germinans</i>	East African spotted hyena..... 1
<i>Hyaena brunnea</i>	Brown hyena..... 2

Canidae:	Number
<i>Canis dingo</i>	Dingo..... 2
<i>Canis latrans</i>	{ Coyote..... 16
	{ Albino coyote..... 3
<i>Canis latrans</i> × <i>domestica</i>	Coyote and dog hybrid..... 1
<i>Canis lupus lycaon</i>	Timber wolf..... 2
<i>Canis lupus nubilus</i>	Wolf..... 3
<i>Canis lupus nubilus</i> × <i>domesticus</i>	Wolf and dog hybrid..... 5
<i>Canis rufus</i>	Texan red wolf..... 1
<i>Chrysocyon jubata</i>	Maned wolf..... 7
<i>Cuon javanicus sumatrensis</i>	Sumatran wild dog..... 1
<i>Urocyon cinereoargenteus</i>	Gray fox..... 1
<i>Vulpes fulva</i>	Red fox..... 9
Procyonidae:	
<i>Nasua narica</i>	Gray coatimundi..... 4
<i>Potos flavus</i>	Kinkajou..... 2
<i>Procyon cancrivorus</i>	Crab-eating raccoon..... 1
	{ Raccoon..... 12
<i>Procyon lotor</i>	{ Albino raccoon..... 1
	{ Black raccoon..... 5
Bassariscidae:	
<i>Bassariscus astutus</i>	Ring-tail or cacomistle..... 1
Mustelidae:	
<i>Arctonyx collaris</i>	Hog badger..... 2
<i>Charronia flavigula henricii</i>	Asiatic marten..... 1
<i>Galictis barbara barbara</i>	White tayra..... 2
<i>Lutra canadensis vaga</i>	Florida otter..... 3
<i>Mellivora capensis</i>	Ratel..... 1
<i>Mephitis nigra</i>	Skunk..... 12
<i>Micraonyx leptonyx</i>	Small-clawed otter..... 1
<i>Mustela eversmanni</i>	Ferret..... 3
<i>Mustela noveboracensis</i>	Weasel..... 1
<i>Mustela vison vison</i>	Mink..... 1
<i>Spilogale ambarvalis</i>	Florida spotted skunk..... 1
Ursidae:	
<i>Euarctos americanus</i>	American black bear..... 5
<i>Euarctos emmonsii</i>	Glacier bear..... 1
<i>Helarctos malayanus</i>	Malay or sun bear..... 1
<i>Thalarctos maritimus</i>	Polar bear..... 2
<i>Thalarctos maritimus</i> × <i>Ursus gyas</i> ..	Hybrid bear..... 3
<i>Ursus arctos</i>	European brown bear..... 3
<i>Ursus gyas</i>	Alaska Peninsula brown bear..... 4
<i>Ursus kiddlei</i>	Kidder's bear..... 1
<i>Ursus middendorffi</i>	Kodiak bear..... 4
<i>Ursus sitkensis</i>	Sitka brown bear..... 3
<i>Ursus thibetanus</i>	Himalayan bear..... 3
PINNIPEDIA	
Otariidae:	
<i>Zalophus californianus</i>	California sea lion..... 2
Phocidae:	
<i>Phoca richardii</i>	Pacific harbor seal..... 3

PRIMATES

		Number
Lemuridae:		
<i>Lemur catta</i>	Ring-tailed lemur.....	2
<i>Nycticebus coucang</i>	Slow loris.....	5
<i>Perodicticus potto</i>	Potto.....	1
<i>Perodicticus</i> sp.....	Potto.....	1
Callitrichidae:		
<i>Leontocebus rosalia</i>	Lion-headed or golden marmoset.....	3
<i>Mico argentata</i>	Black-tailed marmoset.....	2
<i>Mystax mystax</i>	White-lipped tamarin.....	1
Saimiridae:		
<i>Saimiri sciureus</i>	Titi or squirrel monkey.....	1
Cebidae:		
<i>Cacajao rubicundus</i>	Red ouakari.....	1
<i>Cebus apella</i>	Brown capuchin.....	1
<i>Cebus capucinus</i>	White-throated capuchin.....	5
<i>Cebus fatuella</i>	Weeping capuchin.....	3
<i>Cebus</i> sp.....	Brown capuchin.....	2
Cercopithecidae:		
<i>Cercocebus fuliginosus</i>	Sooty mangabey.....	5
<i>Cercopithecus aethiops roloway</i>	Roloway monkey.....	1
<i>Cercopithecus aethiops sabaeus</i>	Green guenon.....	6
<i>Cercopithecus albigularis</i>	Syke's guenon.....	2
<i>Cercopithecus diana</i>	Diana monkey.....	1
<i>Cercopithecus neglectus</i>	De Brazza's guenon.....	1
<i>Cercopithecus petaurista</i>	Lesser white-nosed guenon.....	2
<i>Cercopithecus pygerythra</i>	Vervet guenon.....	1
<i>Colobus polycomos caudatus</i>	White-tailed guereza.....	1
<i>Colobus polycomos polycomos</i>	White-tailed colobus.....	1
<i>Macaca fuscata</i>	Japanese monkey.....	2
<i>Macaca lasiotis</i>	Chinese macaque.....	3
<i>Macaca mordax</i>	Javan macaque.....	13
<i>Macaca mulatta</i>	Rhesus monkey.....	10
<i>Macaca nemestrina</i>	Pig-tailed monkey.....	8
<i>Macaca silenus</i>	Wanderoo monkey.....	2
<i>Macaca sinica</i>	Bonnet monkey.....	1
<i>Magus maurus</i>	Moor monkey.....	4
<i>Mandrillus leucophaeus</i>	Drill.....	1
<i>Mandrillus sphinx</i>	Mandrill.....	3
<i>Papio comatus</i>	Chacma.....	2
<i>Papio papio cynocephalus</i>	East African baboon.....	1
<i>Papio papio papio</i>	West African baboon.....	1
<i>Presbytis pyrrhus</i>	Javan langur or lotong.....	1
<i>Theropithecus gelada</i>	Gelada baboon.....	1
Hylobatidae:		
<i>Hylobates agilis</i>	Sumatran gibbon.....	1
<i>Hylobates lar pileatus</i>	White-handed gibbon.....	3
<i>Symphalangus syndactylus</i>	Siamang gibbon.....	1
Pongidae:		
<i>Pan satyrus</i>	Chimpanzee.....	2
<i>Pongo abelii</i>	Sumatran orangutan.....	2
<i>Pongo pygmaeus</i>	Bornean orangutan.....	1

RODENTIA

Sciuridae:		Number
<i>Ammospermophilus harrisi</i>	Harris antelope squirrel	3
<i>Callosciurus melanops</i>	Sumatran tricolored squirrel	2
<i>Callosciurus piceus</i>	Beautiful squirrel	1
<i>Callospermophilus saturatus</i>	Mantled ground squirrel	2
<i>Citellus mexicanus parvidens</i>	Rio Grande ground squirrel	1
<i>Citellus richardsonii</i>	Richardson ground squirrel	8
<i>Citellus richardsonii elegans</i>	Picket-pin gopher	1
<i>Citellus spilosoma</i>	Spotted ground squirrel	3
<i>Citellus tridecemlineatus</i>	Flag squirrel	6
<i>Cynomys ludovicianus</i>	Prairie dog	10
<i>Eutamias amoenus amoenus</i>	Klamath chipmunk	1
<i>Glaucomys volans</i>	Flying squirrel	7
<i>Marmota flaviventris</i>	Marmot or whistler	2
<i>Marmota monax</i>	Woodchuck or groundhog	12
	Albino woodchuck or groundhog	1
<i>Ratufa bicolor</i>	Javan giant squirrel	1
<i>Sciurus finlaysoni</i>	Lesser white squirrel	8
<i>Sciurus hoffmani</i> subsp.	Hoffman's squirrel	2
<i>Sciurus niger</i>	Fox squirrel	5
<i>Tamias striatus</i>	Eastern chipmunk	2
<i>Tamiasciurus hudsonicus</i>	Red squirrel	1
<i>Tomeutes notatus</i>	Javan brown squirrel	2
Geomyidae:		
<i>Thomomys douglasii yelmensis</i>	Yelm pocket gopher	1
Heteromyidae:		
<i>Dipodomys deserti</i>	Desert kangaroo rat	1
<i>Dipodomys merriami</i>	Merriam kangaroo rat	2
<i>Microdipodops pallidus</i>	Gnome or kangaroo mouse	1
<i>Perognathus hispidus</i>	Hispid pocket mouse	1
<i>Perognathus longimembris</i>	Nevada pocket mouse	1
<i>Perognathus parvus</i>	Great Basin pocket mouse	1
<i>Perognathus penicillatus</i>	Desert pocket mouse	1
Jaculidae:		
<i>Jaculus jaculus</i>	Egyptian jerboa	4
Castoridae:		
<i>Castor canadensis</i>	Beaver	1
Cricetidae:		
<i>Neotoma floridana attwateri</i>	Round-tailed wood rat	2
<i>Onychomys</i> sp.	Grasshopper mouse	1
<i>Peromyscus leucopus</i>	White-footed mouse	3
<i>Sigmodon hispidus</i>	Cotton rat	9
<i>Zapus hudsonius</i>	Jumping mouse	1
Rhizomyidae:		
<i>Nyctocleptes sumatrensis</i>	Bamboo rat	1
Muridae:		
<i>Cricetomys gambianus</i>	Gambia pouched rat	2
Hystriidae:		
<i>Acanthion brachyurum</i>	Malay porcupine	5
<i>Atherurus africana</i>	West African brush-tailed porcupine.	2
<i>Hystrix galeata</i>	East African porcupine	2
<i>Thecurus sumatrae</i>	Sumatran porcupine	1

	Number
Erethizontidae:	
<i>Coendou prehensilis</i>	Prehensile-tailed porcupine
Capromyidae:	
<i>Capromys pilorides</i>	Hutia
Cuniculidae:	
<i>Cuniculus paca virgatus</i>	Central American paca
Dasyproctidae:	
<i>Dasyprocta croconota prymnolopha</i> ..	Agouti
<i>Myoprocta</i> sp	Tailed agouti
Caviidae:	
<i>Cavia porcellus</i>	Domestic guinea pig
<i>Dolichotis magellanica</i>	Patagonian cavy
<i>Pediolagus salinicola</i>	Dwarf cavy
Hydrochoeridae:	
<i>Hydrochoerus hydrochoerus</i>	Capybara

LAGOMORPHA

Leporidae:	
<i>Lepus americanus</i>	Varying hare or snowshoe rabbit ..
<i>Oryctolagus cuniculus</i>	{ Domestic rabbit
	{ Angora rabbit

ARTIODACTYLA

Bovidae:	
<i>Ammotragus lervia</i>	Aoudad
<i>Anoa depressicornis</i>	Anoa
<i>Antilope cervicapra</i>	Black buck or Indian antelope
<i>Bibos gaurus</i>	Gaur
<i>Bison bison</i>	American bison
<i>Bos frontalis</i>	Gayal
<i>Bos indicus</i>	Zebu
<i>Boselaphus tragocamelus</i>	Nilgai
<i>Bubalus bubalis</i>	Indian buffalo
<i>Capra sibirica</i>	Siberian ibex
<i>Connochaetes gnu</i>	White-tailed gnu
<i>Connochaetes taurinus albojubatus</i> ..	White-bearded gnu
<i>Hemitragus jemlahicus</i>	Tahr
<i>Onotragus lechae</i>	Lechae antelope
<i>Oryx beisa annectens</i>	Ibean beisa oryx
<i>Ovis europaeus</i>	Mouflon
<i>Poephagus grunniens</i>	Yak
<i>Pseudois nahura</i>	Bharal or blue sheep
<i>Synceros caffer</i>	African buffalo
<i>Taurotragus oryx</i>	Eland
Antilocapridae:	
<i>Antilocapra americana</i>	Pronghorn antelope
Cervidae:	
<i>Axis axis</i>	Axis deer
<i>Cervus canadensis</i>	American elk
<i>Cervus duvaucellii</i>	Barasingha deer
<i>Cervus elaphus</i>	European red deer
<i>Cervus xanthopygus</i>	Bedford deer
<i>Dama dama</i>	{ Fallow deer
	{ White fallow deer

Cervidae—Continued.		Number
<i>Muntiacus muntjak</i>	Barking or rib-faced deer.....	1
<i>Muntiacus sinensis</i>	Chinese rib-faced deer.....	1
<i>Odocoileus costaricensis</i>	Costa Rican deer.....	2
<i>Odocoileus virginianus</i>	Virginia deer.....	3
<i>Rusa moluccensis</i>	Molucca deer.....	2
<i>Rusa unicorn</i>	Sambur deer.....	1
<i>Sika nippon</i>	Japanese deer.....	8
Tragulidae:		
<i>Tragulus javanicus</i>	Javan mouse deer.....	1
Giraffidae:		
<i>Giraffa camelopardalis</i>	Nubian giraffe.....	4
Camelidae:		
<i>Lama glama</i>	Llama.....	7
<i>Lama huanacus</i>	Guanaco.....	2
Tayassuidae:		
<i>Pecari angulatus</i>	Collared peccary.....	2
<i>Tayassu pecari</i>	White-lipped peccary.....	2
Suidae:		
<i>Babirussa alfurus</i>	Babirussa.....	3
<i>Phacochoerus aethiopicus massaicus</i>	East African warthog.....	3
<i>Sus scrofa</i>	European wild boar.....	1
Hippopotamidae:		
<i>Choeropsis liberiensis</i>	Pigmy hippopotamus.....	3
<i>Hippopotamus amphibius</i>	Hippopotamus.....	1
PERISSODACTYLA		
Equidae:		
<i>Equus grevyi</i>	Grevy's zebra.....	1
<i>Equus grevyi-asinus</i>	Zebra-ass hybrid.....	1
<i>Equus grevyi-caballus</i>	Zebra-horse hybrid.....	1
<i>Equus onager</i>	Asiatic wild ass or kiang.....	2
<i>Equus przewalskii</i>	Mongolian wild horse.....	3
<i>Equus quagga chapmani</i>	Chapman's zebra.....	10
<i>Equus zebra</i>	Mountain zebra.....	2
Tapiridae:		
<i>Acrocodia indica</i>	Asiatic tapir.....	1
<i>Tapirella bairdii</i>	Baird's tapir.....	1
<i>Tapirus terrestris</i>	Brazilian tapir.....	1
Rhinocerotidae:		
<i>Diceros bicornis</i>	Black rhinoceros.....	1
PROBOSCIDEA		
Elephantidae:		
<i>Elephas sumatranus</i>	Sumatran elephant.....	1
<i>Loxodonta africana oxyotis</i>	African elephant.....	1
EDENTATA		
Choloepodidae:		
<i>Choloepus didactylus</i>	Two-toed sloth.....	3
Dasypodidae:		
<i>Dasypus novemcinctus</i>	Nine-banded armadillo.....	1
<i>Euphractus sexcinctus</i>	Six-banded armadillo.....	1
Myrmecophagidae:		
<i>Myrmecophaga jubata</i>	Giant anteater.....	1

BIRDS

STRUTHIONIFORMES

Struthionidae:		Number
<i>Struthio camelus</i>	South African ostrich.....	1

RHEIFORMES

Rheidae:		
<i>Rhea americana</i>	Common rhea or nandu.....	1

CASUARIFORMES

Casuariidae:		
<i>Casuarus benneti</i>	Bennett's cassowary.....	1
<i>Casuarus</i> sp. (young).....	Cassowary.....	5
<i>Casuarus unappendiculatus</i>	Single-wattled cassowary.....	1

Dromiceidae:		
<i>Dromiceius novaehollandiae</i>	Common emu.....	1

SPHENISCIFORMES

Spheniscidae:		
<i>Spheniscus demersus</i>	Jackass penguin.....	5

PELECANIFORMES

Pelecanidae:		
<i>Pelecanus californicus</i>	California brown pelican.....	2
<i>Pelecanus conspicillatus</i>	Australian pelican.....	1
<i>Pelecanus erythrorhynchos</i>	American white pelican.....	6
<i>Pelecanus erythrorhynchos</i> × <i>P.</i> <i>occidentalis</i>	Hybrid pelican.....	1
<i>Pelecanus occidentalis</i>	Brown pelican.....	4
<i>Pelecanus onocrotalus</i>	European pelican.....	2
<i>Pelecanus roseus</i>	Rose-colored pelican.....	2

Sulidae:		
<i>Morus bassanus</i>	Gannet.....	1
<i>Sula granti</i>	Blue-footed booby.....	1

Phalacrocoracidae:		
<i>Nannopterum harrisi</i>	Flightless cormorant.....	2
<i>Phalacrocorax auritus albociliatus</i> ...	Farallon cormorant.....	2
<i>Phalacrocorax auritus floridanus</i>	Florida cormorant.....	1

Anhingidae:		
<i>Anhinga anhinga</i>	Anhinga.....	1

Fregatidae:		
<i>Fregata ariel</i>	Lesser frigate bird.....	2

CICONIIFORMES

Ardeidae:		
<i>Ardea herodias</i>	Great blue heron.....	1
<i>Ardea herodias</i> × <i>A. occidentalis</i> ...	Hybrid heron.....	2
<i>Ardea occidentalis</i>	Great white heron.....	1
<i>Casmerodius albus egretta</i>	American egret.....	1
<i>Nycticorax nycticorax naevius</i>	Black-crowned night heron.....	25

Cochleariidae:		
<i>Cochlearius cochlearius</i>	Boatbill heron.....	3

Balaenicipitidae:		
<i>Balaeniceps rex</i>	Shoebill stork.....	3

	Number
Scopidae:	
<i>Scopus umbretta</i>	1
Ciconiidae:	
<i>Dissoura episcopus</i>	1
<i>Ephippiorhynchus senegalensis</i>	1
<i>Ibis cinereus</i>	2
<i>Jabiru mycteria</i>	2
<i>Leptoptilus crumeniferus</i>	1
<i>Leptoptilus dubius</i>	1
<i>Leptoptilus javanicus</i>	2
<i>Mycteria americana</i>	1
Threskiornithidae:	
<i>Ajaia ajaja</i>	1
<i>Guara alba</i>	3
<i>Guara alba</i> × <i>G. rubra</i>	1
<i>Guara rubra</i>	2
<i>Threskiornis aethiopica</i>	2
<i>Threskiornis melanocephala</i>	1
Phoenicopteridae:	
<i>Phoenicopterus chilensis</i>	8

ANSERIFORMES

Anatidae:	
<i>Aix sponsa</i>	13
<i>Alopochen aegyptiacus</i>	2
<i>Anas domestica</i>	15
<i>Anas platyrhynchos</i>	26
<i>Anas rutripes</i>	1
<i>Anas undulata</i>	8
<i>Anser albifrons</i>	3
<i>Anser fabalis</i>	2
<i>Branta bernicla</i>	3
<i>Branta canadensis</i>	9
<i>Branta canadensis hutchinsii</i>	4
<i>Branta canadensis minima</i>	4
<i>Branta canadensis occidentalis</i>	18
<i>Branta leucopsis</i>	1
<i>Cairina moschata</i>	3
<i>Casarca variegata</i>	1
<i>Cereopsis novaehollandiae</i>	1
<i>Chen atlantica</i>	7
<i>Chen caerulescens</i>	9
<i>Chloephaga leucoptera</i>	1
<i>Cygnopsis cygnoides</i>	2
<i>Cygnus columbianus</i>	3
<i>Cygnus olor</i>	1
<i>Dafila acuta</i>	6
<i>Dafila bahamensis</i>	1
<i>Dafila acuta</i> × <i>D. sp.</i>	1
<i>Dendrocygna arborea</i>	4
<i>Dendrocygna autumnalis</i>	4
<i>Dendrocygna viduata</i>	1
<i>Mareca americana</i>	3
<i>Nyroca collaris</i>	1

Anatidae—Continued.

		Number
<i>Philacte canagica</i>	Emperor goose.....	11
<i>Plectropterus gambensis</i>	Spur-winged goose.....	2
<i>Querquedula cyanoptera</i>	Cinnamon teal.....	1
<i>Querquedula discors</i>	Blue-winged teal.....	1
<i>Sarkidiornis melanota</i>	Comb duck.....	1

FALCONIFORMES

Cathartidae:

<i>Cathartes aura</i>	Turkey vulture.....	3
<i>Cathartes aura</i> × <i>Coragyps atratus</i>	Black Carolina and turkey vulture hybrid.....	1
<i>Coragyps atratus</i>	Black vulture.....	1
<i>Gymnogyps californianus</i>	California condor.....	3
<i>Vultur gryphus</i>	South American condor.....	1

Accipitridae:

<i>Aegypius monachus</i>	Cinereous vulture.....	1
<i>Aquila chrysaetos</i>	Golden eagle.....	2
<i>Buteo borealis</i>	Red-tailed hawk.....	3
<i>Buteo lineatus</i>	Red-shouldered hawk.....	3
<i>Buteo platypterus</i>	Broad-winged hawk.....	1
<i>Buteo swainsoni</i>	Swainson's hawk.....	1
<i>Gypaetus barbatus grandis</i>	Lammergeyer.....	1
<i>Gyps rueppelli</i>	Ruppell's vulture.....	1
<i>Haliaeetus indus</i>	Malay brahminy kite.....	3
<i>Haliaeetus leucocephalus</i>	Bald eagle.....	20
<i>Milvus migrans</i>	Yellow-billed kite.....	1
<i>Pandion haliaetus carolinensis</i>	Osprey or fish hawk.....	2
<i>Stephanoaetus coronatus</i>	Crowned hawk eagle.....	1
<i>Torgos tracheliotus</i>	African eared-vulture.....	1
<i>Uroaetus audax</i>	Wedge-tailed eagle.....	1

Falconidae:

<i>Falco columbarius</i>	Pigeon hawk.....	1
<i>Falco sparverius</i>	Sparrow hawk.....	3
<i>Pohierax semitorquatus</i>	African pigmy falcon.....	1
<i>Polyborus cheriway</i>	Audubon's caracara.....	2
<i>Polyborus plancus</i>	South American caracara.....	1

GALLIFORMES

Megapodiidae:

<i>Megapodius freycineti</i>	Molucca megapode.....	2
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Cracidae:

<i>Crax rubra</i>	Panama curassow.....	1
<i>Mitu mitu</i>	Razor-billed curassow.....	1
<i>Mitu salvini</i>	Salvin's curassow.....	1

Phasianidae:

<i>Alectoris graeca</i>	Chukar partridge.....	2
<i>Argusianus argus</i>	Argus pheasant.....	2
<i>Catreus wallichii</i>	Cheer pheasant.....	1
<i>Chrysolophus amherstiae</i>	Lady Amherst's pheasant.....	1
<i>Chrysolophus amherstiae</i> × <i>Symaticus reevesi</i>	Hybrid pheasant.....	1
<i>Chrysolophus pictus</i>	Golden pheasant.....	4
<i>Colinus virginianus</i>	Bobwhite.....	1

Phasianidae—Continued.		Number
<i>Coturnix coturnix</i>	Migratory quail.....	26
<i>Coturnix japonica</i>	Asiatic migratory quail.....	1
<i>Crossoptilon mantchuricum</i>	Manchurian pheasant.....	1
<i>Excalfactoria chinensis</i>	Blue-breasted button quail.....	8
<i>Gallus gallus</i>	Jungle fowl.....	3
<i>Gallus gallus</i> × <i>Numida galeata</i>	Chicken × guinea fowl hybrid.....	2
<i>Gennaeus lineatus</i>	Lineated pheasant.....	3
<i>Gennaeus nycthemerus</i>	Silver pheasant.....	2
<i>Hierophasis swinhoei</i>	Swinhoe's pheasant.....	1
<i>Lophophorus impeyanus</i>	Himalayan Impeyan pheasant.....	2
<i>Lophura diardi</i>	Siamese crested fire-back pheasant.....	1
<i>Lophura rubra</i>	Malayan fire-back pheasant.....	1
<i>Pavo cristatus</i>	Blue peafowl.....	5
<i>Pavo muticus</i>	Green peafowl.....	2
<i>Phasianus torquatus</i>	{ Ring-necked pheasant.....	2
	{ White ring-necked pheasant.....	2
<i>Phasianus torquatus formosanus</i>	Formosan ring-necked pheasant.....	1
<i>Phasianus versicolor</i>	Green pheasant.....	4
<i>Syrmaticus reevesi</i>	Reeve's pheasant.....	2

GRUIFORMES

Gruidae:

<i>Anthropoides virgo</i>	Demoiselle crane.....	2
<i>Antigone australasiana</i>	Australian crane.....	1
<i>Balearica pavonina</i>	West African crowned crane.....	1
<i>Balearica regulorum gibbericeps</i>	East African crowned crane.....	1
<i>Grus canadensis canadensis</i>	Little brown crane.....	1
<i>Grus canadensis tabida</i>	Sandhill crane.....	1
<i>Grus leucaruchen</i>	White-naped crane.....	1
<i>Grus leucogeranus</i>	Siberian crane.....	2

Psophiidae:

<i>Psophia crepitans</i>	Gray-backed trumpeter.....	1
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Rallidae:

<i>Gallinula chloropus cachinnans</i>	Florida gallinule.....	2
<i>Gallinula chloropus</i> sub. sp.....	Sumatran gallinule.....	3
<i>Limnocolax flavirostra</i>	African black rail.....	3
<i>Porphyrio melanotus</i>	New Zealand mud hen.....	1
<i>Porphyrio poliocephalus</i>	Gray-headed porphyrio.....	2
<i>Rallus</i> sp.....	Sumatran rail.....	3

Eurypygidae:

<i>Eurypyga helias</i>	Sun bittern.....	2
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Otididae:

<i>Otis cafra</i>	Denham's bustard.....	1
<i>Otis cafra jacksoni</i>	Jackson's bustard.....	1

CHARADRIIFORMES

Haematopodidae:

<i>Haematopus ostralegus</i>	European oyster catcher.....	2
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Charadriidae:

<i>Belonopterus cayennensis</i>	South American lapwing.....	1
<i>Sarciophorus tectus</i>	Black-headed plover.....	1

Scolopacidae:

<i>Philomachus pugnax</i>	Ruff.....	1
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Laridae:

Number

<i>Larus argentatus</i>	Herring gull.....	1
<i>Larus delawarensis</i>	Ring-billed gull.....	2
<i>Larus glaucescens</i>	Glaucous-winged gull.....	1
<i>Larus novaehollandiae</i>	Silver gull.....	65
<i>Larus occidentalis</i>	Western gull.....	1
<i>Larus ridibundus</i>	European gull.....	1

COLUMBIFORMES

Pteroclididae:

<i>Pterocles orientalis</i>	Oriental sandgrouse.....	2
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Columbidae:

<i>Caloenas nicobarica</i>	Nicobar pigeon.....	5
<i>Chalcophaps indica</i>	Emerald dove.....	4
<i>Columba fulviventris</i>	Forest dove.....	1
<i>Columba leuconota</i>	Tibetan pigeon.....	2
<i>Columba palumbus</i>	Wood pigeon.....	1
<i>Columba livia</i> (domestic).....	Archangel pigeon.....	2
<i>Columba livia</i> (domestic).....	Fan-tailed pigeon.....	5
<i>Dendrophassa vernans</i>	Sumatran fruit pigeon.....	4
<i>Ducula aenea</i>	Green imperial pigeon.....	4
<i>Ducula pinon</i>	Red-eyed fruit pigeon.....	4
<i>Gallicolumba luzonica</i>	Bleeding heart dove.....	10
<i>Goura sclaterii</i>	Sclater's crowned pigeon.....	5
<i>Goura victoria</i>	Victoria crowned pigeon.....	5
<i>Lamprotreron jambu</i>	Pink-headed fruit pigeon.....	8
<i>Leptotila rufaxilla</i>	Scaled pigeon.....	2
<i>Macropygia unchall</i>	Cuckoo dove.....	11
<i>Muscadivores paulina</i>	Celebian imperial pigeon.....	4
<i>Myristicivora bicolor</i>	Pied imperial pigeon.....	5
<i>Ptilinopus humeralis</i>	Purple-shouldered fruit dove.....	2
<i>Ptilinopus regina</i>	Purple-capped fruit dove.....	5
<i>Streptopelia chinensis</i>	Asiatic collared dove.....	28
<i>Streptopelia risoria</i>	Ring-necked dove.....	7
<i>Streptopelia senegalensis</i>	East African ring-necked dove.....	1
<i>Turtur risorius</i>	Turtle dove.....	1
<i>Zenaidura macroura macroura</i>	West Indian dove.....	1

PSITTACIFORMES

Psittacidae:

<i>Agapornis lilianae</i>	Nyassa lovebird.....	1
<i>Amazona albifrons</i>	White-fronted parrot.....	3
<i>Amazona amazonica</i>	Orange-winged parrot.....	2
<i>Amazona arausiaca</i>	Bouquet's parrot.....	1
<i>Amazona auropalliata</i>	Yellow-naped parrot.....	10
<i>Amazona bodini</i>	Red-fronted parrot.....	1
<i>Amazona festiva</i>	Festive parrot.....	1
<i>Amazona leucocephala</i>	Cuban parrot.....	2
<i>Amazona ochrocephala</i>	Yellow-headed parrot.....	9
<i>Amazona ochroptera</i>	Yellow-shouldered parrot.....	3
<i>Amazona oratrix</i>	Double yellow-head parrot.....	6
<i>Amazona viridigenalis</i>	Red-crowned parrot.....	1
<i>Anodorhynchus hyacinthinus</i>	Hyacinthine macaw.....	1
<i>Aprosmictus amboinensis</i>	Amboina lory.....	1
<i>Ara ararauna</i>	Yellow and blue macaw.....	3

Psittacidae—Continued.

Number

<i>Ara chloroptera</i>	Red and yellow macaw.....	1
<i>Ara macao</i>	Red, yellow, and blue macaw.....	3
<i>Ara maracana</i>	Illiger's macaw.....	2
<i>Ara militaria</i>	Mexican green macaw.....	3
<i>Ara severa</i>	Severe macaw.....	1
<i>Aratinga solstitialis</i>	Yellow paroquet.....	1
<i>Brotogeris jugularis</i>	Tovi paroquet.....	2
<i>Calyptorhynchus magnificus</i>	Banksian cockatoo.....	1
<i>Coracopsis nigra</i>	Lesser vasa parrot.....	1
<i>Cyanopsittacus spixi</i>	Spix's macaw.....	2
<i>Domicella garrula garrula</i>	Red lory.....	11
<i>Eclectus pectoralis</i>	Eclectus parrot.....	2
<i>Eolophus roseicapillus</i>	Roseate cockatoo.....	2
<i>Eos cyanogenia</i>	Blue-eared lory.....	1
<i>Eos rubra</i>	Red lory.....	1
<i>Eupsittula aurea</i>	Golden-crowned paroquet.....	1
<i>Eupsittula canicularis</i>	Petz paroquet.....	1
<i>Kakatoe alba</i>	White-crested cockatoo.....	3
<i>Kakatoe citrinocristata</i>	Orange-crested cockatoo.....	1
<i>Kakatoe galerita</i>	Sulphur-crested cockatoo.....	4
<i>Kakatoe leadbeateri</i>	Leadbeater's cockatoo.....	2
<i>Kakatoe moluccensis</i>	Great red-crested cockatoo.....	2
<i>Kakatoe sulphurea</i>	Lesser sulphur-crested cockatoo.....	11
<i>Kakatoe tenuirostris</i>	Slender-billed cockatoo.....	1
<i>Leptolophus novaehollandicus</i>	Cockatiel.....	2
<i>Loriculus galgulus</i>	Hanging parrotlet.....	2
<i>Lorius domicella</i>	Rajah lory.....	2
<i>Lorius lory</i>	Blue-crowned lory.....	1
<i>Melopsittacus undulatus</i>	Grass paroquet.....	17
<i>Microglossus aterrimus</i>	Great black cockatoo.....	1
<i>Myopsitta monachus</i>	Quaker paroquet.....	1
<i>Nandayus nanday</i>	Nanday paroquet.....	1
<i>Nestor notabilis</i>	Kea.....	4
<i>Pionites xanthomera</i>	Amazonian caique.....	2
<i>Pionus menstruus</i>	Blue-headed parrot.....	1
<i>Psittacula eupatria</i>	Red-shouldered paroquet.....	5
<i>Psittacula krameri</i>	Kramer's paroquet.....	6
<i>Psittacula longicauda</i>	Long-tailed paroquet.....	3
<i>Psittacula nepalensis</i>	Nepalese paroquet.....	1
<i>Psittacus erithacus</i>	African gray parrot.....	2
<i>Tanygnathus megalorhynchus</i>	Great-billed parrot.....	1
<i>Tanygnathus muelleri</i>	Mueller parrot.....	1
<i>Trichoglossus cyanogrammus</i>	Green-naped lory.....	1
<i>Trichoglossus haematod</i>	Ceram lory.....	4
<i>Trichoglossus nigrogularis</i>	Blue-fronted lory.....	3
<i>Trichoglossus novaehollandiae</i>	Blue-bellied lory.....	1

CUCULIFORMES

Cuculidae:

<i>Centropus sinensis</i>	Sumatran coucal.....	1
<i>Eudynamis scolopaceus</i>	Koel.....	2

STRIGIFORMES

Strigidae:		Number
<i>Bubo virginianus</i>	Great horned owl.....	7
<i>Ketupa ketupu</i>	Malay fishing owl.....	1
<i>Otus asio</i>	Screech owl.....	2
<i>Strix varia</i>	Barred owl.....	15

CAPRIMULGIFORMES

Caprimulgidae:		
<i>Chordeiles minor</i>	Nighthawk.....	2
Podargidae:		
<i>Podargus strigoides</i>	Tawny frogmouth.....	1

CORACIIFORMES

Alcedinidae:		
<i>Dacelo gigas</i>	Kookaburra.....	2
<i>Halcyon pyrrhopygius</i>	Red-backed kingfisher.....	2
<i>Halcyon sanctus</i>	Sacred kingfisher.....	6
Momotidae:		
<i>Momotus momotus parensis</i>	Motmot.....	1
Bucerotidae:		
<i>Berenicornis comatus</i>	Long-crested hornbill.....	1
<i>Buceros rhinoceros</i>	Rhinoceros hornbill.....	2
<i>Bucorvus abyssinicus</i>	Abyssinian ground hornbill.....	2
<i>Dichoceros bicornis</i>	Concave casque hornbill.....	2
<i>Hydrocissa convexa</i>	Pied hornbill.....	2
<i>Rhyticeros plicatus</i>	Plicated hornbill.....	1

PICIFORMES

Ramphastidae:		
<i>Pteroglossus bitorquatus</i>	Two-banded aracari.....	1
<i>Ramphastos ariel</i>	Ariel toucan.....	1
<i>Ramphastos culminatus</i>	White-breasted toucan.....	1
<i>Ramphastos toco</i>	Toco toucan.....	2
<i>Selenidera culik</i>	Guiana toucanette.....	1
Capitonidae:		
<i>Thereiceryx zeylandicus</i>	Streaked barbet.....	2

PASSERIFORMES

Oriolidae:		
<i>Oriolas chinensis</i>	Sumatran oriole.....	3
Cotingidae:		
<i>Chasmorhynchus nudicollis</i>	Naked-throated bell-bird.....	2
<i>Rupicola rupicola</i>	Cock of the rock.....	1
Pittidae:		
<i>Pitta brachyura</i>	Indian pitta.....	1
<i>Pitta moluscensis</i>	Molucca pitta.....	2
Tyrannidae:		
<i>Pitangus sulphuratus</i>	Kiskadee flycatcher.....	2
Corvidae:		
<i>Aphelocoma californica woodhousei</i> ..	Woodhouse's jay.....	1
<i>Calocitta formosa</i>	Mexican magpie jay.....	1
<i>Cissa chinensis</i>	Chinese cissa.....	2

Corvidae—Continued.		Number
<i>Corvus albus</i>	White-breasted crow.....	2
<i>Corvus brachyrhynchos</i>	American crow.....	3
<i>Corvus corax sinuatus</i>	American raven.....	1
<i>Corvus coronoides</i>	Australian crow.....	2
<i>Corvus cryptoleucus</i>	White-necked raven.....	6
<i>Corvus insolens</i>	Indian crow.....	4
<i>Cyanocitta cristata</i>	Blue jay.....	2
<i>Cyanocorax cyanopogon</i>	White-naped jay.....	2
<i>Gymnorhina hypoleuca</i>	White-backed piping crow.....	3
<i>Pica nuttalli</i>	Yellow-billed magpie.....	3
<i>Pica pica hudsonia</i>	American magpie.....	6
<i>Urocissa occipitalis</i>	Red-billed blue magpie.....	2
<i>Xanthoura luxuosa guatemalensis</i>	Guatemalan green jay.....	1
Paradiseidae:		
<i>Manucodia atra</i>	Black manucode.....	1
<i>Paradisea minor</i>	Lesser bird of paradise.....	2
<i>Paradisea rubra</i>	Red bird of paradise.....	10
<i>Schlegelia wilsoni</i>	Wilson's bird of paradise.....	1
<i>Seleucides niger</i>	12-wired bird of paradise.....	3
Ptilonorhynchidae:		
<i>Ptilonorhynchus violaceus</i>	Satin bower bird.....	4
Timaliidae:		
<i>Pomatorhinus erythrogenys imberbis</i>	Salvadori's scimitar-babbler.....	1
Pycnonotidae:		
<i>Molpastes haemorrhous</i>	Black-headed bulbul.....	1
<i>Otocompsa jocosus</i>	Red-eared bulbul.....	1
<i>Pycnonotus analis</i>	Yellow-vented bulbul.....	2
<i>Pycnonotus bindentatus</i>	Orange-spotted bulbul.....	3
<i>Rubigula dispar</i>	Red-throated bulbul.....	3
<i>Trachycomus zeylonicus</i>	Yellow-crowned bulbul.....	4
Irenidae:		
<i>Irena puella</i>	Fairy blue bird.....	1
Turdidae:		
<i>Mesia argentauris</i>	Silver-eared mesia.....	2
<i>Mimocichla rubripes</i>	Western red-legged thrush.....	4
<i>Turdus grayi</i>	Bonaparte's thrush.....	1
<i>Turdus migratorius</i>	Robin.....	1
Laniidae:		
<i>Lanius dorsalis</i>	Teita fiscal shrike.....	2
Sturnidae:		
<i>Aplonis chalybea</i>	Glossy aplonis.....	2
<i>Cosmopsaris regius</i>	Splendid starling.....	3
<i>Creatophora cinerea</i>	Wattled starling.....	2
<i>Galeopsar salvadorii</i>	Crested starling.....	1
<i>Gracula javana</i>	Javan mynah.....	4
<i>Gracula palawanensis</i>	Palawan mynah.....	2
<i>Gracula religiosa</i>	Southern hill mynah.....	2
<i>Gracupica melanopectera</i>	Gray starling.....	4
<i>Lamprocolius sycobius</i>	Southern glossy starling.....	1

	Number
Coerebidae:	
<i>Cyanerpes cyaneus</i>	Blue honey creeper..... 1
Icteridae:	
<i>Agelaius assimilis</i>	Cuban red-winged blackbird..... 5
<i>Agelaius icterocephalus</i>	Yellow-headed marsh bird..... 1
<i>Gymnomystax mexicanus</i>	Giant oriole..... 2
<i>Icterus gairaudi</i>	Giraud's oriole..... 1
<i>Molothrus ater</i>	Cowbird..... 1
<i>Psomocolax oryxivora</i>	Rice grackle..... 1
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed blackbird..... 4
Thraupidae:	
<i>Piranga erythromelas</i>	Scarlet tanager..... 1
<i>Spindalis preteri</i>	Cuban spindalis..... 1
<i>Tanagra luteicapilla</i>	Yellow-crowned euphonia..... 1
<i>Thraupis cana</i>	Blue tanager..... 2
<i>Thraupis palmarum melanoptera</i>	Palm tanager..... 1
Ploceidae:	
<i>Amadina fasciata</i>	Cut-throat finch..... 1
<i>Coliuspasser ardens</i>	Red-necked whydah..... 3
<i>Diatropura procne</i>	Giant whydah..... 6
<i>Munia maja</i>	White-headed munia..... 30
<i>Munia molucca</i>	Black-throated munia..... 15
<i>Munia oryzivora</i>	{ White Java sparrow..... 2 Java sparrow..... 12
<i>Munia punctulatus</i>	Rice bird..... 5
<i>Ploceus baya</i>	Baya weaver..... 5
<i>Ploceus intermedius</i>	Black-cheeked weaver..... 15
<i>Ploceus rubiginosus</i>	Chestnut-breasted weaver..... 8
<i>Poephila acuticauda</i>	Long-tailed finch..... 13
<i>Poephila gouldiae</i>	Gouldian finch..... 5
<i>Quelea sanguinirostris intermedia</i>	Southern masked weaver finch..... 1
<i>Steganopleura bichenovii</i>	Banded finch..... 6
<i>Steganura paradisea</i>	Paradise whydah..... 7
<i>Taeniopygia castanotis</i>	Zebra finch..... 2
Fringillidae:	
<i>Amandava amandava</i>	Strawberry finch..... 75
<i>Carduelis carduelis</i>	European gold finch..... 1
<i>Erythrura prasina</i>	Long-tailed munia..... 2
<i>Fringilla montifringilla</i>	Brambling finch..... 1
<i>Melopyrrha nigra</i>	Cuban bullfinch..... 1
<i>Paroaria cucullata</i>	Red-crested or Brazilian cardinal..... 2
<i>Pheucticus tibialis</i>	Yellow grosbeak..... 1
<i>Serinus canarius</i>	Canary..... 4
<i>Sicalis minor</i>	Lesser yellow finch..... 1
<i>Sporophila aurita</i>	Hick's seed-eater..... 4
<i>Sporophila gutturalis</i>	Yellow-bellied seed-eater..... 3
<i>Tiaris canora</i>	Melodius grassquit..... 3
<i>Uroloncha sp</i>	Society finch..... 2
<i>Volatinia jacarini</i>	Blue-black grassquit..... 1

REPTILES

LORICATA

Crocodylidae:		Number
<i>Alligator mississippiensis</i>	Alligator.....	36
<i>Alligator sinensis</i>	Chinese alligator.....	3
<i>Caiman sclerops</i>	Caiman.....	3
<i>Crocodylus acutus</i>	American crocodile.....	1
<i>Crocodylus cataphractus</i>	West African crocodile.....	1
<i>Crocodylus porosus</i>	Salt-water crocodile.....	1
<i>Osteolaemus tetraspis</i>	Broad-nosed crocodile.....	1
<i>Tomistoma schlegeli</i>	Malayan gavial.....	7

SQUAMATA

Lacertidae:		
<i>Lacerta muralis</i>	Wall lizard.....	1
Agamidae:		
<i>Acanthosaura armata</i>	Armed tree lizard.....	2
<i>Physignathus cocincinus</i>	Siamese water dragon.....	2
<i>Physignathus lesueurii</i>	Lesueur's water dragon.....	1
Iguanidae:		
<i>Anolis carolinensis</i>	False chameleon.....	12
<i>Anolis equestris</i>	Giant anolis.....	8
<i>Anolis porcatus</i>	Cuban anolis.....	2
<i>Conolophus subcristatus</i>	Galapagos iguana.....	1
<i>Cyclura cornuta</i>	Rhinoceros iguana.....	1
<i>Iguana sp.</i>	Rock iguana.....	1
<i>Leiocephalus cubensis</i>	Cuban curl-tailed lizard.....	4
<i>Phrynosoma cornutum</i>	Horned lizard.....	6
<i>Phrynosoma platyrhinos</i>	Horned lizard.....	3
<i>Sceloporus magister</i>	Western spiny lizard.....	1
<i>Sceloporus torquatus</i>	Scaly lizard.....	4
<i>Sceloporus undulatus</i>	Fence lizard.....	3
Anguidae:		
<i>Ophisaurus apus</i>	European glass snake.....	1
Gerrhosauridae:		
<i>Gerrhosaurus validus</i>	Robust plated lizard.....	1
Helodermatidae:		
<i>Heloderma horridum</i>	Mexican beaded lizard.....	4
<i>Heloderma suspectum</i>	Gila monster.....	8
Teiidae:		
<i>Cnemidophorus s. sexlineatus</i>	Six-lined lizard.....	3
<i>Tupinambis nigropunctatus</i>	Tegu lizard.....	2
Scincidae:		
<i>Egernia cunninghami</i>	Cunningham's skink.....	3
<i>Eumeces fasciatus</i>	Red-headed skink.....	1
<i>Eumeces obsoletus</i>	Brown skink.....	3
<i>Tiliqua nigrolutea</i>	Mottled lizard.....	1
<i>Tiliqua scincoides</i>	Blue-tongued lizard.....	2
<i>Trachysaurus rugosus</i>	Stump-tailed lizard.....	1

Varanidae:		Number
<i>Varanus gouldii</i>	Gould's monitor.....	1
<i>Varanus griseus</i>	Gray monitor.....	1
<i>Varanus komodoensis</i>	Komodo dragon.....	1
<i>Varanus niloticus</i>	African monitor.....	1
<i>Varanus salvator</i>	Sumatran monitor.....	13

OPHIDIA

Boidae:		
<i>Boa canina</i>	Green tree boa.....	1
<i>Boa cookii</i>	Cook's tree boa.....	1
<i>Constrictor constrictor</i>	Common boa.....	1
<i>Epicrates angulifer</i>	Cuban tree boa.....	3
<i>Epicrates cenchris</i>	Rainbow boa.....	11
<i>Epicrates striatus</i>	Haitian boa.....	2
<i>Eryx johni</i>	Indian sand boa.....	1
<i>Eunectes murinus</i>	Anaconda.....	1
<i>Tropidophis melanurus</i>	Cuban boa.....	1
Pythonidae:		
<i>Python amethystinus</i>	Amethystine python.....	1
<i>Python curtus</i>	Blood python.....	3
<i>Python molurus</i>	Indian python.....	4
<i>Python regius</i>	Ball python.....	1
<i>Python reticulatus</i>	Regal python.....	5
<i>Python sebae</i>	African rock python.....	3
<i>Python variegatus</i>	Carpet python.....	2
Colubridae:		
<i>Alsophis angulifer</i>	Jubo or culebra.....	1
<i>Boiga dendrophila</i>	Mangrove snake.....	1
<i>Coluber c. constrictor</i>	Black snake.....	1
<i>Drymarchon corais couperi</i>	Indigo snake.....	12
<i>Elaphe guttata</i>	Corn snake.....	2
<i>Elaphe obsoleta confinis</i>	Southern pilot snake.....	1
<i>Elaphe o. obsoleta</i>	Pilot snake.....	5
<i>Elaphe quadrivittata</i>	Chicken snake.....	2
<i>Elaphe vulpina</i>	Fox snake.....	1
<i>Lampropeltis getulus boylii</i>	Boyle's king snake.....	3
<i>Lampropeltis getulus floridana</i>	Florida king snake.....	3
<i>Lampropeltis g. getulus</i>	King snake.....	3
<i>Lampropeltis getulus holbrooki</i>	Holbrook's king snake.....	2
<i>Lampropeltis rhombomaculata</i>	Mole snake.....	1
<i>Liopeltis vernalis</i>	Smooth green snake.....	2
<i>Natrix cyclopion</i>	Water snake.....	10
<i>Natrix sp</i>	Water snake.....	10
<i>Pituophis catenifer</i>	Western bull snake.....	1
<i>Pituophis melanoleucus</i>	Bull snake.....	2
<i>Pituophis sayi</i>	Pine snake.....	1
<i>Storeria dekayi</i>	DeKay's snake.....	3
<i>Thamnophis sauritus</i>	Ribbon snake.....	3
<i>Thamnophis sirtalis concinnus</i>	Pacific garter snake.....	15
<i>Thamnophis s. sirtalis</i>	Garter snake.....	2

Elapidae:	Number
<i>Micrurus fulvius</i>	Coral snake..... 1
<i>Naja hannah</i>	King cobra..... 2
<i>Naja tripudians sumatrana</i>	Sumatran black-hooded cobra..... 1
<i>Naja tripudians</i> (var.).....	Spectacled cobra..... 3
<i>Naja tripudians</i> (var.).....	Siamese black-hooded cobra..... 3
<i>Notechis scutatus</i>	Australian tiger snake..... 1
Crotalidae:	
<i>Agkistrodon mokasen</i>	Copperhead..... 2
<i>Agkistrodon piscivorus</i>	Water moccasin..... 6
<i>Crotalus adamanteus</i>	Diamond-backed rattlesnake..... 1
<i>Crotalus cinereus</i>	Desert rattlesnake..... 1
<i>Crotalus horridus</i>	Banded rattlesnake..... 4
<i>Sistrurus catenatus catenatus</i>	Massasauga..... 1
<i>Sistrurus miliarius</i>	Pigmy rattlesnake..... 1
Viperidae:	
<i>Atheris chlorechis</i>	West African tree viper..... 2
<i>Bitis gabonica</i>	Gaboon viper..... 1
TESTUDINATA	
Chelydidae:	
<i>Chelodina longicollis</i>	Australian snake-necked turtle..... 3
<i>Chelys fimbriata</i>	Matamata turtle..... 1
<i>Hydromedusa tectifera</i>	South American snake-necked turtle..... 6
<i>Platemys platycephala</i>	Flat-head turtle..... 1
Platysternidae:	
<i>Platysternum megacephalum</i>	Large-headed Chinese turtle..... 2
Pelomedusidae:	
<i>Pelomedusa galeata</i>	Common African water-tortoise... 2
<i>Podocnemis expansa</i>	South American river tortoise... 1
Kinosternidae:	
<i>Kinosternon flavescens</i>	Musk turtle..... 1
<i>Kinosternon subrubrum</i>	Musk turtle..... 4
Chelydridae:	
<i>Chelydra osceola</i>	Osceola snapping turtle..... 1
<i>Chelydra rossignoni</i>	Rossignon's snapping turtle..... 1
<i>Chelydra serpentina</i>	Snapping turtle..... 4
<i>Macrochelys temminckii</i>	Alligator snapping turtle..... 1
Testudinidae:	
<i>Chrysemys picta</i>	Painted turtle..... 2
<i>Clemmys guttata</i>	Spotted turtle..... 1
<i>Clemmys mühlenbergii</i>	Mühlenberg's tortoise..... 1
<i>Cyclemys amboinensis</i>	Malayan box turtle..... 18
<i>Deirochelys reticularia</i>	Chicken tortoise..... 1
<i>Geoclemmys subtrijuga</i>	Siamese field turtle..... 1
<i>Geomyda spinosa</i>	Spiny hill tortoise..... 1
<i>Gopherus polyphemus</i>	Gopher tortoise..... 1
<i>Malaclemmys centrata</i>	Diamond-back terrapin..... 8
<i>Pseudemys concinna</i>	Cooter..... 5
<i>Pseudemys decussata</i>	Haitian terrapin..... 1
<i>Pseudemys elegans</i>	Cumberland terrapin..... 2
<i>Pseudemys floridana</i>	Florida terrapin..... 2
<i>Pseudemys rugosus</i>	Cuban terrapin..... 2

Testudinidae—Continued.	Number
<i>Terrapene carolina</i>	Box tortoise..... 25
<i>Terrapene major</i>	Florida box turtle..... 2
<i>Testudo elephantina</i>	Aldabra tortoise..... 1
<i>Testudo emys</i>	Sumatran land tortoise..... 1
<i>Testudo ephippium</i>	Duncan Island tortoise..... 2
<i>Testudo hoodensis</i>	Hood Island tortoise..... 2
<i>Testudo tabulata</i>	South American tortoise..... 1
<i>Testudo torneri</i>	Soft-shelled land tortoise..... 4
<i>Testudo vicina</i>	Albemarle Island tortoise..... 1
Trionychidae:	
<i>Amyda ferox</i>	Soft-shelled turtle..... 8
<i>Trionyx cartilagineus</i>	Asiatic soft-shelled turtle..... 1
AMPHIBIA	
CAUDATA	
Salamandridae:	
<i>Aneides lugubris</i>	Salamander..... 1
<i>Batrachoseps attenuatus</i>	Salamander..... 1
<i>Ensatina eschscholtzii</i>	Salamander..... 1
<i>Triturus pyrrhogaster</i>	Red-bellied Japanese newt..... 6
<i>Triturus viridescens</i>	Common newt..... 18
Amphiumidae:	
<i>Amphiuma means</i>	Blind eel or Congo snake..... 2
<i>Amphiuma tridactylum</i>	Blind eel or Congo snake..... 1
<i>Megalobatrachus japonicus</i>	Giant salamander..... 1
Cryptobranchidae:	
<i>Cryptobranchus alleganiensis</i>	Hellbender..... 8
SALIENTIA	
Brachycephalidae:	
<i>Atelopus varius varius</i>	Yellow atelopus..... 2
Discoglossidae:	
<i>Bombina bombina</i>	Fire-bellied toad..... 1
Dendrobatidae:	
<i>Dendrobates auratus</i>	Arrow-poison frog..... 30
Bufonidae:	
<i>Bufo alvarius</i>	Green toad..... 1
<i>Bufo americanus</i>	Common American toad..... 2
<i>Bufo empusus</i>	Sapo de concha..... 15
<i>Bufo marinus</i>	Marine toad..... 3
<i>Bufo peltocephalus</i>	Cuban giant toad..... 9
<i>Bufo superciliosus</i>	Leaf toad..... 1
Ceratophrydae:	
<i>Ceratophrys varius</i>	Horned toad..... 2
Hylidae:	
<i>Hyla caerulea</i>	Australian tree frog..... 7
<i>Hyla cinerea</i>	Florida tree frog..... 1
<i>Hyla crucifer</i>	Tree frog..... 4
<i>Hyla septentrionalis</i>	Cuban tree frog..... 5
Pipidae:	
<i>Pipa americana</i>	Surinam toad..... 1
<i>Xenopus sp.</i>	Smooth-clawed frog..... 3

Ranidae:		Number
<i>Rana catesbeiana</i>	Bull frog.....	1
<i>Rana clamitans</i>	Green frog.....	1
<i>Rana sphenoccephala</i>	Southern leopard frog.....	1

FISHES

<i>Acanthopthalmus kuhlii</i>	Banded loach.....	6
<i>Anguilla rostrata</i>	Common eel.....	3
<i>Barbus</i> sp.....	1
<i>Brachydanion rerio</i>	Zebra fish.....	2
<i>Corydoras aeneus</i>	Trinidad armored catfish.....	4
<i>Corydoras melanistius</i>	Armored catfish.....	1
<i>Electrophorus electricus</i>	Electric eel.....	1
<i>Helostoma temminckii</i>	Kissing gourami.....	1
<i>Hemigrammus unilineatus</i>	1
<i>Hypostomus</i> sp.....	Armored catfish.....	1
<i>Kryptopterus bicirrhus</i>	Glass catfish.....	5
<i>Lebistes reticulatus</i>	Guppy.....	50
<i>Lepidosiren paradoxa</i>	South American lungfish.....	3
<i>Monocirrhus polyacanthus</i>	Leaf fish.....	3
<i>Platypoecilus maculatus</i>	Goldplaties.....	20
<i>Pristella riddlei</i>	5
<i>Protopterus annectens</i>	African lungfish.....	2
<i>Pterophyllum scalare</i>	Angel fish.....	1
<i>Rasbora heteromorpha</i>	3
<i>Trichogaster trichopterus</i>	Three-spot gourami.....	3
<i>Xiphophorus hellerii</i>	Swordtail.....	1

ARACHNIDS

<i>Eurypelma</i> sp.....	Tarantula.....	3
<i>Latrodectus mactans</i>	Black widow spider.....	4

INSECTS

<i>Blabera</i> sp.....	Giant cockroach.....	100
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MOLLUSKS

<i>Achatina variegata</i>	Giant land snail.....	6
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Respectfully submitted.

W. M. MANN, *Director.*

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

APPENDIX 8

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, 1938:

WORK AT WASHINGTON

RECOMPUTATIONS

The recomputation of solar-constant values under the direction of L. B. Aldrich, referred to in last year's report, was the main business. A considerable force of extra computers was employed on a job basis under grants-in-aid from John A. Roebing. Also a considerable force of W. P. A. workers was assigned to the project. With the regular force and these extra workers the immense task is nearly completed. It is hoped to finish the entire recomputations and comparisons of solar-constant results from all stations by January 1939, so as to make up a homogeneous series of daily values from 1923 to the present time.

STELLAR SPECTRUM ENERGY CURVES

In 1922, 1923, 1928, and 1934, attempts were made, in cooperation with the Mount Wilson Observatory, to measure the distribution of energy in the spectra of some of the brighter stars. The measurements were made in the focus of the 100-inch reflecting telescope. Results of some value were reached in 1923 and 1928, using a prismatic spectroscope and the radiometer. In 1934 it was attempted, in cooperation with Dr. Joel Stebbins, to observe at 10 wave lengths selected by Christiansen filters, employing a photoelectric cell. Unfortunately, owing to the great inequality of sensitiveness of the cell for different wave lengths of radiation, these observations proved valueless.

Since 1934 repeated attempts have been made at Washington to devise a radiation-measuring instrument with a black absorbing surface. We desired to attain sufficient sensitiveness to get good measurements with the Christiansen filters for stars as faint as third magnitude. In the opinion of able astronomers this would be a highly valuable accomplishment, indeed one of the most interesting

for astronomy. It is to be hoped that when the 200-inch telescope becomes available such a sensitive measuring instrument may be used successfully with a prismatic or grating spectroscope, and with photographic registration, so as actually to secure continuous spectral energy curves of the brighter stars.

In our attempts to realize the highly sensitive measuring device, we tried for several months to perfect the kammometer, but it did not quite reach our demands. We then turned to the improvement of the galvanometer, hoping to use it to observe the indications of the delicate thermopile such as L. B. Clark now constructs for use in the Division of Radiation and Organisms. Our intention was to employ with the galvanometer the magnetic shield which was constructed for us about 18 years ago by the late Dr. Elihu Thomson of Lynn, and to insert therein, in highly evacuated space, a galvanometer of the Kelvin suspended magnetic system type. We hoped by high evacuation to be able to use a very light system at a time of single swing as high as 10 seconds, and that the sensitiveness would be found nearly proportional to the square of time of swing, even up to this long period. As the magnetic shield is very effective indeed, we attempted at first to use a galvanometer of only one pair of coils, with a single group of magnets. But while this arrangement is evidently the most sensitive possible, we found that what was gained in sensitiveness was more than lost in instability. Accordingly, we constructed an astatic system with two opposed groups of magnets separated but little over 10 millimeters between centers, and two pairs of correspondingly small coils, making a combined resistance of about 17 ohms.

Preliminary trials at Washington indicated a high sensitiveness, but with the mechanical and electrical disturbances unavoidable in a city, we could not tell whether the stability was adequate. To test this question, Messrs. Abbot and Hoover observed, by invitation, with this galvanometer at John A. Roebling's estate in Florida in March 1938. They found a 10-second single swing easily practicable, the proportionality of sensitiveness to the square of time of swing nearly followed up to that period, and the stability so good that readings at a scale distance of 5 meters seemed likely to disclose vibrations only rarely exceeding 1 millimeter in amplitude.

Tests with the thermopile and candle flame seemed to indicate that the new combination would prove between 10 and 100 times as effective as the combination employed by Dr. Abbot in 1928. Mr. Hoover made a new and better magnetic system after returning from Florida. The excellent showing of the galvanometer is almost wholly due to his work, though based on the extensive researches of Messrs. Abbot and Fowle about the years 1898 to 1900.

In May 1938 Mr. Hoover went to Mount Wilson to prepare for new measurements of the energy in the spectra of the stars, and to make studies of the growth of plants in monochromatic rays, taken from sunlight by Christiansen filters. It may be said, by anticipation, that in both researches Mr. Hoover has been able to make gratifying progress, as will be reported next year. It may even be said now with confidence that when the 200-inch telescope is available it will be possible to get excellent continuous stellar spectrum energy curves for all types of stars. Thus far Mr. Hoover has succeeded in measuring electric currents with his 17-ohm galvanometer of 1×10^{-12} amperes, and to observe the rays of a candle flame on a thermoelement of 1 millimeter diameter from a candle distance of 150 meters.

ATMOSPHERIC TURBIDITY AND MOISTURE APPARATUS

In 1930 we constructed a special instrument, containing a spectrophotometer, an Ångström pyrheliometer, and a pyranometer, for the use of Mr. Moore in testing the availability of mountain sites in and near Africa for solar-constant work. With this portable instrument he could determine the total precipitable water in the atmospheric path of sun rays, as well as total intensity of solar radiation, and the brightness of the sky. This instrument came to the attention of the United States Weather Bureau, and was considered to be of much promise for their work. At the request of Chief Gregg, the Smithsonian Institution has undertaken to duplicate it for the Weather Bureau, and the instrument maker, Mr. Kramer, is at work thereon.

UTILIZING SOLAR RADIATION

Some further progress has been made by Dr. Abbot on devices for utilizing solar radiation. While in Florida, in March, he tried out with gratifying results a solar flash boiler, a solar water distiller, and a toy solar cooker.

FIELD STATIONS

Several considerations led to the abandonment of the Mount St. Katherine solar-radiation station in December 1937. The isolation of the station made its occupation hazardous. Its remoteness and isolation made its upkeep costly. An intestinal infection attacked all of the observers and proved stubborn to cure. The likelihood of a great European war made it probable that the observatory might be wholly cut off from Washington. The station was abandoned with regret, for meteorologically it had proved to be excellent, perhaps equal to Montezuma.

Instead of St. Katherine, it was decided to locate a station in southwestern New Mexico. This location seemed to partake of the climatological advantages of Old Mexico. Our other stations, both northern and southern, have all had relatively bad observing conditions in the months December to March. In Old Mexico and southwestern New Mexico, on the contrary, these months promise to be the most cloudless of all.

A. F. Moore has located the new station on Burro Mountain near Tyrone, N. Mex., at a level of about 8,000 feet. The living conditions there seem to give promise of being quite as attractive as at Table Mountain. It lies not far from four fair-sized towns, the people of the vicinity are helpful and pleasant, and the United States Forest Service is exceedingly helpful and welcoming regarding the project. It is hoped to be ready to observe in October or November 1938.

With two pleasant stations besides Washington in the United States, and one more isolated one in Chile, it seems feasible to rotate the observers hereafter without undue privation.

The stations at Table Mountain and Montezuma have continued to observe the solar constant of radiation daily, when possible.

ULTRAVIOLET SOLAR RADIATION

Having failed thus far to obtain sufficient financial support to operate enough solar-constant stations to determine adequately the variation of the sun on every day of the year, as referred to in last year's report, it has been hoped to accomplish in some other way a program of measuring solar variation as influencing weather. Several possibilities exist. For recent years, in America, England, and Australia, records of atmospheric ionization at great altitudes are being obtained by several institutions and individuals. The ionization is thought to be dependent on solar radiation, far in the ultraviolet spectrum, at wave lengths less than 1,000 angstroms. Results seem to indicate that these rays vary over a great range, perhaps as much as 500 percent. It is hoped that these measurements may be correlated with weather.

Inasmuch, however, as both theory and our preliminary observations indicate that the variation of the sun, which is only of the order of 1 or 2 percent in the total radiation, may be as great as 15 or 20 percent at ultraviolet wave lengths about 3,300 angstroms, it was hoped that automatic sounding balloon methods might be developed whereby the variation of the sun's radiation in this part of the ultraviolet spectrum could be measured accurately enough for weather predicting. To this end the Smithsonian Institution made two grants in aid to Dr. Brian O'Brien, of Rochester, N. Y. Dr. O'Brien, aided also by the University of Rochester and by several

generous manufacturing corporations, has gone far to develop highly ingenious methods and apparatus for measuring solar variation in the ultraviolet from sounding balloons, automatically observed on the ground through radio transmission of signals. He hopes soon to be in position to compare this type of results with those of solar-constant work reported from our stations.

PUBLICATION

Dr. Abbot published a résumé of his studies on solar variation and weather changes in a number of the Czechoslovak scientific journal concerning physics, prepared in honor of Dr. S. Hanzlik. A small number of separates of this résumé are available for distribution if solicited by interested parties.

PERSONNEL

F. E. Fowle, who entered the service of the Astrophysical Observatory in 1894, having been retired for disability, W. H. Hoover, who has heretofore had special status with the Astrophysical Observatory, as a field director, was promoted to the position of Senior Astrophysicist on October 16, 1937.

Respectfully submitted.

C. G. ABBOT, *Director*.

The SECRETARY,
Smithsonian Institution.

APPENDIX 9

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, 1938.

The fundamental facts relating to plant growth and radiation have been fruitfully pursued by the Division during the year. Mr. Hoover, temporarily loaned for studies of radiation and photosynthesis, had been recalled for continuous work with the Astrophysical Observatory. To assist in these and other plant studies under Dr. Johnston's immediate direction, Dr. R. L. Weintraub was engaged. He developed an improved method of measuring plant growth substances which are concerned in the bending of plants toward the light. A description of this method with data from a number of experiments is now ready for publication under the title, "An assay method for plant growth substances utilizing straight growth of the *Avena* coleoptile." Dr. Weintraub is continuing the earlier work of Dr. Johnston on the growth of the first internode in light of very low intensities and in different spectral regions. It is interesting to note that the plant responds to light intensities far below those which can be detected by the most sensitive thermocouples.

Messrs. Johnston, McAlister, Weintraub, Clark, and Fillmen have been preparing a new automatic apparatus for measuring and recording photosynthesis continuously. It is similar in nature to the device employed by Dr. McAlister, to which reference was made in last year's report, but with the added feature of continuous automatic photographic registration. This new apparatus was nearly ready for use at the close of the fiscal year. It is to be used with a powerful light source, comprising a 60-inch army searchlight, loaned by the War Department, and a battery of mirrors at the focus of the beam so placed that slender plants such as wheat, or others, may be illuminated strongly from all sides. Experiments of many kinds relating to photosynthesis and the formation of chlorophyll are about to be taken up with this efficient outfit. Another piece of apparatus has been developed for the determination of chlorophyll. Very good results can be obtained with concentrations as low as 0.1 mg chlorophyll per liter of solution. This equipment is being used in con-

nection with the CO_2 absorption studies and the formation of chlorophyll.

Among other projects, photosynthesis in algae is to be investigated. In preparation for this research Dr. Johnston and Dr. Meier have been testing various methods of producing thin coatings of living algae on rods and plates, without the interposition of water layers between the algae and such light source as may be employed. Successful cultures of this sort have been made.

Dr. Meier had a very serious fall in early December 1937 and was incapacitated until June 1938, but returned to work part time in June and full time in July. Prior to her accident she made further observations on stimulation of multiplication of algae by ultraviolet rays which in larger dosage would be lethal. While the results obtained certainly point strongly to a positive conclusion, further work must be done before publication.

Dr. Johnston has continued investigations on mixtures of artificial lights suitable to promote fully satisfactory plant growth under laboratory conditions.

Dr. McAlister has made prolonged further studies on the dependence of the induction periods in the photosynthesis of wheat on the length of previous dark exposures. In addition, an uptake of CO_2 by leaves in darkness has been discovered which has an important bearing on photosynthesis. These phenomena are held by students of photosynthesis to be of the greatest possible interest in obtaining an understanding of the fundamental reactions which occur in plants under the influence of light. Until the perfection of the technique by Dr. McAlister, and his introduction of spectroscopy, as a highly sensitive means of instantaneously measuring carbon dioxide assimilation, the subject was practically beyond the possibility of investigation. But during the past year he has accumulated great numbers of results which are the foundation of a paper he will shortly publish under the title: "Chlorophyll— CO_2 ratio during photosynthesis," which it is believed will be of the very highest interest to students of this subject. As heretofore the technical work of the Division has been ably promoted by Messrs. Clark and Fillmen.

As noted under the Report on the Astrophysical Observatory, Mr. Hoover has made interesting experiments at Mount Wilson, Calif., on growing plants to maturity in narrow ranges of spectrum selected from the sunbeam. This work will be described in next year's report.

The following publications have been issued from the Division during the fiscal year:

JOHNSTON, EARL S.

Phototropic response and CO_2 assimilation of plants in polarized light. Smithsonian Misc. Coll., vol. 96, No. 3, 1937.

Growth of *Avena* coleoptile and first internode in different wave-length bands of the visible spectrum. Smithsonian Misc. Coll., vol. 96, No. 6, 1937.

Plant growth in relation to wave-length balance. Smithsonian Misc. Coll., vol. 97, No. 2, 1938.

Sun rays and plant life. Smithsonian Ann. Rep. 1936, pp. 353-371, 1937.

MEIER, FLORENCE E.

Reactions to ultraviolet radiation. Smithsonian Ann. Rept. 1936, pp. 373-382, 1937.

Respectfully submitted.

C. G. ABBOT, *Director.*

THE SECRETARY,
Smithsonian Institution.

APPENDIX 10

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, 1938:

THE LIBRARY

The library, or library system, of the Smithsonian comprises 45 libraries. Chief among these are the Smithsonian deposit in the Library of Congress, which is the main library of the Institution, and the libraries of the United States National Museum and the Bureau of American Ethnology. The others are the Langley aeronautical library, also deposited in the Library of Congress, the Smithsonian office library, the libraries of the Astrophysical Observatory, Freer Gallery of Art, National Collection of Fine Arts, National Zoological Park, Radiation and Organisms, and the sectional libraries, 35 in number, of the National Museum.

PERSONNEL

Two changes occurred in the library staff. Mrs. George C. Rodgers, senior stenographer, withdrew from Government service, and the position was reclassified to that of assistant clerk-stenographer and filled by the appointment of Miss Nancy Alice Link, through transfer from the Bureau of Internal Revenue. The assistant messenger, Joseph A. Salat, Jr., resigned and Clyde E. Bauman was transferred to the vacancy from the United States Naval Academy. The temporary assistants were Mrs. Gladys S. Wilson, Miss Margaret Kober, and 17 employees assigned to the library by the Works Progress Administration.

EXCHANGE OF PUBLICATIONS

The exchange work of the library was noteworthy. It brought to the receiving room 22,800 packages by mail and 2,464 by the International Exchange Service—a total of 25,264, each containing one or more publications. Besides several generous sendings from the United States, such as those from the American Antiquarian Society, the Paleontological Institution, and the University of Washington, there were many from abroad, the largest being from the Koninklijke

Akademie van Wetenschappen, Amsterdam; Učená Společnost Šafaříkova, Bratislava; Academie Royale des Sciences de Belgique, Brussels; Polskiego Towarzystwa Przyrodników im. Kopernika, Lwów; Royal Society of Victoria, Melbourne; Naturforscher-Verein zu Riga, Riga; Kgl. Norske Videnskabers Selskab, Trondheim; and the universities of Basel, Cambridge, and Lille.

The 6,037 dissertations received represented an increase of 670 over the year before. Of these, 2,265 were added to the Smithsonian deposit, 2,971, having to do largely with medical subjects, were turned over to the Surgeon General's library, and the rest, being duplicates, were sent, under a special exchange arrangement, to Columbia University. They came from the universities of Basel, Berlin, Bern, Bonn, Breslau, Cornell, Erlangen, Freiburg, Giessen, Greifswald, Heidelberg, Jena, Kiel, Königsberg, Louvain, Lund, Lwów, Marburg, Neuchâtel, Pennsylvania, Rostock, Strasbourg, Tübingen, Utrecht, Würzburg, and Zürich, and the technical schools of Berlin, Braunschweig, Delft, Dresden, Karlsruhe, and Zürich.

The number of letters—2,403—prepared by the staff in course of the exchange and other work of the library was larger than in 1937, as was the number of publications obtained by special request to meet needs in the various libraries of the Institution. The latter totaled 5,315, more than one-half of which were for the library of the National Museum. In connection with the effort to provide by exchange publications essential to the work of the Smithsonian and its bureaus, the library staff handled 582 want cards and arranged for 285 new exchanges. It should be said, however, in passing, that hundreds of the volumes and parts in question were found among the duplicates in the west stacks, a further indication of the value of this collection and of the effectiveness of the organization to which it has been subjected.

Finally, it is a pleasure to report that the year marked the return to stock of numerous sendings, both large and small, of Smithsonian publications from libraries outside of Washington where they were duplicates. Thus the supply available for exchange use was again substantially increased.

GIFTS

The gifts during the year were numerous. From the Geophysical Laboratory came 3,312 miscellaneous publications, from the American Association for the Advancement of Science 653, and from the American Association of Museums 209, among them a goodly number of scientific serials that were especially welcome.

From the libraries of the late Dr. Walter Hough and Dr. Frederick V. Coville, former members of the scientific staff, came, through Mrs. Hough and Mrs. Coville, many important books and pamphlets.

And from Mrs. Charles D. Walcott and the scientists of the Institution, notably Secretary Abbot and Assistant Secretary Wetmore, even more publications than usual were received.

But perhaps the outstanding gift of the year was made by Mrs. William Woodville Rockhill, widow of the one-time American Minister to China. This consisted of 1,186 volumes and pamphlets, chiefly in Chinese and other Eastern languages, on the history and culture of China. It was assigned, naturally, to the library of the Freer Gallery of Art, where it supplements in a notable way the Rockhill and other collections, as these supplement appreciably, for research purposes, the Division of Orientalia in the Library of Congress.

Other gifts included the following: *La Mostra del Tintoretto, Catalogo delle Opere*, from Count Urbano de Bellegarde; *Pintura Mexicana (1800-1860)*, by Roberto Montenegro, from Angel Rosas; *Turkey in Pictures*, from his Excellency, the Turkish Ambassador to the United States; *Description Géométrique Détaillée des Alpes Françaises, Annexe du Tome Second and Annexe du Tome Dixième* (2 copies of each), by Paul Helbronner, from Le Maréchal Pétain; reprint of *The Cactaceae*, in 4 volumes, by N. L. Britton and J. N. Rose (Publication No. 248 of the Carnegie Institution of Washington), from The Cactus and Succulent Society of America; Nikola Tesla, a volume issued on the occasion of his 80th birthday, from La Société pour la Fondation de l'Institut Nikola Tesla; *A Catalogue of the Pictures and Drawings in the Collection of Frederick John Nettlefold, Volumes III-IV*, by C. Reginald Grundy and F. Gordon Roe, from Frederick John Nettlefold; *Mollusques Terrestres et Fluviatiles d'Asie-Mineure (Voyage Zoologique d'Henri Gadeau de Kerville en Aise-Mineure)*, by Louis Germain, from Henri Gadeau de Kerville; *The Works of Edwin Howland Blashfield, with an Introduction by Royal Cortissoz*, from Mrs. Grace Hall Blashfield; *The Geology of Pennsylvania, Volume I and Volume II, Parts 1 and 2*, by Henry Darwin Rogers, from John W. Berry for the family of the late R. D. Lacey, who, before his death in 1900, presented the Institution with a valuable collection of coal fossils and his library on paleozoölogy; *The Birds of Tropical West Africa, Volume IV*, by David Armitage Bannerman, from The Crown Agents for the Colonies, London; *Captains and Mariners of Early Maryland*, by Dr. Raphael Semmes, from the author; *Complete Self-Instructing Library of Practical Photography*, in 10 volumes, edited by S. B. Schriever, from Mrs. A. B. Stebbins; *Automobilens Historia*, by John Nerén, from the author; 15 books and pamphlets on various subjects, including *Historia de la Medicina en el Uruguay, Volumes 1-2*, by Rafael Schiaffino, and *Historia de la Dominación Española en el Uruguay, Volumes 1-3*, by Francisco Bauza, from Dr. Rafael Schiaf-

fino; Art and Archaeology Abroad, by Dr. Kalidas Nag, from the author; Old New York from the Battery to Bloomingdale, etchings by Eliza Greatorax, text by M. Despard, from Mrs. Walter S. Pratt, Jr.; Interpretive History of Flight, by M. J. B. Davy, from the author; The Americana Annual for 1937 and 1938, from the editor; The Great Chain at West Point and Other Obstructions Placed in the Hudson River during the War of the Revolution, by B. F. Fackenthal, Jr., from the author; The Phonetics of the Hottentot Language, by D. M. Beach, from the Research Grant Board, Johannesburg; Hints on Museum Education, by J. C. Basak, from the author; and The Tracy Genealogy, by Sherman Weld Tracy, from the author.

SOME STATISTICS

Accessions to the libraries:

	Volumes	Pamphlets and charts	Total	Approximate holdings, June 30, 1938
Astrophysical Observatory.....	162	132	294	9,491
Bureau of American Ethnology.....	395	-----	395	51,395
Freer Gallery of Art.....	634	69	703	13,377
Langley Aeronautical.....	45	21	66	3,394
National Collection of Fine Arts.....	285	271	556	6,340
National Museum.....	2,639	929	3,568	210,710
National Zoological Park.....	149	21	170	3,741
Radiation and Organisms.....	17	7	24	269
Smithsonian deposit, Library of Congress.....	3,018	1,974	4,992	558,070
Smithsonian office.....	106	18	124	30,627
Total.....	7,450	3,442	10,892	1,887,414

¹ These holdings do not, of course, include the thousands of volumes still incomplete, uncataloged, or unbound.

The staff recorded 23,992 periodicals; cataloged 6,449 publications; prepared and filed 42,568 catalog and shelf list cards; borrowed 2,239 volumes from the Library of Congress and other libraries; and made 11,380 loans, 340 of which were to libraries outside the Smithsonian system. They also advanced materially the index of exchange relations and the index of Smithsonian publications. The work on the union catalog was as follows:

Volumes cataloged.....	3,439
Pamphlets and charts cataloged.....	2,307
New serial entries made.....	165
Typed cards added to catalog and shelf list.....	5,979
Library of Congress cards added to catalog and shelf list.....	13,890

OTHER ACTIVITIES

The staff took down the exhibition set of Smithsonian publications that for 10 years had formed an imposing monument in the main hall and filed it away for future service. They brought together the archives set, checked it, and shelved it in a safe and convenient place.

They supervised the 17 W. P. A. employees assigned to the library in such tasks as cleaning, repairing, and binding books, putting pamphlets into binders and lettering them, renovating plates and maps, typing cards, filling out acknowledgment forms, mounting aeronautical clippings, sorting and filing duplicates, and assisting with the cataloging.

They effected special exchanges of duplicates with the libraries of the Massachusetts Institute of Technology, Marine Biological Laboratory, Woods Hole, Staten Island Association of Arts and Sciences, American Museum of Natural History, United States Patent Office, and the following colleges and universities: Brown, California, Catholic, Columbia, Duke, Harvard, Michigan, North Carolina, Pennsylvania, Princeton, Stanford, Williams, and Yale. By these transactions they placed many publications not wanted by the Institution where they would be useful and obtained many that were needed in the collections. Among the latter were *Forges and Furnaces in the Province of Pennsylvania*, issued by the Pennsylvania Society of the Colonial Dames of America; *The Cannon Collection of Italian Paintings of the Renaissance*, mostly of the Veronese School, by J. Paul Richter; *The African Republic of Liberia and the Belgian Congo, Volume II*, edited by Richard P. Strong; *A Guide to the History and Historic Sites of Connecticut*, in 2 volumes, by Florence S. M. Crofut; *Practice of Tempera Painting, and Materials of Medieval Painting*, by Daniel V. Thompson; *Eclipses of the Sun*, third edition revised and enlarged, by S. A. Mitchell; *A Catalogue of the Epstean Collection on the History and Science of Photography and Its Applications Especially to the Graphic Arts*, by Edward Epstean; *Benjamin Franklin's Own Story*, by Nathan G. Goodman; *Roman Glass from Karanis*, by Donald B. Harden; *Annual Review of Biochemistry, Volume VII*, edited by J. M. Luck and C. R. Noller; and numerous volumes and parts of the *Meddelelser om Grønland*.

The staff continued the revision of the files of society and engineering publications in the natural history and technological libraries of the National Museum, thus making these important sets more available for use. The work with the latter was expedited by the arrival of the steel shelving that had been ordered toward the close of 1937.

They finished recataloging the sectional library of botany and began that of administration.

And they spent even more time than usual identifying for the scientists of the Institution obscure citations found in the literature of their respective subjects, and providing data, including not a few bibliographies, for letters in answer to requests for information received from different parts of the country.

BINDING

The allotment for binding was again very inadequate, permitting the libraries to bind only as follows: National Museum, 494 volumes; National Collection of Fine Arts, 45; Astrophysical Observatory, 36. The total, 575 volumes, was but a fraction of the number that, for the good of the collections, should have been bound. It is earnestly hoped that more funds can soon be made available for binding, that this interest of the Smithsonian libraries—an interest essential to their preservation and usefulness—may be provided for satisfactorily. In 1935 the average charge for binding was about \$3.25 a volume, while in 1938 it had risen to approximately \$5. This difference of \$1.75 has woefully reduced the number of volumes that can be bound with the sums annually allowed for this purpose.

Fortunately, the Freer Gallery of Art, with funds of its own for binding, was able to have 57 volumes bound. Fortunately, too, the Smithsonian Institution, taking advantage of the services of an expert binder and of two assistants assigned to it under the W. P. A., was able to have 414 volumes bound and 148 volumes and 994 pamphlets repaired for several of its libraries.

But there remain thousands of unbound volumes, especially in the National Museum, Bureau of American Ethnology, Astrophysical Observatory, and National Collection of Fine Arts. Most of the volumes are made up of serial parts. As many of these are in daily use, they are constantly running the risk of being damaged or destroyed. And it frequently happens that a part, once lost, cannot be replaced, particularly if it belongs to a foreign volume of limited issue.

NEEDS

The need of increased funds for binding has already been mentioned. Other needs are only a little less urgent. They are as follows: Two or more well-trained catalogers to work chiefly in the main library in the Natural History Building; another messenger to assist in the libraries in the Smithsonian Building and the Arts and Industries Building; more shelf room for the library collections in all three of the principal buildings of the Institution.

Respectfully submitted.

WILLIAM L. CORBIN, *Librarian.*

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

APPENDIX 11

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, 1938:

The Institution published during the year 12 papers in the series of Smithsonian Miscellaneous Collections, 1 annual report, and pamphlet copies of the 23 articles in the report appendix, and 2 special publications.

The United States National Museum issued 1 annual report, 4 bulletins, 1 separate from Bulletin 100, 1 volume of the Proceedings, and 19 separates from Proceedings, volumes 84 and 85.

The Bureau of American Ethnology issued one annual report and three bulletins.

Of the publications there were distributed 129,478 copies, which included 87 volumes and separates of the Smithsonian Contributions to Knowledge, 27,223 volumes and separates of the Smithsonian Miscellaneous Collections, 22,593 volumes and separates of the Smithsonian Annual Reports, 4,200 Smithsonian special publications, 57,761 volumes and separates of the National Museum publications, 16,569 publications of the Bureau of American Ethnology, 67 publications of the National Collection of Fine Arts, 8 publications of the Freer Gallery of Art, 20 annals of the Astrophysical Observatory, 68 reports of the Harriman Alaska Expedition, and 882 reports of the American Historical Association.

SMITHSONIAN MISCELLANEOUS COLLECTIONS

Of the Smithsonian Miscellaneous Collections, volume 91, there were issued 3 papers; volume 96, 5 papers and title page and table of contents; and volume 97, 4 papers, making 12 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. 27. A new species of deep-sea fish, *Argyropelecus antrorsospinus*, of the family Sternoptichidae, by Leonard P. Schultz. 5 pp., 1 fig. (Publ. 3439.) July 7, 1937.

No. 28. New species of hydroids from the Puerto Rican region, by G. McLean Fraser. 7 pp., 2 pls. (Publ. 3443.) November 10, 1937.

No. 29. A new genus of starfishes from Puerto Rico, by Austin H. Clark. 7 pp., 1 pl. (Publ. 3481.) June 18, 1938.

VOLUME 96

No. 1. Archeology of St. Lawrence Island, Alaska, by Henry B. Collins, Jr. 431 pp., 84 pls., 26 figs. (Publ. 3411.) August 9, 1937.

No. 3. Phototropic response and CO₂ assimilation of plants in polarized light, by Earl S. Johnston. 7 pp., 1 fig. (Publ. 3440.) July 12, 1937.

No. 4. Indian sites below the falls of the Rappahannock, Virginia, by David I. Bushnell, Jr. 65 pp., 21 pls., 11 figs. (Publ. 3441.) September 15, 1937.

No. 5. The male genitalia of orthopteroid insects, by R. E. Snodgrass. 107 pp., 42 figs. (Publ. 3442.) September 25, 1937.

No. 6. Growth of Aveña coleoptile and first internode in different wave-length bands of the visible spectrum, by Earl S. Johnston. 19 pp., 4 figs. (Publ. 3444.) November 6, 1937.

Title page and table of contents. (Publ. 3450.)

VOLUME 97

No. 1. Preliminary report on the Smithsonian Institution-Harvard University archeological expedition to northwestern Honduras, 1936, by William Duncan Strong, Alfred Kidder II, and A. J. Drexel Paul, Jr. 129 pp., 16 pls., 32 figs. (Publ. 3445.) January 17, 1938.

No. 2. Plant growth in relation to wave-length balance, by Earl S. Johnston. 18 pp., 4 pls. (Publ. 3446.) January 12, 1938.

No. 3. Middle Cambrian fossils from Pend Oreille Lake, Idaho, by Charles Elmer Resser. 12 pp., 1 pl. (Publ. 3447.) January 3, 1938.

No. 4. The feeding mechanism of adult Lepidoptera, by John B. Schmitt. 28 pp., 12 figs. (Publ. 3448.) January 10, 1938.

SMITHSONIAN ANNUAL REPORTS

Report for 1936.—The complete volume of the Annual Report of the Board of Regents for 1936 was received from the Public Printer in October 1937.

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, 1936. xiv+446 pp., 122 pls., 26 text figs. (Publ. 3405.)

The appendix contained the following papers:

- Astronomy in Shakespeare's time and in ours, by C. G. Abbot.
- The size and age of the universe, by Sir James Jeans.
- The earth, the sun, and sunspots, by Loring B. Andrews.
- Northern lights, by A. S. Eve.
- Radioactivity and atomic theory, by Lord Rutherford.
- The cryogenic laboratory at Leiden, by Robert Guillian.
- Form, drift, and rhythm of the continents, by W. W. Watts.
- Core samples of the ocean bottom, by Charles Snowden Piggot.
- Some new aspects of evolution, by W. P. Pycraft.
- What is the meaning of predation? by Paul L. Errington.

The gorillas of the Kayonsa region, Western Kigezi, SW. Uganda, by Capt. C. R. S. Pitman.

The vampire bat: A presentation of undescribed habits and review of its history, by Raymond L. Ditmars and Arthur M. Greenhall.

Some of the commoner birds of Ceylon, by Casey A. Wood.

The wax palms, by Miriam L. Bomhard.

Significance of shell structure in diatoms, by Paul S. Conger.

Some aspects of the plant virus problem, by Kenneth M. Smith.

Sun rays and plant life, by Earl S. Johnston.

Reactions to ultraviolet radiation, by Florence E. Meier.

Aerial photography, by Capt. H. K. Baisley.

Easter Island, Polynesia, by Henri Lavachery.

The Eskimo archeology of Greenland, by Therkel Mathiassen.

Petroglyphs of the United States, by Julian H. Steward.

The history of the crossbow, illustrated from specimens in the United States National Museum, by C. Martin Wilbur.

Report for 1937.—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 1938.

Report of the Secretary of the Smithsonian Institution and financial report of the executive committee of the Board of Regents for the year ended June 30, 1937. 123 pp., 7 pls., 1 fig. (Publ. 3449.)

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

SPECIAL PUBLICATIONS

Explorations and field work of the Smithsonian Institution in 1937. 122 pp., 123 figs. (Publ. 3480.) April 9, 1938.

Radio Program Folders, "The World is Yours." Edition of 200,000 distributed by the Office of Education, United States Department of the Interior.

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, 4 bulletins, and 1 separate from Bulletin 100, 1 volume of the Proceedings, and 19 separates from Proceedings volumes 84 and 85, as follows:

MUSEUM REPORT

Report on the progress and condition of the United States National Museum for the year ended June 30, 1937. iii+130 pp. January 1938.

PROCEEDINGS: VOLUME 84

Complete volume:

Proceedings of the United States National Museum. Vol. 84, viii+606 pp., 80 pls., 34 figs.

Separates:

No. 3017. Revision of the North American species of ichneumon-flies of the genus *Ewetastes* Cravenhorst. By R. A. Cushman. Pp. 243-312, pls. 16-21. July 3, 1937.

No. 3019. Moths of the genus *Rupela* (Pyralididae: Schoenobiinae). By Carl Heinrich. Pp. 355-388, pls. 22-33. July 3, 1937.

No. 3021. Observations on the birds of West Virginia. By Alexander Wetmore. Pp. 401-441. August 24, 1937.

No. 3022. Annotated list of West Virginia mammals. By Remington Kellogg. Pp. 443-479. October 7, 1937.

No. 3023. On the detailed skull structure of a crested hadrosaurian dinosaur. By Charles W. Gilmore. Pp. 481-491, figs. 29-34. October 12, 1937.

No. 3024. Hydrocorals of the North Pacific Ocean. By Walter Kendrick Fisher. Pp. 493-554, pls. 34-76. March 8, 1938.

No. 3025. A giant new species of fairy shrimp of the genus *Branchinecta* from the State of Washington. By James E. Lynch. Pp. 555-562, pls. 77-80. December 3, 1937.

No. 3026. New species of moths of the family Notodontidae in the United States National Museum. By William Schaus. Pp. 563-584. December 29, 1937.

— Title-page, table of contents, and index. Pp. i-viii, 585-606. June 18, 1938.

VOLUME 85

Separates:

No. 3027. On some onychophores from the West Indies and Central America. By Austin H. Clark. Pp. 1-3. November 5, 1937.

No. 3028. Synopsis of the beetles of the Chilean genus *Phytholaema* (Scarabaeidea: Melonthinac). By Lawrence W. Saylor. Pp. 5-11, fig. 1. December 3, 1937.

No. 3029. Redescription of the capelin *Mallotus catervarius* (Pennant) of the North Pacific. By Leonard P. Schultz. Pp. 13-20. December 2, 1937.

No. 3030. A Miocene booby and other records from the Calvert formation of Maryland. By Alexander Wetmore. Pp. 21-25, figs. 2, 3. January 14, 1938.

No. 3031. Another fossil owl from the Eocene of Wyoming. By Alexander Wetmore. Pp. 27-29, figs. 4, 5. January 17, 1938.

No. 3032. Descriptions of new fishes obtained by the United States Bureau of Fisheries steamer *Albatross*, chiefly in Philippine and adjacent waters. By Henry W. Fowler. Pp. 31-135, figs. 6-61. May 23, 1938.

No. 3033. Evidence of Triassic insects in the Petrified Forest National Monument, Arizona. By M. V. Walker. Pp. 137-141, pls. 1-4. June 14, 1938.

No. 3034. Review of the annelid worms of the family Nephtyidae from the Northeast Pacific, with descriptions of five new species. By Olga Hartman. Pp. 143-158, figs. 62-67. June 8, 1938.

No. 3036. Revision of the Nearctic leafhoppers of the tribe Errhomenellini (Homoptera: Cicadellidae). By P. W. Oman. Pp. 163-180, pls. 5, 6. May 27, 1938.

No. 3037. A new genus and two new species of the dipterous family phoridae. By Charles T. Greene. Pp. 181-185, fig. 69. June 27, 1938.

No. 3038. A new genus and two new species of cottoid fishes from the Aleutian Islands. By Leonard P. Schultz. Pp. 187-191, fig. 70. May 12, 1938.

BULLETINS

No. 166. The oxystomatous and allied crabs of America. By Mary J. Rathbun. vi+278 pp., 86 pls., 47 figs. October 14, 1937.

No. 168. Nearctic Collembola, or springtails, of the family Isotomidae. By J. W. Folsom. iii+144 pp., 39 pls. July 1, 1937.

No. 169. The Fort Union of the Crazy Mountain Field, Montana, and its mammalian fauna. By George Gaylord Simpson. x+387 pp., 10 pls., 80 figs. August 21, 1937.

No. 171. The Pleistocene vertebrate fauna from Cumberland Cave, Maryland. By James W. Gidley and C. Lewis Gazin. vi+99 pp., 10 pls., 50 figs. May 5, 1938.

Separate from Bulletin 100:

Vol. 6, part 9. The tree snails of the genus *Cochlostyla* of Mindoro Province, Philippine Islands. By Paul Bartsch. Pp. 373-533, pls. 94-120. February 26, 1938.

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 three bulletins were issued as follows:

Fifty-fourth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1936-1937. 9 pp.

Bulletin 115. Journal of Rudolph Friederich Kurz. Edited by J. N. B. Hewitt. 382 pp., 48 pls.

Bulletin 116. Ancient caves of the Great Salt Lake region. By Julian H. Steward. 131 pp., 1 map, 9 pls., 48 figs.

Bulletin 117. Historical and ethnographical material on the Jivaro Indians. By M. W. Stirling. 148 pp., 1 map, 37 pls., 6 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.

The report for 1933 (Writings on American History) and the report for 1936, volume 1, were issued during the year. The report for 1937 and Writings on American History, 1934 and 1935, were in press at the close of the year.

REPORT OF THE NATIONAL SOCIETY, DAUGHTERS OF THE AMERICAN REVOLUTION

The manuscript of the Fortieth Annual Report of the National Society, Daughters of the American Revolution, was transmitted to Congress, in accordance with law, December 3, 1937.

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, 1939, totals \$67,000, allotted as follows:

Smithsonian Institution.....	\$17,000
National Museum.....	29,000
Bureau of American Ethnology.....	12,000
International Exchange Service.....	100
National Zoological Park.....	100
Astrophysical Observatory.....	400
American Historical Association.....	8,000
National Collection of Fine Arts.....	400

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, 1938

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..... 1,150,703.76

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:

Abbott, William L., fund, bequest to the Institution.....	\$101,108.02
Arthur, James, fund, income for investigations and study of sun and lecture on the sun.....	39,689.13
Bacon, Virginia Purdy, fund, for a traveling scholarship to investigate fauna of countries other than the United States.....	49,719.73
Baird, Lucy H., fund, for creating a memorial to Secretary Baird...	14,225.49
Barstow, Frederic D., fund, for purchase of animals for the Zoological Park.....	754.88
Canfield collection fund, for increase and care of the Canfield collection of minerals.....	37,956.16
Casey, Thomas L., fund, for maintenance of the Casey collection and promotion of researches relating to Coleoptera.....	7,669.52
Chamberlain, Francis Lea, fund, for increase and promotion of Isaac Lea collection of gems and mollusks.....	27,946.29
Hillyer, Virgil, fund, for increase and care of Virgil Hillyer collection of lighting objects.....	6,522.24
Hitchcock, Dr. Albert S., Library fund, for care of Hitchcock Agrostological Library.....	1,190.87
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.....	15,034.83
Myer, Catherine Walden, fund, for purchase of first-class works of art for the use of, and benefit of, the National Gallery of Art.....	18,811.84
Pell, Cornelia Livingston, fund, for maintenance of Alfred Duane Pell collection.....	2,395.18
Poore, Lucy T. and George W., fund, for general use of the Institution when principal amounts to the sum of \$250,000.....	71,535.89
Reid, Addison T., fund, for founding chair in biology in memory of Asher Tunis.....	28,981.48
Roebbling fund, for care, improvement, and increase of Roebbling collection of minerals.....	119,764.35
Rollins, Miriam and William, fund, for investigations in physics and chemistry.....	92,791.56
Springer, Frank, fund, for care, etc., of Springer collection and library.....	17,796.43
Walcott, Charles D., and Mary Vaux, research fund, for development of geological and paleontological studies and publishing results thereof.....	10,883.24
Younger, Helen Walcott, fund, held in trust.....	50,112.50
Zerbee, Frances Brincklé, fund, for endowment of aquaria.....	755.28

Total endowment for specific purposes other than Freer endowment..... 836,590.91

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

Fund	United States Treasury	Consolidated fund	Separate fund	Total
Abbott, W. L.....		\$67,800.35	\$33,307.67	\$101,108.02
Arthur, James.....		39,689.13		39,689.13
Bacon, Virginia Purdy.....		49,719.73		49,719.73
Baird, Lucy H.....		14,225.49		14,225.49
Barstow, Frederic D.....		754.88		754.88
Canfield collection.....		37,956.16		37,956.16
Casey, Thomas L.....		7,669.52		7,669.52
Chamberlain.....		27,946.29		27,946.29
Hillyer, Virgil.....		6,522.24		6,522.24
Hitchcock, Library.....		1,190.87		1,190.87
Hodgkins, specific.....	\$100,000			100,000.00
Special research.....			20,946.00	20,946.00
Hughes, Bruce.....		15,034.83		15,034.83
Myer, Catherine W.....		18,811.84		18,811.84
Pell, Cornelia Livingston.....		2,395.18		2,395.18
Poore, Lucy T., and George W.....	26,670	44,865.89		71,535.89
Reid, Addison T.....	11,000	13,481.48	4,500.00	28,981.48
Roebbling collection.....		119,764.35		119,764.35
Rollins, Miriam and William.....		83,291.56	9,500.00	92,791.56
Smithsonian unrestricted:				
Special.....			1,400.00	1,400.00
Avery.....	14,000	36,953.44		50,953.44
Endowment.....		211,871.12		211,871.12
Habel.....	500			500.00
Hachenberg.....		3,990.90		3,990.90
Hamilton.....	2,500	400.61		2,900.61
Henry.....		1,200.21		1,200.21
Hodgkins (general).....	116,000	29,993.12		145,993.12
Parent.....	727,640	1,211.48		728,851.48
Rhees.....	590	469.47		1,059.47
Sanford.....	1,100	883.41		1,983.41
Springer.....		17,796.43		17,796.43
Walcott, Charles D., and Mary Vaux.....		10,883.24		10,883.24
Younger, Helen Walcott.....			50,112.50	50,112.50
Zerbee, Frances Brincklé.....		755.28		755.28
Total.....	1,000,000	867,528.50	119,766.17	1,987,294.67

CONSOLIDATED FUND

Statement of principal and income for the last 10 years

Fiscal year	Capital	Income	Percentage
1929-----	\$557,056.95	\$28,109.56	5.04
1930-----	578,292.40	28,908.87	5.00
1931-----	668,069.02	28,518.07	4.27
1932-----	712,156.86	26,142.21	3.67
1933-----	764,077.67	28,185.11	3.68
1934-----	754,570.84	26,650.32	3.66
1935-----	706,765.68	26,808.86	3.79
1936-----	723,795.46	26,836.61	3.71
1937-----	738,858.54	33,819.43	4.57
1938-----	867,528.50	34,679.64	4.00

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 \$4,820,777.31. 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-----	\$540,074.68
Court and grounds maintenance fund-----	135,782.17
Curator fund-----	549,589.39
Residuary legacy-----	3,595,331.07
Total-----	4,820,777.31

SUMMARY

Invested endowment for general purposes-----	\$1,150,703.76
Invested endowment for specific purposes other than Freer endowment-----	836,590.91
Total invested endowment other than Freer endowment---	1,987,294.67
Freer invested endowment for specific purposes-----	4,820,777.31
Total invested endowment for all purposes-----	6,808,071.98

CLASSIFICATION OF INVESTMENTS

Deposited in the U. S. Treasury at 6 percent per annum, as authorized in the United States Revised Statutes, sec. 5591-----		\$1,000,000.00
Investments other than Freer endowment (cost or market value at date acquired) :		
Bonds (25 different groups)-----	\$328,855.55	
Stocks (50 different groups)-----	551,406.56	
Real estate and first-mortgage notes-----	75,053.67	
Uninvested capital-----	31,978.89	
		<u>987,294.67</u>
Total investments other than Freer endowment-----		1,987,294.67
Investments of Freer endowment (cost or market value at date acquired) :		
Bonds (47 different groups)-----	\$2,172,981.47	
Stocks (50 different groups)-----	2,449,317.39	
Real estate first-mortgage notes-----	9,000.00	
Uninvested capital-----	189,478.45	
		<u>4,820,777.31</u>
Total investments-----		6,808,071.98

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

Cash balance on hand June 30, 1937-----		\$354,294.70
Receipts:		
Cash income from various sources for general work of the Institution-----	\$65,636.52	
Cash gifts and contributions expendable for special scientific objects (not to be invested)-----	51,032.50	
Cash gifts for special scientific work (to be invested)-----	44,803.58	
Cash income from endowments for specific use other than Freer endowment and from miscellaneous sources (including refund of temporary advances)-----	67,369.82	
Cash received as royalties from Smithsonian Scientific Series-----	42,195.73	
Cash capital from sale, call of securities, etc. (to be reinvested)-----	67,924.33	
		<u>338,962.48</u>
Total receipts other than Freer endowment-----		338,962.48
Cash receipts from Freer endowment, income from investments, etc-----	\$255,651.61	
Cash capital from sale, call of securities, etc. (to be reinvested)-----	544,896.45	
		<u>800,548.06</u>
Total receipts from Freer endowment-----		800,548.06
		<u>1,493,805.24</u>
Total-----		1,493,805.24

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

Disbursements:

From funds for general work of the Institution:

Buildings—care, repairs, and alterations---	\$3,235.62
Furniture and fixtures-----	225.84
General administration ² -----	28,540.66
Library-----	2,224.07
Publications (comprising preparation, printing, and distribution)-----	19,314.78
Researches and explorations-----	31,446.60

84,987.57

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-----	72,893.20
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)-----	85,822.05
Reinvestment of cash capital from sale, call of securities, etc-----	43,772.69
Cost of handling securities, fee of investment counsel, and accrued interest on bonds purchased-----	1,775.50

204,263.44

From Freer endowment:

Operating expenses of the gallery, salaries, field expenses, etc-----	57,859.40
Purchase of art objects-----	170,039.96
Investments made from gain from sale, etc., of securities-----	39,559.79
Reinvestment of cash capital from sale, call of securities, etc-----	350,924.67
Cost of handling securities, fee of investment counsel, and accrued interest on bonds purchased-----	19,677.72

638,061.54

Cash balance June 30, 1938----- 566,492.69

Total----- 1,493,805.24
² This includes salary of the Secretary and certain others.

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

Expenditures from general funds of the Institution:

Publications.....	\$19,314.78	
Researches and explorations.....	31,446.60	
		\$50,761.38

Expenditures from funds devoted to specific purposes:

Researches and explorations.....	58,400.78	
Care, increase, and study of special collections.....	10,191.15	
Publications.....	1,620.96	
		70,212.89

Total.....		120,974.27
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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 \$903.14.

The Institution gratefully acknowledges gifts or bequests from the following:

- Friends of Dr. Albert S. Hitchcock, for establishment and care of the Hitchcock Agrostological Library.
- Research Corporation, further contributions for research in radiation.
- John A. Roebling, further contributions for research in radiation.
- Mrs. Mary Vaux Walcott, for purchase of certain specimens.
- Laurence L. Wilson, for archeological investigations in Texas.

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 1938:

Salaries and expenses.....		\$36,330
International Exchanges.....		44,260
American Ethnology.....		58,730
Astrophysical Observatory.....		30,850
National Museum:		
Maintenance and operation.....	\$144,840	
Preservation of collections.....	609,380	
		754,220
National Collection of Fine Arts.....		34,275
Printing and binding.....		65,000
National Zoological Park.....		225,000
Total.....		1,248,665

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

SEPTEMBER 1, 1938.

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, 1938, and certify the balance of cash on hand, including Petty Cash Fund, June 30, 1938, to be \$568,392.69.

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, 1938, 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, 1938.

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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