

# THE AMERICAN MUSEUM OF NATURAL HISTORY

66<sup>TH</sup>
Annual Report

Issued May 1, 1935

FOR THE YEAR 1934





#### SERIAL SCIENTIFIC PUBLICATIONS

#### NATURAL HISTORY, Journal of The American Museum:

Volumes I-XXXIV, 1900–1934. An illustrated monthly magazine (September to June) devoted to records of scientific research, exploration and discovery, of the development of museum exhibitions and of museum influence on education. Contributors include the scientific staff, explorers and Members of the American Museum and other eminent naturalists. Issued free to all classes of membership, or on subscription \$3.00.

#### BULLETIN of The American Museum:

Volumes I-LXVIII, 1881–1934. Scientific records of explorations and collections of the Museum, in Geology, Palaeontology, Mineralogy, Zoology, and, originally, Anthropology. Distributed in exchange to over 400 libraries and institutions of science and learning throughout the world. \$5.00–\$10.00 per volume.

#### ANTHROPOLOGICAL PAPERS of The American Museum:

Volumes I-XXXV, 1906-1934. Discoveries, explorations and researches in Archaeology, Anthropology and Ethnology among the extinct and living races of man. Distributed to over 300 institutions and scientists throughout the world. 25c.-\$5.00 a part.

#### AMERICAN MUSEUM NOVITATES:

Nos. 1-763, 1921-1934. Devoted to publication of preliminary announcements and descriptions of new forms in the fields of Zoology, Palaeontology, Geology and Mineralogy. 15c. each.

#### MEMOIRS of The American Museum:

Volumes I, III, VI and IX, 1893–1909; contributions by Whitfield, Osborn, Beutenmüller, Matthew, Lumholtz, Emmons, Matthews, Brown, McGregor, Hussakof, Dean.

Volumes II, IV, V, VII, VIII and X-XV constitute the Jesup North Pacific Expedition Series.

Volumes I-III of the New Series, 1912–1921, devoted to Zoology and Palaeontology, \$2.00-\$12.00 per part. This terminates the serial form of publication. Beginning with the forthcoming work by Henry Fairfield Osborn, "Evolution of the Proboscidea," the Memoirs will be issued without serial numbers.

#### SPECIAL SCIENTIFIC PUBLICATIONS

#### A REVIEW OF THE PRIMATES:

By Daniel Giraud Elliot, 1913. A monographic treatise in three quarto volumes. Paper, \$35.00; morocco, \$45.00.

#### BIBLIOGRAPHY OF FISHES:

By Bashford Dean, 1916-1923, covering the entire literature of fishes to 1914 and embracing 45,000 titles arranged alphabetically by authors. 3 volumes, \$15.00.

#### THE BASHFORD DEAN MEMORIAL VOLUME:

Article I, 1930, \$1.25; Article II, 1931, 60c.; Article III, 1931, \$1.75; Article IV, 1932, \$2.50; Article V, 1933, \$1.00.

(Publications continued on third page of cover)



## THE AMERICAN MUSEUM OF NATURAL HISTORY

# 66<sup>TH</sup> Annual Report

FOR THE YEAR 1934

"For the purpose of establishing and maintaining in said city a Museum and Library of Natural History; of encouraging and developing the study of Natural Science; of advancing the general knowledge of kindred subjects, and to that end of furnishing popular instruction."

THE CITY OF NEW YORK
Issued May 1, 1935

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Credit is due to Miss Clara Mabel Beale in the assembling and editing of this report. Miss Beale has for years given minute attention to the numerous details involved in getting out a report of this character, and we desire to express to her our deepest appreciation for her excellent work.

#### SIXTY-SIXTH ANNUAL REPORT

To the Trustees of The American Museum of Natural History and to the City of New York

#### By President Frederick Trubee Davison

In presenting the following report of the accomplishments and activities of the various departments of The American Museum of Natural History for 1934, I first of all desire to thank the hundreds of members who came to the Museum's financial assistance last spring and summer, when, due to unforeseen circumstances, our carefully balanced budget was upset by a threatening deficit of about \$35,000. There were only two alternatives: either to reduce the Museum's service to the public, or else to appeal to its members to help make up the deficit.

We selected the latter course, and I am happy to say that the appeal yielded the splendid sum of \$18,000. This amount, together with funds raised elsewhere, plus additional economies and savings, enabled us to re-establish a practically balanced budget. But above all, this was made possible by the loyalty and sacrifices of the entire personnel of the Museum. The contributions came in sums ranging from a few dollars to several hundreds of dollars, and from Museum members from all parts of the country, and even from abroad.

I am firmly convinced that one of the finest marks of distinction ever conferred upon the men and women of the Museum's administrative and scientific staffs is that Museum members, whose only link with the Museum is their interest in natural history, were sufficiently sympathetic towards its financial problems to contribute at a time when the demand upon the dollar is greater than it ever has been.

An active and interested membership is the soul and spirit of any institution, and it is most gratifying that the practical participation in the Museum's affairs by its members enabled it to extend its usefulness at a period when vigorous efforts are being made throughout the country to utilize to the utmost the increasing number of leisure hours.

During 1934, a total of 35,115,658 contacts were made by

the Museum through its extension educational system—an increase of 2,829,250 over 1933. While the major portion of this important increase is represented by a tremendous upward surge of the number of school pupils reached by the Museum's Department of Education through circulating collections, lantern slides, motion pictures and lecture facilities, it is worth noticing that the Museum's exhibition halls had 1,113,245 visitors in 1934 as against 924,030 in 1933.

Thislarge growth in Museum attendance was undoubtedly primarily due to the opening of many new exhibits. Among the new exhibitions which won wide public interest is the Drummond Jade Collection, the magnificent Coral Reef Group in the Hall of Ocean Life, the Gobi Habitat Group of Birds, the rare and interesting specimens brought from New Guinea by Dr. Margaret Mead, and the Bathysphere used by Dr. William Beebe in his deep-sea explorations. The aviation exploration exhibit, presented to the Museum in December, 1933, by Colonel and Mrs. Charles A. Lindbergh, was opened shortly after the turn of the new year. It has been viewed with great interest by hundreds of thousands of visitors, who came to see the famous plane "Tingmissartoq."

During 1934, members of the Museum's scientific staff continued their effective and valuable work in the fields of research and exploration. In his part of this report, Dr. Roy Chapman Andrews dwells at length upon these important features, but I would like to refer briefly to the fact that during the year—thanks to the generosity of friends—the Museum had some twenty-one expeditions in the field, ranging in character from boring through clays in the Hackensack meadows to digging for dinosaurs in the mountains of Wyoming; from studying insects in the Grand Canyon to exploring the hinterland of Patagonia. As for research, nearly every phase of natural history is represented in the papers, lectures and other scientific reports by Museum curators and their associates.

While I am loath to single out any one field of research without mentioning them all, I feel compelled to express deep appreciation for the appropriation made by the Josiah Macy, Jr. Foundation, in support of the work of Dr. G.

Kingsley Noble relative to hormonal investigations of the lower vertebrates, in the Department of Experimental Biology.

Another important gift was the presentation by Mr. Frederick F. Brewster and Dr. Leonard C. Sanford of their magnificent collection of South American water-fowl, shore and land birds. This collection, which numbers almost 8,000 skins, is so complete that its study has solved a large number of research problems in connection with these birds.

We greatly appreciate the action of the Board of Estimate and Apportionment in approving contracts to the amount of \$400,000 to provide for the casing and other equipment of the Whitney Wing, which has been erected jointly through appropriation by the City of New York and the gift of the late Mr. Harry Payne Whitney. These funds were made available through the purchase by the Trustees of City bonds of \$250,000, supplementing cash received through gift of the late Harry Payne Whitney. The storage cases for this wing are now nearing completion, and presently the great Rothschild Collection of Birds, the gift of Mrs. Harry Payne Whitney and her children. will be again available for study and research. Office equipment has been delivered and cases for the first and second floors are under construction. We are also grateful to the Board of Estimate and Apportionment for having made a supplementary appropriation of \$30,000, to provide for the completion of the construction of group exhibition cases in the Akeley African Hall.

While on the subject of new construction, I am happy to report the completion of six of the large Habitat Groups on the main floor of Akeley African Hall. Eight more are under construction, and it is gratifying to note that this hall, which will stand as a memorial to Carl Akeley, is rapidly assuming the dramatic color and artistic beauty which are bound to make it one of the foremost exhibits of an African game world that some day will be but a memory.

Progress is also to be reported on the construction of the Hayden Planetarium. According to present indications, this magnificent addition to the Museum will be opened to the public some time during the summer of 1935. It is fitting that tribute should be paid to the splendid work done by the Planetarium Advisory Committee, under the guidance of Mr. A. Cressy Morrison. Thanks to the energy of this committee, the many converging problems that enter into the equipment of the Planetarium to make it the home of a well-rounded astronomical exhibit, have been speedily solved.

Due to the illness of Dr. George H. Sherwood, Director of the Museum, Dr. Roy Chapman Andrews took over the duties of Director for the better part of 1934. At the turn of the year, Doctor Sherwood retired to become Honorary Director of the Museum and Doctor Andrews succeeded him as Director. This change means that Dr. Sherwood will give his entire time to his position as Curator-in-Chief of the Museum's Department of Education, a department in which Dr. Sherwood has always taken a keen personal In fact, one of the major reasons for its growth and usefulness is the work he has done. No one could adequately appraise the part that Dr. Sherwood has played in the development of the Museum for many years. His appreciation of the opportunities of the Museum could not have been surpassed, and his ability and loyalty in meeting them have been one of the great factors in the Museum's history. Assistant Director Wayne M. Faunce was appointed Vice-Director and Executive Secretary.

The Trustees have felt that in our magazine, Natural History, there was a very important instrument which can be made more effective than in the past in increasing our membership and in bringing us into direct contact with larger numbers of people, thereby enlarging our educational service. Accordingly, steps were taken to bring this about, and already most satisfactory progress can be reported. The Trustees are deeply indebted to the committee of which Mr. Frederick M. Warburg is chairman, for its advice and help in regard to this project.

The Bear Mountain Nature Trails, Trailside Museum and Zoos have been operated and maintained by The American Museum of Natural History, in coöperation with the Commissioners of the Palisades Interstate Park, for

the past eight years. During this period, nearly two million men, women and children visited the trailside area, on the banks of the Hudson at Bear Mountain. There were 380,000 visitors in 1934 alone.

There were notable increases in personal contacts throughout 1934. Eighteen colleges and universities, three hundred and twenty grade schools and three normal schools received direct instruction, in addition to many groups of boy and girl scouts, many similar organizations, and thousands of the general public. The Nature Trails and Trailside Museums continue to follow the policy of "teaching" nature where nature is.

Receiving, as it has, the enthusiastic support of the Park Commissioners, this institution has come to play a very important part in the State Park System. It would be a real tragedy to be compelled to close the doors of the Trailside Museum due to lack of funds, in the event that the State government fails to appropriate the necessary money to carry on this work which means so much to so many people, particularly children, in the metropolitan area.

The Museum faces another difficult year financially. We shall have to continue to operate on a very much reduced basis and shall be obliged to close ten halls daily as in the recent past.

Nevertheless, I am confident that, as in 1934, the Trustees, our entire Administrative and Scientific Staffs, and our membership will unite to make 1935 a year of increased usefulness to the community and to the nation.

We are inheritors of a great tradition, and that fact cannot fail to carry us forward in an earnest attempt to meet our responsibilities.



## II. SCIENTIFIC AND EDUCATIONAL PROGRESS

#### ROY CHAPMAN ANDREWS, Acting Director

The work of the past year was begun under the direction of Dr. George H. Sherwood, who, since 1927, had held the post of Director. Early in the year, however, Director Sherwood was obliged to retire from these arduous duties because of ill health, and the present Director wishes to record his admiration for Doctor Sherwood as an executive and his esteem as a friend and co-worker.

The reports received from the scientific departments have been summarized very briefly, as it is necessary to curtail our Annual Report to save expense. Besides the projects that we have been able to finance, many lines of investigation and many activities that we wish we might undertake remain untouched because of lack of funds.

In many cases the use of small models, stratigraphic sections, and habitat groups would add to the effectiveness of our exhibits. Our loan program and facilities for the use of reserve collections could be extended to advantage, and answers to inquiries would be facilitated by additional handbooks and guide leaflets. More expeditions would solve more problems. In spite of the help we have received from volunteer workers and from the Emergency Relief Bureau, New York City Works Division, more specialized assistance is needed for the routine and extension of the activities of a large institution. More labels are needed, and more scientific papers should be published. Cases are needed for specimens and collections. Exhibits have been begun but not finished because of lack of funds. Additional artists are needed for modeling and color work.

Much routine work has been done: cataloguing, indexing, photographing, care of collections, identification of specimens in response to inquiries, and restoration of specimens, etc.

The Museum has acted as host to visiting educational and scientific societies, and temporary exhibits of interest to the public have been installed.

Weekly concerts in our auditorium, by the New York Civic Orchestra, were begun in 1933, under the auspices of the State Department of Education, and in the early part of 1934 were continued under the same auspices. Later they were given by the Federal Civil Works Administration of the City of New York, and then by the Department of Public Welfare of the City of New York. These concerts have proved very popular, and the Museum has been glad to sponsor them.

#### **NEW EXHIBITIONS**

The Isaac Wyman Drummond Memorial Hall was opened with appropriate ceremonies on April 6. This installation, besides presenting with fitting efficiency and dignity the gift of Mrs. William Herbert (Katharine Wyman Drummond Herbert), involves several novelties in museum display, including an entirely new use of decorative panels to impart group label information.

A case illustrating the physical property of fluorescence among minerals was installed in the northwest corner of Morgan Hall. This exhibit derives its ultraviolet illumination from a General Electric Nico tube, presented to the Museum by the New York Mineralogical Club.

The Rhinoceros Alcove on the south side of the Tertiary Hall was completed and opened to the public. In the Dinosaur Hall there has been added the beautifully mounted skeleton of *Plateo-saurus* from the Triassic of Württemberg.

In the first half of the year, the complicated underwater portion of the Coral Reef Group was finished, and in July the great glass fronts for both the above and underwater portions were installed, the largest yet used for a museum group. Since then, work has proceeded on the representation of the water surface and the vegetation for the rocky island.

In the Darwin Hall, Mr. Hermann O. Mueller has completed five types of greatly enlarged rotifer jaws modeled in glass, and two more were practically finished, thus rounding out the series. Progress was made on anatomical models in glass of a male and female rotifer (*Epiphanes senta*), thus covering a species much used in college classwork.

Dr. George H. Childs is at work, under the direction of the Curator, Doctor Miner, upon an elaborate series of models of *Amphioxus lanceolatus*, to fill a gap in the Darwin Hall series, of great importance in connection with high school and university work.

A new series of descriptive labels of the chief phyla of the

animal kingdom has been hand-lettered and installed in the Darwin Hall.

Doctor Beebe's remarkable discovery in regard to the "stalkeyed fish" (Stylophthalmus) will be the basis of an exhibit in the deep-sea fish room. Doctor Beebe's bathysphere, with a selection of his largest deep-sea fishes, forms an arresting exhibit in preparation in the Hall of Ocean Life.

A new exhibit in the Hall of Fishes shows the evolution of the body form of skates and rays.

The Hall of Biology and Public Health was completely rearranged and some new exhibits added. For many years the public health exhibits have been among the most educational in the Museum. Large classes have studied them intensively, to supplement their classroom work.

The first storage cases for the Whitney Wing were delivered in December, and the work of getting this wing into condition for occupation by the Department of Birds has progressed rapidly, giving promise of the early commencement of the task of unpacking the Rothschild Collection and moving the Department into its new quarters.

The Gobi habitat group was opened during the year, based on material collected by Doctor Andrews and Doctor Granger during the activities of the Central Asiatic Expeditions. This group forms the eighth of the series of groups of birds of the world.

Renovation of the exhibition collection of local birds is progressing.

Plans have progressed for the mammal groups in the African Hall, and there have been important additions to other mammal halls. In the Hall of Ocean Life, a fine large skeleton of the Right Whale was mounted and substituted for an older specimen. The installation of the Lindbergh plane and of the Bathysphere, with accessory material, devolved upon the Department of Mammals.

In Physical Anthropology, Dr. H. L. Shapiro and Dr. William W. Howells developed tentative plans for exhibits showing the main race types of man, the growth stages in the development of the adult from childhood, and an exhibit showing the cation of the most important ductless glands and their effect upon bodily form and size.

A small scale model of the Temple of Tenayuca was constructed by Mr. S. Ichikawa and installed in the Mexican Hall.

This is a well-designed model, in part a restoration, and the only known model of an Aztec temple.

In the Eastern Woodlands exhibit, the birchbark tipi has been reconstructed, the group showing the home life of an Indian family revised, and two special exhibits for maple sugar and wild rice have been arranged.

A selected series from the collections secured by Dr. Margaret Mead, in New Guinea (1931–1933), was installed in the Philippine Islands Hall, since the Pacific Islands Hall does not provide sufficient space.

In the hall devoted to Asia, Mrs. A. Gordon installed a collection of religious images and prepared labels for them. This service was voluntary. A small exhibit of ethnological material from India was also installed.

In the hall for Prehistoric Archaeology, the exhibit representing neolithic Denmark was revised, and a new exhibit made for Armenian prehistoric archaeology. This hall now presents a systematic view of the early periods in human culture.

#### **PREPARATION**

Dr. James L. Clark and his staff completed six of the large, colorful groups on the main floor of Akeley Memorial, African Hall. The Gorilla Group, the most elaborate and ambitious mammal group yet attempted by any museum, was practically completed within the year. Work on these complex and intricate exhibits has gone forward with unprecedented speed, made possible by a well-trained corps of artists and craftsmen. The African groups brought to completion are:

African Buffalo, gift of Mr. George Eastman.

Giant Sable, from Angola, gift of Mr. Arthur S. Vernay.

Mountain Nyala, from the highlands of Abyssinia, gift of the Sanford-Legendre Abyssinian Expedition.

Giant Eland, from the Sudan, gift of Mr. C. Oliver O'Donnell. Greater Kudu, from Tanganyika Territory, gift of Mr. Daniel E. Pomeroy.

Mountain Gorilla of Kivu, gift of Messrs. Julius F. and Franz T. Stone, and the Misses Edna A., Theodora M. and Natalia S. Stone.

Eight more groups are well advanced: the Waterhole, the

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Lion, the Gemsbok, the Bongo, the Impalla, the Lesser Kudu, the Plains and the Wild Dog.

Mr. John W. Hope has modeled nine decorative bas-reliefs with African wild game as their theme, which are to be placed in the panels above the first-floor groups.

Other achievements were the designing and redecoration of the West Tower Room on the fourth floor, for the Drummond Collection of Jade; the Gobi Desert Bird Group in the Birds of the World Hall; the mounting of the skeletons and baleen of the Right Whale for the Hall of Ocean Life; and the creation of the model for the Whitney Memorial (South Oceanic Hall), including architectural and lighting details, and the preliminary sketches of the eighteen bird groups destined for this hall.

Notwithstanding the magnitude of the habitat group work, this activity represents less than half of the work of the Department of Preparation. The routine work includes the cleaning of skulls and skeletons, preparation of study skins, tanning skins, small mounts; models and casts; miniature groups for loans to schools; a number of illustrations and two cover paintings for Natural History, and miscellaneous labels, maps, posters and charts for all departments.

#### **EDUCATION**

High points were reached in practically all phases of the work carried on by the Department of Education in 1934. This service has become so extensive that 91 per cent. of all the public schools in New York City, including all industrial and trade schools, utilized it in one form or another, while at the same time an effective extension service through the photographic and film divisions reached forty-six States, the District of Columbia, and nine foreign countries. The records of former years in several instances were surpassed, as shown in the following summary of statistics:

	1931	1932	1933	1934
Attendance at lectures, classes, and guiding Number reached by circu-	226,552	220,482	191,556	215,209
lating collections	2,590,753	3,816,863	4,775,175	5,865,839
Number reached by lantern slide service	17.392.790	17.019.882	17.014.690	17.232.395

	1931	19 <b>32</b>	1933	1 <b>934</b>
Number reached by motion				
picture service	7,423,708	10,458,181	9,012,628	10,271,806
Visitors to Bear Mountain				
Nature Trails	283,000	300,000	350,000	380,000

While research is an established part of the work of the scientific departments of the Museum, it is just as necessary in a department devoting its entire attention to educational services. With methods changing so rapidly, it is important to test and evaluate constantly the various kinds of work being carried on and to incorporate new phases as they appear in the most progressive circles. When the leading educators began to emphasize the importance of "Activation" in its various phases, it seemed wise to introduce this type of work into our Museum educational program. Accordingly, in the fall of 1934, a "Special Activity Program" was offered to classes in the public schools of New York City. This included instruction in (1) the technique of making miniature groups for geography, history, and nature study, (2) finger painting, and (3) nature crafts.

The enthusiastic response was overwhelmingly in favor of this individual activity on the part of boys and girls.

While the department has been keeping pace with the educational world, its program of other activities, tested and proved worth while over a long period of years, has been maintained and in a number of phases has surpassed former records. This is true in regard to the coöperation with colleges and universities, activities carried on with the elementary schools, junior and senior high schools, teachers' training courses, the lecture and guide service, and various extension activities.

The outside activities include circulating collections, loans to branch libraries, loan of lantern slides, loan of motion picture films, loan of miroscopic slides, and intra-mural activities include auditorium lectures, lectures in biologic science, Saturday afternoon auditorium programs, sight conservation and blind classes, exhibition hall classes, exhibition hall guiding, radio talks and guiding, teacher training courses, adult education, college and university contacts, Junior Astronomy Club, Thoreau Nature Club, and photographic work.

Trailside Museum at Bear Mountain. The splendid work in outdoor nature education carried on at the Trailside Museum at

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Bear Mountain, in coöperation with the Palisades Interstate Park Commission, was greatly extended in 1934 through the erection by the State of special buildings for a Historical Museum, a Botanical Museum, and a new Bird and Mammal Cage. These new museums have lifted the burden of "over population" from the nature trails to such an extent that in combination with the new procedure of "trail rotation," real semi-wilderness trails are being developed. The facilities of the Trailside Crafthouse were also used extensively by interested individuals, teachers, and organized groups from camps, schools and clubs. The year 1934 witnessed the transformation of the Trailside Museum from an experimental project to a definitely established institution with thousands of visitors annually.

Inwood Park Project.—A new form of coöperation with the New York City Board of Education was carried out during the fall with groups of teachers assigned by the Civil Works Administration for work with classes of children in nature and geography in Inwood Park. In stormy weather, the public school children were brought to the Museum for special work given by Museum instructors.

Coöperation with Civilian Conservation Corps Camps.—The department cooperated with the educational work carried on in the C.C.C. Camps, under the national government, by lending 16 mm. motion picture films which were well received by the men.

Staff Personnel.—The department felt a serious loss in the absence of Dr. George H. Sherwood, its Curator-in-Chief, during his illness from March to October. Mrs. Grace Fisher Ramsey was appointed Acting Curator of Education for this period.

Another loss was felt in the withdrawal of Dr. Clyde Fisher from his duties as Curator of University, College and Adult Education to give his entire attention to the Department of Astronomy. Doctor Fisher came to the Museum June 1, 1913, and served continuously in the Department of Education until March, 1934. It was with much regret that the Educational Department gave him over to Astronomy and the Hayden Planetarium.

Acknowledgments.—It is impossible to make here individual acknowledgment to all the friends who have aided and encouraged the Museum's educational work by gifts and financial support. We, however, desire especially to mention our indebtedness to Mr.

Felix M. Warburg. It was only through his continued generosity that the Department of Education was enabled to maintain the many and long-established phases of its work, and also to develop the new activities described in this report.

#### LIBRARY AND PUBLICATION

The Trustees wish to record their appreciation of a splendid gift of books, comprising approximately 750 volumes of sporting and big game literature and a fine collection on Asia and Africa—many of which are limited, de luxe or autographed editions—and two beautiful bookcases, which will be placed in the projected Sportsman's Lounge. The donor's name, for the present, is withheld, at his request.

The Library was further enriched by many smaller gifts, and by the extensive exchanges made possible by the wide range of Museum publications. The devaluation of the dollar, in terms of gold, has been a serious handicap in the purchase of new books. Purchases abroad cost, in dollars, approximately fifty per cent. more than formerly. This condition made it necessary to cancel some subscriptions and to discontinue buying any but the most outstanding monographs on natural history subjects.

This year brought the retirement of Miss Ida R. Hood from her position as Curator of Books and Publications. Miss Hood had served the Museum faithfully and enthusiastically for more than thirty years, and her loss is deeply felt in the Library.

The output of our printing and publishing department records a larger increase than in any previous year in the volume of printed matter completed by the Museum print shop and bindery.

From September to the end of the year, Natural History was printed monthly, instead of bi-monthly, but, in spite of this, 4,908 pages of scientific and popular publications, also leaflets, were printed in 1934, an increase over 1933. There was also an increase in job work. Type for the January issue of Natural History was set in our print shop, but the printing was done elsewhere.

Volume I of the 800-page monograph on the Proboscidea, by Henry Fairfield Osborn, went to press just prior to the end of the year. The long-delayed *Bulletin*, by Henry W. Fowler, on West African Fishes, an enormous work, was finally begun.

"The Reptiles of China," by Clifford H. Pope, has been edited by Dr. Chester A. Reeds. It will constitute Volume X of "The Research 15

Natural History of Central Asia." It is being issued by G. P. Putnam's Sons, and will contain more than 600 pages, 78 text figures, and 27 plates. This is the fourth of the twelve volumes to appear in this series.

The bindery was able to give much more time to the repair of library books than in 1933.

Our regular publications include the Bulletin, Novitates, Anthropological Papers, Memoirs, Natural History, Handbooks, General Guide, Guide Leaflets, and School Service series.

#### RESEARCH

Much time has been given by Doctor Fisher to Planetarium plans, equipment, publicity and program, and to the writing of articles on the subject. He and his assistants have spoken before various audiences, and radio programs were carried on weekly over Station WOR, under the auspices of the Amateur Astronomers Association.

Mr. Clifford Frondel, a volunteer research worker in the Department of Mineralogy, has completed valuable work on the subject of selective incrustations and color zoning in crystals. Three of his papers have been published in *Novitates* and one in *The American Mineralogist*. The address of the Curator, Mr. H. P. Whitlock, as retiring President of the Mineralogical Society of America, was published under the title of "A Century of Progress in Crystallography" in *The American Mineralogist*.

Doctor Reeds prepared elevation drawings to scale of the various wall spaces and outline mural sketches for six of the eight spaces selected in the Roosevelt Memorial. For the March-April number of Natural History, Curator Reeds prepared an article, "New Piers for Giant Ships," a résumé of his report of 1933 to the Dock Department of the City of New York on the cause of rock slides in excavations for three new 1100-foot piers on the North River. He also prepared an article on "Earthquakes," published in Natural History. This article, supplemented by an earthquake map of the world, was reprinted as a Guide Leaflet. Doctor Reeds also provided base maps and other data for a model of Vesuvius, prepared earthquake bulletins for the Associated Press, and answered inquiries regarding the Museum's Mainka Seismograph.

Doctor Van Name has revised and brought up to date his comprehensive and scholarly work (in manuscript) on the Isopods

of North America. He has also identified an important collection made by Doctor Geist in Alaska, and has continued his researches on ascidians.

Curator Miner has made substantial progress on his handbook of North Atlantic Invertebrates.

During the year three important papers on invertebrates have been published in the *Bulletin* and seven in *Novitates*. Among these is a paper on the *Papuina* of the Solomon Islands, by Ilse Rensch of the Berlin Museum. Dr. William J. Clench, of the Museum of Comparative Zoölogy, has reported considerable progress on the large collection of land mollusks of the Solomon Islands, collected by the Whitney Expedition, and Professor H. A. Pilsbry has continued his work on the marine mollusks of the same region.

Papers by Dr. Waldo L. Schmitt and Dr. Clarence R. Shoemaker of the U. S. National Museum, on the Macrura and Amphipoda of Porto Rico and the Virgin Islands, have been completed and published (February, 1935) by the New York Academy of Sciences, based on material in the Museum collections. Other papers on Museum collections from the same region are in progress by various authors, including one on the Annulata of Porto Rico by A. L. Treadwell, of which the manuscript has been received. Curator Miner has continued his work on the corals of Porto Rico and other West Indian Islands.

In addition to the regular technical publications on insects, including the description of more than three hundred new species, two books have been published by members of the Department of Insect Life: Assistant Curator Curran's "Families and Genera of North American Diptera" and Curator Lutz's rewritten "Field Book of Insects."

Fishes received from the Kasai District, Belgian Congo, have been reported on by Mr. J. T. Nichols and Miss Francesca R. La Monte. A report on fishes from Brazil and British Guiana, by Miss La Monte, is ready for the press. A monographic study of the Carangid family is under way by Mr. Nichols. The Bashford Dean Memorial Volume on Archaic Fishes, under the editorship of Dr. E. W. Gudger, is progressing. Part VI, on "The Anatomy of the Frilled Shark," by Dr. B. G. Smith, is nearing completion.

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Doctor Gudger has completed an interesting study of the geographic distribution of the Whale Shark, which is being published in the Proceedings of the Zoölogical Society of London. He is also making an extended investigation of "ambicolorate" flatfishes.

In a paper read before the National Academy of Sciences, Doctor Gregory continued his theme in regard to the body forms of fishes.

Mr. Nichols has studied the flying fishes; the local fish fauna in coöperation with Mr. C. M. Breder, Jr.; the genetics of tropical aquarium fishes, in coöperation with Mr. Guy C. Mallett; and the year's new literature on Chinese fresh-water fishes.

Miss F. R. La Monte is beginning a revision of the Brazilian fresh-water fishes.

The "World of Fishes," a guide to the Hall of Fishes, by Doctor Gregory and Miss La Monte, was published during the year.

The magnificent Bassler collection of South American reptiles, received during the year, represents twelve years of collecting in the most inaccessible part of the South American continent. Doctor Bassler, who presented the collection to the Museum, has been made Research Associate, and he has continued his studies of his own material, as well as of other collections in the Museum.

The Archbold-Rand Expedition secured a notable collection of reptiles and amphibians in New Guinea, and the report on this material is well in hand.

Mr. Clifford H. Pope brought to conclusion his volume on the reptiles secured in China by the Central Asiatic Expeditions. He also published a description of a new turtle from China, and a list of and key to the turtles, crocodilians and snakes known from that country.

At the Seventeenth Annual Meeting of the American Society of Ichthyologists and Herpetologists, held in the Museum, a number of papers were presented by Department members and their associates.

The outstanding event of the year in the Department of Experimental Biology was the opening of the experimental biology laboratories. These occupy the sixth floor and roof of the new African Wing. They have been built and furnished by the City of New York, while the scientific equipment and supplies have been

provided by Trustees and friends. In these laboratories the precise methods of the physicist and chemist will be applied to problems which have baffled naturalists for a long time: heredity, animal behavior, physiology, development, and other fields.

The organization of animal societies was studied from both the psychological and the physiological aspects. The significance of color pattern in the social life of animals was analyzed by Doctor Noble and his associates. Mr. Brian Curtis, a guest investigator, studied the fishes; Mr. William Vogt, another laboratory guest, the birds, and Mr. William Hassler experimented with lizards in the field. The new biological laboratory is receiving considerable help from its guest investigators. Doctor Etkin is continuing his studies on the hormones of development. Doctor Hadley is carrying forward his investigations on color change in the animal world, and Doctor Hyman is working with problems of regeneration.

Doctor Noble and Doctor Clausen continued their studies on the physiology of hibernation. The oxygen requirement of snakes at different stages in their life cycle was determined. They have also continued their work in the field of morphogenesis, publishing a report on the internal forces controlling the shape of scales.

Doctor Chapman made a study of a collection of birds from Mocha Island, publishing a report in *Novitates*. He also published an article on Florida bird life in *Natural History*. Doctor Murphy completed the manuscript of his work on "Oceanic Birds of South America." Mr. Zimmer continued studies on South American birds, with special attention to Peruvian bird life: five numbers in the series of "Studies of Peruvian Birds" were issued in *Novitates*. Doctor Mayr has continued work on the birds of the Pacific Islands, based on the Whitney South Sea Expedition, and two numbers have been published in *Novitates*. A paper by R. T. Moore, of Pasadena, California, based partly on American Museum material and consisting of a revision of the genus *Buthraupis*, was published in *Novitates*. The cataloguing of important collections has progressed, also the indexing of the catalogues to date.

Progress has been made in research and identification of material in the Department of Mammals. The African Mammals, particularly those of the Belgian Congo, have been studied by Dr. R. T. Hatt; the mammals of Asia by Mr. T. D. Carter and by Mr.

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G. G. Goodwin; those of Malaysia and of South America by Mr. G. H. H. Tate; and those of North and Central America by Mr. Goodwin. The Curator, Dr. H. E. Anthony, spent some time on South American mammals.

A number of scientific articles have appeared in Museum publications and elsewhere by members of the Department of Mammalogy, and others are in press or in preparation, by Doctor Anthony, Doctor Hatt, Mr. Goodwin and Mr. Tate.

The mounting of an index collection of plants as zone markers for several sections of South America was completed, this collection to later serve as a basis for ecological studies in connection with South American mammals. A gazetteer of geographical names in South America has been begun, and translations of important papers on mammals in Russian have been under way. The attack upon these items has been made possible by utilizing the services of Emergency Relief Bureau workers.

Dr. G. C. Vaillant completed a manuscript report on the archaeological excavations made at El Arbolillo in the valley of Mexico; the major objective in this field is to establish long-range stratigraphic horizons.

Dr. Marshall H. Saville was commissioned to prepare a report upon the archaeological excavations and collections made by him in Mexico between 1896 and 1903. This task is practically complete, and has been supported by the Voss Fund.

Curator Wissler, assisted by Mrs. R. D. Sanderson, completed the first half of an investigation of population changes among the Indians of the Northern Plains. A manuscript covering this part of the work is practically ready for publication. In addition the first part of a study in culture adjustments among the Indians of the Northern Plains was finished.

Dr. Milo Hellman continued his important investigations concerning the growth of the human face, a subject upon which he has completed several publications. Dr. William W. Howells completed an exhaustive comparative study of the crania in the collection of the Department of Anthropology and incorporated the results into a manuscript for publication.

Reports by Messrs. C. E. Schaefer and D. Mandelbaum, on problems connected with the Cree and Flathead Indians, of the United States and Canada, are under way. (Voss Fund.)

Miss Weitzner completed a study of the house types of

Hidatsa Indians, based on field studies made by the late G. L. Wilson.

Dr. Margaret Mead has in preparation reports on her anthropological studies in New Guinea.

Curator Nelson, assisted by Mrs. Nelson and Mr. Nielson, is engaged in an exhaustive survey of early world archaeology, with a view to systematizing the typology of artifacts. (Voss Fund.)

Mr. F. Rainey is preparing a report upon his newly discovered prehistoric culture in Porto Rico. (Voss Fund.)

Mr. W. B. Whitney and Mrs. A. Gordon continued their volunteer services in identifying our Tibetan collections. Mr. Ichikawa has assisted in this work. Mrs. Gordon has in preparation a key to the identification and classification of such material.

Research on population and genetics is organized, directed and maintained by Mr. Frederick H. Osborn, Research Associate, assisted by Dr. G. M. Schwesinger. During the year, Mr. Osborn and his staff issued a comprehensive volume on the "Dynamics of Population."

Professor F. Mitra, University of Calcutta, has continued his investigations among the little-known Marrings of Manipur, Burma, the work for the most part being carried on by his student assistant, J. K. Bose. Manuscript reports, embodying these important data, have been received. (Voss Fund.)

An outstanding event in the Department of Comparative Anatomy is the completion of Mr. Raven's monograph on "Wallace's Line," dealing with the distribution of 2,240 species and subspecies of mammals of southeastern Asia and the Australian region. Studies on whales were continued by Mr. Raven.

Evolution from fish to man continued to engage much of the time of Doctor Gregory. Doctor Gregory read two papers at the International Congress of the Anthropological and Ethnological Sciences held in London, "Man's Place among the Primates" and "The Comparative Aspect of Dentition." The evolution of the face from fish to man, and the origin, rise and decline of *Homo sapiens* were dealt with in a number of lectures. The evolution of the pelvis was reviewed at the Pittsburgh meeting of the American Association for the Advancement of Science. Investigation on the evolution of the jaws and teeth of vertebrates was completed in a work entitled "A Half Century of Trituberculy: The Cope-Osborn Theory of Dental Evolution..." published by the

American Philosophical Society. A joint paper with Marcelle Roigneau, dealing with "Williston's Law," was read before the American Association of Physical Anthropologists.

By invitation of the Linnaean Society of New York, Doctor Gregory, in collaboration with Dr. R. C. Murphy, presented a critical review of the new ideas regarding flightless birds.

In a description of the collections of *Baluchitherium* fossil remains made by the Central Asiatic Expeditions under the leadership of Dr. Roy Chapman Andrews, Doctors Granger and Gregory present a new restoration of the skeleton of this gigantic animal.

The evolution of the lizards was summarized in an article by Doctor Gregory, published in the Bulletin of the New York Zoological Society, and two articles on the Loch Ness Monster in *Natural History* defended the negative side of this problem.

An introduction to Anatomy by Doctor Gregory and Marcelle Roigneau has been published in the Museum's Guide Leaflet series.

Mr. Chubb's investigations regarding "horns" on the foreheads of horses have been continued.

Progress is being made on the James Arthur Research into the comparative anatomy and evolution of the human brain. Mr. George Pinkley, who has spent the past two years at University College, London, in the laboratory of Sir Grafton Elliot Smith, read a paper on the Wadjak skull, at the International Congress of Anthropological and Ethnological Sciences.

#### **EXPLORATION**

In spite of the fact that there was not one dollar available from general Museum funds for exploration, we have been fortunate in having twenty-one expeditions in the field.

These have all been financed by private individuals or from special funds and have contributed largely to the new facts and new collections which are continually enriching the Museum.

#### NORTH AMERICA

Dr. Chester A. Reeds and Mr. Bert Zellner made test borings for varved clays in the Overpeck, Hackensack and upper Passaic basins, New Jersey, and in the headwaters of Spar Kill basin, New York, also at Green Ridge, Staten Island, New York. The primary object of the investigations was to extend the range of the basins in which the clays were deposited as the ice of the last

Pleistocene glaciation was melting, and thus determine more accurately its rate of retreat. Financed by Mr. Childs Frick.

Dinosaur work was continued by Dr. Barnum Brown over six of the Rocky Mountain States. At least four thousand bones were collected, mostly of large Sauropods and Ornithischian dinosaurs, with a few carnivorous teeth, patches of skin and pockets of stomach stones. There are at least three mountable composite skeletons in this collection. These dinosaurs are Jurassic in age. Several genera and at least six species are new to science. More than twenty individuals are preserved, the largest approximately fifty feet long, but a Barosaurus-like species predominates. Arrangements were made with the Sinclair Refining Company to supply an airplane, in which members of the expedition flew 20,000 miles, making an aërial survey over Montana, Wyoming, South Dakota, Utah, Colorado, Arizona, and New Mexico. The airplane enabled Doctor Brown to trace strata and determine their relationship with a certainty not possible from the ground. With the Fairchild aërial cameras, photographic records of great value were secured. Several new areas of extensive promising exposures were discovered in fields previously thought to be completely explored, and these were immediately checked by ground survey. New areas were discovered by this method in Triassic, Jurassic, Cretaceous, and Fort Union strata. Other important discoveries from this aërial reconnaissance are:

- 1. A quarry of dinosaur bones with twenty-five feet of bones exposed in the Mesa Verde formation (mid-Cretaceous).
- 2. A fine ceratopsian skull and jaws in the Judith River formation.
- 3. A Mosasaur skeleton and a five-foot Mosasaur skull in the Pierre Cretaceous.
  - 4. A new type of Reptile (collected), Middle Triassic.
  - 5. An unreported Meteoric Crater.
- 6. An unreported Ceremonial Way of Twelfth Century Pueblo date.
  - 7. Several new oil domes.

(American Museum-Sinclair Dinosaur Expedition of 1934, financed by the Sinclair Refining Company.)

The principal entomological field work of the Department of Insect Life was in the Grand Canyon and vicinity. Curator F. E.

Lutz, Research Associate Bell, David Rockefeller, and P. E. Geier made collections at various altitudes from the bottom of the Canyon (2,500 feet) to the tops of the San Francisco peaks (about 12,000 feet), to secure material for a study of geographic distribution. Financed by Messrs. Rockefeller, Bell and Geier.

During the summer, Mr. Junius Bird visited the coast of Labrador for archaeological research among Eskimo village sites. Financed by the Voss Fund.

The Snyder Canadian Expedition (Peace River District) collected seven wood bison, a Stone sheep, and 180 small mammals. Mr. G. G. Goodwin represented the Museum. Financed by Mr. Harry Snyder.

Mr. Van Campen Heilner made a collection of fishes in the Zapata Swamp, Cuba. Financed by Mr. Heilner.

Mr. F. Rainey was commissioned as a voluntary assistant to begin an archaeological survey of Porto Rico. This was in cooperation with the Peabody Museum of Yale University, and the New York Academy of Sciences. Previous investigation of the shell-heaps had revealed at least two horizons. Mr. Rainey's investigation revealed a third and previously unknown culture below and preceding the shell-heap culture. This is one of the most important archaeological discoveries of the year. The Museum's work was supported by the Voss Fund.

The Anthony Wyoming Expedition collected one moose, one elk, and forty-one small mammals. Financed by Hon. George Shiras, 3d.

The Hatt Isle Royale, Michigan, collecting trip, collected one moose and forty small mammals.

The Tate Adirondack-New Jersey collecting trip collected sixty-six small mammals.

Late in 1934, Doctor Vaillant went to Mexico to begin a systematic survey of stratigraphic horizons. Financed by the Voss Fund.

Messrs. C. E. Schaefer and D. Mandelbaum were appointed to join in a field project, under the direction of Curator Wissler, among the Cree and Flathead Indian tribes of the United States and Canada. Financed by the Voss Fund.

#### SOUTH AMERICA

Dr. G. G. Simpson returned from the Second Scarritt Expedition in July. This party worked successfully in early Tertiary

beds of previously unexplored regions of northern Patagonia. The most important discovery was an old volcanic blowout in which were more or less complete skeletons of great numbers of large notoungulates recently described as *Scarrittia*. Doctor Simpson's party brought back six of these complete skeletons, in addition to the many other important finds. Financed by Mr. H. S. Scarritt.

Dr. W. C. Bennett and Mr. Junius Bird continued archaeological investigations in Bolivia, south of Lake Titicaca. Supported by the Voss Fund.

In November, 1934, Mr. Junius Bird went to Chile, to continue his field work of the previous year in and around the Strait of Magellan. It is hoped that this expedition will explore a considerable part of the archipelago off the Chilean coast. Financed by the Voss Fund.

#### **ASIA**

The Sage West China Expedition collected mammals, birds and other natural history objects, including three giant pandas. Financed by Dean Sage, Jr.

In the Vernay Upper Burma Expedition to collect mammals, Mr. Arthur S. Vernay was accompanied by Mr. H. C. Raven as the Museum's representative. Financed by Mr. Vernay.

#### **NEW GUINEA**

Fishes were collected in southern New Guinea by Mr. Richard Archbold and by Messrs. Brass and Rand. The Archbold New Guinea Expedition also secured a collection of more than 500 reptiles and amphibians, including some extremely rare species, about 3,200 birds, many of unusual interest, and about 850 mammals, representing several scores of species, among which may be mentioned examples of spicy ant-eaters and the rare rodent Leptomys. Financed by Mr. Richard Archbold.

#### **HAWAII**

Interesting material bearing on the taxonomy of fishes of the genus *Caranx* has been borrowed from the Charleston Museum, and studied. Ample new material is expected in the near future from various sources, particularly from Hawaii, as Mr. William J. Morden, Field Associate in the Department of Mammals, is to

spend three months there collecting such material (financed by the Morden *Caranx* Fund).

Dr. Harry L. Shapiro continued to direct and participate in the intensive study of race types in Hawaii, in coöperation with the Bishop Museum in Honolulu and the University of Hawaii. Financed by the Voss Fund.

#### SOUTH SEAS

An important item was the launching of the Templeton Crocker Expedition to the South Pacific, to obtain material and make studies for the first of the groups of birds for the Whitney Memorial Hall. Dr. James P. Chapin, of the Department of Ornithology, and Mr. Francis L. Jaques, of the Department of Preparation, represent the Department of Ornithology on this expedition, which is being conducted and financed by Mr. Templeton Crocker on his yacht "Zaca."

In September, Dr. H. L. Shapiro joined the Crocker expedition to the South Pacific, to gather anthropological data on the Polynesians accessible to the expedition. Financed by Mr. Templeton Crocker.

The Whitney South Sea Expedition has remained in the field with Mr. Coultas in charge, and has sent in more than a thousand birds from the Admiralty Islands during the year. Financed by the Whitney Fund.

### III. ADMINISTRATION, OPERATION, BUILDING

ROY CHAPMAN ANDREWS, Acting Director WAYNE M. FAUNCE, Assistant Director

Important building projects of the American Museum have been advanced in 1934. The Roosevelt Memorial, the dedication of which was postponed, will be dedicated, it is hoped, on October 27, 1935, the seventy-seventh anniversary of the birth of Theodore Roosevelt. The Roosevelt Memorial Trustees and the Buildings and Plans Committee of the Museum, with Museum staff members, have continued to develop plans for the murals and the architectural, artistic and exhibition features of this great building. An integral feature of the Memorial plans includes the Easterly Approaches across Central Park, in which Professor Osborn has continued to take an important part. Local and national organizations are interested in these plans. This building was erected by the State of New York.

In the recently erected African Wing, it is planned to place the North American mammal exhibits on the first floor. The Akeley Memorial, African Hall, will occupy the second and third floors, and it is hoped that this part of the building will be opened soon after the dedication of the Roosevelt Memorial, with which it connects. The Jurassic Dinosaur Hall is planned to occupy the fourth floor. Offices occupy the fifth floor, and the sixth floor and roof form the Experimental Biology Laboratories. The building and laboratories were constructed and furnished by the City of New York. The laboratory scientific equipment and supplies have been provided by Trustees and friends.

The Whitney Wing (South Oceanic Wing) is also progressing. The attractive exhibition hall on the first floor will contain a series of exhibits illustrating the biology of birds. The second floor will constitute the Whitney Memorial, and will contain groups of South Sea birds. The Rothschild study collection will occupy the third floor and part of the fourth. Also on the fourth floor will be offices and the gallery for bird paintings. The fourth mezzanine and the fifth floor will contain offices and storage rooms, and the sixth floor laboratories and storage rooms. Storage space will be provided in the basement also.

The Planetarium and its equipment have required much time. This building is being constructed through a loan made by the Reconstruction Finance Corporation. The Zeiss Projection Planetarium and the Copernican Planetarium have been given by Mr. Charles Hayden, for whom the building is named. Present indications are that this latest addition to the Museum's great educational group of buildings will be ready for public demonstrations early next summer.

In our department of construction and repairs, under the direction of Mr. H. F. Beers, many pieces of work have been completed. The servicing and repairing of the Museum's automobiles require much attention. Repairs, new equipment and additions to the Herpetology Laboratories, and the supervision of the Emergency Relief Bureau work have been important items in this department. Work by the mechanical force included the making of cases for the second, third and fourth floors of the African Hall, and for the Drummond Hall and Hall of Ocean Life, also installations, alterations, and repairs. The construction office force prepared plans and developed a number of projects, including exhibition cases, alterations, designs, cost system, and safety inspections.

The heating, lighting and power plant has been in charge of our Chief Engineer, Mr. Henry J. Langham. The increase in the number of buildings has of course increased the demands on this department. More attention is required of the force at our disposal to keep all this equipment in good condition. Many items of plumbing, steam and allied work, also electrical work, were accomplished in 1934.

The large amount of work connected with the care of the buildings has been under the direction of our Superintendent of Buildings, Mr. J. B. Foulke.

It is to be regretted that, as in 1933, some of our exhibition halls have been closed each day, because of lack of funds, but our attendance has exceeded that of 1933, in spite of this drawback.

At our sales booth on the first floor, the sales of popular publications, post cards, etc., have continued satisfactorily.

Scientific and allied societies have met in our assembly halls, including the Junior Science Congress of the American Institute, December 27 and 28, with two guest speakers each day: Mrs. Piccard, Professor Urey, Professor Chambers, and Russell Owen. The meeting was broadcast over NBC hookup. The Annual Meet-

ings of the American Society of Mammalogists and the American Association of Physical Anthropologists, also the American Society of Ichthyologists and Herpetologists, were held here in May, and the Annual Meeting of the National Association of Audubon Societies was held in October. Meetings of the New York Academy of Sciences and affiliated societies have been held at the Museum for many years.

Our restaurant, employees' lunch room, and cafeteria for school children have been of great convenience. These have been under the direction of Mrs. M. Jellicorse de Roos.

#### PUBLIC AND PRESS INFORMATION

The Department of Publicity, under the direction of Mr. Hans Christian Adamson, issued about one hundred major releases on natural history subjects, in addition to providing special stories and articles for individual reporters and writers.

The Department's efforts to disseminate information to the public through the press resulted in the publication of Museum news that covered twelve hundred yards of newspaper space. This is equal to about two hundred fifty newspaper pages of eight columns each, or represents, in volume of words, some forty full-length books.

The Metropolitan newspaper and wire services were extremely helpful in the Museum's efforts to make the public more conscious

STATISTICS OF NUMBERS REACHED BY THE MUSEUM AND ITS EXTENSION EDUCATIONAL SYSTEM

	1930	1931	1932	1933	1934
Lectures to School Children and Classes Visiting the Museum for Study Meetings of Scientific So- cieties and Other Meet-	214,153	226,552	220,482	159,538	215,209
ings and Lectures	56,640	20,330	23,042	18,528	8,992
Total	270,793	246,882	243,524	178,066	224,201
Attendance in Exhibition Halls	876,601	882,309	789,741	924,030	1,113,245
Total Attendance for All Purposes	1,147,394	1,129,191	1,033,265	1,102,096	1,337,446
Lectures to Pupils in the Schools	19,512	8,248	23,006	31,818	28,172
Number Reached by Motion Picture Service	3,764,505	7,423,708	10,458,181	9,012,628	10,271,806
Number Reached by Lan- tern Slide Service	15,588,403	17,392,790	17,019,882	17,014,690	17,232,395
Number Reached by Circulating Collections	3,194,647	2,567,537	3,816,863	4,775,176	5,865,839
Bear Mountain Nature Trails		283,000	300,000	350,000	380,000
Grand Total	23,714,461	28,804,474	32,651,197	32,286,408	35,115,658

of the interesting and important work being carried on by its various departments. This was largely made possible through the splendid attitude on the part of members of the Museum's scientific staff, who, no matter what the pressure of their work, were never too busy to coöperate with the press.

The Department placed three hundred twenty-six photographs and twenty-eight enlargements in distribution, which yielded a large volume of return. This valuable publicity work was made possible by the unusually fine coöperation of the photographic department.

#### REPORT OF THE REGISTRAR

In this era of changing events, that the Museum is enabled through its many friends to continue to offer the world additional material of scientific value in the field of natural history, is reflected in the amount and variety of accessions as recorded in the office of the Registrar. The increase in accessions over 1933 is added evidence, too, that the world is recovering from the inactivity occasioned by this most severe of all depressions. Gifts received during the year number 641. There were 47 exchanges; 68 purchases; 14 transfers, and 43 accessions through expedition.

Inasmuch as the Registrar's office has the official records of all accessions, it is necessary that these records be checked carefully with each department, and the Registrar wishes to express his appreciation of the excellent coöperation given by the several departments in this service.

A number of valuable gifts were presented during 1934, among them a collection of 3,500 specimens of archaeological and ethnological material, also large numbers of reptiles, birds and mammals, collected in South America by Dr. Harvey Bassler and valued at \$25,000. An important collection of herpetological material was brought back by the Archbold-Rand New Guinea Expedition. The Museum was again the recipient of an archaeological collection from Peru, presented by Mr. George D. Pratt, valued at \$2,000. Through the Templeton Crocker Expedition, a valuable series of ethnological specimens was brought in from Melanesia. Through the interest of Mr. Clarence L. Hay and others, the Museum was presented with the Minor C. Keith collection of pottery, stonework, jade and gold, valued at \$10,000. The Department of Entomology received a splendid gift of ants from

Professor William M. Wheeler, a fine collection of butterflies and some microscopic slides and colored drawings from Mr. E. L. Bell, another from Dr. A. B. Klots and a large collection of Colombian insects from Dr. Ovalle Felipe, Q. The Department of Gems was presented with an Australian opal brooch surrounded by small diamonds, an opal pendant, an oriental pendant set with Australian opals, small emeralds, sapphires and yellow diamonds with pearl and opal drops, through the Lillias A. Betts Memorial. Miss Susan Dwight Bliss presented a combination safe and exhibition case valued at \$1,000. Mr. Suydam Cutting presented a specimen of the Indian dugong. Two fine stone statues from Mexico were presented by Mrs. Van der Woude. Mrs. Worcester Reed Warner presented the 8-inch equatorially-mounted refracting telescope which belonged to Mr. Warner. Mrs. B. T. B. Hyde presented the 3-inch refractor which belonged to "Uncle Benny" Hyde.

The increase in incoming shipments reported by the shipping department also reflects the return of better times, since the 4,094 shipments represented an increase of 328 over last year. Of outgoing shipments there were 2,859, involving the packing of 4,113 packages.

During the year, as formerly, our Registrar, Mr. George N. Pindar, has supervised to a considerable extent the sales bureau of the Museum. While attractive material pertaining to natural history has been supplied this division, there is an opportunity for needed expansion of the work which can be provided only by the establishment of a revolving fund. With such a fund, it would be possible so to increase activities in this field of work that it might become not only a valuable source of income, but a means of making the Museum better known throughout the country.

In addition, the Registrar's office has supervised the welfare work, attending to such relief and affording such material aid as was possible with the funds available. It would not seem amiss at this time to point out that the welfare fund, established through the contributions of friends, who have augmented it from time to time, would be materially assisted by the acquisition of additional funds.

The Pension Board, of which the Registrar is Secretary, will issue its report under a separate form.

#### IV. FINANCIAL ADMINISTRATION

E. ROLAND HARRIMAN, Treasurer Frederick H. Smyth, Bursar

#### **BUDGETARY FUNDS OF 1934**

The Budget (City Maintenance, General and Morris K. Jesup Fund Accounts) was approved by the Board of Trustees on January 8, 1934, to the amount of \$1,222,791.11, and balanced in receipts and disbursements.

By the end of the year, the receipts were reduced by losses in income of \$25,534.91, to \$1,197,256.20. Disbursements were reduced by \$16,236.23, to \$1,206,554.88. This figure includes actual disbursements of \$1,201,404.88 and obligations of 1934 of \$5,150.00 carried forward to 1935. The net result was a deficit of \$9,298.68. This deficit is carried against Bank Loan and will be met in 1935 from accounts due in 1934.

#### SUMMARY OF ALL ACCOUNTS

The summarized statement of the operating accounts of the Museum include all receipts of the City Maintenance, General, and Morris K. Jesup Fund Accounts, \$1,206,554.88, and disbursements of these accounts, \$1,201,404.88. Also included are the receipts, \$461,587.65, and disbursements, \$337,006.61, of the Special Funds Account. The former three accounts constitute our Budgetary Funds, and the latter the restricted funds which are for specific purposes.

Mr. James H. Perkins, who had been Treasurer of the Museum since January 3, 1927, resigned on May 7, 1934, and Mr. E. Roland Harriman was elected to the office of Treasurer on the same date.

# SUMMARY OF RECEIPTS AND DISBURSEMENTS FOR ALL PURPOSES, 1934

#### Receipts

City of New York for Maintenance		\$ 380,975.32
Trustees' Funds:		
Balance, January 1, 1934	. 35	<b>\$ 128,814.79</b>
Contributions of Members and Friends 258,463 Membership Dues 54,859 Sale of Publications and Exchanges 20,668	. <b>47</b> . 00	
Contributions of Foundations 7,000 Contributions of Employees for General Purposes 74.139	.00	
Natural History Advertising 3,944		1,145,103.74
Loan Account, Deficiency of 1934Loan Account, Keith Collection Deficiency of 19		9,298.68 3,950.00
Total Income, Trustees' Funds		\$1,287,167.21
Total Income, all sources		<b>\$</b> 1,668,142.53

## Disbursements (Operating Costs)

Scientific and Research:		
Astronomy	\$140,465.74	
Geology and Invertebrate Palaeon-		
tology	12,322.73	
Mineralogy	10,179.01	
Mammalogy	59,724.24	
Central Asiatic Exploration and Re-		
search	9,482.44	
Ornithology	35,738.24	
Vertebrate Palaeontology	91,972.44	
Professor Osborn's Science Fund	4,863.58	
Comparative Anatomy	20,095.56	
Anthropology	53,489.07	
Ichthyology	18,085.18	
Herpetology	12,299.22	
Experimental Biology	19,622.73	
Lower Invertebrates Entomology	15,099.17 23,822.79	
Library	26,896.73	
Library		
	<b>\$</b> 55 <b>4</b> ,158.87	
Printing, Books and Publications:		
Printing and Publishing	\$ 93,896.32	
Preparation and Exhibition:		
Preparation and Exhibition	\$132,281.07	
Vertebrate Palaeontology	20,699.88	
G.	<b>\$</b> 152,980.95	
Educational—Public School Work:		
	e 77 002 69	
Public Education	\$ 77,883.62	
Administration and Operation:		
Administration	\$283,028.54	
General Supplies and Expenses	38,959.39	
Heating and Lighting	124,113.67	
Repairs and Installation	77,564.57	
Special Repairs	7,625.00	
Legal Services	2,060.37	
Pension Fund	30,680.59	
Group Life Insurance	9,938.60	
Natural History Magazine Cost Interest on Bank Loans	7,374.64 1,469.54	
Financial Administration	76,676.82	
rmancial Administration		
m . 1 . 11	<b>\$</b> 659,491.73	
Total, all costs		\$1,538,411.49
Balance, December 31, 1934.		129,731.04
		\$1,668,142.53

#### PERMANENT ENDOWMENT FUND, 1934

The Treasurer, who is also Chairman of the Finance Committee, desires to report that there have been received the following bequests:

Ludwig Dreyfuss	\$10,000.00
Beatrice, Countess of Granard, Gladys	
Phipps and Ogden L. Mills	50,000.00
John DeWitt Sterry	10,000.00
	\$70,000.00

The Chairman also reports that during the year amortization payments of \$20,000.00 were received on account of one of our Real Estate Mortgages, and that our holdings of Solvay American Investment Corporation 5s were called for redemption. Securities of a par value of \$468,400.00 were sold, and the proceeds, together with receipts from redemptions and other sources, were used to purchase securities of a par value of \$566,000.00, at an aggregate cost of \$573,148.75, leaving a balance on December 31 of \$224,667.77. The Finance Committee is at present considering the investment of this amount.

The Endowment Fund on December 31, 1934, amounted to a book value of \$15,133,272.55, comparing with the holdings at January 1 as follows:

	Dec. 31, 1934	Jan. 1, 1934
Railroad Bonds	\$ 7,593,627.25	\$ 7,469,937.25
Railroad Stocks	40,871.15	40,871.15
Public Utility Bonds	4,182,650.00	4,130,821.75
Industrial Bonds	654,261.25	935,581. <b>2</b> 5
Industrial Stocks	461,865.25	451,920.25
Government Bonds	335,000.00	122,823.44
Investment Trust Bonds	0.00	201,352.50
Real Estate Bonds	120,100.00	0.00
Real Estate Stocks	80,000.00	0.00
Real Estate Mortgages	1,170,175.00	1,430,700:00
Real Estate Property	170,054.88	110,416.66
Charles M. Jesup Trust	100,000.00	100,000.00
	\$14,908,604.78	\$14,994,424.25
Uninvested Cash	224,667.77	10,713.61
	<b>\$15,133,272</b> .55	\$15,005,137.86

The market value of the investments, according to a compilation made December 31, is \$14,705,784.85, a decrease from book

value of 1.4% compared with a decrease of 9.4% as shown by the market value of December 31, 1933.

The annual income from our invested funds is \$719,621.32, a yield of 4.83% of the value at which the investments are carried on our books. This sum does not take into consideration the defaults of interest on Real Estate Mortgages or certain Railroad Bonds, which must necessarily decrease the estimated income. At the present time there are some of our holdings which have already defaulted in interest, or which we anticipate will default, amounting to an annual income of \$46,428.00. This amount will be reduced by the net income available above the cost of operating Real Estate properties and by any adjustment made by the Chicago, Rock Island & Pacific Railroad.

#### CONTRIBUTIONS FOR GENERAL PURPOSES, 1934

In order to save space under the heading "Contributions for General Purposes" in our printed financial statement, we give below the list of contributors responding to our special appeal to Members and friends:

Abbett Mrs Donald Butman	\$ 2.00	Dugam N. H.	10.00
Abbott, Mrs. Donald Putman Aldridge, Mrs. Walter H	25.00	Busey, N. H	10.00
• •	10.00		10.00
Alvarez, Dr. Walter C	10.00	Campbell, A. C	5.00 3.00
		• •	
Andrews, Dr. George C.	10.00	Carter, Ernest T	5.00
Andrews, Miss Kate R	25.00	Carter, Mrs. Ernest T	10.00
Angle, Mrs. Anna Hopkins	5.00	Chace, Malcolm G	10.00
Anonymous contributions	6.00	Champlin, George B	10.00
Alexander, Bart., Sir Douglas	100.00	Chandler, Miss Alice G	5.00
Appleby, Mrs. John S	25.00	Chappell, Mrs. Howard Field	10.00
Arnold, Miss Mittie	25.00	Cheney, Edward J	10.00
Ayer, Charles F	25.00	Childs, Starling W	100.00
Backeland, George	25.00	Chorley, C. W	.46
Baker, Robert E	10.00	Christman, Charles G	100.00
Baldwin, Mrs. H. F	10.00	Chu, Yuanting T	10.00
Barnes, J. Sanford	5.00	Chubb, Mrs. Hendon	<b>25.00</b>
Barton, Dr. Donald C	5.00	Church, C. T	10.00
Bartow, Francis D	25.00	Church, George H	<b>2</b> 5.00
Bass, Murray H., M.D	10.00	Clark, Dr. De Witt S	10.00
Baum, Mrs. Dwight J	10.00	Clark, Mrs. J. William	100.00
Becker, Miss Marie F	10.00	Clarke, Mrs. E. A. S	5.00
Beckwith, Mrs. Daniel	200.00	Clovis, Hall	25.00
Bell, Gordon K., Jr	5.00	Cohen, Hon. William N	10.00
Beller, Wm. F	10.00	Colt, S. Sloan	100.00
Black, Mrs. R. Clifford	25.00	Cravath, Paul D	100.00
Blakeslee, Clifford L	10.00	Croft, Miss Emma B	5.00
Block, Paul	10.00	Cromwell, Wm. Nelson	200.00
Boettger, Theodore	10.00	Crump, James L	25.00
Boise, Charles Watson	100.00	Cudahy, Hon. John	10.00
Bond, Stephen Norman	10.00	Curtis, Mrs. James Breckenridge	10.00
Booth, Willis H	100.00	Dahle, Isak	10.00
Boury, Louis J	100.00	Dana, Edward S	10.00
Boyd, Mrs. James	<b>25.00</b>	Davenport, Mrs. Elizabeth B	4.00
Bradley, Miss Dora F. Levett	1.00	Davis, Hon. Dwight F	25.00
Brewer, George E	100.00	Davison, Mrs. F. Trubee	<b>2</b> 5.00
Brewster, Frederick F	500.00	Davison, George W	<b>25.00</b>
Brown, J. Alexander	10.00	Davison, Mrs. Henry P	100.00
Bryant, Comdr. Emory A	2.00	Dean, Mrs. Bashford	100.00
Bulkley, David Tod	100.00	Dean, Miss Harriet Martine	100.00
Bull, Mrs. E. L	10.00	Dearborn, D. B	10.00
Burlingham, Mrs. Charles	10.00	de Camp, L. Sprague	10.00
Burton, J. Campbell	10.00	Dederer, Miss Pauline H	2.00

# Report of the Treasurer

De Lury, Dr. Ralph E	10.00	Goler, Mrs. Frank H	10.00
Derickson, E. V	3.00	Goodwin, James L	10.00
Dexter, Miss E. W	15.00	Guggenheim, Simon	100.00
Dimock, E. J	10.00	Hamilton, Mrs. Morgan	10.00
Dohrn, Prof. R	5.00	Hammer, Alfred E	10.00
Dolese, David	1.00	Hardy, Charles J	<b>25.00</b>
Dominick, Mrs. George F	10.00	Harkness, Edward S	1,000.00
Donaldson, Mrs. John W	15.00	Harkness, Mrs. W. L	100.00
Dooley, Channing Rice	5.00	Harriman, E. Roland	100.00
dos Passos, Cyril F	10.00	Harrington, Dr. James T	10.00
Dougan, Miss Rose	5.00	Harriot, Samuel C	41.00
du Pont, Mrs. Coleman	20.00	Harris, Henry U	5.00
Eden, Mr. and Mrs. John H	90.00	Hart, Mrs. John I	5.00
Egloff, Dr. Gustav	10.00	Hartt, Mrs. Arthur W	5.00
Ellsworth, Miss Matilda	10.00	Haskins, Caryl Parker	10.00
Elmhirst, Mrs. Leonard Knight	100.00	Hauswirth, Dr. L	10.00
Elsberg, H. A	10.00	Hemmerdinger, Henry	50.00
Elstad, Miss Agnes	3.00	Hess, George H., Jr	5.00
Ely, Wm. Newbold	<b>25.00</b>	Hickox, Mrs. Charles V	100.00
Embury, Aymar, II	10.00	Hird, Miss Mary E	15.00
Emerson, Miss Julia T	5.00	Hochschild, H. K	50.00
Emmet, Robert Temple	<b>25.00</b>	Hollis, Edward P	5.00
Erasmus Hall High School	8.00	Holmes, Mrs. Christian R	
Erickson, Mrs. A. Wentworth	25.00	Howard, John K	10.00
Essick, Dr. Charles R	10.00	Hoyt, Mrs. E. Kenneth	20.00
Evans, H. H	10.00	Hughes, Mrs. John A	
Ewing, George R. M	10.00	Hull, Mrs. Cora A	5.00
Farr, Miss Shirley	100.00	Hunneman, William C	10.00
Farrington, R. I	100.00	Hutton, William	3.00
Ferguson, Mrs. Sydney	15.00	Hyman, Dr. Abraham	10.00
Fesler, Mrs. James W	100.00	Ireland, Miss Elisabeth	
Fischer, Dr. Martin H	5.00	Jackson, Prof. A. V. Williams	
Foster, C. H	10.00	Jacoby, Prof. Henry S	3.00
Fowler, Edwin	5.00	James, Harry E	15.00
Frank, Mrs. Leo E	10.00	James, Henry	10.00
Fraser, John	10.00	Jervey, Huger W	10.00
Frost, Mrs. Frank J	5.00	Johnston, Percy H	50.00
Fuller, Mrs. Eugene	10.00	Jones, Miss Amelia H	10.00
Fuller, Frederick H	5.00	Keith, Edward D	
Fuller, Richard E	10.00	Kellar, Chambers	10.00
Gammell, William	50.00	Knight, Alfred	
Garrett, Laura B	5.00	Knight, Arthur S	
Garver, Chauncey B	20.00	Krech, Dr. Shepard	
Gates, Harold T	2.00	Kreitler, Mrs. Edith K	
Gifford, Mrs. Nelson D., Jr	10.00	Kuttroff, Edwin	
Gill, Bennington P	3.00	Lamont, Thomas S	
Ginsburg, S. R	10.00	Lang, Mrs. Henry	
Girls' High School, Brooklyn, N. Y.	5.00	Lauber, LieutCol. Philip J	5.00

# Report of the Treasurer

Levine, Dr. Moses N	2.00	O'Neil, Miss Mary E	25.00
Lichtenfels, W	10.00	Ostrom, Mrs. Homer Irvin	5.00
Lilienthal, Howard	10.00	Otis, Charles	5.00
Livingston, Henry S	10.00	Ozias, Ramon E., Sr	15.00
Lockett, Dr. Stephen	2.00	Parent-Teachers' Assn., P. S. 117	,
Loew, Mrs. David L	5.00	Jamaica, N. Y	10.00
Long, Harry V	5.00	Payne, George L	
Ludekens, Fred	10.00	Perkins, Mrs. George W	500.00
Lynch, M. H	10.00	Perkins, Prof. Henry A	
MacLaren, James	5.00	Perry, Mrs. Howard E	10.00
McAllister, M. Hall	60.00	Peters, Thomas M	
McCloy, J. J	10.00	Phelps, Capt. John J	25.00
McCrea, Nelson G	15.00	Pierrepont, Miss Anna J	20.00
McCreery, H. F	10.00	Pierrepont, Miss Julia J	80.00
McIntosh, Miss Marjorie	10.00	Pike, Sumner T	10.00
Macauley, Arthur	10.00	Pinney, Edward S	
Mallinckrodt, Edward, Jr	100.00	Pitney, Mrs. J. O. H	25.00
Manges, Dr. Morris	<b>25</b> .00	Pomeroy, Mrs. Katherine	100.00
Mann, Mrs. George Williamson	20.00	Pond, Miss Florence L	15.00
Marmon, Mrs. Elizabeth C	100.00	Pond, Mrs. N. M	25.00
Martin, Mrs. Howard T	<b>25</b> .00	Pope, Gustavus D	25.00
Masson, John G	1.00	Popper, Mrs. William C	10.00
Mathews, Gregory M	5.00	Pratt, Mrs. Charles H	5.00
Mathews, H. A	<b>25</b> .00	Pratt, Mrs. C. M	100.00
Matthies, Miss Katharine	10.00	Pratt, Harold I	1,000.00
Matz, Miss Ruth	10.00	Prentice, G. E	<b>25.00</b>
Maxwell, William	10.00	Public School No. 36, Bronx	10.00
May, Hon. Paul M	20.00	Pulitzer, Ralph	100.00
Mayer, A. Osborne	5.00	Puorro, Michael	10.00
Mead, Carl A	10.00	Pyle, Mrs. Wm. Scott	10.00
Meadow, Meyer	2.00	Reed, Mrs. James H	25.00
Melville, Frank, Jr	50.00	Reist, Henry G	3.00
Merle-Smith, Mrs. Van Santvoord.	100.00	Reynolds, H. C	1.00
Metcalf, Houghton P	10.00	Rhoades, Miss Nina	10.00
Miller, Mrs. Byron De Witt	50.00	Rice, Hamilton	1,000.00
Miller, Mrs. Henry Wise	10.00	Rich, Charles A	5.00
Miller, Richard F	2.00	Richmond, John F	10.00
Milliken, Arthur N	500.00	Roberts, George	10.00
Morgan, Keith L	25.00	Roberts, G. Brinton	1.00
Morris, Francis J. A	3.00	Robinson, Charles L	10.00
Mosman, Philip A	25.00	Roger, John	20.00
Neergaard, Dr. A. E	10.00	Rogers, Hubert E	25.00
Newcomb, Mrs. Webster Kent	<b>25</b> .00	Rothschild, Miss Anna J	5.00
Nichols, L. Nelson	5.00	Rothschild, Walter N	10.00
Norton, Mrs. Helen B	5.00	Ryerson, Edw. L., Jr	25.00
Notman, Howard	20.00	Sachs, B., M.D	10.00
Oesterreicher, S. I	10.00	Sargent, Ara Nathaniel, M.D	5.00
O'Neil, Mrs. James	<b>25</b> .00	Sargent, H. E	<b>2</b> 5.00

	10.00		05 00
Scherman, Harry	10.00	Ulmann, Mrs. Carl J	25.00
Schiff, John M	25.00	Vaillant, George W	25.00
Schlesinger, Fanny	2.00	Van Anda, Carr V	15.00
Schwab, Miss Emily	25.00	Van Benthuysen, Miss Marian	15.00
Schwarz, Miss Emilie E	100.00	Vanderbilt, W. K	2,000.00
Seward, Dr. F. W	5.00	Vauclain, Samuel M	25.00
Shaw, Quincy A	90.00	von Bernuth, Miss Louise E	10.00
Shepard, Finley J	150.00	Vosburgh, Harry S	5.00
Sikorsky, I. I	10.00	Wadsworth, Samuel F	10.00
Smith, Dr. Morris K	10.00	Wadsworth, William P	25.00
Smith, Miss Nellie M	100.00	Waldstein, Dr. Ernst	3.00
Snare, Frederick	100.00	Walker, Miss Miriam Dwight	25.00
Snedeker, Milton	10.00	Wanzer, W. G	5.00
Spagnoli, John J	1.00	Ward, H. E	25.00
Stamm, A. C	2.00	Warren, Frank M	2.00
Starck, Dr. Taylor	1.00	Webb, Mrs. Vanderbilt	5.00
Stern, Emil	35.00	Weil, Mrs. Sylvan E	25.00
Stieglitz, Albert	10.00	Welles, Benjamin	50.00
Stone, Robert G	5.00	Welton, Miss Nellie M	10.00
St. John, Mrs. G. C	2.00	Wheeler, John B	2.00
Sullivan, Mrs. Catharine Allen	15.00	Wilbur, Brayton	5.00
Taylor, Winston	1.00	Willey, Prof. Arthur	10.00
Tenney, Daniel G	50.00	Williams, Mrs. Clarence C	100.00
Terry, Mrs. Harriet Devotion	20.00	Williams, Clarence R., Ph.D	2.00
Thacher, Thomas D	25.00	Wilson, Mrs. Robert G	100.00
Thayer, Mrs. Ezra Ripley	300.00	Winslow, Winthrop C	5.00
Thayer, Mrs. Robert H	25.00	Witherell, Charles S	5.00
Thompson, Mrs. Lewis S	2.00	Woodelton, Mrs. R. B	2.00
Thorne, Victor C	100.00	Woolf, Mrs. Louis J	5.00
Tison, Alexander, Jr	10.0 <b>0</b>	Work, Mrs. Horace H	10.00
Townsend, Edward	50.00	Wright, John S	5.00
Trafton, Mrs. Frances D	5.00	- 	5,651.46
Uhl, Oswald W	250.00	——————————————————————————————————————	0,001.40

## FINANCIAL STATEMENT, 1934

## ENDOWMENT AND INVESTMENT

#### UNRESTRICTED ENDOWMENT FUNDS:

	Par Value	Book Value
George F. Baker Fund	\$ 211,600.00	<b>\$</b> 139.311.10
Wood Fosdick Fund	1,003,079.88	986,995,63
General Endowment Fund	1,802,110.00	1,755,057.58
Anna M. Harkness Fund	841,400.00	828,703.82
Collis P. Huntington Fund	50,000.00	50.088.05
Ogden Mills Endowment Fund	156,400.00	149,991.75
John D. Rockefeller, Jr., Fund	915.092.50	1.087.921.80
The Sage Fund	1,671,885.00	1,518,962,52
Sixtieth Anniversary Endowment	1.388.850.00	1.436.466.75
Charles M. Jesup Trust Fund	100,000.00	100,000.00
RESTRICTED ENDOWMENT FUNDS:		
	(5,753,792.50)	* 000 010 <b>0</b> 0
Morris K. Jesup Fund	£110,000}	5,820,218. <b>2</b> 0
Anthropology Special Fund	1,100.00	1,083.25
James Arthur Research Fund	37,700.00	30,991.25
Matilda W. Bruce Fund	12,000.00	<b>12,002.00</b>
Bashford Dean Ichthyological Library Fund	4,100.00	3,898.50
Anson W. Hard Library Fund	5,300.00	<b>5,302</b> .00
J. P. Morgan Fund	477,150.00	444,696.53
Osborn Palaeontologic Research Fund	4,000.00	3,218.75
Physical Anthropology Fund	12,222.50	11,586.50
Margaret Olivia Sage Fund	$\{1,000.00\}$	9,995.00
The Boyce Thompson Mineral Collection Fund	50,000.00	50,000.00
Jonathan Thorne Memorial Fund	29,300.00	28.347.75
Ralph Winfred Tower Memorial Fund	23.122.50	22,371.05
Vertebrate Palaeontology Field Fund.	25,500.00	25,000.75
Vertebrate Palaeontology Special Fund	1.100.00	1.083.25
Frederick G. Voss Anthropology and Archaeology	1,100.00	1,000.20
Fund	307.800.00	300.054.50
Wallace Memorial Fund	14,000.00	14,274.50
RESTRICTED INVESTMENT FUNDS:		
African Hall Group Fund		50,000.00
The Boyce Thompson Mineral Collection Installa-		20,000.00
tion Fund	20,900.00	20,982.00
	\$14,920,504.88	\$14,908,604,78
	£112,000	
Uninvested Cash		994 667 77
Uninvested Cash	•••••	224,667.77
		<b>\$</b> 15,133, <b>27</b> 2.55

## ENDOWMENT AND INVESTMENT ACCOUNT

## Receipts and Disbursements, 1934

## GENERAL ENDOWMENT FUNDS—(Unrestricted Funds):

	Balance Jan. 1, 1934	Receipts	Disbursements	Balance Dec. 31, 1934
General Endowment Fund: Bequest of	\$ 7.07	Receipts	Disbursements	Dec. 01, 1904
Ludwig Dreyfuss		\$ 10,000.00		
John De Witt Sterry		10,000.00		
Amortization Payment Sale of Securities		20,000.00 35,780.14	,	
Purchase of Securities		30,730.14	\$ 30,784.75	
Loan to Wood Fosdick Fund			5,038.22	
	7.07	75,780.14	35,822.97	\$ 39,964.24
George F. Baker Fund:	1.02	H		1.02
Wood Fosdick Fund: Sale of Securities	53.54	25,829.38		
Income held in anticipation		20,028.00		
of foreclosure		663.72		
Loan from General Endow- ment Fund		5,038.22		
Foreclosure Sale Costs		0,056.22	5,701.94	
	53.54	31,531.32	5,701.94	25,882.92
Anna M. Harkness Fund:	18.75			
Sale and Redemption of		070 700 77		
Securities Purchase of Securities		272,788.75	119,738.00	153,069.50
Ogden Mills Endowment Fund				100,000.00
Gift of				
Beatrice, Countess of Granard, Gladys				
Phipps, and Ogden				
L. Mills		<b>50,000</b> .00		
Transferred from Sixtieth Anniversary Endowment.		35.50		
Purchase of Securities		00.00	50,027.25	
		50,035.50	50,027.25	8.25
John D. Rockefeller, Jr., Fund:	60.68			
Sale and Redemption of Securities		86,429,91		
Purchase of Securities		00,428.81	86,406.25	84.34
The Sage Fund:	37.74			
Sale of Securities Purchase of Securities		<b>76,22</b> 0.55	76 000 00	<b>50.00</b>
Sixtieth Anniversary Endow-			76,200.00	58.29
ment:	10,023.15			
Sale and Redemption of		<b>74 204 0</b> 0		
Securities Purchase of Securities		56,206.30	66,190.00	
Transferred to Ogden Mills			.,	
Endowment Fund			35.50	-
Total Company Endowers	\$10,023.15	\$ 56,206.30	\$ 66,225.50	\$ 3.95
Total General Endowment	\$10,201.95	\$648,992.47	<b>\$44</b> 0,121 .91	\$219,072.51

## ENDOWMENT AND INVESTMENT ACCOUNT

## (Continued)

	Balance Jan. 1, 1934	Receipts	Disbursements	Balance Dec. 31, 1934
Anson W. Hard Library Fund: Sale of Securities Purchase of Securities		\$ 5,221.75	<b>\$</b> 5,200.00	<b>\$</b> 21.75
Morris K. Jesup Fund:	50.16		Ф 0,200.00	<b>4</b> 21.70
Sale and Redemption of Securities		135,270.10		
Income held in anticipation of foreclosure		3,606.70		
Purchase of Securities	-		135,220.00	
	50.16	138,876.80	135,220.00	3,706.96
J. P. Morgan Fund: Redemption of Securities Purchase of Securities	1.95	3,399.00	3,382.50	18.45
Osborn Palaeontologic Re-	40.70			
search Fund:	42.50			42.50
Physical Anthropology Fund: Ralph Winfred Tower Memo-	81.23			81.23
rial Fund:	79.00			79.00
Sixtieth Anniversary Endowmen				
James Arthur Research Fund	79.37			79.37
Bashford Dean Ichthyologi- cal Library Fund	43.50			43.50
Vertebrate Palaeontology	40.05			40.07
Field Fund	$\frac{46.25}{20.00}$			46.25
Total Special Endowment	\$443.96	\$147,497.55	\$143,802.50	20.00 \$4,139.01
<b>-</b>		•	Ψ1 <del>2</del> 3,002.30	<del>#1</del> ,139.01
SPECIAL INVESTMENT FUN	IDS—(Restri	cted Funds):		
The Boyce Thompson Mineral Collection Installation				
Fund:	\$ 67.70			
Sale of Securities	•	<b>\$</b> 12,791.37		
Transferred from Income Account		1,297.18		
Purchase of Securities		1,2010	\$ 12,700.00	
	67.70	14,088.55	12,700.00	1,456.25
Total Special Investment Fund	\$67.70	\$14,088.55	\$12,700.00	\$1,456.25
	SUMMA	ARY		
General Endowment Funds			#440 101 O1	#010 070 F1
Special Endowment Funds	\$10,201.95 443.96	\$648,992.47 147,497.55	\$440,121.91 143,802.50	\$219,072.51 4,139.01
Special Investment Funds	67.70	14,088.55	12,700.00	1,456.25
Total Endowment and Investment	\$10,713.61	\$810,578.57	\$596,624.41	\$224,667.77
		-		

#### CITY MAINTENANCE ACCOUNT •

## Receipts, 1934

Capital Fund: Balance, January 1, 1934	·····		\$ 15,000.00
Department of Parks, City of New York, 1933:			
Expenses for Other than Personal Service:			
1413 Motor Vehicle Supplies	<b>\$</b> 127.23		
plies	427.00		
1420 Repairs and Replacements	255.00	\$ 809.23	
Department of Parks, City of New York, 1934:			
Salaries, Regular Employees Salaries, Temporary Employees (Special	\$348,770.55		
Repairs)	5,403.22	354,173.77	
Expenses for Other than Personal Service:			
1410 Fuel Supplies	14,624.55		
1411 Office Supplies	2,000.00		
Supplies	1,100.00		
1413 Motor Vehicle Supplies	1.00		
plies	1.00		
1415 General Plant Supplies	1,600.00		
1416 Wearing Apparel	1.00		
1417 Office Equipment	1.00		
1418 General Plant Equipment	1.00		
1419 General Plant Materials	5,371.00		
1420 Repairs and Replacements	1.00		
1421 Telephone Service	1,100.00	00 001 55	
1422 Fixed Charges	1,000.00	26,801.55	
Total net receipts for the maintenance of all de	partments		381,784.55
			\$396,784.55

<sup>\*</sup>The annual appropriation of the City can be used only for the maintenance of the Museum, and is inadequate for this purpose. It cannot be used for the purchase of specimens or for the expenses of exploring and collecting expeditions. The deficiency in maintenance for 1934, amounting to \$400,000.00, has been met from the Trustees' General Account.

# CITY MAINTENANCE ACCOUNT

## Disbursements, 1934

Administration and Operation: Administration	\$218,284.72 4,534.20 60,297.34 41,774.87 5,403.22 24,831.30	<b>\$</b> 355,125.65	
Scientific and Research:			
Mineralogy	\$ 1,643.43		
Ornithology	1,500.90		
Vertebrate Palæontology	780.00		
Anthropology	1,500.90		
Lower Invertebrates	2,937.36		
Library	2,807.90	11,170.49	
Educational—Public School Work:			
Public Education		15,488.41	
Total net disbursements for the maintenance	of all departn	nents	\$381,784.55
Capital Fund: Balance, December 31, 1934	• • • • • • • • • • • • • • • • • • • •		15,000.00
			\$396,784.55

## GENERAL ACCOUNT

# Receipts, 1934

Receipts, 193	) <del>4</del>		
Balance, January 1, 1934 Cash		@177 000 91	
Loans Receivable:	 35,915.69	\$177,082.31	
	3,479.29 5,963.35	155,358.33	
	0,000.00		
George F. Baker Fund	2,510.00 846.00 1,266.00		
John D. Rockefeller, Jr., Fund	378.00	25,000.00	
Reserved for payment of Bank Loan		\$357,440.64 350,000.00	
Available Cash			\$ 7,440.64
Income from Investments and Trust Funds: General Endowment Fund	7,185.75		
	7,241.17		
Wood Fosdick Fund 4	0,557.28		
	<b>8,247</b> . 76		
Collis P. Huntington Fund	<b>2,499</b> .50		
Charles M. Jesup Trust Fund	1,935.44		
	6,297.42		
	1,179.73		
John D. Doolrofollor Jr. Fund	7,244.31		
	0,640.68	#000 100 oo	
Sixtieth Anniversary Endowment 6	3,074.95	<b>\$366,103.99</b>	
Sustaining Members	2,600.00 4,850.00 2,700.00 4,709.00	73.51 54,859.00	
		7,449.73	
Sale of PublicationsSubscriptions to Natural History		4,290.88	
Natural History Advertising		3,944.94	
Sales and Exchanges		3,171.71	
Contributions of Trustees for General Purposes:	<b>7</b> 00 00		
John D. Rockefeller, 3rd \$	500.00	40 700 00	
Felix M. Warburg 10	0,000.00	10,500.00	
Contributions of Employees for General Purposes.		74,139.65	
Contributions for General Purposes, see listing on	Dage 38	15,651.46	
	page 66.	10,001.40	
Contributions for Special Purposes:	<b>*</b> 000 00		
	5,000.00	7 000 00	
Carnegie Corporation of New York	2,000.00	7,000.00	
Authorized Deficit of 1934 advanced by General A	Account.	9,298.68	
Total net receipts for the development of all depar	rtments		\$556,483.55
Income from Investments and Trust Fund:			••••
Advanced during 1933 Pending Collection			
		<b>e</b> 20 000 00	
Charles S. Keene Trust 1932 and 1933		\$ 20,000.00	
General Endowment Fund		2,510.00	1
George F. Baker Fund		846.00	
Wood Fosdick Fund		1,266.00	
John D. Rockefeller, Jr., Fund		378.00	<b>25,000.0</b> 0
भू चरन्यतः च्या चर्णाच्यास्य स्थापस्य म् भूताः । च स्थापस्य । । । । । । । । । । । । । । । । । । ।	•		\$588,924.19
			\$000,027.10

## GENERAL ACCOUNT

## Disbursements, 1934

Administration and Operation: Administration. General Supplies and Expenses. Heating and Lighting. Repairs and Installation. Special Repairs. Legal Services. Pension Fund. Group Life Insurance. Financial Administration. Natural History Magazine Cost. Interest on Bank Loan.	\$63,403.14 34,552.42 63,816.33 36,044.70 2,221.78 2,060.37 30,680.59 9,938.60 51,845.52 7,374.64 1,469.54	<b>\$303,407.63</b>	
Scientific and Research: Astronomy Geology and Invertebrate Palæontology. Mineralogy. Mammalogy. Ornithology. Central Asiatic Exploration and Research. Vertebrate Palæontology. Comparative Anatomy. Anthropology. Ichthyology. Herpetology. Experimental Biology. Lower Invertebrates. Entomology.	3,430.60 6,292.65 876.57 8,417.30 4,314.17 1,800.00 8,134.48 6,072.32 7,355.81 3,880.15 8,394.63 7,377.65 5,182.46 9,730.39 16,362.49	97,621.67	
Printing, Books and Publications: Printing and Publishing. Preparation and Exhibition: Preparation and Exhibition. Educational—Public School Work: Public Education.		75,418.10 33,511.55 53,965.24	
Total net disbursements for the development Repayment of 1933 Income advanced	of all departm	ents	\$563,924.19 25,000.00 \$588,924.19
ALLOCATION OF	BANK LO	AN	
Balance, December 31, 1934:			
Cash Loans Receivable: Sixtieth Anniversary Endowment African Hall Construction Authorized Deficit of 1931 Authorized Deficit of 1934. Natural History Magazine.		\$87,541.05 44,301.84 26,454.53 9,298.68 25,000.00	\$157,403.90 192,596.10
			\$350,000.00

Trustees' Restricted Funds:

## MORRIS K. JESUP FUND ACCOUNT\*

## Receipts, 1934

Sales and Exchanges			341.75
otal net receipts for the development of all d	lepartments		\$261,655.37
Disbursemen	ts, 1934		
cientific and Research:			
Geology and Invertebrate Palaeontology.	<b>\$</b> 5,399.28		
Mineralogy	5,625.00		
Mammalogy	15,650.09		
Central Asiatic Exploration and Research	<b>5,496</b> .22		
Ornithology	23,994.63		
Vertebrate Palaeontology	16,265.14		
President Osborn's Science Fund	4,863.58		
Comparative Anatomy	10,848.13		
Anthropology	19,568.57		
Ichthyology	13,997.13		
Herpetology	3,904.59		
Experimental Biology	12,245.08		
Lower Invertebrates	6,938.95		
Entomology	13,128.28		
Library	6,539.40	<b>\$</b> 16 <b>4,4</b> 6 <b>4</b> .07	
rinting, Books and Publications:			
Printing and Publishing		15,677.32	
reparation and Exhibition:			
Preparation and Exhibition	55,664.10	<b>F</b> 0.000.00	
Vertebrate Palaeontology	20,699.88	76,363.98	
otal net disbursements for the development	of all departm	ente	\$256,505.37
alance, December 31, 1934	or an departm	CILIS	5,150.00

<sup>\*</sup> Disbursements of this account are made as the Board of Trustees may direct, for the purchase of specimens, for the expenses of field parties, and for the support of scientific work.

# Report of the Treasurer

## SPECIAL FUNDS ACCOUNT

## Receipts and Disbursements, 1934

	Balance Jan. 1	Receipts	Disbursements	Balance Dec. 31
Astronomy Astronomic Fund:	\$151.73			<b>\$</b> 151.73
Hayden Planetarium Fund: Charles Hayden Payments		\$150,000.00	\$137,035.14	12,964.86
TotalsGeology and Invertebrate	\$151.73	\$150,000.00	\$137,035.14	\$13,116.59
Palasontology Meteorite Fund: Lincoln Ellsworth Payments	350.00	61.40	170.16	241. <b>2</b> 4
Varve Clay Investigation Fund: Childs FrickPayments	197.15	300.00	460.64	<b>3</b> 6.51
Totals	\$547.15	\$361.40	\$630.80	\$277.75
Mineralogy Matilda W. Bruce Fund: Interest Payments	21.12	4.50	5.00	20.62
The Boyce Thompson Mineral Collection Fund: Interest	5,325.00	2,250.00		<b>7,575</b> .00
The Boyce Thompson Mineral Collection Installation Fund: Interest Transferred to Investment Fund.	557.38	739.80	1,297.18	
Wallace Memorial Fund: Interest	232.25	699.50	731.83	199.92
Totals	\$6,135.75	\$3,693.80	\$2,034.01	\$ 7,795.54
Mammalogy Archbold Mammal Fund: Richard Archbold Payments	32.39	19,321.72	19,354.11	
Mammal Fund: Transferred to Vertebrate Palaeontology Prepara-	750.00			
tion Fund			250.00 160.75	
-	\$750.00		\$410.75	\$339.25
Carried Forward	\$782.39	<b>\$</b> 19,321.72	\$19,764.86	\$339.25

Brought Forward Morden Asiatic Reconnaissance Fund:	Balance Jan. 1 \$782.39	Receipts \$19,321.72	Disbursements \$19,764.86	Balance Dec. 31 \$339.25
William J. Morden Payments		6,200.00	6,200.00	
North American Mammal Fund: Payments	300.00		300.00	
Ottley-Anthony Sudan Expedition Fund: Payments	2,112.80		262.54	1,850.26
Sage West China Expedition Fund: Dean Sage, Jr Payments		2,716.80	2,716.80	
Snyder Canadian Expedition Fund: Harry Snyder Payments		5,015.00	5,000.00	15.00
Special Canine Fund: Payments	161.94		33 76	128.18
Vernay, Hopwood, Chindwin Expedition Fund: Arthur S. Vernay Payments		1,378.89	1,378.89	
Totals	\$3,357.13	\$34,632.41	\$35,656.85	\$2,332.69
Asiatic Exploration and Research Central Asiatic Expeditions Fund: Anonymous. Payments Sale of Publications. Payments	\$4,296.53 10.16	\$1,000.00 1,944.50	<b>\$2,</b> 130.53 55.69	\$3,166.00 1,898.97
Totals	\$4,306.69	\$2,944.50	\$2,186.22	\$5,064.97
Ornithology Barro Colorado Island Fund: Mrs. Carll Tucker Payments		\$300.00	\$300.00	
Bird Photographic Fund: Frank M. Chapman Payments		36.00	36.00	
Templeton Crocker South Sea Cruise Fund: Templeton Crocker		15,000.00		15,000.00
Carried Forward		<b>\$15,336</b> .00	\$336.00	\$15,000.00

Brought Forward	Balance Jan. 1	Receipts \$15,336.00	Disbursements \$336.00	Balance Dec. 31 \$15,000.00
Olalla Fund: Mrs. E. M. B. Naumburg. Albert R. Brand		200.00 25.00		
-		225.00		225.00
Ornithological Fund:	3.77			3.77
Margaret Olivia Sage Fund: Robert T. Moore Interest Payments		25.00 435.14	41.93	
-		460.14	41.93	418.21
Whitney South Sea Expedition Fund: Mrs. Gertrude Vanderbilt Whitney	13,564.59	4,214.17	5,550.61	12,228.15
Totals	\$13,568.36	\$20,235.31	\$5,928.54	\$27,875.13
Vertebrate Palaeontology American Museum-Sinclair Dinosaur Expedition Fund: Sinclair Refining Co Payments	·	9,000.00	\$8,967.43	<b>\$32</b> .57
American Pliocene Fund— Vertebrate Palaeontology: Childs Frick Mrs. Childs Frick Payment	2,159.58	15,000.00 5,000.00	22,154.97	4.61
J. P. Morgan Fund—Verte- brate Palaeontology: Transferred from Reserve. Payments		22,477.81	22,477.81	
Osborn Palaeontologic Research Fund: Interest Payments	40.49	192.50	232.25	.74
Henry F. Osborn Research and Science Fund for 1933: Henry Fairfield Osborn Payments		1,156.20	1,156.20	
Henry F. Osborn Research and Travel Fund Contributions of 1933: Henry F. Osborn		5,090.98		
Payments	40.000.00	AND 0:7	5,090.98	
Carried Forward	<b>\$2,2</b> 00.07	\$57,917.49	\$60,079.64	<b>\$37</b> .92

Brought ForwardScarritt Mongolian Expedition	Balance Jan. 1 \$2,200.07	Receipts \$57,917.49	Disbursements \$60,079.64	Balance Dec. 31 \$37.92
Fund: Horace S. Scarritt Payments		1,007.02	1,007.02	
Scarritt Patagonian Expedition Fund:Payments	1,607.41		1,548.97	58.44
Vertebrate Palaeontology Field Fund: Interest	28.92	1,215.63		1,244.55
Vertebrate Palaeontology Preparation Fund: Transferred from Compara-			ehalikeasikilalikinseessas.	
tive Anatomy Fund		250.00		
Transferred from Mammal Fund Payments		250.00	155.56	
_		500.00	155.56	344.44
Vertebrate Palaeontology Special Fund: Interest	73.34	49.50		122.84
Western Field Fund: RefundPayments		8.65	8.65	
Totals	\$3,909.74	\$60,698.29	\$62,799.84	\$1,808.19
Comparative Anatomy James Arthur Research Fund: Interest Payments	1,136.82	1,750.00	1.775.11	1,111.71
Comparative Anatomy Fund: Mrs. Allen W. Shelton Payments	750.00	1,150.00	1,150.00	
Transferred to Vertebrate Palaeontology Prepara- tion Fund			250.00	
_	\$750.00	\$1,150.00	\$1,400.00	\$500.00
Introduction to Anatomy Fund:	118.52			118.52
Totals	\$2,005.34	\$2,900.00	\$3,175.11	\$1,730.23
Anthropology Fund: Anonymous Payments		\$500.00	\$180.00	\$320.00
Carried Forward		\$500.00	\$180.00	\$320.00

Brought Forward	Balance Jan. 1	Receipts \$500.00	Disbursements \$180.00	Balance Dec. 31 \$320.00
Anthropology Special Fund: Interest	73.34	49.50	ф180.00	122.84
Carnegie Conference Fund: Payments	144.10		144.10	
Keith Collection Fund: Mrs. Oric Bates Eman L. Beck Mrs. Robert Woods Bliss. Mrs. W. Murray Crane Childs Frick Harry F. Guggenheim Clarence L. Hay T. W. Lamont Mrs. Dwight W. Morrow. Mrs. Payne Whitney Loan Payments		50.00 1,000.00 800.00 100.00 500.00 100.00 1,000.00 250.00 250.00 2,000.00	10,000.00	
<del>-</del>		10,000.00	10,000.00	
Middle American Research Fund: Clarence L. Hay Payments	50.00	261.14	61.14	250.00
Physical Anthropology Fund: Miss Amelia Elizabeth White Interest Payments	1,195.84	100.00 473.72	832.38	
-	1,195.84	573.72	832.38	937.18
Physical Anthropology of Quebec Fund:	140.00			140.00
Frederick G. Voss Anthropology and Archaeology Fund: Interest Payments	1,582.69	13,904.30	13,846.17	1,640.82
Totals	\$3,185.97	\$25,288.66	\$25,063.79	\$3,410.84
Ichthyology Bashford Dean Ichthyological Library Fund: Interest Payments	14.59	203.50	152.90	65.19
Purchase of Fish Specimens Fund: Payments	267.25		55.00	212.25
Totals	\$281.84	\$203.50	\$207.90	\$277.44

To a Tomorto Landon	Balance Jan. 1	Receipts	Disbursements	Balance Dec. 31
Lower Invertebrates Coral Reef Group Fund: RefundPayments		40.40	40.40	
Totals		\$40.40	\$40.40	
Entomology Entomological Fund: Anonymous Herbert F. Schwarz Payments	1,213.13	59.85 100.00	104.89	
_	1,213.13	159.85	104.89	1,268.09
Grand Canyon FieldTrip Fund: David Rockefeller Payments	,	859.23	859.23	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Totals	\$1,213.13	\$1,019.08	\$964.12	\$1,268.09
Library Anson W. Hard Library Fund: InterestPayments		118.22	118.22	
Ralph Winfred Tower Memorial Fund: Interest Payments		1,068.72	1,068.72	
Totals		\$1,186.94	\$1,186.94	
Printing and Publishing Anthropological Handbook Fund:	2,566.34	654.66	695.92	2,525.08
Brewster Sanford Publication Fund: Payments	1,223.49		393.45	830.04
Mammal Publications Fund:	736.12		410.89	325.23
J. P. Morgan Fund—Printing and Publishing: Transferred from Reserve. Payments	·	1,300.64	1,300.64	
Totals	\$4,525.95	\$1,955.30	\$2,800.90	\$3,680.35
Public Education Carnegie Corporation of New York Fund: Payments	3,107.47		350.00	2,757.47
Carried Forward	\$3,107.47		\$350.00	<b>\$2,757</b> . 47

	Balance Jan. 1	Receipts	Disbursements	Balance Dec. 31
Brought Forward Educational Lecture Fund: Tuition Fees Payments.	\$3,107.47	92.40	\$350.00 92.40	<b>\$</b> 2,757.47
Laboratory School Fund: Lecture Fees		93.00		93.00
Nature Trails Fund: Antoinette Wilson Fees Payments	107.00	35.00 11.00	114.50	
	107.00	46.00	114.50	38.50
Pupil Parent Fund:	164.46			164.46
School Fund:Guiding Fees	161.42	7.50		168.92
Special Education Fund: Felix M. Warburg Payments	2,648.81	10,000.00	7,368.06	5,280.75
Jonathan Thorne Memorial Fund: Interest Payments	1,430.17	1,172.00	932.01	1,670.16
Totals	\$7,619.33	\$11,410.90	\$8,856.97	\$10,173.26
Preparation and Exhibition African Hall Group Fund: Daniel E. Pomeroy Arthur S. Vernay Interest Payments	69,238.07 69,238.07	7,000.00 5,000.00 500.00	37,914.02 37,914.02	43,824.05
African Hall Sculpture Fund: George D. Pratt Payments		5,000.00	5,000.00	
Blue Marlin Group Fund: Michael Lerner		1,000.00		1,000.00
Davison African Expedition Fur F. Trubee Davison Payments	nd:	191.40	191.40	
TotalsAdministration	\$69,238.07	\$18,691.40	\$43,105.42	\$44,824.05
Administration Fund: F. Trubee Davison Payments		1,340.68	1,340.68	
Totals	-	\$1,340.68	\$1,340.68	

	Balance Jan, 1	Receipts	Disbursements	Balance Dec. 31
Balance, January 1, 1934 Total net receipts for the development of specific de-	<b>\$120,04</b> 6.18			
partments  Total disbursements for the development of specific departments				
Balance, December 31, 1934 J. P. Morgan Fund Reserve: Interest Transferred to		23,396.40	······································	\$123,635.12
Vertebrate Palaeontology. Printing and Publishing			22,477.81 1,300.64	
	1,327.97	23,396.40	23,778.45	945.92
Totals	\$121,374.15	\$359,998.97	\$356,792.08	\$124,581.04

#### SPECIAL FUNDS ACCOUNT -1934

#### SUMMARY

	Balance Jan. 1	Receipts	Disbursements	Balance Dec. 31
Astronomy	\$151.73	\$150,000.00	\$137,035.14	\$13,116.59
Geology and Invertebrate	ф101.70	ф100,000.00	ф101,000.1 <del>1</del>	Φ10,110.00
	547.15	361.40	630.80	277.75
Palaeontology			2.034.01	
Mineralogy	6,135.75	3,693.80		7,795.54
Mammalogy	3,357.13	<b>34,</b> 632.41	35,656.85	<b>2,332</b> .69
Asiatic Exploration and Re-			0.400.00	
search	4,306.69	2,944.50	2,186.22	5,064.97
Ornithology	13,568.36	20,235.31	5,928.54	27,875.13
Vertebrate Palaeontology	3,909.74	60,698.29	62,799.84	1,808.19
Comparative Anatomy	2,005.34	<b>2,9</b> 00.00	3,175.11	1,730.23
Anthropology	3,185.97	<b>25,288.66</b>	25,063.79	3,410.84
Ichthyology	281.84	203.50	207.90	277.44
Lower Invertebrates		40.40	40.40	
Entomology	1.213.13	1.019.08	964.12	1,268.09
Library	•	1.186.94	1.186.94	•
Printing and Publishing	4,525.95	1,955.30	2,800.90	3,680.35
Public Education	7,619.33	11,410.90	8,856.97	10,173.26
Preparation and Exhibition.	69,238.07	18.691.40	43.105.42	44,824.05
Administration	00,200.01	1.340.68	1.340.68	11,021.00
Administration		1,010.00	1,010.00	
Total—Before Reserve	\$120,046.18	<b>\$</b> 336,602.57	\$333,013.63	\$123,635.12
J. P. Morgan Fund Reserve:	\$1,327.97			
Interest		<b>\$23,396.40</b>		
Transferred to				
Vertebrate Palaeontology			\$22,477.81	
Printing and Publishing			1,300.64	
<b>3</b>				
	<b>\$</b> 1,327.97	<b>\$</b> 23,396.40	\$23,778.45	\$945.92
Totals	\$121,374.15	<b>\$</b> 359,998.97	<b>\$</b> 356,792.08	\$124.581.04
LOCALS	Ψ121,071.10	4000,000.01	<del>4000,102.00</del>	<b>4121,001.01</b>

## THE AMERICAN MUSEUM OF NATURAL HISTORY

#### CORPORATE STOCK ACCOUNT 1934

Receipts:	
Department of Parks, City of New York:	
Č. D. P. 122 A	\$5,160.89
C. D. P. 123 M	9,962.00
N. D. P. 3–12.	20,784.86
	\$35,907.75
Disbursements: Payroll of Mechanics, etc	\$35,907.75
INCIDENTAL ACCOUNT 1934	
	<b>e</b> 0 220 01
Balance, January 1, 1934	\$8,338.21
Individuals and Societies	5,563,62
Group Life Insurance:	.,
Employees' Premium Payments\$9,844.41	
Loans	14,837.25
	\$28,739.08
	<b>420,700.00</b>
Disbursements: Individuals and Societies	<b>\$</b> 6.434.57
Group Life Insurance:	<b>\$0,454.07</b>
Premiums\$10,007.50	
Loan Instalments	14,837.25
Balance, December 31, 1934.	7.467.08
Balance, December 01, 100±	7,207.00
	\$28,739.08
All the foregoing accounts have been  Examined and OGDEN L. MILLS Approved CORNELIUS V. WHITNEY Auditing Committee.  H. RIVINGTON PYNE	
E. and O. E.  New York, December 31, 1934.  E. ROLAND HARRIMAN.	Tanana
NEW IORA, December 31, 1934. E. KOLAND HARRIMAN,	1 Teasurer.

ADAMS AND TROY
Certified Public Accountants
110 East 42nd Street
New York

MR. OGDEN L. MILLS,

Chairman, Auditing Committee,

American Museum of Natural History,

77th St. and Central Park West,

New York, N. Y.

#### DEAR SIR:

We have audited the cash transactions of The American Museum of Natural History for the year ended December 31, 1934.

According to the usual custom, certain collections to and including January 22, 1935, have been treated as of December 31, 1934, in order to obtain the benefit for the period then ended, of revenue earned during said period, but which became due and payable on January 2, 1935. In addition thereto, payments due from the City of New York aggregating \$17,438.06 were received on January 30, 1935, but were treated as of December 31, 1934.

\* \* \* \* \* \*

WE HEREBY CERTIFY, that in our opinion, subject to the foregoing comment, the receipts and disbursements for the year then ended were properly accounted for and correctly stated upon the records.

(Signed) ADAMS AND TROY
Certified Public Accountants.

New York, February 6, 1935.

# TREASURER'S REPORT OF THE

## PENSION FUND

OF

# THE AMERICAN MUSEUM OF NATURAL HISTORY FOR THE YEAR 1934

# INVESTED FUNDS SUMMARY

	Par Value	Book Value
Investment Fund		\$842,459.61
Endowment Fund	1,258.37	1,140.39
	\$863,950.00	\$843,600.00

#### PENSION FUND ACCOUNT

#### Receipts, 1934

Balance, January 1, 1934		\$16,580.51
counts		
Interest on Deferred Contributions 18.20	\$30,880.17	
Contributions of Board of Trustees: To equal contributions of Subscribing Em-		
ployees	30,880.17	61,760.34
Income from Investment Fund	37,474.51	
Interest on Deferred Contributions.	42.08	
Interest on Repayment of Contributions and Interest  Interest on Credit Balances	100.00 8.22	37,624.81
Investment Fund:		
Sales of Securities		100,087.25
		\$216,052.91

Examined and {George T. Bowdoin } Auditing Committee

#### PENSION FUND ACCOUNT

#### Disbursements, 1934

Payments to Subscribers and Beneficiaries: Return of Contributions Interest on Contributions Returned	\$ 3,360.92 372.68	<b>\$</b> 3,733.60	
Service Pensions "A"	11,753.65 1,169.25 7,047.09 3,006.63	22.976.62	
Death Gratuities: Section 13 Sub-Div. 1-B	1,767.18 394.25	•	0.00170.00
Sub-Div. 3-B (1)		2,463.68	\$ 29,173.90 56.52
Investment Fund: Purchase of Securities Balance, December 31, 1934: On Deposit:			152,162.50
United States Trust Company of New York. National City Bank of New York (Bursar's A		33,659.99 1,000.00	34,659.99 \$216,052.91

NEW YORK, December 31, 1934

E. ROLAND HARRIMAN, Treasurer.

Welfare Fund:

#### PENSION FUND—SPECIAL FUNDS ACCOUNT

## Receipts, 1934

Balance, January 1, 1934	
Examined and Approved {George T. Bowdoin } Auditing Con	
PENSION FUND—SPECIAL FU	INDS ACCOUNT
Disbursements, 19	34
Welfare Fund: Assistance and Relief	
E. & O. E. NEW YORK, December 31, 1934.	E. ROLAND HARRIMAN, Treasurer.

ADAMS AND TROY
Certified Public Accountants
110 East 42nd Street
New York

MR. FREDERICK M. WARBURG,

Chairman, Pension Board of the

American Museum of Natural History,

77th Street and Central Park West,

New York, N. Y.

#### DEAR SIR:

We have audited the cash transactions of the Pension Fund of The American Museum of Natural History for the year ended December 31, 1934.

According to the usual custom, certain collections to and including January 8, 1935, have been treated as of December 31, 1934, in order to obtain the benefit for the period then ended, of revenue earned during said period, but which became due and payable on January 2, 1935.

WE HEREBY CERTIFY, that in our opinion, subject to the foregoing comment, the receipts and disbursements for the year then ended were properly accounted for and correctly stated upon the records.

(Signed) Adams and Troy
Certified Public Accountants

New York, February 6, 1935.

# V. MEMBERSHIP

# CLARENCE L. HAY, Secretary WAYNE M. FAUNCE, Assistant Executive Secretary

We are pleased to report that our membership increased from 10,479 at the end of 1933 to 11,962 at the end of 1934, a net gain of 1,483. This brought our membership figure to a higher point than in 1932 also. All seems to point to increased gain in the economic field. Our members are enrolled as follows:

Endowment Members	11	Fellows	97					
Benefactors	24	Honorary Life Members	72					
Associate Founders	26	Life Members	1,095					
Associate Benefactors	<b>54</b>	Corresponding Members	22					
Patrons	211	Sustaining Members	209					
Honorary Fellows	17	Annual Members	3,357					
Associate Members								

Membership dues received in 1934 amounted to \$54,859.

The lectures for Members included the regular spring and autumn courses, nine lectures, and those for the Children of Members, spring and autumn, eight lectures. Informal talks for Members, "Know Your Museum Series," were given in the spring and fall in several of the exhibition halls.

Informal public lectures were given, spring and fall, by Mr. H. P. Whitlock, on "Jade and the Drummond Collection."

Ten-minute talks on stars and planets were given in the Pro-Astronomic Hall by Mr. Arthur Draper and Miss Marian Lockwood.

Free Saturday afternoon programs of motion pictures were given throughout the year, with the exception of July and August.

Saturday afternoon free tours of the Museum were conducted by Dr. W. L. Smith and, in addition, special tours were conducted as follow-up of radio talks by members of the Staff over WNYC and WOR.

Lectures were also given at the Museum under the auspices of the various scientific societies that met here.

The James Arthur lecture on the Evolution of the Human Brain was given in our auditorium by Professor D. M. S. Watson, D.Sc., F.R.S., of the University of London, on April 24.

Throughout 1934, each week, concerts have been given in

our auditorium by the New York Civic Orchestra. Early in the year, as last year, these concerts were given under the auspices of the Department of Education of the State of New York; later they were given by the Federal Civil Works Administration, and later still by the Department of Public Welfare of the City of New York.

The Sixth Annual Members' Visiting Day was held on May 18. The program was arranged to illustrate the contrast between the old and the new in museum practice, emphasizing the latest development in research and exhibition. There was a conducted tour "behind the scenes" and to some exhibits recently opened, including the Lindbergh exploration plane and the Drummond Collection of Ancient Jade, Amber and Ivory. The studios of the Department of Preparation were open for inspection, and the Akeley African Hall furnished opportunity to observe large mammal habitat groups in all stages of installation. In the new laboratories of the Department of Experimental Biology, which occupy the entire sixth and seventh floors of the African Wing, some of the Museum's interesting research problems were demonstrated.

After the tour of the Museum, members and their guests assembled for tea in Education Hall, where an exhibit of work of the children in the art classes in the elementary schools of New York City was on view. President Davison extended the greetings of the institution and briefly reviewed the history of the Museum. Music was supplied by the New York Salon Orchestra.

#### CHANGES IN THE BOARD OF TRUSTEES

At the spring meeting of the Board of Trustees, May 7, 1934, the resignation of Mr. James H. Perkins as Treasurer and as Trustee was accepted with regret. The Trustees recorded their appreciation of Mr. Perkins' able and conscientious services since his election as Trustee and as Treasurer on January 3, 1927. Mr. Perkins also served as Chairman of the Finance Committee and as a member of the Executive Committee. During 1927 and 1928 he was a member of the Trustee Committee on Fishes, and from 1931 to 1934 he was Treasurer of the Sixtieth Anniversary Endowment Committee.

On May 7, 1934, Mr. E. Roland Harriman was elected Treasurer, and as a Trustee in the Class of 1936, in the place of Mr. Perkins.

At the Annual Meeting of the Board, January 7, 1935, the following officers were re-elected: President, F. Trubee Davison; First Vice-President, J. P. Morgan; Second Vice-President, Cleveland E. Dodge; Treasurer, E. Roland Harriman; Secretary, Clarence L. Hay.

Also at the Annual Meeting of 1935, the Trustees whose terms expired at this meeting were re-elected to the Class of 1939: Chauncey J. Hamlin, Suydam Cutting, Frederick H. Osborn, Henry Fairfield Osborn, George D. Pratt, and A. Hamilton Rice.

The Trustees learned with great regret of the decease, on January 20, 1935, of Mr. George Dupont Pratt, who had served the Museum as a Trustee since February 7, 1921, with singular devotion and generosity.

The ex-officio members of the Board of Trustees are: the Mayor, Mr. Fiorello H. La Guardia; the Comptroller, Mr. Frank J. Taylor, who, on January 1, 1935, succeeded Mr. Joseph D. McGoldrick (who had served as Comptroller since May 9, 1934, in place of Mr. W. Arthur Cunningham, deceased); and the Commissioner of Parks, Mr. Robert Moses.

The Trustees also record the loss through the passing, on May 22, 1934, of Mr. Howard Russell Butler, a member of the Advisory Committee on Astronomy and the Planetarium from 1925. Mr. Butler's paintings of astronomical phenomena have been important factors in stimulating interest in the Museum's Department of Astronomy.

#### CHANGES IN THE ADMINISTRATIVE AND SCIENTIFIC STAFFS

Harvey Bassler, Ph.D., was appointed Research Associate in Herpetology in February, 1934.

In March, Clyde Fisher, Ph.D., LL.D., retired as Curator of University, College and Adult Education, to devote himself entirely to the Department of Astronomy.

Mrs. Grace Fisher Ramsey, Associate Curator, was appointed Acting Curator of the Department of Education, during the illness of Dr. George H. Sherwood, Curator-in-Chief of the Department. Her appointment took place on April 19, 1934.

Mr. Frederick H. Osborn was appointed Research Associate in Anthropology, November 19, 1934.

At the Annual Meeting of the Trustees, January 7, 1935, the following changes occurred in the administration offices:

Dr. George H. Sherwood retired as Director because of continued ill health. Dr. Sherwood was appointed Honorary Director. The following resolution was unanimously adopted by the Trustees:

WHEREAS, Doctor George H. Sherwood has served The American Museum of Natural History faithfully and loyally throughout a period of more than thirty-two years, during which time he has held the posts of Assistant Curator of the Department of Invertebrate Zoology, Curator of the Department of Education, Assistant Secretary and Assistant Treasurer, Executive Secretary, Acting Director and Director, and

Whereas, Doctor Sherwood has given unstintingly of his time, strength and energy in administering the affairs of the Museum—never sparing himself, but ever vigilant in his efforts to build up an institution second to none of its kind in the world of science and in the scope of its service to the community, and

Whereas, the Trustees are sensible of the fact that largely through the splendid efforts of Doctor Sherwood the Department of Education of the Museum has become an integral factor in the public school system of the City of New York, and

Whereas, because of impaired health his physician advises his retirement from the arduous duties of the Director,

THEREFORE BE IT RESOLVED, That the Trustees wish to assure Doctor Sherwood that his record will stand as an inspiration to those who have had the privilege of being intimately associated with him, and that in recognition of his long service he be hereby appointed Honorary Director of The American Museum of Natural History and be continued as Curator of the Department of Public Education.

Dr. Roy Chapman Andrews, Vice-Director, who had served as Acting Director since March 1, 1934, was appointed Director.

Mr. Wayne M. Faunce, Assistant Executive Secretary and Assistant Director (General Administration), was appointed Vice-Director and Executive Secretary.

Also at the Annual Meeting of January 7, 1935, the following promotions and appointments occurred in the Scientific Staff:

E. W. Gudger, Ph.D., Bibliographer and Associate in the Department of Living and Extinct Fishes, and Francesca R. La Monte, B.A., Assistant Curator in the Department, were appointed Research Associates.

John T. Zimmer, M.A., Associate Curator of Birds of the Western Hemisphere, was appointed Acting Curator in the Department of Ornithology.

Charles E. O'Brien was appointed Assistant Curator in the Department of Ornithology.

Marcelle Roigneau, Staff Assistant in the Department of Comparative and Human Anatomy, was appointed Assistant Curator in the Department.

Bella Weitzner was appointed Assistant Curator in the Department of Anthropology.

Georgine Mastin was appointed Staff Assistant in the Department of Education.

In May, 1934, Miss Ida Richardson Hood, A.M., Curator of the Department of Library and Publications, retired from the Museum, after a service of more than thirty-one years, and Miss Hazel Gay, Assistant Librarian, was appointed Acting Curator. On January 7, 1935, Miss Gay was appointed Librarian, and Miss Helen Gunz was appointed Assistant Librarian.

# VI. APPENDIX

# ADMINISTRATION AS OF DECEMBER 31, 1934

#### BOARD OF TRUSTEES

Honorary President

HENRY FAIRFIELD OSBORN

President\*

F. TRUBEE DAVISON

First Vice-President

J. P. MORGAN Treasurer Second Vice-President

CLEVELAND E. DODGE Secretary

E. ROLAND HARRIMAN

CLARENCE L. HAY

ELECTIVE TRUSTEES
Class of 1934

CHAUNCEY J. HAMLIN

SUYDAM CUTTING FREDERICK H. OSBORN HENRY FAIRFIELD OSBORN

GEORGE D. PRATT
A. HAMILTON RICE

Class of 1935

GEORGE T. BOWDOIN

CORNELIUS V. WHITNEY

J. P. Morgan

DANIEL E. POMEROY

HENRY W. SAGE H. RIVINGTON PYNE

Class of 1936

DOUGLAS BURDEN

CLEVELAND EARL DODGE

CHILDS FRICK

E. ROLAND HARRIMAN

JOHN D. ROCKEFELLER, 3rd

LEONARD C. SANFORD

Class of 1937

F. TRUBEE DAVISON

LINCOLN ELLSWORTH

MADISON GRANT

CLARENCE L. HAY

WILLIAM K. VANDERBILT

Class of 1938

GEORGE F. BAKER

ARCHER M. HUNTINGTON

JUNIUS S. MORGAN

A. Perry Osborn Kermit Roosevelt

FREDERICK M. WARBURG

**EX-OFFICIO TRUSTEES** 

FIORELLO H. LA GUARDIA

(MAYOR OF THE CITY OF NEW YORK)

JOSEPH D. McGoldrick

(COMPTROLLER OF THE CITY OF NEW YORK)

ROBERT MOSES

(COMMISSIONER OF PARKS)

<sup>•</sup> The President is ex-officio a member of all Committees,

#### STANDING COMMITTEES OF THE TRUSTEES

#### **Executive Committee**

**Finance Committee** 

CLEVELAND EARL DODGE,

Chairman ex-

Officio

E. ROLAND HARRIMAN,

F. TRUBEE DAVISON

E. ROLAND HARRIMAN

Clarence L. Hay

George T. Bowdoin

CHILDS FRICK JUNIUS S. MORGAN

DANIEL E. POMEROY

GEORGE D. PRATT

KERMIT ROOSEVELT

A. PERRY OSBORN

**Nominating Committee** 

Madison Grant, Chairman George F. Baker Douglas Burden Chairman George F. Baker

GEORGE F. BAKER
GEORGE T. BOWDOIN
A. PERRY OSBORN
JUNIUS S. MORGAN
FREDERICK H. SMYTH,

Assistant Secretary

**Auditing Committee** 

Ogden L. Mills, *Chairman*Cornelius V. Whitney
H. Rivington Pyne

# Counsel to the Board of Trustees

LEWIS L. DELAFIELD

# SPECIAL COMMITTEES OF THE TRUSTEES Buildings and Plans

HENRY FAIRFIELD OSBORN, Chairman

ROBERT MOSES,

Park Department

CHAUNCEY J. HAMLIN, Roosevelt Memorial

LEONARD C. SANFORD CORNELIUS V. WHITNEY, Whitney Memorial DANIEL E. POMEROY,
African Hall
CLARENCE L. HAY,
Middle American Hall
JUNIUS S. MORGAN,
Oceanic Hall
CHILDS FRICK,
Vertebrate Palæontology
ROSWELL MILLER
Engineering Consultant

WAYNE M. FAUNCE,
Assistant Executive Secretary

# SPECIAL COMMITTEES OF THE TRUSTEES—Continued Sixtieth Anniversary Endowment

F. TRUBEE DAVISON,
General Chairman
E. ROLAND HARRIMAN,
Treasurer
George T. Bowdoin
Douglas Burden

Douglas Burden Cleveland E. Dodge

CHILDS FRICK

CLARENCE L. HAY
JUNIUS S. MORGAN
A. PERRY OSBORN
DANIEL E. POMEROY
HENRY W. SAGE
LEONARD C. SANFORD
GEORGE H. SHERWOOD,
Secretary of the Committee

# Pension Board\* Trustee and Employee Members

FREDERICK M. WARBURG,

Chairman

FREDERICK H. OSBORN

GEORGE T. BOWDOIN

A. Perry Osborn Harry F. Beers George N. Pindar Harold E. Anthony

#### DEPARTMENTAL COMMITTEES

#### Library and Publications

GEORGE T. BOWDOIN, Chairman MADISON GRANT A. HAMILTON RICE OGDEN L. MILLS HAZEL GAY, Acting Curator

#### Education

FREDERICK M. WARBURG,
Chairman
GEORGE D. PRATT
CHAUNCEY J. HAMLIN
GEORGE H. SHERWOOD,
Curator-in-Chief

### Geology and Geography

A. Hamilton Rice, Chairman Douglas Burden Chester A. Reeds, Curator

# Mineralogy and Morgan Hall

GEORGE F. BAKER, Chairman J. P. MORGAN H. RIVINGTON PYNE HERBERT P. WHITLOCK, Curator

#### Vertebrate Palæontology

CHILDS FRICK, Chairman
DOUGLAS BURDEN
HENRY FAIRFIELD OSBORN,
Honorary Curator-in-Chief

# Anthropology and Comparative Anatomy

CLARENCE L. HAY, Chairman MADISON GRANT FREDERICK H. OSBORN FREDERICK TILNBY CLARK WISSLER, Curator-in-Chief WILLIAM K. GREGORY, Curator

<sup>\*</sup> Established by the Trustees in 1913.

# DEPARTMENTAL COMMITTEES—Continued

#### Astronomy and Planetarium

A. Cressy Morrison,
Chairman
H. Rivington Pyne
Charles I. Liebman

O. H. CALDWELL JOHN A. KINGSBURY CLYDE FISHER, Curator

# Advisers to the Astronomy Committee

HENRY NORRIS RUSSELL, Princeton GEORGE ELLERY HALE, Mount Wilson HARLOW SHAPLEY, Harvard

SAMUEL ALFRED MITCHELL, University of Virginia

# Asiatic Halls and Asiatic Collections

KERMIT ROOSEVELT, Chairman ARTHUR S. VERNAY SUYDAM CUTTING WILLIAM J. MORDEN H. E. ANTHONY, Curator

# African Hall and African Collections

DANIEL E. POMEROY, Chairman A. PERRY OSBORN HENRY W. SAGE H. E. ANTHONY, Curator JAMES L. CLARK, Preparation

### North American Mammals

MADISON GRANT, Chairman CHILDS FRICK DOUGLAS BURDEN KERMIT ROOSEVELT JOHN D. ROCKEFELLER, 3rd H. E. ANTHONY, Curator

Birds of the World

LEONARD C. SANFORD,

Chairman

CORNELIUS V. WHITNEY
FRANK MICHLER CHAPMAN,
Curator-in-Chief

# Rothschild Collection Leonard C. Sanford,

Chairman
MRS. GERTRUDE VANDERBILT

WHITNEY
LORD ROTHSCHILD
FRANK MICHLER CHAPMAN,

Curator of Birds
ROBERT CUSHMAN MURPHY

George H. Sherwood, Director
Ocean Life and Oceanic Hall
JUNIUS S. MORGAN, Chairman
George T. Bowdoin

WILLIAM K. VANDERBILT
H. E. ANTHONY,

Curator of Mammalogy
Marine Life

George T. Bowdoin,

Chairman

CLARENCE L. HAY
WILLIAM K. VANDERBILT
ROY W. MINER, Curator
Insect Life

JOHN D. ROCKEFELLER, 3rd, Chairman

HERBERT F. SCHWARZ WILLIAM C. WOOD FRANK E. LUTZ, Curator

# DEPARTMENTAL COMMITTEES—Continued

Fishes

**Amphibians and Reptiles** 

CLEVELAND EARL DODGE,

Douglas Burden, Chairman

Chairman

Chairman H. RIVINGTON PYNE

WILLIAM K. VANDERBILT

G. KINGSLEY NOBLE, Curator

WILLIAM K. GREGORY,

Curator-in-Chief

Wild Life Protection

MADISON GRANT, Chairman GEORGE D. PRATT H. E. ANTHONY, Staff Member

# ADMINISTRATIVE OFFICERS AS OF DECEMBER 31, 1934

Executive Secretary and Director GEORGE H. SHERWOOD

**Acting Director** 

ROY CHAPMAN ANDREWS

Vice-Director (Preparation and Exhibition)

IAMES L. CLARK

Assistant Executive Secretary and Assistant Director (General Administration)

WAYNE M. FAUNCE

**Assistant Treasurer** 

United States Trust Company of New York

Bursar

FREDERICK H. SMYTH

Assistant Bursar

Francis Bushell

Superintendent of Buildings I. B. FOULKE

Registrar

George N. Pindar

Assistant Registrar ETHEL L. NEWMAN

Chief of Construction

H. F. BEERS

Chief Engineer

HENRY J. LANGHAM

Assistant to the President HANS CHRISTIAN ADAMSON

# ADMINISTRATIVE COMMITTEES AS OF DECEMBER 31, 1934

Operation, Construction, Transportation

WAYNE M. FAUNCE, Chairman

H. F. BEERS

H. J. LANGHAM

J. B. FOULKE

George N. Pindar

FREDERICK H. SMYTH
GEORGE H. SHERWOOD, ex-officio

Finances

FREDERICK H. SMYTH

GEORGE H. SHERWOOD

Safety

WAYNE M. FAUNCE, Chairman

H. F. BEERS

I. B. FOULKE

H. J. LANGHAM

CHARLES C. GROFF, Inspector

Welfare of Employees

A. PERRY OSBORN, Chairman

GEORGE N. PINDAR

FREDERICK M. WARBURG

# SCIENTIFIC STAFF AS OF DECEMBER 31, 1934

#### 1. OFFICERS OF ADMINISTRATION

FREDERICK TRUBEE DAVISON, LL.D., President\* GEORGE H. SHERWOOD, Ed.D., Director\*

# Director's Cabinet in Planning and Exhibition

ROY CHAPMAN ANDREWS, Sc.D., Vice-Director

JAMES L. CLARK, D.Sc., Vice-Director (Preparation and Exhibition)

WAYNE M. FAUNCE, Sc.B., Assistant Executive Secretary and Assistant Director (General Administration)

Frederick H. Smyth, Bursar

GEORGE N. PINDAR, Registrar

# 2. SCIENTIFIC STAFF ASTRONOMY

CLYDE FISHER, Ph.D., LL.D., Curator HUGH S. RICE, B.S., Associate in Astronomy

#### MINERALOGY

HERBERT P. WHITLOCK, C.E., Curator

#### VERTEBRATE PALÆONTOLOGY

HENRY FAIRFIELD OSBORN, D.Sc., LL.D., Honorary Curator-in-Chief

CHILDS FRICK, B.S., Honorary Curator of Late Tertiary and Quaternary Mammals

WALTER GRANGER, D.Sc., Curator of Fossil Mammals

BARNUM BROWN, Sc.D., Curator of Fossil Reptiles

GEORGE GAYLORD SIMPSON, Ph.D., Associate Curator of Vertebrate Palæontology

CHARLES C. MOOK, Ph.D., Associate Curator of Geology and Palæontology

EDWIN H. COLBERT, A.M., Assistant Curator

RACHEL A. NICHOLS, A.M., Staff Assistant

WALTER W. HOLMES, Field Associate in Palæontology

#### GEOLOGY AND INVERTEBRATE PALÆONTOLOGY

CHESTER A. REEDS, Ph.D., Curator

<sup>\*</sup> The President and the Director are ex-officio members of all Scientific Staff Committees

#### LIVING INVERTEBRATES

ROY WALDO MINER, Ph.D., Sc.D., Curator WILLARD G. VAN NAME, Ph.D., Associate Curator Frank J. Myers, Research Associate in Rotifera\* Horace W. Stunkard, Ph.D., Research Associate in Parasitology A. L. Treadwell, Ph.D., Research Associate in Annulata

#### **ENTOMOLOGY**

FRANK E. LUTZ, Ph.D., Curator
A. J. MUTCHLER, Associate Curator of Coleoptera
C. H. CURRAN, M.S., D.Sc., Assistant Curator
WILLIS J. GERTSCH, M.A., Assistant Curator
FRANK E. WATSON, B.S., Staff Assistant in Lepidoptera

WILLIAM M. WHEELER, Ph.D., LL.D., Research Associate in Social Insects

CHARLES W. LENG, B.Sc., Research Associate in Coleoptera HERBERT F. SCHWARZ, M.A., Research Associate in Hymenoptera E. L. Bell, Research Associate in Lepidoptera

#### LIVING AND EXTINCT FISHES

WILLIAM K. GREGORY, Ph.D., Curator-in-Chief†
JOHN T. NICHOLS, A.B., Curator of Recent Fishes
E. W. GUDGER, Ph.D., Bibliographer and Associate
FRANCESCA R. LA MONTE, B.A., Assistant Curator
CHARLES H. TOWNSEND, Sc.D., Research Associate
C. M. Breder, Jr., Research Associate
LOUIS HUSSAKOF, Ph.D., Research Associate in Devonian Fishes
WILLIAM BEEBE, Sc.D., Research Associate in Oceanography
VAN CAMPEN HEILNER, M.S., Field Representative

#### **HERPETOLOGY**

G. KINGSLEY NOBLE, Ph.D., Curator CLIFFORD H. POPE, B.S., Assistant Curator HARVEY BASSLER, Ph.D., Research Associate

#### EXPERIMENTAL BIOLOGY

G. KINGSLEY NOBLE, Ph.D., Curator H. J. CLAUSEN, Ph.D., Assistant Curator BERTRAM G. SMITH, Ph.D., Research Associate

<sup>\*</sup> Research Associates are honorary appointments.

<sup>†</sup> Also Research Associate in Palæontology and Associate in Physical Anthropology.

DOUGLAS BURDEN, M.A., Research Associate FRANK S. MATHEWS, M.D., Research Associate HOMER W. SMITH, Sc.D., Research Associate O. M. HELFF, Ph.D., Research Associate CHARLES E. HADLEY, Ph.D., Research Associate S. W. HANDFORD, A.B., Research Associate

#### **ORNITHOLOGY**

Frank M. Chapman, Sc.D., Curator-in-Chief Robert Cushman Murphy, D.Sc., Curator of Oceanic Birds James P. Chapin, Ph.D., Associate Curator of Birds of the

Eastern Hemisphere

JOHN T. ZIMMER, M.A., Associate Curator of Birds of the Western Hemisphere

ERNST MAYR, Ph.D., Associate Curator of Birds

ALBERT R. BRAND, Associate in Ornithology

ELSIE M. B. NAUMBURG, Research Associate

#### MAMMALOGY

H. E. Anthony, D.Sc., Curator

ROBERT T. HATT, Ph.D., Assistant Curator

GEORGE G. GOODWIN, Assistant Curator

G. H. H. TATE, M.A., Assistant Curator of South American Mammals

T. DONALD CARTER, Assistant Curator of Old World Mammals

RICHARD ARCHBOLD, Research Associate

WILLIAM J. MORDEN, Ph.B., Field Associate

ARTHUR S. VERNAY, Field Associate

#### COMPARATIVE AND HUMAN ANATOMY

WILLIAM K. GREGORY, Ph.D., Curator

H. C. RAVEN, Associate Curator

S. H. Chubb, Associate Curator

MARCELLE ROIGNEAU, Staff Assistant in Comparative Anatomy

J. HOWARD McGregor, Ph.D., Research Associate in Human Anatomy

DUDLEY J. MORTON, M.D., Research Associate

FREDERICK TILNEY, M.D., Ph.D., Research Associate

#### ANTHROPOLOGY

CLARK WISSLER, Ph.D., LL.D., Curator-in-Chief

N. C. Nelson, M.L., Curator of Prehistoric Archæology

George C. Vaillant, Ph.D., Associate Curator of Mexican Archæology

HARRY L. SHAPIRO, Ph.D., Associate Curator of Physical Anthropology

MARGARET MEAD, Ph.D., Assistant Curator of Ethnology

W. C. Bennett, Ph.D., Assistant Curator of Anthropology

WILLIAM W. HOWELLS, Ph.D., Associate in Physical Anthropology

CLARENCE L. HAY, A.M., Research Associate in Mexican and Central American Archæology

MILO HELLMAN, D.D.S., Research Associate in Physical Anthropology

GEORGE E. BREWER, M.D., LL.D., Research Associate in Somatic Anthropology

RONALD L. OLSON, Ph.D., Research Associate in Peruvian Archæology

FREDERICK H. OSBORN, Research Associate in Anthropology

#### ASIATIC EXPLORATION AND RESEARCH

ROY CHAPMAN ANDREWS, Sc.D., Curator-in-Chief

WALTER GRANGER, D.Sc., Curator of Palæontology

CHARLES P. BERKEY, Ph.D., Sc.D. [Columbia University], Research Associate in Geology

AMADEUS W. GRABAU, S.D. [The National Geological Survey of China], Research Associate

Père Teilhard de Chardin [The National Geological Survey of China], Research Associate in Mammalian Palæontology

## PREPARATION AND EXHIBITION

JAMES L. CLARK, D.Sc., Vice-Director (in Charge)
ALBERT E. BUTLER, Associate Chief
FRANCIS L. JAQUES, Staff Associate

# 3. EDUCATION, LIBRARY AND PUBLICATION STAFF EDUCATION

GEORGE H. SHERWOOD, Ed.D., Curator-in-Chief GRACE FISHER RAMSEY, Associate Curator WILLIAM H. CARR, Assistant Curator DOROTHY A. BENNETT, A.B., Assistant Curator HERMAN A. SIEVERS, Staff Assistant
JOHN SAUNDERS, Staff Assistant
FARIDA A. WILEY, Staff Assistant
AGNES G. KELLY, A.M., Staff Assistant
L. WALES HOLDEN, Staff Assistant
WILLIAM LORD SMITH, M.D., Staff Assistant
PAUL B. MANN, A.M., Associate in Education
FRANK E. LUTZ, Ph.D., Research Associate in Outdoor Education

#### LIBRARY AND PUBLICATIONS

HAZEL GAY, Acting Curator
JANNETTE MAY LUCAS, B.S., Assistant Librarian—Osborn Library

#### PRINTING AND PUBLISHING

HAWTHORNE DANIEL, Curator, and Editor of Natural History A. KATHERINE BERGER, Associate Editor of Natural History ETHEL J. TIMONIER, Associate Editor of Scientific Publications

# PUBLIC AND PRESS INFORMATION HANS CHRISTIAN ADAMSON, Chairman

# COMMITTEES OF THE SCIENTIFIC STAFF FOR 1934 Scientific Publications

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Clark Wissler, Ph.D.

CHESTER A. REEDS, Ph.D.

WILLIAM K. GREGORY, Ph.D.

G. Kingsley Noble, Ph.D.

Frank M. Chapman, Sc.D. Hazel Gay

#### HAWTHORNE DANIEL

#### Subcommittee on Central Asiatic Publications

ROY CHAPMAN ANDREWS, Sc.D., Chairman

CHESTER A. REEDS, Ph.D.

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#### HISTORY

PRESIDENCY OF JOHN DAVID WOLFE, 1869-1872

1869 Museum incorporated. Constitution adopted as drafted by Joseph H. Choate.

1870 First home secured, the Arsenal, Central Park.

Presidency of Robert L. Stuart, 1872-1881.

1874 Cornerstone of first section of building laid by President Ulysses S. Grant. 1878 Contract adopted between Trustees and Department of Parks, as drawn up by Andrew H. Green and Joseph H. Choate.

1880 Educational work with the schools inaugurated by Professor Albert S. Bickmore.

Presidency of Morris K. Jesup, 1881-1908.

1892 Museum opened to the public on Sundays.

1887-1905 The City of New York appropriated \$4,218,820.95 for seven new building sections, II-VIII.

1907 Museum opened free to the public every day in the year.

1908-1917 Mr. and Mrs. Jesup bequeathed \$6,000,000 to the Museum.

Presidency of Henry Fairfield Osborn, 1908–1933.

1908 Constitution amended making the Mayor, the Comptroller and the President of the Department of Parks, ex-officio members of the Board of Trustees.

1921 Greater New York Charter amended, placing the Museum on the same basis as Public Schools with respect to Corporate Stock Appropriations, by Chapter 618 of the Laws of 1921, State of New York.

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1929 Appropriation of \$3,550,000 by the City of New York for construction of African Hall, Power Plant and Service Building, and South Oceanic Wing.

Contribution of \$750,000 by Harry Payne Whitney for one-half cost of South Oceanic Wing.

#### PRESIDENCY OF F. TRUBEE DAVISON, 1933-

1934 Contribution of \$150,000 by Charles Hayden for purchase of Zeiss Projection Planetarium and Copernican Planetarium.

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