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535

THE AMERICAN MUSEUM OF NATURAL HISTORY

INCORPORATED IN 1869

•	

MEMBERSHIP AND ENDOWMENT

There are more than thirty-three hundred members of the Museum, residents of the United States and other countries, who support its educational and scientific work and enjoy its lectures, publications and other privileges.

Annual N	1embe	ers				. \$	5 10
Sustaining	Mer.	nbers	(ann	ually)			25
Life Men	nbers						100
Fellows							500
Patrons				•			1,000
Associate	Bene	factors			•	•	10,000
Benefacto	rs						50,000

The Endowment Fund was established in 1884. The Trustees especially desire to insure the permanent growth and welfare of the Museum through an increase of this fund.

FORM OF GIFT OR BEQUEST

I do h	ereby give	e and b	requeath	to "]	Гне А	MERIC	AN
\mathbf{M} useum	of NAT	URAL	Histor	Y" (of the	City	of
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THE AREMINE OF WOODS AND TORRESTRY

BA-RETIED OF THE LATE MORRIS K. JESUT

Out of the Late John I. Clancy

FORTY-FOURTH ANNUAL REPORT

OF

THE AMERICAN MUSEUM OF NATURAL HISTORY

FOR THE YEAR 1912

Annual Report of the President

Treasurer's Report List of Accessions

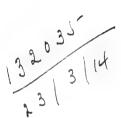
Act of Incorporation

Contract with the Department of Parks

Constitution By-Laws and List of Members



NEW YORK
Issued February 3, 1913



PH 71 A641 1912

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FOR 1913

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FREDERIC A. LUCAS, Sc.D.

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EDMUND OTIS HOVEY, Ph.D., Curator CHESTER A. REEDS, Ph.D., Assistant Curator

DEPARTMENT OF MINERALOGY

L. P. GRATACAP, A.M., Curator

GEORGE F. KUNZ, Ph.D., Honorary Curator of Gems

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WILLIAM MORTON WHEELER, Ph.D., Honorary Curator of Social Insects AARON L. TREADWELL, Ph.D., Honorary Curator of Annulata CHARLES W. LENG, B.S., Honorary Curator of Coleoptera

DEPARTMENT OF ICHTHYOLOGY AND HERPETOLOGY

BASHFORD DEAN, Ph.D., Curator
LOUIS HUSSAKOF, Ph.D., Associate Curator of Fishes
JOHN T. NICHOLS, A.B., Assistant Curator of Recent Fishes
MARY CYNTHIA DICKERSON, B.S., Assistant Curator of Herpetology

DEPARTMENT OF MAMMALOGY AND ORNITHOLOGY

J. A. ALLEN, Ph.D., Curator
FRANK M. CHAPMAN, Curator of Ornithology
ROY C. ANDREWS, A.B., Assistant Curator of Mammalogy
W. DeW. MILLER, Assistant Curator of Ornithology
RUDOLPH M. ANDERSON, Ph.D., Assistant in Mammalogy

SCIENTIFIC STAFF FOR 1913-Continued

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HENRY FAIRFIELD OSBORN, Sc.D., LL.D., D.Sc., Curator Emeritus W. D. MATTHEW, Ph.D., Curator WALTER GRANGER, Associate Curator of Fossil Mammals BARNUM BROWN, A.B., Associate Curator of Fossil Reptiles WILLIAM K. GREGORY, Ph.D., Assistant Curator

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CLARK WISSLER, Ph.D., Curator
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NELS C. NELSON, M.L., Assistant Curator
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ALANSON SKINNER, Assistant Curator

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MARY CYNTHIA DICKERSON, B.S., Curator

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ALBERT S. BICKMORE, Ph.D., LL.D., Curator Emeritus GEORGE H. SHERWOOD, A.M., Curator AGNES L. ROESLER, Assistant

FORTY-FOURTH ANNUAL REPORT

To the Trustees and Members of The American Museum of Natural History, and to the Municipal Authorities of the City of New York:

The President has the honor to submit herewith his sixth annual report and briefly to call attention to the salient features which have marked the year 1912. The detailed activities and growth of the several departments will be found in the reports by the Director, the Curators and the Officers in charge of the scientific and financial administration included in this Report.

The progress of the Museum is in large measure due to the liberal contributions of Trustees and other Members, which exceed those of any previous year; it is in still larger measure due to the spirit of devotion to the institution which animates all the members of our scientific and administrative staffs and even characterizes the workers of all classes throughout the Museum. The members of the Scientific Staff who are carrying on explorations in different parts of the world, are extending the name of the American Museum and creating world-wide interest in its undertakings.

The Museum Journal has been the means of informing our Members from month to month both of the progress of exploration and discovery and of the presentation in the exhibition halls of the results of field work. The articles are first offered to the newspapers, which are showing a constantly increasing desire to present authoritative accounts of the activities of the Museum. Public education in science, which is one of our first objects, is, perhaps, furthered in this manner as rapidly as in any other, because a vast, intelligent and eager audience is reached through the public press.

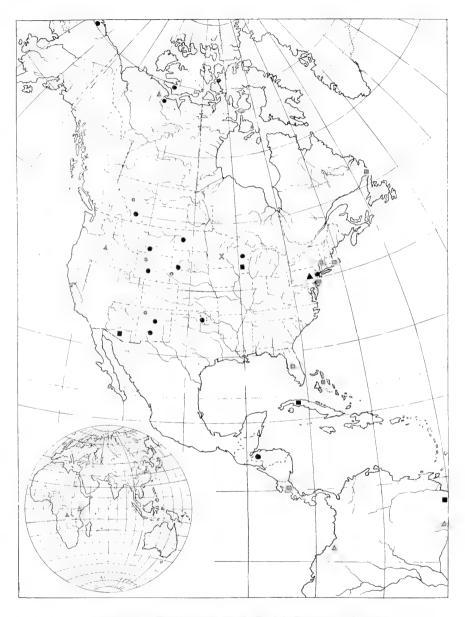
Although the location of the Museum is still far from the center of population, the attendance of the year was 846,963, an increase of 122,822 over the figures for 1911. The general lectures were attended by 80,249 persons; the children's

lectures and opportunities for special study attracted 49,872; while the circulating collections, which are sent out daily from our doors, reached 1,275,890 school children, the largest number yet recorded. This system of circulating collections has been extended to some of the schools of New Jersey. It is also interesting to note that the colleges and universities of the country are making increasing use of our exhibition halls for purposes of instruction, professors and students from the colleges of New England and the Middle States making special journeys to the Museum for this purpose.

The Members of the Museum now include residents in many portions of the United States as well as several foreign countries. During the past year there has been an increase of nearly one-third in our membership, 757 new names having been enrolled. The contributions of Members have added \$6,630 (fees of Annual and Sustaining Members) to our current income, and \$12,100 (fees of Life Members, Fellows and Patrons) to our Endowment Fund. The Trustees acknowledge this practical interest of the public, which is also expressed by a very large number of contributions and gifts acknowledged in this Report under the heading "Special Funds," pages 102 to 117, and "List of Accessions," pages 118 to 152.

EXPLORATION

Since 1881 the American Museum has developed a policy of exploration rather than of purchase for the acquisition of collections. Although large purchases are still made from time to time, exploration is now the chief means of enriching the exhibition halls of the Museum. While specimens for exhibition are the chief aim of the explorer, he brings back a large amount of information regarding the country visited, as well as photographs, drawings or paintings, which are absolutely essential both for publication and as accessories to exhibition. The field photographs thus acquired now number over 8,000, and are in constant use in lectures and publications all over the country. In all, thirty-five parties were operating in the field during the year 1912; every continent on the globe, except Australia, has been visited, and remarkable success has crowned the efforts of the leaders, who have not only



Location of Exploring and Field Parties of 1912

- Vertebrate Palæontology
- Mammalogy and Ornithology
- Invertebrate Zoology
- Anthropology
- ▲ Geology and Invertebrate Palæontology
- lchthyology and Herpetology
- × Public Health

		,

made important contributions to science but have brought to the people of New York rare collections from remote seas and parts of the earth.

NORTH AMERICA.—The Stefansson-Anderson Expedition, which was sent out in coöperation with the Geological Survey of Canada, returning from four and one-half years of work in Coronation Gulf and along the shores of the Arctic Ocean, after having suffered many hardships, reported newly-discovered tribes of Eskimo showing evidences of mixture with the Scandinavian race. Messrs. Stefansson and Anderson brought back valuable archæological, ethnological and zoölogical collections and important geographical data.

Owing to the great importance of these results, a second Stefansson Expedition is being organized, in coöperation with the National Geographic Society, to extend over the next three years.

The departure of the Crocker Land Expedition, organized, in coöperation with the American Geographical Society, to explore the land mass to the northwest of Grant Land observed by Peary in 1909, was postponed owing to the untimely death of George Borup, one of the leaders and a member of our Scientific Staff. The expedition has now been reorganized and will leave in the summer of 1913 under the leadership of Donald B. MacMillan.

The work of Barnum Brown in the Cretaceous beds of Alberta, Canada, along the Red Deer River, has added to our collections several fine exhibition specimens of dinosaurs and has brought nearly to completion the years of exploration for material illustrating the life of Cretaceous times. At the same time expeditions to New Mexico, Wyoming and Nebraska, under Walter Granger and Albert Thomson, have yielded rich series of fossil mammals.

The Department of Anthropology has continued researches among the Blackfoot in Alberta, the Shoshone in Wyoming, the Dakota in South Dakota, the Hidatsa in North Dakota and the Potawatomi in Wisconsin. Dr. Spinden has made a tour through Yucatan, Mexico and the southwestern United States, and excavations of the village sites of the Rio Grande

Pueblos have been carried on by our new curator of archæology, Mr. Nelson.

In Yucatan, Edward H. Thompson has successfully completed the very difficult task of casting the façade of the fallen temple of Chichen Itza, which constitutes one of the finest examples of Mayan architecture. This façade will be remounted in the new Mexican Hall.

South America.—Expeditions in Ecuador and the United States of Colombia, under the direction of Frank M. Chapman, have added to our collection several thousands of birds and mammals, many of them new to science. The most important scientific features of this work, however, are the division of the Andean region of Colombia into life zones, and the collection of birds and mammals from the coast to the summit of the Andes, with all the data necessary for some new habitat groups.

The oceanic and shore-birds of South America are cared for by a special expedition, organized by Leonard C. Sanford of New Haven, and financed by Frederick F. Brewster, which will make a circuit of the South American coast, in a vessel chartered for the purpose, under the direction of Rollo H. Beck. This collection, for the present, will be deposited in the Museum as a loan, together with the Sanford collection of oceanic and shore-birds already on deposit here.

ANTARCTIC OCEAN.—The Museum, in coöperation with the Museum of the Brooklyn Institute, has despatched Robert C. Murphy to South Georgia on the whaler "Daisy" to secure specimens of the southern Sea Elephant, the Sea Leopard, a series of young King Penguins to complete a group of these birds, and to make general zoölogical collections.

EUROPE.—The President, accompanied by George Grant MacCurdy of Yale University, made a tour of the prehistoric caverns of northern Italy, and of France and Spain, and procured materials illustrating the culture, and especially the art, of the men of the Upper Stone Age.

Asia.—Roy C. Andrews, in a second expedition to the Japanese coast, increased the Museum's collection of Cetacea

at the whaling stations of southern Korea, and traversed more than four hundred miles of the unexplored wilderness of northern Korea, securing birds and mammals.

The New York Zoölogical Society, through the gift of Anthony R. Kuser, sent C. William Beebe to the homes of all the pheasants of Asia and the East Indies, as a result of which the Museum will secure, as the gift of Colonel Kuser, a complete collection of the various types of pheasants and four new Asiatic habitat bird groups.

AFRICA.—On the African continent the Museum has been especially represented for the past four years by the Congo Expedition, under Herbert Lang and James Chapin, with the friendly coöperation of the Belgian Government. The latest reports from the young explorers indicate that they have made a zoölogical collection which will be of unique value, including specimens of the Okapi, White Rhinoceros and Giant Eland. A duplicate collection has been secured for the Congo Museum of Tervueren, near Brussels. This is the American Museum's second African expedition.

Our third African expedition has been sent out by friends of the Museum, under William S. Rainsford, to British East Africa, for the primary object of securing large game animals, particularly the Black Rhinoceros. Material for groups of the Buffalo, Eland and Koodoo have also been secured.

The returns from these expeditions will all come in during the year 1913, and it will require generous contributions to the preparation fund to place these collections on exhibition.

Publications.—Publication has hardly kept pace with this active work of exploration, although a number of reports are in progress, such as those of the Stefansson-Anderson Expedition, and the "Albatross" Expedition of 1911 under Charles H. Townsend. The regular publications include Parts 1, 2 and 3, of Vol. I, of the new series of the Memoirs; Vol. XXXI of the Bulletin; Vol. X and parts of Vols. VII, IX, XI and XII of the Anthropological Papers; Vol. XII of the Journal; Handbook No. 1, and Guide Leaflet No. 35. The most important publication of the year is the monograph on the Primates, by Daniel Giraud Elliot, in three volumes—a regular edition

of 750 copies, and a deluxe edition of 100 copies to be sold by subscription only. This monograph represents ten years' work by the author and special studies in all the great museums of Europe.

Among the popular volumes issued in recent years, based chiefly on research by present or former members of the Museum Staff, may be mentioned:

Frank M. Chapman, "Camps and Cruises of an Ornithologist,"
"Bird Life," "Guide to the Study of our Common Birds"
H. E. Crampton, "The Doctrine of Evolution, Its Basis and
Its Scope"

L. P. Gratacap, "Popular Guide to Minerals" Henry Fairfield Osborn, "The Age of Mammals" William Morton Wheeler, "Ants"

RELATIONS WITH THE CITY

The Museum is indebted to Commissioner Stover of the Department of Parks and to the members of the Board of Estimate and Apportionment for cordial coöperation in the progress of the year.

The matter of the publication of a complete list of the employes of the Museum in the City Record and of the standardizing of all salaries paid out of the Maintenance Fund, led to a careful inquiry on the part of the Finance Committee of the Board of Aldermen and of the Comptroller, which in each instance resulted in confirming the contract of 1878 between the Board of Trustees and the City, which provides that the Trustees "may appoint, direct, control and remove all persons employed within said building." The Trustees of the Museum are responsible for both the employment and the fixing of the salaries of the employes.

Pension Plan.—The responsibility of caring for our staff and our employes in case of disability or retirement has led to the preparation of a Pension Plan, originating with a committee of the employes appointed by the President, and put in form by a sub-committee of the Board, of which Felix M. Warburg is Chairman. This provides for the accumulation of a contributory savings and pension fund, made by the employes and Trustees, respectively, in equal amounts, which

will insure to all the members of our staff and working force who desire to take advantage of it an adequate pension after the several terms of service. This plan, if adopted by the Board at its Annual Meeting, will involve an annual contribution of \$8,000 from the Trustees' funds and a similar amount from the employes.

BUILDING AND REPAIRS

In connection with the plans for the Fiftieth Anniversary which the Museum will celebrate in April, 1919, the Trustees issued on May 6 a second and revised edition of the *Growth of the Building* folder, which sets forth clearly and concisely the building plans which are proposed for the immediate future. Copies of this folder accompanied our application for a corporate stock issue in 1912 of \$550,000, and copies were sent to each member of the Board of Estimate and Apportionment.

Southeast Wing and Court Building.—The first step in this comprehensive building plan was the construction of the Southeast Wing and Court Building of the East Façade. This was recognized by the City through the appropriation of \$200,000 in 1911, for the construction of its foundation, which became available in September, 1911. The architects deemed it wisest to let a separate contract for the excavation, and the contract for the work was awarded to Di Benedetto and Egan for the sum of \$48,828. Ground was broken for the new wing March 18, 1912, but owing to various interruptions the excavation was not completed until November, 1912.

In accordance with the proposed building plans, application was made to the Board of Estimate and Apportionment for an appropriation of \$550,000 for the construction of the superstructure of the Southeast Wing and Court Building, plans for which the architects have completed. As the year advanced it became apparent that under the present financial condition of the City, this appropriation could not be made this year. The urgent need for space in which to store the large collections just received or on their way to the Museum from various parts of the world, compelled the Trustees to postpone the Southeast Wing for the present and to recommend an appropriation of a smaller amount, namely, \$150,000, which, with the

balance of the previous appropriation, will be sufficient to construct the Southeast Court Building only. This application is now before the Board of Estimate and Apportionment.

The figures on page 23 show that the annual contributions from all sources to the growth of the Museum have increased from \$141,173.28 in 1902 to \$282,684.13 in 1912; in other words, they have more than doubled. During the past decade the City has not appropriated sufficient construction and equipment funds to keep pace with the growth of the collections and exhibitions. The last building erected was the West Wing, provided seven years ago. The East Wing, as well as the East Court Building, are now both urgently needed, for the very large collections from various parts of the world on which upwards of \$134,000 have been expended. These collections are now in storage, and some of them are of a perishable character. The retirement of many collections from exhibition is already necessitated by the arrival of the African collections.

EQUIPMENT FUND.—As fully reported by the Director, all parts of the Museum building have now been put in thorough repair, and several inflammable sections have been fireproofed. This, together with the regular growth of permanent casing, exhibition work and storage cases, has nearly exhausted the \$75,000 appropriated in 1911, and application has been made for another equipment appropriation of \$75,000 to continue this work so necessary if the valuable new collections are to be cared for and exhibited during the years 1913 and 1914. The Board of Estimate and Apportionment has not yet acted upon this request.

Special Revenue Bonds for Repairs.—A portion of the present building was erected thirty years ago, and since the sums appropriated for maintenance have always been insufficient to meet the regular items of maintenance, repairs to the building that were not imperative have been deferred from year to year. The more stringent interpretation, applied by the present administration to the uses of corporate stock, has also prevented the doing of certain kinds of work which formerly were considered a proper charge against corporate

stock. This led the Trustees to apply for an issue of \$10,000 of special revenue bonds in order to make repairs which could not be deferred longer without serious detriment to the building. This request was granted by the Board of Aldermen and the Board of Estimate and Apportionment, on July 11, 1912, and became available immediately. To secure this appropriation it was necessary to ask for the cancellation of \$10,000 of the equipment fund C DP 3C.

REPAIRS BY TRUSTEES' FUNDS.—In addition to this sum the Trustees have applied \$8,500 of their own funds to urgent repairs to the building.

MAINTENANCE.—The maintenance appropriation by the City was increased from \$195,000 to \$200,000 for the year 1913, which amount at the present time is the limit allowed by statute.

SUMMARY OF CONTRIBUTIONS OF THE MUSEUM AND OF THE CITY, 1902-1912

Year	Contributi from Trus and Memb	tees	Contribution Permaner Endowment Trustees and Memb	t by	Maintenar Appropriat by the Ci	ions	Building Appropriations by the City	
1902	\$108,964	71	\$32,208	57	\$160,000	00	\$200,000 00)
1903	90,196	38	4,933	12	160,000	00	188,000 00)
1904	84,210	22	569,761	39	160,000			
1905	85,387	30	1,000	00	160,000	00	500,000 00	
1906	132,718	10			170,000	00		
1907	125,858	16	33,799	25	160,000	00		
1908	159,705	52	1,000,000	00	159,930	62		
1909	176,008	04	12,000	00	179,999	60	100,000 00)
1910	196,634	00	132,000	00	185,757	00		
1911	218,713	65	26,070	37	189,757	00	275,000 00	*
1912	265,584	13	17,100	00	195,000	00	• • • • • • • •	•
	\$1,643,980	21	\$1,828,872	70	\$1,880,444	22	\$1,263,000 00)

^{* \$10,000} of this sum was cancelled in 1912, and in its place the City issued \$10,000 of special revenue bonds for repairs to the building.

EXPENDITURES BY DEPARTMENTS FOR 1912

The Annual Budget, as now adopted by the Board at the beginning of the year, includes the allowances for all departments, which cannot be exceeded except by vote of the Board. These allowances, together with the special gifts and exploration funds, swelled the total expenditures by departments for the year 1912 to the following amounts:

MUNICIPAL	: CITY N	1 AINTENANCE	Fund			.\$195,000	00
TRUSTEES:	GENERA	L FUND	\$	180,759	28		
4.4	SPECIAL	Funds		61,782	46	242,541	74
			-			\$437,541	74

SUMMARY

	MUNICIPAL	TRUS	STEE			
	Appropriation Maintenance	Genera	al	Special	Total	
Geology and Invertebrate						
Palæontology	\$4,035 62	\$6,107	49	\$9,342 69	\$19,485	80
Mineralogy	1,585 23	2,069	45	1,057 25	4,711	93
Mammalogy and Ornithol-						
ogy	5,269 84	23,328	92	24,987 27	53,586	03
Vertebrate Palæontology	4,719 04	22,088	12	2,000 00	28,807	16
Professor Osborn's Re-						
search and Publication			,			
Fund		3,521	-		3,521	
Anthropology	7,SIO 46	21,831		14,868 66	44,510	98
Invertebrate Zoölogy	7,211 71	6,651	66	437 84	14,301	21
Ichthyology and Herpetol-						
ogy		4,650	-	3,136 28	11,887	_
Anatomy and Physiology.		2,558	40		2,558	40
Public Health	1,833 46	1,711	25	1,375 75	4,920	46
Woods and Forestry	148 90	2,235	60	2,500 00	4,884	50
Library	8,318 58	9,654	20		17,972	78
Publications		21,054	12	233 00	21,287	12
Public Education	4,029 51	5,421	72	843 72	10,294	95
Preparation and Exhibi-						
tion	2,479 42	22,970	13	1,000 00	26,449	55
Heating and Lighting	23,412 55	942	60		24.355	15
Repairs and Installation	28,910 26	1,770	26		30,680	52
General Supplies and Ex-						
penses	7,793 58	17,998	86		25,792	44
Administration	83,341 25	3,908	36		87,249	61
Interest on Bank Loans.,		284	01		284	10
	\$195,000 00	\$180,759	28	\$61,782 46	\$437,541	74





DEFARMMENT OF MAMMALOGY AND OBMITHOLOGY
TO GLAING, THROUGH EIPPHANT, COLVERA
THE VICTOR African Expedition

JESUP FUND

In the expenditure of the income of the Jesup Fund, due regard has been paid to the terms of the bequest. The income, now amounting to \$50,991.97, has been devoted during the year to the following purposes:

To the purchase of specimens and collections for practically all the departments of the Museum, which include

> Meteorites and other geological specimens Models showing the forms of crystals Mammals and birds from Africa, China and South America

> The Benedict ethnological collection from the Philippines

European archæological material Studies for the Hopi Indian Group Fishes

To the support of field parties

To the Arctic: Stefansson-Anderson Expedition
To Alberta, Wyoming and New Mexico for fossils
To Alberta, Wyoming, South Dakota and Wisconsin for work among the Indians
To Labrador, Florida and Massachusetts for invertebrates

Books for the Library

Scientific Publications

In connection with the publication of the Memoirs of the Jesup North Pacific Expedition, arrangements have been made for Waldemar Jochelson to continue the preparation of manuscript, and Professor Boas, the editor, expects to deliver three parts during the coming year.

EXCHANGES WITH MUSEUMS

The duplicate material that accrues from museum expeditions provides specimens which are valuable for exchange with other institutions. By this method we are often able to secure valuable collections which otherwise it would be necessary

During the past year important exchanges have to purchase. been arranged with the following institutions:

Australian Museum, Sidney, Australia British Museum of Natural History, London, England Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y. Carnegie Museum, Pittsburgh, Pa. Columbia University, New York, N. Y. Cornell University, Ithaca, N. Y. Durban Museum, Natal, Africa Geological Survey of India, Calcutta, India Königl. Bayerische Akademie der Wissenschaften, Munich, Bayaria K. K. Naturhistorisches Hofmuseum, Vienna, Austria Königl. Naturalien-Sammlung, Stuttgart, Germany Kral's, F., Bakteriologisches Museum, Vienna, Austria Musée Oceanographique, Monaco Museum of Comparative Zoölogy, Cambridge, Mass. Naturhistoriska Riksmuseum, Stockholm, Sweden Naturhistorisches Museum, Basel, Switzerland New York State Museum, Albany, N. Y. Peabody Museum, New Haven, Conn. Peabody Museum, Salem, Mass. Queensland Museum, Brisbane, Australia Royal Agricultural and Commercial Society, Georgetown, British Guiana San Pablo College, San Juan, Porto Rico Senckenbergische Naturforschende Gesellschaft, Frankfurt am Main, Germany

Staten Island Association of Arts and Sciences, St. George, S. I.

United States National Museum, Washington, D. C.

University of California, Berkeley, Cal.

University of Kansas, Lawrence, Kans.

HOSPITALITY TO SOCIETIES

The location of the Museum makes it a convenient meeting place for scientific organizations in the City, and as usual courtesies of this kind have been extended to a number of Societies. The benefits derived from these relations are mutual. For example, through cooperation with the New York Academy of Sciences, the Members of the Museum were able to see and hear Dr. Hugo de Vries of the University of Amsterdam, Holland, who gave a lecture on "Experimental Evolution," and Dr. Alexis Carrel of the Rockefeller Institute for Medical Research, recipient of the Nobel Prize in Medicine, 1912, who lectured on "The Results of the Suture of Blood Vessels"; through cooperation with the American Scenic and Historic Preservation Society, our Members had an opportunity to hear Professor Herschel C. Parker of Columbia University give an

account of his ascent of Mount McKinley, and Dr. Joseph Kossuth Dixon lecture on "The Last Great Indian Council."

In April, the Imperial German Commission, which came to this country to study educational methods, visited the Museum.

In connection with this City's entertainment of the officers and crews of the German fleet, the Museum, in coöperation with the Metropolitan Museum of Art, the New York Botanical Garden, the New York Public Library and the New York Zoölogical Society, prepared and distributed to the officers and crews a guide, printed in German, to the Museums and to the Public Library of the City.

General information regarding the Museum was also sent to the officers and crews of the Atlantic Fleet during its stay in New York in October.

In addition to these, the following societies or organizations have been entertained by the Museum during the year:

American Association of Museums

American Bison Society

American Ethnological Society

American Geographical Society of New York

American Nature Study Society, New York Branch

American Psychological Association, New York Branch

American Scenic and Historic Preservation Society

Aquarium Society

Audubon Society of the State of New York

Department of Education, City of New York

Eighth International Congress of Applied Chemistry

Horticultural Society of New York

Imperial German Commission

Linnæan Society of New York

Mount Holyoke Alumnæ Association

National Association of Audubon Societies for the Protection of Wild Birds and Animals

Natural Science Committee of the Associate Alumnæ of the Normal College of the City of New York

New York Academy of Sciences

New York Entomological Society

New York Microscopical Society

New York Mineralogical Club

Peary Arctic Club

School Garden Association of New York

Sixth International Congress of Testing Materials

Torrey Botanical Club

Transcontinental Excursion of 1912 of the American Geographical Society

IMPORTANT GIFTS

The contributions of Trustees to the General Fund this year have been \$48,850; the contributions of the Trustees and other Members to the Special Funds have been \$78,427.80; making a grand total of gifts to the Museum for the year 1912, of \$127,277.80.

Through the generosity of Ogden Mills, the Museum has acquired the famous Catlin Collection of Indian Paintings. There are 417 of these paintings made by the late George Catlin, the first great Indian painter. They represent twenty years of study among the Indians, and the collection has great historic value in addition to its ethnographical interest.

Under the special patronage of J. P. Morgan, Sr., the mineral and gem collection has been enriched by beautiful examples of Aquamarine, Rubellite, Tourmaline and other gem crystals.

Mrs. E. H. Harriman has again shown her interest in the Museum by presenting a selected series of Alaskan ethnological specimens from the collection of former Governor Brady.

From his Grace the Duke of Bedford we have received two specimens of the Prjevalsky Horse, which are very desirable additions to our unique series showing the evolution of the horse.

Through the generosity of J. P. Morgan, Jr., the Museum has acquired the Bailey Collection of Meteorites, which adds many important falls to our collection and a large number of specimens valuable for exchange.

The following are some of the other important gifts: From Grant B. Schley, a collection of rare Calcite Crystals, from El Potosi Mine, Mexico; Copper and other ores, from the Calumet and Hecla Mining Co., and from the Anaconda Copper Mining Co.; African mammals, from Alfred J. Klein; a mounted Sailfish, from John D. Crimmins; a collection of Indian photographs, from Rodman Wanamaker; a collection of birds, from Clarence H. Eagle; a collection of Colombian insects, from R. D. O. Johnson; painting of a "shovel pit," from the Nevada Consolidated Copper Co.; model of Indian village on upper Orinoco River, from Rudolf Dolge; Samoan bird skins, from Messrs. J. T. Lloyd and L. A. Fuertes, and

several specimens of birds and mammals, from the New York Zoölogical Society.

To these patrons, and all others who have directly or indirectly contributed to the enlargement of the collections, the Trustees wish to express their heartiest appreciation.

ORGANIZATION, STAFF

We greatly regret to record the resignation of Archer M. Huntington from the Board of Trustees. Since his election, in February, 1909, Mr. Huntington has served two years as Secretary, and has rendered great service through his interest in the development of the anthropology of the Southwest by exploration and publication. Adrian Iselin, Jr., has succeeded Mr. Huntington as Secretary.

Director Lucas represented the Museum at the laying of the "Foundation Stone" of the National Museum of Wales at Cardiff in June, and later at the meeting of the Museums Association of Great Britain at Dublin. He subsequently visited the more important museums of the United Kingdom, noting methods of installation, lighting and ventilation, and especially the introduction of ventilating systems in buildings where they had not been planned for. During the Director's absence of ten weeks, Curator Hovey served as Acting Director.

Curator Bashford Dean, under whose direction the Department of Reptiles and Fishes has advanced very rapidly, has entered upon a leave of absence in connection with special services abroad to the Metropolitan Museum of Art.

Through the death of George Borup by drowning, on April 28, 1912, the Museum lost a member of its staff of exceptional promise. Young Borup was just on the threshold of his career. By careful study he had prepared himself for serious scientific work and was well qualified for the leadership of the important Crocker Land Expedition. Universally loved because of his genial nature, fund of humor and uniform cheerfulness, his loss is keenly felt by his colleagues and all connected with the Museum.

Early in the year Nels C. Nelson, of the University of California, was appointed Assistant Curator in the Department of Anthropology, and took up his duties on June 1. Dr. Nelson's particular field is American archæology, and his excavations during the summer in the Southwest yielded important results.

The following promotions have been made in the Scientific Staff during the year:

Department of Anthropology:

R. H. Lowie from Assistant Curator to Associate Curator, December 20, 1912.

Charles W. Mead from Assistant to Assistant Curator, January 1, 1912.

Alanson Skinner from Assistant to Assistant Curator, October 16, 1912.

The following were the new appointments:

Department of Geology:

Chester A. Reeds appointed Assistant Curator, August 1, 1912.

Department of Anthropology:

Nels C. Nelson appointed Assistant Curator, January 1, 1912.

I. GENERAL ADMINISTRATION

FREDERIC A. LUCAS, Director

General Considerations.—The past year has been note-worthy for progress in the installation of exhibits, in making provision for the care of study collections and in improving the general mechanical equipment of the Museum by the addition of new machinery and new lights in the workshops and laboratories. Much has been done, but it is necessary to emphasize the fact that there is a great deal more to be done. The very success of the explorations of the Museum results not only in securing material representing lost and vanishing species of men and beasts; it becomes imperative to care for the objects secured.

The Museum now possesses one of the finest, probably the finest, collection of whales in the world; half-a-dozen of these huge creatures are awaiting preparation before they can be shown. The Congo Expedition will bring to the Museum more than 25,000 specimens, ranging in size from elephants to



GIANT FOREST PIGS FROM AFRICA

butterflies, and these objects, secured by the expenditure of much time, labor and money, must be cared for.

Museums were, and are, leaders in the conservation movement of which we hear so much now-a-days; preservation is their first law, and it is as important to take care of specimens as it is to obtain them.

The most crying need of the exhibits is for labels; objects may be of great interest in themselves, but they are illustrations without text. One hundred thousand labels are still needed to accompany the exhibits, and a special effort will be made during the coming years towards supplying this deficiency.

The establishment of the Director's Fund has proved of much service, and by its use for various departments it has been possible not only to secure such desirable specimens as the Forest Hogs and African Crested Rat, but to carry on some very important work.

The untimely death of the talented artist, Louis Akin, has placed a temporary check on the execution of the plan for a series of mural paintings for the Southwest Indians Hall. The preliminary figure studies had been prepared and Mr. Akin expected to have the sketches for the sixteen panels well advanced this year.

Building Operations.—The alterations in the Vestibule, noted in the report for 1911 as having been planned by the architects, Messrs. Trowbridge and Livingston, have been carried out, the result being a vast improvement in the entrance hall, which is for the first time what it should be—both attractive and dignified. The improvements include the Visitors' Room, mentioned in the previous report, where visitors may arrange to meet their friends, examine and purchase the various publications of the Museum and write notes.

In Memorial Hall, the tablets, with suitable inscriptions for the busts of American Men of Science, have been donated by Mrs. Morris K. Jesup, and will be put in place early in 1913.

There have been, naturally, a few inquiries for the astronomical exhibit that has been necessarily withdrawn, pending the providing of future quarters in the Astronomical Hall; but the slight educational loss occasioned by the withdrawal of this is more than compensated for by the greatly enhanced appearance of Memorial Hall and the adjoining rooms. A museum of natural history is not merely a utilitarian institution in which art has no place; the building, the exhibition halls, cases and exhibits, should be one and all educational in themselves, and by their artistic nature appeal to the visitor. The replacement of the old lights in Memorial Hall by modern fixtures, the contract for which has been let, will practically complete the improvements of this important portion of the building.

The most important interior work has been the construction of fireproof storage in the Southwest Pavilion for the anthropological collections, which have been a source of continued anxiety, as they were stored in wooden boxes. The close of the year finds sixteen rooms completed, built of reinforced concrete, provided with electric light, fitted with metal racks and shelves, so arranged that all material can be seen at a glance, and equipped in such a manner that the contents of any room may be poisoned.

Eighty-eight metal cases have been provided for the storage of the osteological collection, Department of Mammalogy, and for fossil fishes, though many drawers are needed to make these fully available.

The erection of book stacks provides for a rearrangement of part of the library and for future growth as well; it also makes possible the removal of the collection of maps from their present quarters and the use of these for caring for the steadily increasing collection of skins of mammals.

Changes in Building.—The excavation for the new Southeast Wing and Court Building has been completed, but the demands on the City finances for other purposes have prevented the commencement of work on the foundation of either of these structures. While both these extensions are badly needed, the erection of the Court Building is specially pressing, since this is to contain the collection of whales and other marine mammals which cannot be installed until it is erected.

The new printing room is nearing completion and is badly needed to allow for the additional press and assistants necessary to keep up with the regular work of the Museum. The office rooms for the Department of Geology are also well advanced and will furnish a little relief for this department.

NEW EXHIBITIONS.—As noted by the Curator of the Department of Mineralogy, important changes are desirable in the hall containing the Morgan Collection of Gems. The room, cases and fittings should harmonize with the exhibits; they now illustrate a phase in the growth of museums that is generally overlooked by the visitor, the extension of collections in an unlooked for direction, and the difficulty of making proper provision for such increase. It is recognized that the room and installation are not in keeping with its contents, but under existing conditions, with the many demands for the actual preservation of material already on hand, it is impossible to treat the various exhibits as the administration would like.

Many of the new exhibits, as well as extensive changes in the exhibition halls, are dealt with in the reports of the various departments. The more important individual pieces are the Cryptobranchus Group and the groups of insects. Various other groups are well advanced, among them one showing the breeding habits of the freshwater "dogfish," Amia, one illustrating the life history of the common toad and its associates, the Vineyard Haven Wharf-pile Group, and the northern Sea Elephant Group. This latter has not been pushed as rapidly as it might have been, since it cannot be finished and installed until the completion of the Southeast Court Building.

The reproduction of a section of the beautiful cave on the territory of the Copper Queen Mine is also so far advanced that it will probably be completed during the first quarter of 1913, while the large and detailed model of the Copper Queen Mining Co.'s property, in course of construction for some years past, is now being assembled near by in the Hall of Geology.

The transfer of the sections of the giant Sequoia and Redwood trunks from the Darwin Hall to the Forestry Hall has greatly improved the appearance of both rooms, and the erection of the bronze tablet of Mr. Jesup, the gift of the late John J. Clancy, provides a fitting introduction to a collection in which Mr. Jesup took special interest.

A fine pair of Giant Forest Pigs of Central Africa has been mounted by Mr. Blaschke; Alfred J. Klein has presented, among other specimens, a series of Horse-tailed Monkeys, and, just as the year closes, we have received through the aid of F. H. Goldfinch of Nakuru, British East Africa, three skins of the curious African Crested Rat, for many years known from a single specimen.

In connection with the exhibits it should be mentioned that fifty-four metal cases and twenty-three wooden cases were constructed in the Museum workshops. This, however, represents but a small portion of the work and does not even include the reconstruction and reërection of many large wall cases, such, for example, as those containing the collection of local birds, the making of bases, frames and mounts of various descriptions and alterations and improvements in offices, workrooms and general equipment.

This Museum has always endeavored to keep in the front rank in the matter of cases and installation and receives many calls for information from the officers of other institutions.

During the past year it was visited, among others, by the Architect of the State Education Building, Albany, the Director and Architect of the new Museum of the California Academy of Sciences, the Director of the Provincial Museum, Victoria, the Director of the Museum of Applied Geology, London, and the officers of the Victoria Museum, Ottawa.

Printing and Labeling.—In connection with the work of installation the Director cannot help expressing keen regret that the labeling of the exhibits has not progressed more rapidly. The addition of a new and rapid press, with assistance in the printing room, has indeed greatly increased the output of work, but the proper record of operations in all branches of the Museum, the cataloging and registration of specimens, the announcements of lectures and other educational matters have kept the printing force busy. The printing office, under Mr. Klassen, has not only turned out a great deal of work, but work of a very excellent and artistic character. In all, over 478,000 imprints have been turned out, varying from pamphlets of eight and ten pages, to labels of a single

line, but out of all these imprints only 6,105 were of labels, 1,468 being individual labels and 567 descriptive, three copies of each. It should be noted that some of these descriptive labels included as much matter as the page of an average book, and that many of the labels required much time to set.

A condensed statement of the printing is appended:

Letterheads	32,500
Field and Reserve Collection Labels	97,720
Report, Requisition and similar forms	90,350
Catalogue Cards, Postals, Tickets, etc	112,220
Programs, Circulars, Statements, etc	104,160
Envelopes, Miscellaneous	34,989
Labels	6,105
Total number of impressions	478,044

It is to be borne in mind that a large amount of museum printing is of such a nature that it cannot be done advantageously outside of the Museum: a very considerable portion must be done in haste, another portion must be done subject to important changes after the matter is set up, and all of it under the supervision of men whose time is fully occupied.

REGISTRATION AND CATALOGING.—It is a source of satisfaction to report that the registration and cataloging of the collections are in far better shape than ever before. Two years ago it was impossible to obtain a record of the accessions, loans and exchanges without applying to every department of the Museum. Now these matters are in charge of the Registrar, Mr. Pindar, and the record of the receipt and shipment of all specimens passes through the Director's hands.

The number of accessions during the year was 850, the number of shipments 4,594, the total number of packages handled being 8,524.

The cataloging of the various departments is, in most cases, down to date, and the Registrar has not only kept up with the regular record work, but has done much in bringing together and making available lists of accessions of former years; in all he has prepared 16,000 cards during the year.

The property list, in which are recorded the furniture and equipment of the Museum, has been systematized and brought

well down to date through the energy of the Bursar, Mr. Smyth.

A good beginning has been made in classifying and cataloging the 35,000 lantern slides belonging to the Museum and the first of the cases to contain them, provided with 120 drawers, has been constructed.

Mr. Beers, Chief of Construction, has devised and carried out a system for designating the various halls and rooms by letters and numbers, and it is now possible to refer with exactness to any one of them.

Publications.—The publications issued are noted elsewhere under that heading; it remains to be said that the sale of *Guide Leaflets* at the Bureau of Information and by the attendants has been good, the total number of copies sold being 6,496. Several of the *Guide Leaflets* are now out of print, and new editions of those most needed are being prepared.

The supply of the General Guide was exhausted in August and a new edition is now being prepared. In the meantime, its place is, to some extent, taken by an index or Key to Building and Collections originally prepared by Dr. Hovey, in connection with the meeting of the Eighth International Congress of Applied Chemistry. The second edition of this Key, which contains plans of the various floors and notes the principal exhibits on each, has just been issued.

It is a difficult matter with the other work of the Museum to provide for popular publications, the more that with the steady increase in the collections and improvement in their arrangement it is practically necessary to rewrite each and every leaflet when a new edition is required. For example, the new edition of the *Evolution of the Horse*, now in press, contains fifty pages and twenty-five illustrations, as against thirty pages and eleven illustrations of the previous leaflet.

The first of a series of Handbooks, The North American Indians of the Plains, by Dr. Wissler, was issued during the year, and others of the series, on The Indians of the Southwest, by Dr. Goddard, and on The Antiquities of Mexico and Central America, by Dr. Spinden, will appear during the coming year.

These *Handbooks* are more comprehensive in their nature than the *Guide Leaflets*, and deal with subjects, rather than with special features or portions of the collections.

The sale of colored postcards also has been good, 1,771 single cards and 1,752 sets of eighteen, a total of 33,307, having been sold during the year. The sale of publications by commercial houses differs from sales by museums in that while the one endeavors to sell at as great a profit as possible, the other strives to lose as little as possible.

The extension of knowledge by publications relating to the collections is recognized as a regular branch of museum work, and, as museums are free to the public, museum publications are usually sold at a loss.

ATTENDANCE.—It is encouraging to note the increased attendance, the more that it is not the result of special exhibits or special effort put forth by the Museum.

STATISTICS OF NUMBERS REACHED BY MUSEUM EXTENSION SYSTEM

1905	1906	1907	1908	1909	1910	1911	1912
Board of Educa- tion Lectures 42,212	-	35,068	43,386	28,402	43,549	40,067	52,855
Lectures to School Children and Children's Room 35,000	17,187	29,688	28,361	27,524	15,610	29,935	39,624
Classes visiting the Museum for General Study 11,000	., .	7,795	10,818	8,712	9,284	9 444	10,248
Meetings of Scientific Societies and other Meetings and Lectures	6,867	11,784	15,587	27,369	15,712	18,649	28,384
General attendance for all purposes565,489 Number of Pupils reached by Cir-	476,133	537,894	1,043,582	839,141	613,152	724,141	846,963
culating Collec- tions375,000	800,000	725,000	575,801	922,512	839,089	1,253,435	1,275,890
940,489	1,276,133	1,262,894	1,619,383	1,761,653	1,452,241	1,977,576	2,122,853

CARE OF BUILDING.—In the report of 1911 attention was called to the condition of the heating apparatus in the old North Wing. It has not been possible to replace this, owing to the cost of the necessary work, and a special appropriation is needed for the purpose.

It may be noted that progress in electric lighting has been so rapid that many of the lights and fixtures in the Museum are antiquated and utterly inadequate. They are being replaced as rapidly as possible, but here again a special appropriation must be made or the work will drag for many years.

It should also be said in this connection that the present boilers and dynamos are not of sufficient power to permit the lighting of the entire building at one time.

By authorization of the Board of Estimate and Apportionment and the Board of Aldermen, the sum of \$10,000 was made available to provide for the more necessary repairs; in addition to this \$8,500 was expended from the Trustees' funds. This has been used for extensive repairs to the roofs of various parts of the building, to replace many poor window sash, repaint the exposed woodwork, repoint a large portion of the stonework on the south and west fronts, replace worn and leaky skylights and perform other badly needed work. It is to be borne in mind that the Museum has a very large roof area and that its total frontage exposed to weather is somewhat over 2,000 feet, very much over a third of a mile. To keep all this in good repair calls for an expenditure of from \$12,000 to \$15,000 yearly.

Owing to the great injury to specimens from exposure to direct light,* a sandblast outfit has been purchased and the work of transforming the windows into ground glass commenced. Much has been done, though the work unfortunately proceeds slowly, owing to the numerous unavoidable interruptions; but it is hoped to complete some of the more important halls during the coming year.

All in all, it may be said that the collections, the exhibition halls and the general equipment of the Museum, are in better condition than for many years past, and that steady progress has been made in the registration of material of all kinds and in the record of the various branches of the work of the Museum.

[•] The greatest injury is done to the mammals, birds, birds' eggs and insects, and the exhibits of all these objects have suffered severely by exposure to light. Many of the mammals now on exhibition are worthless and some have been ruined in the short space of five years.

II. REPORTS OF THE DEPARTMENTS

PUBLIC EDUCATION

GEORGE H. SHERWOOD, Curator

DEPARTMENT OF PUBLIC EDUCATION.—It is the chief function of the Department of Public Education to assimilate the scientific data collected by other departments and present these facts in such a way that teachers can readily make use of them and children can easily understand them. By this means, we attempt to arouse in children and adults a keener interest in nature and outdoor life. The activities of the department during the year have been devoted to the improvement of present methods rather than to the development of new.

As in the past the principal means of contact between the Museum and the schools have been the circulating collections and the lectures, but certain special features have aided in strengthening the relations existing between the Museum and the educational system of the City. Of these special features, mention should be made of "Burroughs Day," the Third Annual Teachers Day, and representation before the Committee on School Inquiry of the Board of Estimate and Apportionment.

On April 10, in celebration of the seventy-fifth birthday of John Burroughs, more than 300 pupils from the lower east side, members of the Burroughs Clubs of Public Schools Nos. 15 and 188, assembled at the Museum and under the direction of Miss Margaret Knox and Miss Ellen Phillips presented an original play which had for its theme the love of nature as revealed in Mr. Burroughs's writings. Mr. Burroughs was present as the guest of honor, and was greatly pleased by this tribute from the children, the majority of whom were of foreign parentage.

In pursuance of the plan adopted two years ago, the Annual Teachers' Day was held at the Museum on November 16. Brief addresses were made by Director Lucas, Dr. Gustave Straubenmüller and the Curator, which were followed by an illustrated lecture by Vilhjalmr Stefansson, "Among the Eskimo

of Coronation Gulf and Vicinity." The programs of previous years had presented material and information regarding the work in the Museum and its relation to the schools. The particular theme of this year's program was the relation of the Museum's explorations to the work of teachers, this being concretely illustrated by Mr. Stefansson's discoveries in the North. There were about 700 teachers present and many expressed themselves as having spent a profitable and enjoyable afternoon at the Museum.

On May 17, the Curator represented the Museum at a meeting of the Committee on School Inquiry of the Board of Estimate and Apportionment, of which John Purroy Mitchel, President of the Board of Aldermen, is Chairman. The purpose of the meeting was to discuss the coördination of the various agencies in the City which were prepared to coöperate with the public educational system. The Curator outlined briefly the relation of the Museum to the schools.

The department was represented at the meetings of the British Museums Association, held in Dublin in July, by Director Lucas, who presented a paper on the educational work of the Museum.

The educational methods of the Museum continue to receive attention from educators at home and abroad. In April the Imperial German Commission visited the Museum for the express purpose of studying our methods, and more recently Mrs. Ella Flagg Young, Superintendent of Schools of Chicago, and a Committee from the Chicago Board of Education made a critical examination of the work of the department with a view to introducing similar methods in the Chicago schools.

Museum Extension to the Schools and Libraries.—It is probable that no branch of the department's work is more practical or exerts a wider influence than the circulating collections. Through them, nature study material is placed in the hands of the teachers in the class rooms, and many thousands of pupils come in direct contact with it. The collections contain material referred to in the syllabus of nature study, and were originally prepared with such care that

very little modification has been required. To the thirteen sets previously in use have been added the Public Health Folio which was prepared with the assistance and under the supervision of C.-E. A. Winslow, Curator of Public Health. The folio consists of a series of fifteen photographic enlargements illustrating the spread of disease and its prevention. Twelve of these folios, each accompanied by an explanatory guide, have been added to the circulating collections, and are much appreciated, especially by the high school teachers. Two additional public health folios are being prepared under the supervision of Professor Winslow, and will be issued in 1913.

The distribution of the regular circulating collections to the schools has progressed as usual, and has required the services of two messengers. During the year, 491 schools have been on our list, as follows:

Manhattan	169	Richmond	21
Brooklyn	153	Corporate Schools	21
Queens	48	Catholic Schools	4
Bronx	49	High Schools and Colleges.	26

STATISTICS RELATING TO THE CIRCULATING COLLECTIONS

	1906	1907	1908	1909	1910	1911	1912
Number of Collections in use	435	450	484	435	390	512	537
Number of Schools of Greater New York supplied	300	325	383	419	334	486	491
Number of Pupils studying the Collections	800,000	725,000	575,801	922,512	839,089	1,253,435	1,275,890

The total number of pupils reached is 1,275,890, a larger number than in any previous year.

Fifty collections were rented to the Newark schools and were studied by 35,821 pupils, and in a few cases the collections have been loaned to other outside institutions.

Upon request of Miss Annie Carroll Moore, the Supervisor of Children's Rooms of the New York Public Libraries, the department has continued to supply various branch libraries of the city with ethnological collections illustrating the culture of the Indians, Chinese, Japanese, Koreans and Africans.

Lectures to School Children.—Regular courses of lectures to school children have been given during the year. The new feature of the spring course was the introduction of moving picture films which added much to the interest of the children. For the most part these lectures were delivered by members of the Museum staff, but two very interesting talks on African travel were given by Carl E. Akeley, and one industrial lecture was given by Robert G. Weyh. We desire to acknowledge with thanks the services of these gentlemen. We also wish to express our thanks to the Canadian Pacific Railway Co., The Union Pacific Railroad Co., the Department of Street Cleaning of the City of New York, and the Shredded Wheat Co., for their courtesy in generously allowing us to use their lantern slides and moving picture films in our lecture on industries.

The experiences of the past two years indicated the desirability of a change in the schedule of lectures. In the past, the regular course consisted of nine lectures, each of which In the fall series of this year, the eighteen was given twice. lectures were divided into groups of six and not repeated. The first group was on American history and geography and was given on Mondays; the second was devoted to the geography of the world and occurred on Wednesdays; the Friday series treated of great American industries. Through consultation with teachers, these lectures were more closely correlated with the regular class-room work in these subjects. An increase in the attendance and many favorable comments from the teachers indicated the advisability of the change. In connection with this course and in cooperation with the department, the New York Public Library prepared and issued lists of books for the use of children. These lists were distributed at the Museum and the children were informed that they would find the books referred to in the children's libraries. The arrangements for these lectures were entrusted to Mrs. Roesler and Miss Wilds, and success is due in no small degree to their efficient work.





DEFAULT OF THE THE ALLON
SCHOOL CHILDREN AT THE MUSICA

The attendance at the spring course was 15,328; at the fall course, 16,601, a total of 31,929. This is 9,132 more than attended similar lectures in 1911. Many of the lectures were so popular that the applications for seats were greatly in excess of the capacity of the auditorium, and in a few instances lectures were repeated in order to relieve the disappointment of teachers and children.

In addition to these regular lectures, many special lectures were given to classes from the elementary and high schools. Increasing numbers of teachers have used the lantern slides and class rooms, and it is a common occurrence to see pupils busily studying the bird groups or insects with notebook and pencil. The number utilizing the Museum in this way is registered as 10,248.

The increase in the attendance at the children's lectures is gratifying, but in this connection new difficulties of transportation have been brought to light. The fact that the journey to the Museum makes many of the pupils car-sick, so unused are they to travel, the severe tax on the energy of the teachers and the cost of transportation have raised the question of arranging for lectures at school centers. While this cannot be done at present, owing to the many demands already made on our staff, the desirability of such a plan is apparent.

Through the generosity of Henry Phipps, there was placed at the disposal of the department a fund with which to pay the car fare of children who otherwise could not afford a trip to the Museum. This money has been expended in the interests of the crippled children and the special classes in the public schools. On December 16, 366 crippled children were brought to the Museum and listened with genuine interest to African jungle stories told by Carl E. Akeley. These were illustrated by lantern slides and motion pictures and the children thoroughly enjoyed them. This large number of children, many of whom could not even walk, were transported from the schools to the Museum and returned to their homes without accident.

The second lecture was for the special classes of Districts Nos. 10 and 11, which cover part of the congested portion of

the lower west side. These classes are composed of children, chiefly of foreign parentage, who have not received sufficient education to secure "working papers" and who cannot afford even car fare for a trip to the Museum; 618 of these children listened to a lecture by Mrs. Roesler on "The Great Industries and Natural Wonders of our Country." This was fully illustrated with motion pictures.

We wish to express our heartiest thanks to Mr. Phipps for this gift which enabled us to give so much pleasure to these children.

GENERAL LECTURES.—The general lectures have been more varied than usual and have attracted much attention. They have included a spring and a fall course for Members on Thursday evenings, the regular series under the auspices of the Board of Education, free lectures on public holidays, special lectures under the auspices of the New York Academy of Sciences and Affiliated Societies, lectures in conjunction with the American Scenic and Historic Preservation Society and a special course of lectures for Members on the Antiquity of Man.

So great was the popularity of Paul J. Rainey's lecture on lion hunting in the spring Members' Course that four thousand people had to be turned away. Later this lecture was repeated twice in the same evening by Carl E. Akeley for the benefit of Members.

On account of the widespread interest in the origin of man and the recent discovery of prehistoric remains, a special course of lectures was arranged on the Antiquity of Man. These lectures were designed to present a popular epitome of the present knowledge of this subject. The course was opened by President Osborn and proved of great public interest.

CHILDREN'S ROOM.—The Children's Room was open regularly on Wednesdays and Saturdays during the spring and early summer. The attendance for the period was 1,105. The room has been closed since July owing to necessary changes that were being made and from the fact that the instructor's time has been occupied with other duties in the department.

WORK FOR THE BLIND .- Through the Ionathan Thorne Memorial Fund we have been able again to extend special privileges to the blind. Special lectures have been arranged for children and adults, and collections adapted for their use have been placed at their disposal. Particular attention has been given to systematizing the work for the blind. people have shown great timidity about coming to the Museum. which in a measure explains the small attendance; but progress has been made in overcoming this difficulty. Spring and fall courses of talks on zoölogy and anthropology were given by Mrs. Roesler and Miss Wilds to the blind pupils of the public schools and similar courses for adults from the institutions for the blind. These were fully illustrated with specimens which could be handled. The attendance of pupils was 154; of adults 70. The work with the blind has been very interesting and has seemed to be a real source of pleasure to the people reached. They have been very attentive to the talks, eager for information and reluctant to have the story hour over.

A part of the income of the Jonathan Thorne Memorial Fund has been expended in paying the transportation of the blind to the Museum and for the preparation of small models to be sent to the blind pupils in the public schools, and we have 10 giraffes, 10 camels and 10 hippopotamuses ready for use; 12 relief maps of the world are nearly finished.

Collections of Indian, Eskimo and Japanese material have been sent to the classes for the blind in the public schools of Newark and Jersey City.

Photography and Cataloging.—The more successful the Museum expeditions, the greater is the burden placed on the division of photography. Especially during the past year when the scope and success of the expeditions have been great, the tax on this department has been unusually severe. Remarkable progress has been made in the routine photographic work, which has been carried on by one man unassisted. The photographer has displayed great ingenuity and efficiency in mastering the many difficulties involved in the special photographic work necessary in connection with the preparation of backgrounds for groups.

During the year the photographer has made 4,857 prints, 1,760 slides, 955 negatives, 339 enlargements and 33 transparencies, but large as these numbers are, they are no indication of the labor involved in producing the results desired.

Through the faithful and efficient work of Miss Muenchehofe, the reference file of photographs grows apace. This file now numbers 29,848 prints. The file of negatives numbers 23,881.

It has been stated repeatedly that the Museum possesses a collection of 35,000 lantern slides, but it has never been possible to make the fullest use of this valuable material since it is uncatalogued. A beginning has now been made on this important work. A new system of filing based on the Dewey Decimal System is being developed, which when completed will enable one to locate quickly slides on any subject desired. Nearly 2,000 slides have already been arranged in this file.

Accessions.—The principal accessions for the year are a collection of about 150 birds' skins from Miss Evelyn Purdie and a collection of minerals, rocks, shells and birds' eggs from Clinton G. Abbott. Gifts from Charles Bohem, Mrs. H. S. Dewey, Miss Annie Miller and Arthur E. Krause have helped in beautifying the Children's Room. G. Seymour Willson kindly loaned us a set of negatives of gold mining in South America from which prints were made.

MINERALS

L. P. GRATACAP, Curator

DEPARTMENT OF MINERALOGY.—The past year has seen the complete installation of the minerals in the new Morgan Hall. These were practically in position at the close of 1911, but considerable refinement in the installation has improved their appearance. Large descriptive head labels in metallic frames have been placed over the various sections throughout the hall, enabling the visitor, by the simple process of their consecutive inspection, to find any mineral species he is in





A SPHIEL OF TEXAST AND A QUARTER OF J. Propert Morgan

search of. This system has already proved its value, and was quickly recognized as a needed help to the student. As in previous years, the important additions to the cabinet, outside of the Gem Collection, have come through the expenditure of the interest on the Bruce Fund.

These mineral additions, with one or two exceptions, are not remarkable for their beauty, but have scientific value, increase our series of localities and complete the collection along the less conspicuous lines of interest, to which now additions must be largely confined. A little progress has also been made in reëstablishing the suite of gold specimens, and from time to time this work will be advanced as opportunity and funds permit.

It is impossible not to reflect, in view of the occasional splendid gifts of Mr. Morgan to the Gem Collection, that an increased endowment of the minerals would allow the Museum to compete for the possession of specimens which private collectors practically absorb in the open market. However, this deficiency of resources is fortunately compensated for, in a measure, through Mr. Morgan's gifts, which, as they appertain to the more expensive and splendid species of the mineral kingdom, enable the Museum to secure in these species phenomenal and unique specimens.

One has only to look over the additions made by Mr. Morgan this year to the Gem Collection to be impressed with their immense value and corresponding beauty; the huge Aquamarine from Brazil, the Euclase in the matrix, also from Brazil, the now rare Benitoite from California, the marvelous Rubellites, also from California, and the two almost unequaled crystals of Kunzite of the highest gem quality, with a mammoth Quartz Sphere of absolute purity, illustrate strikingly the fineness and the importance of this patron's generosity.

An important purchase during the year, secured from our general appropriation, was that of 585 Krantz wooden models of the more common crystal forms of the representative minerals. These will be installed at the west end of the hall in a separate case, thus avoiding the unfortunate effect of their intercalation among the mineral specimens, where their appearance would prove unpleasing and detrimental. The mounting

and preparation of these blocks, which will necessitate their partial coloration, are now under way. It is anticipated that they will be very much welcomed by the increasing number of visitors to whom crystallography is no longer a bugbear or a mystery.

An interesting experiment in mural decoration has been made with, we believe, a genuine popular approval. The Nevada Consolidated Copper Co., one of the Guggenheim properties, has presented us with an enlargement, in color, displayed as a painting, of a panoramic photograph of the Shovel Pit at Ely, Nevada. This difficult work has been successfully executed by Albert Operti, and was described and illustrated in *The American Museum Journal*.

In a previous report the Curator urged a reinstallation to some extent of the Gem Collection, especially with a view to making it technically more valuable, and with no indifferent eye to the improvement of the Mineral Hall by the abstraction of the Gem Room's purely mineral contents.

MAMMALS AND BIRDS

J. A. Allen, Curator

Department of Mammalogy and Ornithology.—The accessions, through exploration, gift and purchase, exceed those of any previous year in the history of the department. Of first importance in number and interest are the collections made in western Colombia under the direction of Curator Chapman. These include over 5,000 birds and about 1,000 mammals. About 3,000 birds and 1,000 mammals have been received from other sources, largely through other Museum expeditions. A much larger number than usual of both mammals and birds have been received from the New York Zoölogical Society, including many of great value to our collections.

Walter Winans of Pluckley, Kent, England, to whom the Museum is indebted for the material for the Wild Boar Group, installed early in the year, has continued to send us specimens of European mammals of much interest. The Museum is also





DEPARTMENT OF MAMMALOGY AND ORNITHOLOGY
THE RAFT ON WHICH THE MUSEUM'S EXPEDITION TRAVELED SOME 350 MILES
OF THE WAY DOWN THE VALU RIVER
Expedition to Korea



indebted to Clarence H. Eagle for a collection of North American birds, numbering about 850 specimens; J. T. Lloyd has presented 45 bird skins from Samoa, and Carl E. Akeley 5 specimens of adult and young Ibises from British East Africa, which proved to represent a new genus.

The important additions by purchase include collections of both birds and mammals from China, Chile and East Africa, the latter including 2 Forest Pigs and 10 Elephant skulls.

EXPEDITIONS.—The Stefansson-Anderson Expedition to arctic America returned late in the year, after an absence of more than four years. The zoölogical material secured is of special interest. The collection includes 139 mammals and 218 birds, with about 100 sets of eggs of arctic breeding birds. The mammals include series of Barren Ground Caribou from widely separated localities, and 18 skins and skulls of the little known Barren Ground Bear, suitable for mounting as well as for study. The smaller mammals are well represented.

Assistant Curator Andrews's expedition to Korea was highly successful. After obtaining certain special desiderata of whales on the coast, including skeletons of the nearly extinct California Gray Whale, and of the Pacific Humpback and Killer Whales, he made a trip into the unexplored northern part of Korea, where he collected small mammals and birds, about 175 specimens of each. These will doubtless prove to include a number of undescribed forms.

Assistant H. E. Anthony spent several weeks collecting mammals and birds in eastern Oregon, with excellent results, this portion of the West being previously wholly unrepresented in our collections. Several species of mammals new to science were obtained, and a large series of specimens of the rare Idaho Pygmy Rabbit.

The Congo Expedition, under the leadership of Messrs. Lang and Chapin, is still in the field, but is preparing to return with the immense collections accumulated during three years of highly successful work in African jungles.

The Colombian Expedition has been continued and work prosecuted from the low humid coast region into the Central Andes to altitudes of about 15,000 feet, and later to the

Eastern Andes, the Magdalena valley, and the headwaters of the Amazonian drainage. The results are of the highest interest, the number of new and rare species having proved surprisingly large among both the birds and mammals, and the facts obtained regarding the influence of environment upon the distribution and evolution of local forms are of much scientific importance. During the coming year the field of exploration will be extended to the Bogotá region and other districts to the eastward. Curator Chapman will be in personal charge in the field during part of the year.

The installations include the completion of the Wild Boar Group and the transfer of the remaining local mammal groups to the North American Mammal Hall. The domestic races of dogs have been moved to the Darwin Hall.

Collections on Deposit.—Dr. Dwight's collection, consisting mainly of North American birds, now comprises about 35,000 specimens, and is especially rich in series illustrating changes of plumage. During the past year he has installed in the gallery of the room assigned for his collection new metal storage cases at his own expense.

Dr. Sanford's collection now numbers several thousand specimens, chiefly North American water birds and the rarer species of North American land birds. He is making a specialty of Albatrosses and Petrels, with which all museums have hitherto been poorly supplied. In order to extend this feature of the collection he has sent into the field an exceptionally expert collector and preparator of bird skins, with instructions to explore thoroughly the coast and islands of the southern half of South America, devoting to this task as much time as may be necessary, probably several years. During the past summer Dr. Sanford has furnished one-half of the floor space of the room assigned to his collection with the most improved type of metal storage cases, at his own expense.

These two collections add greatly to the ornithological resources of the Museum, since they are available for use by the staff of the department in the prosecution of research work.

The cataloging of the collections has been kept up to date, and much work has been done on the index catalog

of the mammals. The rearrangement of the osteological material has not been taken up, as was hoped would be possible, owing to lack of storage facilities.

Publications.—Eight papers published in the *Bulletin* for this year represent the scientific work of the department. Others are well advanced in preparation, including one on the Muskoxen and their near allies, living and extinct, by the Curator, now in press in the Memoirs.

"A Review of the Primates," by D. G. Elliot, in three royal octavo volumes, has been printed during the year, but its publication has been delayed awaiting the completion of the colored plates. These volumes aggregate 1,348 pages, with 128 half-tone plates of skulls and figures from life, and 28 colored plates. This work forms the first of the Monograph series, and is the largest and most important single zoölogical publication thus far undertaken by the Museum.

EXTINCT VERTEBRATES

HENRY FAIRFIELD OSBORN, Curator Emeritus; W. D. MATTHEW, Curator

DEPARTMENT OF VERTEBRATE PALÆONTOLOGY.—The past year has been one of unusual success in the field. Cretaceous formations of Alberta, Associate Curator Brown secured a magnificent collection of fossil reptiles including three fine skulls of Horned Dinosaurs, a complete skeleton with skin of a Duck-billed Dinosaur, materials for completing a mounted skeleton of the great Armored Dinosaur, and a large series of skulls and skeletons of dinosaurs, most of them new or little known. Associate Curator Granger secured from the Eocene of New Mexico and Wyoming a large collection of the rare and interesting fossil mammals of this epoch, which will be of great value in unraveling the early stages in the evolution of various races of quadrupeds. Mr. Thomson obtained from the Lower Miocene of Nebraska three splendidly preserved skeletons of the gigantic and grotesque "Clawed Ungulate" Moropus, which had been one of the greatest desiderata for the Tertiary Mammal Hall. A conservative

estimate of the value of the more important exhibition specimens shows a total of over twice the whole cost of the three expeditions, in addition to collections of great scientific value but difficult to estimate commercially.

CUBAN COLLECTIONS.—The collections of Cuban fossil vertebrates, made under the generous direction of Carlos de la Torre of the University of Havana, and of Associate Curator Brown, are now being prepared for study and exhibition. Dr. de la Torre has also deposited on loan his earlier collections from Cuban localities, as also those of Señor Moreno. These collections constitute practically all that is known of the extinct vertebrate life of the island, and represent one of the most important discoveries of recent years. They will be described and illustrated in the *Memoirs* of this Museum, by Dr. de la Torre and the Curator.

EXHIBITION METHODS.—The work of reinstalling the exhibits on the panel system has been continued, the Uintathere case being completed, the Titanothere alcove practically completed and some progress made on other groups. A fine group has been completed illustrating the conditions which caused the burial of the wonderful deposit of Pleistocene fossils in the asphalt beds of La Brea near Los Angeles. The specimens for this group, complete skeletons of the Sabretooth Tiger and Extinct Wolf, and skulls with a fore limb of a great Ground Sloth, were secured through exchange with the University of California. A cast of the skeleton of the Giant Lemur Megaladapis of Madagascar, also secured through exchange, has been mounted and placed on exhibition. A skeleton of the Four-toed Horse Echippus and another partial skeleton of the same, both from the Lower Eocene of the Big Horn valley, Wyoming, have been prepared and mounted for the Evolution of the Horse Alcove. A number of dinosaur specimens secured by Mr. Brown in Alberta have been prepared and temporarily exhibited in the case opposite the elevator, and the preparation of a complete skeleton of a new Duck-billed Dinosaur Saurolophus, is nearly completed. A splendid skull of the "Giant Pig" Dinohyus has been mounted





DEFARIMENT OF VERCIEBRATE PALTON FORD OGY
HEY LING FOSSILS IN ALBERTA
The Muscum Expedition on the Red Deer River

on the panel to the left of the entrance of the Tertiary Mammal Hall. Most of the material secured by the field expeditions of 1911 has been prepared for study, and for mounting in exhibition groups where desirable. Some progress has also been made in the preparation of the 1912 collections.

The transfer of the Osborn Library to the Museum, and its cataloging and general supervision and care under direction of the Librarian, have made it more than ever valuable and convenient for research work in Vertebrate Palæontology.

Publication and Research.—Research work was continued as usual, by Professor Osborn and Dr. Gregory upon the *Titanothere* Monograph for the United States Geological Survey, by Professor Osborn and Mr. Brown upon Cretaceous Dinosaurs, by Dr. Matthew and Mr. Granger upon Lower Eocene mammals and by Professor Osborn and Dr. Matthew upon the Evolution of the Horse. In addition a number of valuable researches upon Museum material have been contributed by scientific authorities not upon our staff, notably, Dr. von Huene upon Permian vertebrates, Dr. Shufeldt upon Pleistocene birds and Dr. Cockerell upon Tertiary land shells.

Sales and Exchanges.—A number of valuable duplicate specimens and casts have been sent to other museums during the year. Of these the most important are a skeleton of the Primitive Ungulate Phenacodus, sent to the Senckenberg Museum, two fossil skulls to the British Museum, and five copies each of two splendid casts recently prepared, the skull of Tyrannosaurus and skeleton of Eryops, sold to different museums. The net total of these sales, excluding unfilled orders, is \$2,350. Exchanges with the University of California, Munich University and the Geological Survey of India have been arranged during the year.

Photography.—Dr. Gregory and Mr. Anderson have devoted considerable time during the year to the preparation and supervision of illustrations for Dr. Elliot's monograph of the Primates. Mr. Anderson has also prepared and photo-

graphed a minute fossil skull, of extraordinary scientific value, found by Mr. Granger in New Mexico during the summer. The usual number of field photographs and a number of museum exhibits have been added to the files.

Special Acknowledgments.—The skeleton of *Eohippus*, found in 1910, has been recorded as a gift of Frank K. Sturgis, in recognition of his contributions toward the field work which resulted in its discovery. This specimen is now installed in the Horse Alcove. To Langdon Gibson the Museum is indebted for a fossil walrus skull, dredged in Penobscot Bay.

Acknowledgments are due to the Trustees whose continued interest and generous support have made possible the maintenance and success of the field and laboratory work.

Horse Evolution Series.—The alterations and additions in this alcove are more advanced than elsewhere toward what we regard as the new ideals of exhibits. The methods of paneling the cases, of unifying and simplifying the exhibits, and of emphasizing especially some one principle in each alcove, have proved fairly satisfactory, although the rearrangement is not yet complete.

The Guide Leaflet on the Evolution of the Horse has been revised and improved, especially as to the illustrations, so as to conform to the new arrangement of the alcove, and the new edition is now in press.

EXISTING REPTILES, BATRACHIANS, RECENT AND EXTINCT FISHES

BASHFORD DEAN, Curator*

DEPARTMENT OF ICHTHYOLOGY AND HERPETOLOGY.—During the past year this department has made progress in all its activities: in enlarging its exhibits; in adding to, and caring for, its reserve collections; in broadening its exchange relations with other museums, and in the scientific study of its collections. Though one of the youngest departments in

During the leave of absence of Dr. Dean, Louis Hussakof, Associate Curator of Fishes, has been Acting Curator of the department.

the Museum, it has grown so steadily that it bids fair soon to rival the much older, similar departments in other great museums. The department has been fortunate in having at its disposal the Cleveland H. Dodge Fund, which has enabled it to add to its collections many rare and desirable fishes as these have been offered to the Museum.

We gratefully acknowledge the generosity of the New York Zoölogical Society, which has provided the department with many specimens of both fishes and reptiles.

The event of the year was the progress made on the exhibits. This has taken two directions: first, the enlarging of the synoptic series, the series containing examples of the various families of fishes, amphibians and reptiles; and second, the preparation of habitat groups. In the synoptic series, a total of 177 specimens were added to the exhibits. In addition to these, three habitat groups, two of fishes and one of the Giant Salamander, were opened to the public. These groups afford an opportunity for displaying the creatures in their various activities, such as securing food, escaping enemies, building nests, etc., besides lending a touch of nature, often of great beauty in color and artistic detail, to the exhibition hall.

EXISTING FISHES.—The synoptic exhibit in the Recent Fish Hall was increased during the year by the addition of 85 specimens. These are mounts, except in those cases where the poor condition of the original, or the necessity of representing it on a larger scale, has made desirable the preparation of a model. Among the specimens worthy of special mention are several large fishes hung on the walls above the cases, including two Sea Sunfish (*Mola mola*), one of them over ten feet in length and supposed to be of record size, a six-foot *Arapaima* from the Amazon River, two nine-foot Alligator Gars, a beautifully mounted Jewfish and two magnificent Sailfishes.

Early in the year, the department completed and opened to the public the Paddlefish Group, the first of a series of groups planned for the fish exhibit. This represents a school of that singular sturgeon, the paddlefish, swinging around toward a fisherman's seine in one of the smaller lakes of the lower Mississippi valley. The studies for this group were made at Moon Lake, Miss., in 1910.

Another group completed during the year was that of the Sea Lamprey. This represents three lampreys which have run up a river in the breeding season, in the spring, and are carrying away the pebbles with their suctorial mouths so as to make a depression, or nest, in the river bottom in which to spawn. The studies for the group were made on the Nissequogue River at Smithtown, L. I.

The department has also in preparation four other fish groups. Three of these, the Amia, Gar Pike and Shovelnose Sturgeon, were designed to represent the ganoid fishes peculiar to North America; one of them, the Amia Group, is nearing completion. These will be window groups, illuminated by the colored light streaming through painted glass inserted in the windows. The field studies for these groups, which were made possible through the Dodge Fund, were carried out in Wisconsin, in the spring of 1912. There is also under construction a semi-diagrammatic group of the Australian Lungfish Neoceratodus, of which the department was fortunate in obtaining a number of specimens. This group will be of much scientific as well as popular interest, since specimens of the fish are rather rare and the species, it appears, is on the verge of extinction.

Fossil Fishes.—This exhibit was increased by a total of 33 specimens, chiefly restorations of high artistic finish. Some of these have been attempted for the first time, and all have been carried out with strict attention to scientific accuracy, while not neglecting, at the same time, to represent the fish as life-like as possible. Among those worthy of special mention are a model of the ancient shark Cladoselache, based upon the fossils of which the Museum has the largest collection in the world; Pleuracanthus, an ancient shark belonging to a group also extinct, remarkable for having a powerful serrated spine back of the head; a model of Semionotus, and three reproductions of models in the British Museum. Two panels illustrating the evolution of the Arthrodires were arranged, one showing the progressive changes in form and size of the head,



DELYCLAM STORT OF THE GRANT SALAMANDER GROUP
A SPECIOS OF THE GRANT SALAMANDER GROUP

the other the gradual increase in size and effectiveness of the jaws.

Owing to the small size of this exhibition hall, it is not possible to introduce many additional specimens; progress must be rather along the lines of improving the artistic and scientific detail of the exhibit.

AMPHIBIANS AND REPTILES.—The chief event in this field was the completion and opening of the Cryptobranchus Group. This represents the Giant Salamander, or Hellbender, in various activities amid the rocks in the shallows of the Allegheny River. A painted background, which blends with the water, rocks and trees in the foreground, gives the illusion of a sunlit vista up a shallow stream flowing over a bed strewn with rocks, and overhung by the drooping foliage of trees. The materials and artistic details for the group were prepared under the supervision of Miss Dickerson. The scientific data for it were supplied by Bertram G. Smith, an authority on this creature, who has made intimate studies of it in its native haunts and has written extensively on it.

Two other groups are also under way. One is to represent the common toad with its various associates, as it appears in its natural surroundings in New England, toward the end of spring. Some progress has also been made on a group of that interesting reptile, the California Chuckawalla, based on materials collected in southern California in 1910, by Charles H. Townsend, Director of the New York Aquarium.

In the synoptic series, 59 amphibians and reptiles were added to the exhibit. Among these may be mentioned, as of special interest, mounts of *Heloderma*, *Varanus*, *Crocodilus*, and casts of *Rana goliath*, *Ophisaurus* and *Bufo alvarius*.

STUDY COLLECTIONS.—During the year the study, or reserve, collection of fishes was overhauled by Mr. Nichols, and the specimens rearranged on an improved plan. The same was done for the herpetological collections by Miss Dickerson. About 1,100 cards were added to the card catalogs in the department, giving references to some 3,100 specimens. The collections now number, roughly, 8,000 fishes, 7,000 fossil fishes, 7,000 amphibians and reptiles. An

additional room in the basement, adjoining the present storeroom, was made available for use by the department to
accommodate the alcoholic and dried herpetological collections.
This room has been fitted with metal fire-proof shelving,
similar to that in use in the United States National Museum
storerooms, and is now ready for occupancy. Removing the
herpetological collections to this room will allow more space
for the fish collections, and during the coming year the fish
storeroom will be fitted up similarly to the herpetology room.
The fossil fish storeroom on the fifth floor has been provided
with additional metal cases, which will more than double its
previous storage capacity.

In connection with the growth of the collections of the department, it should be mentioned that Professor Dean has made special efforts, during the year, to arrange exchanges with museums throughout the world. Many valuable specimens have thereby been received from distant localities, c. g., British Guiana, Australia, Formosa, South Africa, as well as many museums in Europe and America.

EXPEDITIONS.—Thanks to the Cleveland H. Dodge Fund, the department has been able to participate, to some extent, in the large expeditions sent out by the Museum, and also to meet the expense of several minor expeditions. In this way the department has had entire or partial interest in six expeditions, namely, to Wisconsin, for the collection of ganoid fishes; to Cuban waters; to South Georgia Island; to British Guiana and Central America; to Japan and Korea, and to the Belgian Colony of the Congo. The Arizona desert expedition was financed from the "Director's Fund." The expeditions already returned have brought valuable material to the Museum.

RESEARCH.—The officers of the department have devoted such time as could be spared from their other duties to the scientific study of the collections in their charge. Some of these studies have already appeared, and a number of others are in hand and will be carried on as opportunity offers. Seven Museum Bulletins were published by the department during the year, and a number of popular articles have appeared in the American Museum Journal.

EXISTING INVERTEBRATES

HENRY EDWARD CRAMPTON, Curator

DEPARTMENT OF INVERTEBRATE ZOÖLOGY.—The past year has witnessed marked progress in all lines of activity. New and elaborate exhibits have been placed in the halls, much constructive work has been accomplished in cataloging and arranging the study collections, and several scientific investigations have been pushed forward and some of them have been published. Mr. Grossbeck has been assigned to the immediate oversight of Lepidoptera, in place of Mr. Beutenmüller.

Extensive additions have been made to the study collection. Most of the new material has been secured through our own expeditions, of which four were sent out during the year, while additional field work in our more immediate neighborhood was prosecuted by three officers. As before, all field work has been coordinated through its relation to the extensive studies which the department as a whole has instituted, namely, those of the distribution, evolution and migration of the invertebrate organisms of North and South America. Especially valuable are the results of Mr. Grossbeck, assisted by William T. Davis, in southwestern Florida. A new field for comparison of northern and arctic forms was entered by Mr. Leng, who devoted several weeks to collecting in Labrador and Newfoundland. Mr. Miner spent four weeks in making a detailed biological study of the Greylock Range of the Berkshire Hills and obtained many insects and myriapods. Later he spent some weeks at Woods Hole. Mass., with members of the preparation room staff to complete the observations and preliminary sketches for projected groups of Bryozoa inhabiting shallow water. Early in the year, Professor Wheeler carried on field work in Central America. In November Professor Crampton made a reconnoissance of New Providence in the Bahama Islands for the collection and study of terrestrial molluscs especially, and to ascertain how desirable it might be for the department to give fuller attention to this outlying region. During the summer Dr. Lutz, Professor Treadwell and Professor Crampton also prosecuted field work in regions nearer New York City.

INVERTEBRATES IN GENERAL.—Several notable exhibits have been installed in the Darwin Hall in the course of the year. The Annulate Group has been completed: it is one that arouses considerable interest on the part of visitors. A still more elaborate exhibit is that which displays a variety of organisms associated upon the piles of a wharf; it is a reproduction of a portion of a wharf at Vineyard Hayen, Mass. Despite its complexity and the great number of small models that necessarily enter into its composition, this exhibit has been finally completed. In addition to the displays of a faunistic nature certain other items have been installed. assemblage of field mice and their enemies, represented in a natural habitat, serves to illustrate the intricacies of organic interrelationships and the consequent struggle for existence. Numerous varieties of dogs illustrate the results of artificial selection that were given special prominence by Darwin. Soon to be placed in the Darwin Hall is a large topographic model of the Island of Tahiti, already completed, which will serve two purposes; it will bear distinctive examples of the land snails under investigation by Professor Crampton, thus demonstrating the principles of geographical distribution, and it constitutes one member of the series of models of the Society Islands which in its entirety will show the mode of evolution of a coral atoll from a barrier reef surrounding a volcanic Several other smaller models have been added to the systematic series.

Much time and labor have been given by the preparation staff of this department to work for other departments; a large and detailed model of the House Fly and a series of models of Bacteria are the most prominent items under this heading.

INSECTS.—Marked and gratifying progress has been made in this division during the past year. We have been fortunate in receiving by gift a large number of specimens; Mr. Grossbeck has donated his splendid large collection of Geometridæ, Mr. Leng has given extensive series of Coccinellid and Cerambycid beetles, R. D. O. Johnson of Medellin, Colombia, has presented a valuable collection of insects from that locality, and the members of the New York Entomological



DEPARTMENT OF INVERTEBRATE ZOÖLOGY
WHARF PILE GROUP

Society have continued to fill in the weak places in our local collections. Dr. Lutz, in continuing the local field work of this division, has replaced many specimens devoid of exact data with specimens accompanied by careful field notes, he has added a number of species new to the collection as well as forms new to this locality, and has discovered certain species new to science. This work also has continued to receive the hearty and efficient support of the New York Entomological Society. The magnitude of the task of securing a complete collection of local insects is indicated by the fact that in spite of so many years of work on the part of so many investigators, our collections still lack more than 5,000 of the species to be found within fifty miles of New York City.

Field work in other regions has yielded most satisfactory results. Early in the year Mr. Grossbeck, assisted by William T. Davis, made collections in southwestern Florida to extend and supplement the work accomplished last year by Messrs. Lutz, Leng and Davis. The material thus secured, together with that already on hand or generously loaned from other collections, is being studied by specialists. Their results will be published in a series of reports under the general title of "Insects of Florida." The report on the Diptera is already prepared for the press; it is by C. W. Johnson of the Boston Society of Natural History, and lists 832 species, of which 382 are additions to the best previous list. This monograph also gives a discussion of the important relationship borne by the Floridan fauna to those of surrounding regions. logical field work was also carried on in Newfoundland and Labrador by Mr. Leng, accompanied by George P. Engelhardt of the Brooklyn Museum. The specimens secured on this expedition are particularly interesting because of their value for the problems of geographical distribution, and because many of them are either new species or undescribed local The spiders obtained at the same time are under investigation by J. H. Emerton of Boston.

The work of the year on the general collection of insects has consisted largely of the assembling of named specimens and the preliminary sorting of unidentified material into the larger taxonomic division. The regular staff has had little

time to devote to the more critical study of the collections, and were it not for the cordial coöperation of outsiders but little progress could have been made in rendering them of greater scientific value. There are more than one million specimens of all species in the charge of officers of their divisions, and many of these may be made of far greater scientific interest through their adequate study when this may become possible. Naturally, the preliminary work noted above is the first essential. One of the most important phases of the year's work has been the careful cataloging and labeling of type specimens; more than 1,700 species of insects are represented either by types or by cotypes.

Three large groups have been placed on exhibition in the Hall of Insects. One of these shows a swarm of migratory butterflies (Danais plexippus) resting on a small oak tree; another illustrates more than a dozen distinct features of the biology of the periodic Cicada (Tibicen septendecim); while the third is a reproduction of a nest of the mound building ant (Formica exsectoides) showing about four hundred insects at work. These groups show a notable advance upon the usual methods of exhibiting insects through the adaptation of means earlier employed for the exhibition of birds and mammals. reason of the small size of insects it is possible to display large numbers of individuals within an area of a few square inches in a setting which reproduces their natural surroundings; they are very useful in fixing the interest of visitors and thus inducing them to read the labels which explain the scientific points illustrated by the exhibits.

Molluscs.—During the year the collections have been enlarged by certain items which will doubtless repay closer study. Arthur D. Gabay has continued his gifts of attractive material which, with that acquired in former years, might be incorporated in an exhibit illustrating the ornamental uses of shells. The collections of the genus *Cerion*, already considerable, have been amplified by the material collected during the year in the Bahama Islands by the Curator.

The collection of shells is now safely housed in iron cases provided for its permanent installation in the new Hall of Molluscs. Considering the long exposure incidental to its removal, its condition is satisfactory, although time and labor will be required in order that the shells may be freed from accumulated dust and may be arranged properly. It is hoped that this hall may be soon freed of construction work so that the whole collection may be placed in final order. The officers in charge are most anxious that this may be done, while in addition the visiting public shows many evidences of its desire to renew its acquaintance with the collections of shells.

Visitors to the Museum are mainly uninstructed in the details of conchology and hence the immediate purpose of a hall is to offer suitable general and educational exhibits. Yet it is increasingly evident that a separate room is desirable for those shells which are more valuable for purposes of study than for exhibition. In pursuance of the first purpose the present intention is to utilize about six cases on the north side of the hall for an exhibit of molluscan fauna of New York State, arranged according to the forthcoming report of Dr. The other collections will display Industrial and Ornamental Uses of Shells; Variation in Form, Sculpture. Ornamentation, Color, etc., in progressive or mutational series, as in various species of Pyramidula, Cypraa, Purpura, Pecten, etc.; Fossil Ancestry of Genera (Ostrea, Fusus): Adaptation of Habitats (Solen, Mya, Ostrea, Lithodomus, etc.); Abyssal Forms as contrasted with Littoral or Shallow Water Forms: Eggs, Nidamental Sacs, Capsules and the like. At the front of the hall biological groups will be placed which will illustrate the morphological, physiological and ecological characteristics of Mollusca as distinguished from their taxonomic features.

GEOLOGY AND EXTINCT INVERTEBRATES

EDMUND OTIS HOVEY, Curator

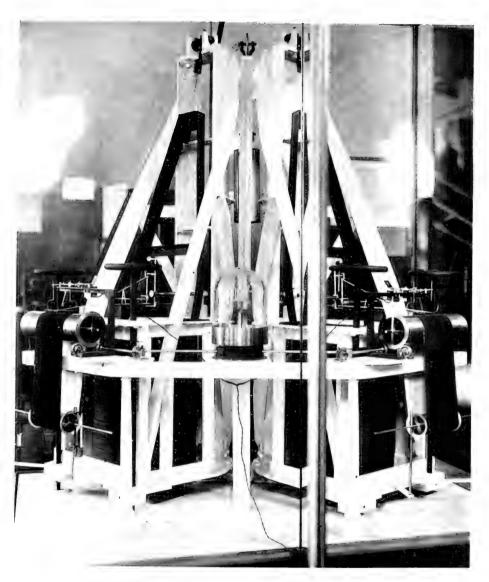
DEPARTMENT OF GEOLOGY AND INVERTEBRATE PALÆON-TOLOGY.—The chief features of the past year's history in this department pertain to the Crocker Land Expedition and the changes in the installation of the hall.

CROCKER LAND EXPEDITION.—Plans for this enterprise were going forward satisfactorily in every respect, the personnel of the party was acceptable and financial support seemed to be fully assured, when on 28 April, George Borup, the leader of the expedition, was drowned while skirting the shores of Long Island Sound near Crescent Beach in a canoe. The details of the accident are unknown, but everything points to the conclusion that he lost his own life in trying to save that of his companion, E. C. Case of Hartford, Connec-This lamentable accident deprived the Crocker Land Expedition of its leader, and led to the postponement of its start for a year. The loss to science in general and to the Museum in particular through Mr. Borup's death is large. Qualified by mental faculties to do scientific work of high grade, particularly along exploratory work in charge of geography. Mr. Borup was of a sunny disposition which made warm friends for him wherever he went. He had personal courage and other qualities that made him a natural leader of men.

In the fall the expedition was reorganized. Donald B. MacMillan, who had been co-leader of the original party with Mr. Borup, was appointed its leader, and in conference with him revised plans for the work were adopted. W. Elmer Ekblaw, of the University of Illinois, was chosen the geologist of the party and Ensign Fitzhugh Green, U. S. N., was chosen for the cartographic and magnetic work, Mr. MacMillan himself retaining charge of the anthropological and meteorological sides of the expedition. The active endorsement and coöperation of the Navy Department are shown by the fact that it "detailed Mr. Green for duty on the expedition," thus retaining for him his full position in the Navy during his absence in the arctic. The general handy-man, mechanic and cook has been appointed, but the surgeon and a general scientific assistant remain to be selected.

Plans are on foot for cooperating with the Government in establishing a Weather Bureau station at the principal head-quarters on Flagler Bay, which, if carried out, will entail an enlargement of the scientific staff. The Crocker Land Expedition will start in July, 1913, and will cooperate with the second Stefansson Expedition in completing the exploration of the





GENERAL VIEW OF MAINKA SEISMOGRAPH

Presented to the New York Academy of Sciences by Emerson McMillin, President of the Academy, and deposited in the American Museum of Natural History

region north of North America and west of the 90th meridian of West Longitude.

REARRANGEMENT OF COLLECTIONS.—The plans for the rearrangement of the hall were put into active operation during the year, and, with the assistance of Chester A. Reeds, who assumed duties as Assistant Curator in the department on I August, much progress has been made. It is now proposed to devote the west half to historical geology and the stratigraphic series of fossils, and a portion of the eastern half of the hall to a typical biological series; the remainder of the hall will be devoted to phenomenal and structural geology, and space has been cleared in the northeast corner for the reception of the Copper Queen Mine model which is being prepared through the generosity of James Douglas.

The reproduction of the Copper Queen Cave is almost finished, and some excellent cave material has been received from other regions, particularly a collection of Calcite and Aragonite crystals from the El Potosi Mine of Chihuahua, Mexico, as the gift of Grant B. Schley, and stalactites and stalagmites from caves in Edmonton County, Ky., as the gift of the Mammoth Cave Estate.

Other accessions worthy of particular mention are copper ores and associated rocks from Butte, Mont., presented by the Anaconda Copper Mining Co., a model of the Panama Canal and a large number of meteorites. The latter came partly through the acquisition by gift from J. Pierpont Morgan, Jr., of the collections of meteorites left by the late Professor Stratford C. H. Bailey, a noted collector of his day, and through exchange or purchase. The total number of additions to the exhibition series comprises representatives of 87 falls, including about 14,000 specimens. The most noteworthy of the falls are the specimen forming eight-tenths of the famous Tomhannock Creek, N. Y., meteorite weighing 31/4 pounds, the 665-pound mass of the Amalia (Mukerop) iron, the Shrewsbury (600 grams) aërolite and the series of 1,080 specimens varying from 1/10 gram to 6,650 grams in weight of the Holbrook, also an entire mass of the Cruz del Aire iron weighing 15,082 grams.

The subglacial pot-hole from the town of Russell, St. Lawrence County, N. Y., which was mentioned in my last annual report, was transported to the Museum during the winter and mounted under the archway in front of the main entrance, as a companion piece to the Kelley's Island glacial grooves.

The 450-kilogram Mainka seismograph which was presented last year by Emerson McMillin to the New York Academy of Sciences, arrived during 1912, and was deposited by the Academy at the Museum in care of this department. The installation included the construction of a solid concrete pier reaching to the solid rock, and the instrument is now on exhibition in the little room reached from the southeast corner of the Eskimo Hall on the ground floor. This is the largest instrument in the United States for recording earthquake shocks.

EXISTING AND EXTINCT RACES OF MEN

CLARK WISSLER, Curator

DEPARTMENT OF ANTHROPOLOGY.—Several important accessions are credited to the year just closed. Ogden Mills presented some 400 oil paintings by the famous George Catlin, many of which are now on exhibition in the Plains and Woodlands Halls. Mrs. Edward H. Harriman presented a large collection from the Tlingit and Haida Indians of Alaska. From the field work the greatest returns in collections were by the southwestern archæological expedition in charge of Assistant Curator Nelson and the Stefansson-Anderson expedition to Coronation Gulf. In addition may be mentioned a Penobscot collection by Dr. Speck and Mr. Paul, a Potawatomi collection by Mr. Skinner, a Hidatsa-Mandan collection by G. L. Wilson, a Ute-Shoshone collection by Dr. Lowie and a New Jersey Rock-shelter series by Mr. Schrabisch.

There were many small gifts of specimens during the year as noted in the accession list. It is hoped that such gifts may increase, for in this way the general collections are gradually rounded out and made useful for study and reference. The year just closed has been marked by the great increase in the

number of calls from persons looking up special points in anatomy, archæology and ethnology. Such students find our museum storage collections very useful, and it is usually these collections that are strengthened by the many small gifts of our patrons. We desire, therefore, to express our great appreciation of the gifts so far made and the hope that the members and friends of the Museum will encourage further contributions.

EUROPEAN ARCHÆOLOGY.—The most important work of the year was a study of paleolithic man in western Europe by President Henry Fairfield Osborn. All the important caverns and sites yielding cultural and anatomical remains of paleolithic man were visited and the principal museum collections studied. Special attention was given to the correlation of the geological and faunistic characters of the period with the somatological and cultural characters. Some of the results of this investigation were made the subject of a special lecture in the Museum on November 20.

Special arrangements were made with the leading investigators and museums of France and Spain by which type collections for the various successive periods will be placed on permanent exhibition in our Archæological Hall. Permission was received through the courtesy of Professor Hugo Obermaier to make a model cross-section of the newly discovered deposit in the cavern of Castillo and to receive type specimens from the successive layers. All this constitutes a very great advance in the development of anthropology in this museum.

Several type collections were purchased and one small cavern excavated by Professor George Grant MacCurdy of Yale, who accompanied President Osborn on his tour of the caverns. Among the specimens secured by President Osborn is a large slab of stone from Sergeac (Dordogne), bearing the engraving of a horse. This valuable relic of paleolithic man will soon be installed in the European exhibit and will be one of our most important scientific assets.

NORTH AMERICAN RESEARCH.—The research work of the department has been along the definite lines noted in previous

reports. Under a special fund provided by Archer M. Huntington, Assistant Curators Spinden and Nelson worked in the Southwest. Dr. Spinden spent the first quarter of the year on the religion and art of the Rio Grande Pueblos. These villages present some of the most important and at the same time some of the most difficult ethnological problems in the Southwest. As the work now stands Dr. Spinden has full data on the material culture and art and has made a beginning on religion and social organization. The general plan for the work in the Southwest was to make a detailed investigation of the living Pueblo peoples and then to take up the archæology of abandoned Pueblo villages, first those abandoned since the Spanish occupation and later those of undoubted pre-Spanish origin. Mr. Nelson began the latter part of this investigation last May. A careful survey of the whole Rio Grande valley from El Paso to Santa Fé was made and the important sites plotted and characterized.

During the rebellion of the Pueblos against the Spanish in 1680, the inhabitants of Cochiti fled to a higher mesa and built a new village, where they lived until 1694 or until the Spanish stormed the mesa and burned the village. We thus have in these ruins a definite cross section of early historic Pueblo culture. This ruin was carefully excavated by Mr. Nelson and will be made the basis of a comparative study.

In the Galisteo basin south of Lamy are a number of important ruins, some of which were occupied in Spanish days. Here San Cristobal, Largo and several others were excavated during the season, making seven in all. More than 500 rooms were cleared out. The collections selected for further study are now in the Museum. It is planned to make this excellent showing but a beginning of the systematic archæological exploration of the whole area to the south.

In the Plains the special subject of investigation was men's societies and ceremonial organizations. Assistant Curator Lowie visited the Comanche, Ute, Shoshone, Crow and Eastern Dakota. The Curator spent some time among the Northern Blackfoot and the Teton-Dakota. A systematic review of this problem for the whole Plains area is now in progress and will form the substance of a future publication. G. L. Wilson



DEFARTMENT OF ANTHROPOLOGY
ESKIMO HELPING MR, STEFANSSON BREAK CAMP AND PACK THE SLEDS
, First Stefansson-Anderson Expedition

made a detailed study of agriculture among the Mandan and Hidatsa which has brought out many new points in land ownership and practical botany.

An important event of the year was the return of the Stefansson-Anderson Expedition. The region covered by this expedition was chiefly the territory between Cape Bathurst and King William Land, an area formerly so little known that one could do no more than conjecture as to what groups of Eskimo lived there. Mr. Stefansson succeeded in visiting thirteen groups in that territory and determining approximately their respective habitats. This alone marks an important advance in our knowledge of the Eskimo. Moreover, some data as to the culture, language and somatology of each group were This, in comparison with data on the Central and Alaskan Eskimo, should give us a fair idea of the whole gamut of Eskimo culture from Greenland to the Aleutian Islands. When it is recalled that anthropologists have found some important differences between the culture of the Alaskan Eskimo and of those around Hudson Bay, it must follow that a boundary line or a transitional belt exists somewhere in the region visited by Stefansson and Anderson. The data will give at least a tentative solution of this problem.

As to the past history of the Eskimo, we must appeal to what is in the ground. The expedition noted many ruins of former villages and recorded the character of houses and culture for further study. A point of especial interest is that from Cape Parry we have a collection of pottery dug out of the cutbank. This one fact is of considerable importance, since it greatly extends the pottery area among the Eskimo. Other archæological material was secured from the vicinity of Point Barrow, and a comparative study of these two collections, one east of the Mackenzie and one west, will prove of great importance.

It appears now that these collections, supplemented by other historical data, will enable Mr. Stefansson to demonstrate that the introduction of fish nets, labrets and tobacco pipes was comparatively recent and from the west, whereas pottery was known a long time before.

Lastly, we may mention the peculiar suggestions of

European blood among these Eskimo. This is an interesting somatological discovery. We say traces of European blood because that seems the most reasonable explanation of the observed facts.

Among the many minor investigations conducted in the Museum may be mentioned a study of the composition of copper implements from the Andean region of South America by W. A. Wissler. Chemical analysis made it clear that the production of bronze was understood by the ancient Peruvians. A full report of this work will be published.

Publications.—The results of research by members of the scientific staff are issued in a special series, the Anthropological Papers of the American Museum of Natural History.

Several papers were issued in the regular series, giving the results of field work among the Crow, Blackfoot, Dakota and Chipewyan tribes conducted by Doctors Wissler, Goddard and Lowie. Frank E. Lutz of the Department of Invertebrate Zoölogy reported some observations on the Patomana Indians of British Guiana. A special series of handbooks was begun, and the first number, on the Indians of the Plains, by Dr. Clark Wissler, was issued.

A special series of publications referring to the work of the Jesup North Pacific Expedition is still being issued but contains the work of former members of that expedition, none of whom are now on the Museum's staff. The editorial responsibility for this work is borne by Professor Boas of Columbia University. No volumes were issued during the year, but two papers are now in press.

EXHIBITION HALLS.—As museum work is practically continuous, a report for the year is simply a cross-section of many tasks begun during the previous year and extending over even into the following year. This is especially true of exhibition. At the beginning of the calendar year a small portion of the Plains Indians Hall was in place and only a few cases in the Woodlands Hall. As these two halls are now fairly well worked out, all the space being occupied by the various tribes in their proper sequence and position, it may be said that the year just

closed can be credited with the completion of this important installation. As these halls now stand, the visitor should be able to get a comprehensive view of the culture of the principal tribes, in geographical sequence from the Atlantic Ocean to the deserts of the Southwest. A great deal of work remains to be done on the special tribal groups in these halls, but the installation is in the main complete. In the North Pacific Hall some refinements of installation were made, especially in the Tlingit and Haida sections. Mr. Operti was detailed from the Department of Preparation to finish some of the figures in the canoe group. As the group now stands the figures are all complete, though we still need some figures to give the group a proper balance. Mr. Taylor has nearly completed two additional wall panels for the ceremonial side of this hall. A small collection of Eskimo material from Coronation Gulf. brought back by Mr. Stefansson, has been installed in the Eskimo alcove. In the South Sea Islands Hall Dr. Lowie revised and refined the New Guinea collection which is now fairly complete. Mr. Operti was detailed to complete the Tahitian groups begun by Mr. Neandross, all three of which are now in place. In the South American Hall Mr. Mead made a special installation of Peruvian cloth. This is a fairly successful arrangement made especially effective by the use of proper backgrounds and a carefully balanced arrangement of the various textiles. The case as a whole adds very much to the attractiveness and interest of that hall, and has been used frequently by students of design during the calendar year.

The Director designed and furnished new cases for the tower of the Chinese Hall, space to be given over entirely to Chinese archæology. Here it is planned to install the pottery and bronze collections in suitable form. One case is already in, but the others await shelves and brackets.

Dr. MacCurdy of Yale University continued the installation of European archæological material begun during the preceding year. This has progressed so far that we have in place a type series from the specimens owned by the Museum. Mr. Operti has just completed a series of mural panels for the walls of this room, representing typical examples of cave paintings.

In connection with the installation work considerable label copy has been prepared, especially for the Woodlands Hall, the European exhibit, the South Sea Islands Hall and the South American Hall. A small portion has been printed and put in place, but the greater part still remains in the hands of the printer. The exhibits have been further enlivened by the use of photographs illustrating the relation of the various specimens to the culture and tribe concerned.

STORAGE.—The proper arrangement and classification of collections not on exhibition must always be an important part of the Museum's work. During the year there have been a great many calls from persons interested in the rather intensive study of various subjects requiring their admission to the storage collections. On the whole, we have been able to meet their requirements satisfactorily. Nevertheless, there is need of further refinement and elaboration of our storage system. During the year, however, considerable advance was made. A large closet heretofore unused was fitted with side shelves and a traveling ladder, and in it was arranged in proper classification our large series of face casts from various parts of the world. A special room for the arrangement and storage of crania and other skeletal material was completed during the year, and half of the room filled. The other half awaits proper trays for installation. This room will hold about all the crania now possessed by the Museum. The other skeletal material, however, must be arranged in cabinets in the hall adjoining this room. This is a very great improvement over the former arrangement, and places the material in such shape that it is readily accessible to students. On the attic floor there are under construction sixteen new fireproof storage vaults. One of these has been completed and filled with material as a test. On the whole, they are very much more satisfactory than the rooms previously constructed.

ANATOMY AND PHYSIOLOGY

RALPH W. TOWER, Curator

DEPARTMENT OF ANATOMY AND Physiology.—During another twelve months the three assistants have been working





DEPARTMENT OF PHYSIOLOGY
SKULL OF BUSHMASTER



to their full capacity in the preparation of skeletons received by the various departments of the Museum. Messrs. Johnstone and Cohn have been occupied entirely with the large material, including the osteological preparation of the California Gray Whale and the Elephant Seal. Again the time of Mr. Elwyn has been wholly occupied in completing work which has been requisitioned by the Departments of Mammalogy and Ornithology, and Ichthyology and Herpetology. Notwithstanding that this work is important and has been skilfully done, it is unfortunate that no time has been left for the regular work of the Department of Anatomy and Physiology. The total preparations of all kinds, large and small, register 25 skeletons and 564 skulls; also 11 skeletons and 13 skulls have been mounted for exhibition purposes.

Through the courtesy of Bashford Dean, an African lungfish was placed at the disposal of the Curator for experiments on the mechanism of respiration. It is well known that this interesting animal uses both its gills and a true lung in the process of respiration, but the method by which this is carried on and what proportion of the function is maintained by the gills and what by the lung has never been demonstrated. While the experiments at the present writing are far from complete they are suggesting interesting problems in a very complicated process.

PUBLIC HEALTH

CHARLES-EDWARD AMORY WINSLOW, Curator

DEPARTMENT OF PUBLIC HEALTH.—A tentative plan has been outlined for an ideal future development of the Department of Public Health so that its exhibition halls may present a fairly comprehensive picture of the life of man as an animal, his place in the general scheme of natural history, his relation to his geographical and meteorological surroundings, the parasites which cause his diseases, and the animals and plants which serve him for food and clothing. The plan as outlined, giving a survey of the cycle of human life, its dangers and its safeguards, complete enough to satisfy the curiosity of the

ordinary man and to teach him what he needs to know in order to keep sound and well, is an extensive one, including twenty-five different sections. It cannot be realized in the near future and may perhaps never be realized in its entirety. but it gives definiteness and purpose to the immediate plans of the department to see them in relation to this larger plan. One section dealing with the disposal of city wastes was practically finished in 1911. During the first half of 1912 another section was essentially completed, dealing with watersupply, its sources and relation to the rainfall, the composition. of water, the micro-organisms of water, the dangers from polluted water and the methods used for making water-supplies safe. A series of models and preserved colonies of bacteria was also finished during the spring. Through the generosity of Felix M. Warburg it was made possible to send all this material to Washington for the exhibition held in connection with the Fifteenth International Congress on Hygiene and Demography. It is gratifying to note that, in each of the two sections of the Congress in which the Museum exhibited, it received the highest honor, a Diploma of Superior Merit. returning from Washington the material was installed in the West Corridor on the third floor, where the department has for the first time a chance to display its exhibits in permanent During the present year, as before, the preparation and installation of exhibition material has been in the immediate charge of John H. O'Neill.

The next step in the development of the exhibit is the preparation of a series of models and specimens illustrating the insect-borne diseases in which man and the microbe and the intermediate insect host are knit together in complex relationship. As one of the central features of this exhibit, work has gone forward during the whole summer and fall in the Department of Preparation upon a giant model of the common house fly, which promises to rival the mosquitoes in the Darwin Hall in interest and beauty. A striking model of a corner of a rat-infested house in San Francisco, illustrating the part played by these rodents in the spread of plague, has been loaned to the Museum by the United States Bureau of Public Health Service, and is being copied; and a number of

other minor exhibits are being prepared, dealing with the general subject of insects and disease.

The museum of living bacteria, under the immediate charge of Mr. Kligler, continues to grow in size and particularly in its widening usefulness to the college and research laboratories of the United States and Canada. On December 1, the collection numbered 578 different strains, representing 374 named types. In the somewhat less than two years since the organization of the laboratory, 1.700 subcultures have been sent out free of charge to 122 different institutions. opportunity which this collection affords to investigators to obtain promptly authentic type specimens for comparative study has been warmly appreciated, and brings frequent letters expressing the gratitude of the bacteriologists of our leading universities for this unique public service rendered by the A printed list of the cultures has been prepared, which will further increase the usefulness of the collection.

The department has continued its coöperation with the Department of Public Education and has prepared a set of bacterial cultures and vials containing specimens of the various stages of the fly and the mosquito, to be used as traveling collections in the schools, with a considerable series of photographs and diagrams for albums, dealing with the bacteria and with insect-borne disease.

Two contributions were published from the Department during the year, one by the Curator, on "The Classification of the Streptococci by their Action upon Carbohydrates and Related Organic Media," and one by the Curator and Mr. Kligler on "A Quantitative Study of the Bacteria in City Dust with Special Reference to Intestinal and Buccal Forms." Mr. Kligler has completed two other pieces of work, a study of the nitrate-reducing power of bacteria and a systematic revision of the Coccaceæ in the Museum collection. The Curator spent a part of August and September in Minneapolis where he was called in collaboration with Dr. Hermann M. Biggs of the New York City Department of Health to make a study of the city health department and prepare a plan for its reorganization.

WOODS AND FORESTRY

MARY CYNTHIA DICKERSON, Curator

DEPARTMENT OF WOODS AND FORESTRY.—One of the most notable additions to the Forestry Hall during the year 1912 was a bronze bas-relief of Morris Ketchum Jesup as an expression of the admiration felt for him by the late John J. Clancy. The panel was executed by James E. Fraser and represents Mr. Jesup walking in contemplative mood in the woods. It is wholly in the spirit of the plans for making this hall a fitting educational memorial to the donor of the world's greatest collection of the trees of North America.

The work of removing the sequoia and redwood tree sections from the Darwin Hall to the Forestry Hall was begun at the close of 1911 and extended through the first months of 1912. The transfer of the redwood was the simple matter of rolling the two-ton section on cylinders into the new place; moving the nine-ton sequoia, which was too high to pass under the archway between the two halls, entailed the labor of removing and later replacing the top part of the trunk. After the transfer all cracks were filled and the trees were faced off with new surfaces, so that they not only have new beauty but also are in condition to stand for many years.

The rearrangement of trees in the hall has continued until so near completion that a few weeks will see that part of the work done and the whole collection again open to exhibition. This rearrangement puts the collection into shape so that any North American tree can be readily located in the hall and its relations quickly seen to other members of a tree family and in regard to questions of market value and geographical distribution. In connection with each family, labeled hand samples of the commercial woods have been placed outside the case in brackets in front of their respective trees, where they can be freely examined by visitors. Some one hundred descriptive labels have been written, including those for the sequoias, the pines, hemlocks, spruces and oaks. These labels give the latest knowledge of the trees and their economic value.

The following list gives some of the leaf, flower and fruit wax models constructed during the year: From Wisconsin,

wild crab apple (Pyrus coronaria); from Arizona, ash (Fraxinus velutina), poplar (Populus fremontii) and cholla (Opuntia spinosior); and of local distribution, red gum (Liquidambar styraciflua), flowering dogwood (Cornus florida), dwarf sumach (Rhus copallina) and pear haw (Cratægus tomentosa). Much experimenting has been done along the line of preservation of sprays of pines and other conifers, with the result that some valuable and attractive exhibits of these trees are in progress. The department expresses much gratitude to the New York Botanical Garden for the many courtesies extended in the way of material for this work.

Among other exhibits for the hall, work is in progress on a relief map to show forest areas of North America, and plans are made for a model to demonstrate the disastrous results of the deforestation of watersheds with the resultant floods and erosion. Also designs are under consideration for a mural painting across the east end of the hall and plans for large colored transparencies for the windows are in hand and the work started.

Much work has been done in filing and cataloging. The correspondence of the department from 1882 to date has been fully gone over; also the new locations of specimens in the Forestry Hall have been entered in department and reference catalogs.

As usual much information has been given to teachers, lumber concerns and architects regarding identification of woods. This work is at present in the hands of Herman de Fremery, trained in forestry at Yale and with practical field experience, appointed as temporary assistant in the department in October.

In addition to the departmental work, the editorship of the American Museum Journal and Guide Leaflets has been carried.

THE LIBRARY

RALPH W. TOWER, Curator

DEPARTMENT OF BOOKS AND PUBLICATIONS.—The Library has had an eventful year. Many valuable and important books have been added to the collection by gift, purchase and

exchange. Especially noteworthy has been the acquisition of 185 volumes relating to exploration and discovery in the far North; many of these works complete broken sets already represented on our shelves, while others are rare and for the most part out of print. In view of the prominent place the American Museum of Natural History has occupied in northern exploration, the expansion of this part of the Library is not inappropriate. Another collection of similar size and especially rich in east coast Mollusca has been added to our equipment, an accession both necessary and important.

During another year the Library has enjoyed the interest and benefaction of Anson W. Hard, who has again found it possible to present some of those rare and classic treatises much needed by scientist or naturalist. Among these are the following interesting and important works: Monograph of the Coraciidæ or Family of Rollers by H. E. Dresser; Sammlung exotischer Schmetterlinge, 1806-1837, by J. Hübner an extremely rare and highly prized set in three volumes and five supplements, together with a manuscript index consummated by the former owner, the eminent late Dr. Staudinger: Études d'Entomologie, 1876-1902, and Études de Lépidoptèrologie. 1904-1011. by Charles Oberthür; Entomologie ou Histoire Naturelle des Insectes, 1789-1808, by M. Olivier; a complete set of Paleontographia Italia, sixteen volumes; The Birds of Tunisia by I. I. S. Whitaker. The acknowledgment and appreciation of the Library and its many patrons are again extended to The Library is also indebted to many other individuals and institutions for interesting and important gifts. I. Pierpont Morgan has presented a manuscript copy of Descriptions of New Species of Mauritian Fishes written by Richard Bliss, Jr., in 1875; this work is of special interest since it serves in part as letter press for the volumes of unpublished drawings which were received from the same donor in 1905. Cleveland H. Dodge has continued his interest by supplying the publications of The Carnegie Institution.

LIBRARY EXTENSION.—The use of our Library by sister institutions and by scientists living at a distance is of special moment at the present time. Through inter-library loans our





DEPARTMENT OF BOOKS AND PUBLICATIONS THE NEW PUBLIC READING-ROOM

books have been used by the British Museum of Natural History, Hamburgisches Kolonialinstitut, the Brooklyn Institute of Arts and Sciences, Columbia University, Harvard University, Yale University, Trinity College, Grosvenor Public Library of Buffalo, and the Department of Agriculture at Washington, D. C., as well as by institutions in the South and West. In each case the books were requested because they were not in the possession of the home institution, and therefore these loans accomplish a very valuable scientific service. It is a great satisfaction to be able to administer a department in an institution whose liberality permits a wise diffusion of knowledge by maintaining a special library of exceptional completeness.

EQUIPMENT.—During the year just past extensive additions have been made to the equipment, new and unusally efficient lighting systems have been placed in the old stacks, the installation of the new two-storied steel stack has been effected, the card catalog has been placed in a more accessible and convenient series of cabinets, doorways have been so constructed that all the rooms are now directly connected, and periodical cases have been placed along the side walls of the Reading Room, where are to be found the more important books of reference and the current numbers of the most used scientific periodicals dealing with natural history. The disturbance caused by the many changes incidental to new construction has somewhat interfered with the efficiency of library work, yet with the transfer of special sections to more commodious quarters it is assured that usefulness and convenience will be greatly enhanced.

Public Reading Room.—In the early part of the year a general reading room was opened on the second floor. A small collection of popular and non-technical books relating to natural history was so arranged that the public could freely use them. It was soon found necessary, however, to enlarge the space and place an assistant in attendance; although the venture was undertaken as an experiment, it has undoubtedly proved its educational value.

THE OSBORN LIBRARY.—The Osborn Library of Vertebrate Palæontology contains 1,524 volumes and 4,000 pamphlets. In planning for its further development, it is intended to place in this library all the works relating to vertebrate palæontology and thus make it a distinct unit in itself.

On January first Miss Jannette Lucas was appointed an assistant in the department and was placed in charge of the Osborn Library. Much time has been given to taking an inventory and arranging the catalog, to introducing an accession system and elaborating the bibliographic index. Notwithstanding many impediments the work has progressed well and Miss Lucas is to be commended for her efforts and success.

PUBLICATIONS

J. A. ALLEN, Editor

The current publications of the American Museum of Natural History consist of the Annual Report, the Bulletin, the Memoirs, the Monographs, the Anthropological Papers and the American Museum Journal.

The Bulletin is a strictly scientific publication in which are published the shorter articles embodying the results of the research work of the various departments of the Museum. The papers composing it are less voluminous and of more general interest than those which appear in the Memoirs and Monographs. The Bulletin was founded in 1881, and thirty-one volumes have been issued.

The *Memoirs*, like the *Bulletin*, are strictly scientific, but are devoted to special articles requiring larger illustrations and more exhaustive treatment. They have been published at irregular intervals since 1893. Ten complete volumes and parts of five others have been issued. During the present year the first series of the *Memoirs* has been closed and a second series opened, of which Parts 1-3 of Volume I have been published and a fourth part is in press.

The Monographs, intermediate in size between the Bulletin (in octavo) and the Memoirs (in quarto), of which the first has been printed during the year, will include technical papers relating to single subjects which require elaborate treatment.

The Anthropological Papers are similar in character to the Bulletin, but are devoted exclusively to the results of field work and other research conducted by the anthropological staff of the Museum. The publication of these papers was commenced in 1907, twelve volumes having been issued up to the present time.

The American Museum Journal is a popular record of the progress of the Museum, and was first published in 1900. Twelve volumes have been issued.

In addition to the above, two series of occasional publications are issued, known as *Guide Leaflets* and *Handbooks*. The *Leaflets* formerly appeared as supplements to the *Journal*, but are now separate publications. Thirty-five *Leaflets* have been issued. The first number of the *Handbook* series was issued during the year, No. 2 is in press, and Nos. 3 and 4 have been authorized.

The expedition to the Gulf of California in the U. S. S. "Albatross," under Charles H. Townsend, was due to the generosity of Arthur Curtiss James and the coöperation of the United States Bureau of Fisheries with the American Museum of Natural History.

The following reports have been issued:

in the Bulletin.

- "The Northern Elephant Seal," by Charles H. Townsend. Published by the New York Zoölogical Society, 1911, in Zoölogica.
- "Mammals Collected in Lower California," by Charles H.
 Townsend.
 Published by the American Museum of Natural History, 1912,

The following reports are in preparation:

- r. "The Narrative of the Expedition," by Charles H. Townsend. To be published by the United States Bureau of Fisheries.
- 2, "The Collection of Echinoderms," by Hubert L. Clark.
- 3. "The Fishes of the Gulf of California," by Charles H. Townsend and Raymond C. Osburn.
- 4. "The Reptiles," by Charles H. Townsend and Miss Mary C. Dickerson.
- 5. "The Birds," by Charles H. Townsend.
- The Invertebrates other than Echinoderms."Yet to be assigned for study and report.
- 7. "A Report on the Deep Sea Fishes," by Charles H. Townsend.

The publications of the year include Parts 1, 2 and 3 of Volume I of the new series of the *Memoirs*, Volume XXXI of the *Bulletin*, Volume X and parts of Volumes VII, IX, XI and XII of the *Anthropological Papers*, Volume XII of the *Journal*, *Handbook* No. 1, and No. 35 of the *Guide Leaflets*. Other publications of the Trustees are the *Annual Report*, the *Key to Building and Collections*, and the *Growth of the Building* folder.

The publications by departments are as follows:

DEPARTMENT OF INVERTEBRATE ZOÖLOGY

- H. F. Wickham. "On Some Fossil Rhynchophorous Coleoptera from Florissant, Colorado." Bull. XXXI, pp. 41–55, pls. i-iv.
- L. P. Gratacap. "An Unusual Specimen of Mytilus middendorffii Grewingk, from Alaska." Bull. XXXI, pp. 69, 70, pl. vii.
- T. D. A. Cockerell and Junius Henderson. "Mollusca from the Tertiary Strata of the West." Bull. XXXI, pp. 229-234, pls. xxi, xxii.
- John A. Grossbeck. "List of Insects Collected in Lower California." Bull. XXXI, pp. 323-326.
- Ignaz Matausch. "Observations on Some North American Membracidæ in their Last Nymphal Stages." Bull. XXXI, pp. 331-336, pls. xxvii-xxxii.
- A. L. Melander. "The Dipterous Genus Bibiodes." Bull. XXXI, pp. 337-341, I text fig.
- E. Bergroth. "New or little known Hemiptera, chiefly from Australia, in the American Museum of Natural History." Bull. XXXI, pp. 343-348.
- John A. Grossbeck. "Types of Insects, except Lepidoptera and Formicidæ, in the American Museum of Natural History additional to those previously listed." Bull. XXXI, pp. 353-379.
- John A. Grossbeck. "A Review of the Species comprising the Glaucina-Canocharis Group." Bull. XXXI, pp. 381-407, 13 text figs.

DEPARTMENT OF ICHTHYOLOGY AND HERPETOLOGY

- Bashford Dean. "Orthogenesis in the Egg Capsules of Chimera," Bull. XXXI, pp. 35-40, 2 text figs.
- J. D. Haseman. "The Relationship of the Genus Priseacara." Bull. XXXI, pp. 97-101.



DEPARTMENT OF MAMMALOGY AND ORNITHOLOGY
THE ORIZABA BIRD GROUP

- John Treadwell Nichols. "Notes on West Indian Fishes." Bull. XXXI, pp. 109-111, 4 text figs.
- John Treadwell Nichols. "Notes on Cuban Fishes." Bull. XXXI, pp. 179-194, 2 text figs.
- L. Hussakof. "The Cretaceous Chimæroids of North America." Bull. XXXI, pp. 195-228, 21 text figs.
- L. Hussakof. "Note on an Embryo of Pristis cuspidatus." Bull. XXXI, pp. 327-330, 2 text figs.
- Bashford Dean. "On the Hair-like Appendages in the Frog, Astylosternus robustus (Blgr.)." Bull. XXXI, pp. 349-351, 2 text figs.

DEPARTMENT OF MAMMALOGY AND ORNITHOLOGY

- J. A. Allen. "Historical and Nomenclatorial Notes on North American Sheep." Bull. XXXI, pp. 1-29, 4 text figs.
- D. G. Elliot. "New Species of Monkeys of the Genera Seniocebus, Alouatta, and Aotus." Bull. XXXI, pp. 31-33.
- J. A. Allen. "Mammals from Western Colombia." Bull. XXXI, pp. 71-95.
- J. A. Allen. "A New Pika from Colorado." Bull. XXXI, pp. 103, 104.
- Charles Haskins Townsend. "Mammals Collected in Lower California, with Descriptions of New Species." Bull. XXXI, pp. 117-130, pls. viii, ix.
- D. G. Elliot. "Description of a New Species of Œdipomidas." Bull. XXXI, p. 137.
- Frank M. Chapman. "Diagnoses of Apparently New Colombian Birds." Bull. XXXI, pp. 139-166, pl. xii.
- Frank M. Chapman. "A New Ibis from Mt. Kenia, British East Africa." Bull. XXXI, pp. 235-238, pls. xxiii, xxiv.
- W. DeW. Miller. "A Revision of the Classification of the Kingfishers." Bull. XXXI, pp. 239-311, pls. xxv, xxvi.
- Abbott H. Thayer. "Concealing Coloration, an Answer to Theodore Roosevelt." Bull. XXXI, pp. 313-321, 4 text figs.
- D. G. Elliot. "A Review of the Primates." Monograph I, 3 vols. royal octavo, pp. 1-1348; 128 plain and 28 colored plates.

DEPARTMENT OF VERTEBRATE PALÆONTOLOGY

- W. J. Sinclair and Walter Granger. "Notes on the Tertiary Deposits of the Bighorn Basin." Bull. XXXI, pp. 57-67, pls. v, vi, 3 text figs.
- Barnum Brown. "The Osteology of the Manus in the family Trachodontidæ." Bull. XXXI, pp. 105-107, 2 text figs.

- S. H. Chubb. "Notes on the Trapezium in the Equidæ." Bull. XXXI, pp. 113-115, 3 text figs.
- Barnum Brown. "A Crested Dinosaur from the Edmonton Cretaceous."

 Bull. XXXI, pp. 131-136, pls. x, xi, 4 text figs.
- Barnum Brown. "Brachyostracon, a new Genus of Glyptodonts from Mexico." Bull. XXXI, pp. 167-177, pls. xiii-xviii, 4 text figs.
- Henry Fairfield Osborn. "Crania of Tyrannosaurus and Allosaurus." Mem., N. S., Vol. I, pt. i, pp. 1-30, pls. i-iv, 27 text figs.
- Henry Fairfield Osborn. "Integuments of the Iguanodont Dinosaur Trachodon." Mem., N. S., Vol. I, pt. ii, pp. 31-54, pls. v-x, 13 text figs.
- Henry Fairfield Osborn. "Craniometry of the Equidæ." Mem., N. S., Vol. I, pt. iii, pp. 55-100, 17 text figs.

DEPARTMENT OF ANTHROPOLOGY

- Clark Wissler. "Ceremonial Bundles of the Blackfoot Indians." Anthrop. Papers VII, pt. ii, pp. 65-289, 35 text figs.
- Robert H. Lowie. "Social Life of the Crow Indians." Anthrop. Papers IX, pt. ii, pp. 179-248.
- Pliny Earle Goddard. "Chipewyan Texts." Anthrop. Papers X, pt. i, pp. 1-66.
- Pliny Earle Goddard. "Analysis of Cold Lake Dialect, Chipewyan." Anthrop. Papers X, pt. ii, pp. 67-170, 249 text figs.
- Robert H. Lowie. "Chipewyan Tales." Anthrop. Papers, X, pt. iii, pp. 171-200.
- Clark Wissler. "Societies and Ceremonial Associations in the Oglala Division of the Teton-Dakota." Anthrop. Papers XI, pt. i, pp. 1-99, 7 text figs.
- Frank E. Lutz. "String-figures from the Patomana Indians of British Guiana." Anthrop. Papers XII, pt. i, pp. 1-14, 12 text figs.
- Clark Wissler. "North American Indians of the Plains." Handbook No. 1, pp. 1-147, 47 text figs., 3 maps.

III. MEMBERSHIP

GEORGE H. SHERWOOD, Assistant Secretary

The confidence of the public in the Museum as an institution that is doing an important work in science and education is evidenced by the rapidly increasing number of Members enrolling in its support. There are now more than 3,200 who are on this list, and the total dues received constitute an item of considerable income. Important as this financial assistance is, however, Members may render even greater service by interesting others in the growth and development of the Museum. Members are especially invited to nominate their friends for election, and are assured that their assistance in increasing the membership will be greatly appreciated.

CLASSES OF MEMBERSHIP

Annual Members\$10	Fellows \$500			
Sustaining Members (annually) 25	Patrons 1,000			
Life Members	Associate Benefactors10,000			
Benefactors\$50,000				

Many unquestionably join the institution through public spirit, but the privileges which are extended to Members are really of great advantage. Two courses of lectures are arranged during the year primarily for Members; a Members' Room is provided for their comfort; on request, instructors who will explain the meaning of the exhibits are available; the Museum Journal, a magazine which gives a popular account of the activities of the Museum, is sent free to all Members. Full information regarding membership will be furnished by the Secretary on request.

Special attention has been given to the Lectures for Members. Every effort has been made in these lectures to present interesting and instructive subjects connected with the exploration and other work of the Museum, and of science in general. The spring course of 1912 was so well attended that the Trustees found it necessary to reduce from four to two the number of tickets allotted to each Member.

The Members' Room, which was opened in 1911, has been well patronized. The record shows that it was utilized in 1912 by more than 1,000 Members and their friends. The room is on the third floor, near the elevator. It is equipped with lounging chairs, and reading and correspondence tables, and Members will find it a desirable meeting place.

It is gratifying to report that 1912 witnessed an unprecedented increase in membership, 757 new names having been enrolled. This number represents an increase of nearly 30 per cent. in the total membership, and is greater by 100 per cent. than the number secured in any previous year. The fees from new members alone have added \$6,630 to current income, and \$12,100 to the Permanent Endowment. The total receipts from all Members, applied to current income, are \$25,265.

This growth is primarily due to the systematic efforts that have been made to secure new members. In this campaign 27,591 invitations have been sent out, and, while the clerical work involved is enormous, the immediate financial return is more than 300 per cent. on the money expended.

While 757 new names have been added to the membership list, there has been a loss through death and resignation of 151; thus the net gain for the year is 606.

On December 31, 1912, the total membership was 3,258, divided into classes, as follows:

Benefactors 2	Honorary Fellows 4
Associate Benefactors 13	Life Members 597
Patrons116	Sustaining Members 60
Fellows	Annual Members2.422

NEW MEMBERS

The following persons were elected Associate Benefactors:

George S. Bowdoin	OGDEN MILLS
CLEVELAND H. DODGE	J. PIERPONT MORGAN, JR.
ARCHER M. HUNTINGTON	HENRY FAIRFIELD OSBORN
ARTHUR CURTISS JAMES	PERCY R. PYNE
CHARLES LANIER	WILLIAM ROCKEFELLER
JOSEPH F. LOUBAT	JACOB H. SCHIFF

FELIX M. WARBURG

The following persons were elected Patrons:

MRS. WILLIAM H. BLISS Mrs. Isaac M. Dyckman

CLARK LOMBARD RING CHARLES E. SLOCUM.

JOHN A. GROSSBECK

M.D., LL.D.

MRS. ARCHER M. HUNTINGTON FRANK K. STURGIS RODMAN WANAMAKER

The following persons were elected Fellows:

THE DUKE OF BEDFORD CHARLES DEERING

COL. ANTHONY R. KUSER MISS CAROLINE L. MORGAN

GRANT B. SCHLEY

The following persons were elected Honorary Fellows:

LIEUT. GEORGE T. EMMONS, U. S. N. GEO. BIRD GRINNELL

The following persons were elected Life Members:

CARL E. AKELEY

Mrs. Wm. Armstrong

VINCENT ASTOR

MRS. EDGAR S. AUCHINCLOSS, JR. MRS. GHERARDI DAVIS

TULES S. BACHE

MISS CHARLOTTE S. BAKER

H. MARTYN BAKER CARROLL BALDWIN C. WILLIAM BEEBE

MRS. CHRISTOPHER M. BELL

Louis V. Bell

THOMAS G. BENNETT JOHN R. BRADLEY

MRS. SAMUEL W. BRIDGHAM

W. R. CALLENDER RICHARD CANFIELD MRS. GEORGE B. CASE

EDWARD PEARCE CASEY EVERSLEY CHILDS

ROBERT STERLING CLARK

ADAM W. S. COCHRANE

MISS MARIE LOUISE CONSTABLE GARRET A. HOBART

HUGH L. COOPER

JOHN LYMAN COX

Mrs. W. Bayard Cutting

MARCUS DALY

EDGAR DEAL

Mrs. Henry F. Dimock

MRS. W. B. DINSMORE CLARENCE H. EAGLE

CHARLES EDDISON EBERHARD FABER

PERCIVAL FAROUHAR MAX C. FLEISCHMANN

Dr. Austin Flint, Jr.

Mrs. Frank Pierce Frazier

CHARLES L. FREER DALLETT FUGUET HOWARD FUGUET MRS. W. R. GRACE

F. GRAY GRISWOLD N. W. HARRIS

GEORGE L. HARRISON, JR.

DR. WILLIAM T. HORNADAY

MISS ROSINA S. HOYT PAUL A. ISLER JOHN B. JACKSON S. K. JACOBS Mrs. Arthur Curtiss James R. D. O. Johnson Mrs. A. D. Juilliard WALTER SCHUYLER KEMEYS Alfred J. Klein CHARLES W. LENG EDWARD H. LITCHFIELD Mrs. John Markoe MRS. D. HUNTER MCALPIN MRS. JOHN G. McCullough GLENN FORD MCKINNEY MRS. JAMES MCLEAN MARION MCMILLIN MANTON B. METCALF MRS. WILLIAM F. MILTON MISS IDA H. OGILVIE, PH. D. B. F. PANKEY EDWARD LUDLOW PARKER Mrs. Francis Eyre Parker Mrs. Herbert Parsons MRS. WM. WALTER PHELPS HENRY C. PHIPPS ANNA J. PIERREPONT ISOLINE D. RAY Louis A. Ripley

C. H. Ruddock JOHN D. RYAN MISS E. LOUISE SANDS Dr. Leonard C. Sanford ROBERT J. F. SCHWARZENBACH SIR ERNEST SHACKLETON OUINCY A. SHAW MRS. W. WATTS SHERMAN HERMAN SIMON MISS JEAN WALKER SIMPSON MRS. WM. DOUGLAS SLOANE Mrs. Byam K. Stevens Benjamin Strong, Jr. FREDERICK TAYLOR EMERY J. THOMAS, M.D. HENRY R. TOWNE MRS. JAMES M. VARNUM JAMES DELANCEY VERPLANCK MISS HARRIET WADSWORTH JAMES S. WATSON I. GRISWOLD WEBB I. WATSON WEBB HAMILTON FISH WEBSTER SOL. WERTHEIM WILLIAM P. WHARTON WILLIAM WILLIAMS L. STUART WING EDWIN O. WOOD JOHN G. WORTH MRS. CORNELIUS ZABRISKIE

The following persons have become Sustaining Members:

MRS. JOHN D. ARCHBOLD
MRS. ROBT. F. BALLANTINE
MRS. WALTER PHELPS BLISS
W. C. BROWN
LOUIS BRY
MRS. J. HENRY DICK
MRS. JAMES DOUGLAS
JOHN W. FROTHINGHAM
HORACE HAVEMEYER
SARA HERMANN
CONRAD HUBERT
JULIUS KAYSER
MRS. L. H. LAPHAM

MRS. FRANK M. LUPTON
OTTO MARON
ROBERT MAXWELL
EUGENE MEYER, JR.
BEULAH S. OPPENHEIM
J. K. ROBINSON
ELIAS D. SMITH
WILLIAM R. STEWART
MISS MARY GARNER TILNEY
OSWALD W. UHL
MRS. CORNELIUS VANDERBILT
E, W. VANDERHOOF
MRS. G. GRANVILLE WRIGHT

DECEASED MEMBERS

It is with a profound sense of our loss that we announce the death of the following Members during the year 1912:

Patrons

M. C. D. BORDEN

JOHN B. MARCOU

Mrs. Abram S. Hewitt

EDWIN H. WEATHERBEE

Life Members

JOHN JACOB ASTOR

W. A. HAINES

DAVID LONEY BRUCE-BROWN
I. E. CHILDS

HENRY IDEN

HUGH J. CHISHOLM

Morris Loeb

Miss Ellen Collins

L. DINWIDDIE SMITH F. L. ST. JOHN

W. BAYARD CUTTING PETER DOELGER ISIDOR STRAUS
JAMES TERRY

PETER DOELGER
WM. BUTLER DUNCAN

JAMES LERRY Col. John Weir

It is with regret that we record the decease of George Borup, Assistant Curator of Geology, who lost his life through drowning on April 28. The following Resolution was adopted by the Faculty of the Museum, at a meeting held on May 13, 1912:

The Scientific Staff of the American Museum of Natural History desires to record its sense of loss occasioned by the death of George Borup, Assistant Curator of Geology and leader of the proposed Crocker Land Expedition. mind and in observational faculties, enthusiastic and optimistic, loyal to his friends and the institutions with which he was connected, as well as to his ideals, Mr. Borup was a natural leader of men and seemed by equipment, training and character to have a brilliant and useful career before him. Furthermore, he was so thoroughly prepared by nature and by training in the class room and in the field for exploratory work along geographical and geological lines that his death is a distinct loss to the Museum, to science and to the world at large.

FINANCES, MAINTENANCE, ENDOWMENT

CHARLES LANIER, Treasurer

The method of conducting the finances of the Museum introduced in 1911 on recommendation of the Special Committee has proved satisfactory, although it involves considerably more clerical work than formerly. The United States Trust Company of New York was reappointed Assistant Treasurer and has been the depository of all moneys received by the Museum, excepting the funds and securities of the Permanent Endowment, which continue in the custody of J. P. Morgan & Co.

The affairs of the Treasurer's Office at the Museum have been under the immediate direction of the Bursar, Frederick H. Smyth, who has performed his duties with faithfulness and marked efficiency.

The principal financial transactions of the Museum have been recorded in the usual four separate accounts, namely: the City Maintenance Account, the General Account, the Special Funds Account and the Endowment and Investment Account. In order, however, to conform to the ruling of the Trustees, that all moneys received by the Museum should be deposited with the Assistant Treasurer, namely, the United States Trust Company of New York, it has been found necessary to open two new accounts: the Building Account, in which are carried all Corporate Stock moneys received from the City, and the Incidental Account, established to care for all moneys not a part of the Museum's income, and in the handling of which the Museum acts merely as agent.

Finally, there is the Bursar's Account, which is merely a temporary working fund with a capital of \$7,500, drawn from the General Account. Since all expenditures in this account generally are immediately reimbursed from some other account, it is not necessary to record the details of the transactions.

It was found desirable to open a separate account for the receipts and disbursements of the Crocker Land Expedition, and this appears on our books as the Crocker Land Expedition Fund Account.

The details of the receipts and disbursements will be found in the Treasurer's Report, pages 95 to 117 inclusive.

Semiannually all books and vouchers of the various accounts have been duly examined and certified by the Audit Company of New York.

BUDGET OF 1912.—On February 5, 1912, the Board voted \$392,209.53 as the total Budget of 1912, involving a prospective deficiency of \$55,556.13, to be made up by contributions from Trustees and Members. Through economic administration of all the departments, the actual expenditures were \$12.304.65 less than the amount voted. Through the large increase in membership, the receipts were \$8,614.88 greater than estimated in the Budget. These credits, amounting to \$20,919.53, were partly offset, however, by \$14,213.40 in supplementary appropriations for emergency and other matters voted by the Executive Committee. The net amount of the actual deficiency was, therefore, \$48,850, which was entirely met by individual subscriptions of members of the Board. This annual deficiency, which cannot grow less, should be relieved by an increased endowment, so that our income will cover our normal annual charges.

CITY MAINTENANCE ACCOUNT.—The moneys appropriated by the City for the maintenance of the Museum are received and disbursed in this account. In 1912 this appropriation was \$195,000 for all purposes, a sum \$5,243 greater than in the preceding year. The actual cost of maintenance, however, was \$282,000, and, as has been so often necessary, the Trustees have met the deficit out of their own funds, expending \$87,000 on maintenance items which legally could have been charged to the City, had the appropriation been large enough. In disbursing the money appropriated by the City the Trustees have been guided by the spirit rather than by the letter of the contract between the Museum and the City, and have charged to their own funds expenditures which legally the City might assume. The diversion of Trustees' money to these purposes is to be regretted, since it means the withdrawal of such sums from the amount available for the purchase of new collections.

TRUSTEES' GENERAL ACCOUNT.—The systematic development of both the scientific and educational work of the Museum is wholly dependent upon the funds of the General Account. The appropriation of the City is intended to provide for the care of the building. The Trustees' General Account must provide the specimens and the exhibits to go in the building. The total net receipts in this account for the year are \$187,150.68, a sum \$23,137.81 greater than the income of 1911, and the largest amount that has ever been available. The generous personal contributions of the Trustees, amounting to \$48,850, in addition to their gifts for special purposes, are conspicuous in causing this increase. The principal items of income are as follows:

Interest on General Endowment Fund	\$57,247	75
Interest on Morris K. Jesup Fund	50,991	97
Annual and Sustaining Members		
Personal Contributions of Trustees	48.850	00

Trustees' Special Funds Account.—When a Patron designates a particular purpose for which his contribution is made, the money is deposited in the Special Funds Account. In such case his gift becomes a special fund, or a part of a special fund if there are other contributors. In other words, the Special Funds Account is made up of several independent special funds, each of which the Treasurer treats as if it were a separate account. The income is a fluctuating amount, since it is dependent on the interest of patrons in special collections or objects. It is gratifying to report that the receipts have exceeded those of any previous year and amount to the splendid total of \$78,427.80.

We wish to express our heartiest thanks to the many Members and other friends whose generosity has enabled us to secure valuable collections and prosecute many researches.

TRUSTEES' PERMANENT ENDOWMENT ACCOUNT.— The growth of the permanent endowment has not kept pace with the development of the collections and the scientific work of the institution. The year 1912 witnessed an increase of \$17,100, the items of which are \$5,000 generously subscribed by Anna B. Bliss, and \$12,100 (fees of Patrons, Fellows and

Life Members). For the first time receipts from Life Members have been applied to the endowment instead of to current income. The wisdom of this change is apparent, since Life Membership fees during the year totaled \$9,100, adding this amount to the endowment. Our endowment was further increased by \$1,250 through the action of the American Surety Company in declaring an extra dividend of 100 per cent. and paying this in stock.

If the normal growth of the Museum is to continue, immediate steps must be taken to increase the endowment. The plan which is proposed is to invite such of the Trustees as may desire to do so to become Benefactors, by adding to the endowment the difference between the total amounts they have contributed to various purposes and \$50,000, the Benefactors' fee; second, to invite twenty contributors of \$50,000 each from various Members and friends of the Museum, in order to add \$1,000,000 to the Endowment Fund. This will meet the immediate annual demands of our Budget, and enable the Trustees and Members to devote their gifts to special purposes.

Respectfully submitted,

HENRY FAIRFIELD OSBORN

February 3, 1913

President



Financial Statement 1912

PERMANENT ENDOWMENT*

Morris K. Jesup Fund	\$1,146,838	80
General Endowment Fund	1,158,277	10
John B. Trevor Fund.	25,000	00
Josiah M. Fiske Fund	10,000	00
Matilda W. Bruce Fund	11,000	00
Solomon Loeb Fund	5,000	00
Jonathan Thorne Memorial Fund	26,884	
Uninvested Cash:		— \$2,383,000 oo
General Endowment Fund		3,517 82
Jonathan Thorne Memorial Fund		2 21
		\$2,386,520 03

^{*}The income of the Permanent Endowment is the chief source of income of the General Account.

ENDOWMENT AND INVESTMENT ACCOUNT

RECEIPTS

-9			
GENERAL ENDOWMENT FUND:			
Balance\$2	.,		
	,000 00		
Patrons 2	,000 00		
Fellows	,000 00		
Life Members	,100 00	\$19,822	88
Morris K. Jesup Fund:			
Balance		241	19
JONATHAN THORNE MEMORIAL FUND:			
Balance		2	21
INTEREST ON CREDIT BALANCES:			
Earnings to December 31, 1912	_	71	46
		\$20,137	74
Examined (ANSON W. HARD) Auditing OGDEN MILLS PERCY R. PYNE (Committee			_

ENDOWMENT AND INVESTMENT ACCOUNT

DISBURSEMENTS

1912

GENERAL ENDOWMENT FUND: Purchase of Bonds	\$16,305 06
MORRIS K. JESUP FUND: Purchase of Bonds	241 19
INTEREST ON CREDIT BALANCES: Transferred to Interest on Credit Balances, General Account	71 46
Cash on Hand December 31, 1912	3,520 03 \$20,137 74
=	\$20,137 74

CHARLES LANIER, Treasurer

E. & O. E. New York, *December 31*, 1912

CITY MAINTENANCE ACCOUNT

RECEIPTS

1912

		2	191
	\$12,256 21	1912	Capital Fund, cash on hand January 1,
			Department of Parks:
			Appropriation for 1911:
		\$847 47	Salaries and Wages
		39 29	Telephone Service
			Materials for Repairs and Re-
			placements by Departmental
		1,225 00	Labor
			Repairs and Replacements by
		20 86	Contract or Open Order
		430 12	Fuel
\$15,000 00	2,743 79	181 05	Contingencies
			Department of Parks:
			Appropriation for 1912:
	170,023 00		Salaries Regular Employees
	12,919 00		Supplies and Materials
			Repairs and Replacements by
	500 00		Contract or Open Order
			Maintenance, Repairs and Storage
	450 00		of Automobiles
	S,500 00		Fuel
	1,458 00		Contingencies Purchase of Furniture and
	* ***		
	1,150 00		Fittings
			Total net receipts for the main-
195,000 00			tenance of all departments
201 35			Interest on Credit Balances
3,500 00			Loans
\$213,701 35			

Examined ANSON W. HARD Auditing OGDEN MILLS Committee

CITY MAINTENANCE ACCOUNT*

DISBURSEMENTS

1912

Geology and Invertebrate Palæontology	\$4,035	62		
Mineralogy	1,585			
Mammalogy and Ornithology	5,269	84		
Vertebrate Palæontology	4,719	04		
Anthropology	7,810	46		
Invertebrate Zoölogy	7,211	71		
Ichthyology and Herpetology	4,100	59		
Public Health	1,833	46		
Woods and Forestry	148	90		
Library	8,318	58		
Public Education	4,029	51		
Preparation and Exhibition	2,479	42		
Heating and Lighting		55		
Repairs and Installation				
Administration	83,341	25		
Total net disbursements for the maintenance		_		
of all departments			\$195,000	00
Interest on Credit Balances transferred to General				
Account			201	35
Loans			3,500	00
Capital Fund:				
4				

CHARLES LANIER, Treasurer

\$213,701 35

E. & O. E.

NEW YORK, December 31, 1912

Cash on hand December 31, 1912

^{*}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 1912, amounting to \$87,000, has been met from the Trustees' General Fund.

GENERAL ACCOUNT

RECEIPTS

1912

1912				
Cash on hand January 1, 1912		\$11,967 57,247 50,991 1,081 23,790 1,475 2,355 1,358	75 97 38 00 00 97	
Contributions of Trustees for General Receipt				
George S. Bowdoin. \$4, Joseph H. Choate. I, Thomas De Witt Cuyler I, Cleveland H. Dodge. 5, James Douglas I, Anson W. Hard. I, Archer M. Huntington 4, Adrian Iselin, Jr. 2, Arthur Curtiss James 2, Walter B. James I, A. D. Juilliard 3 Charles Lanier I, Ogden Mills 2 J. Pierpont Morgan 5, J. Pierpont Morgan, Jr 4 Percy R. Pyne 2 Wm. Rockefeller 2 John B. Trevor I			0 00	
Total net receipts for the development departments	of all		\$1	99,1

Total net receipts for the development of all		
departments	\$199,118	08
Bursar's Account	7,500	00
Loans		00
Proceeds of Note held by United States Trust Co. of N. Y	25,000	00

\$242,618 08

Examined (ANSON W. HARD) (Auditing and Approved PERCY R. PYNE) (Committee

GENERAL ACCOUNT*

DISBURSEMENTS

1912

Geology and Invertebrate Palæontology	\$6,107			
Mineralogy	2,069	45		
Mammalogy and Ornithology	23,328	92		
Vertebrate Palæontology	22,088	12		
Professor Osborn's Research and Publication Fund.	3,521	76		
Anthropology	21,831	86		
Invertebrate Zoölogy	6,651	66		
Ichthyology and Herpetology	4,650	51		
Anatomy and Physiology	2,558	40		
Public Health	1,711	25		
Woods and Forestry	2,235	60		
Library	9,654			
Publications	21,054			
Public Education	5,421	72		
Preparation and Exhibition	22,970			
Heating and Lighting	942			
Repairs and Installation	1,770			
General Supplies and Expenses	17,998			
Administration	3,908			
Interest on Loans	284	-		
_				
Total net disbursements for the development		a		-0
of all departments		2	180,759	
Bursar's Account			7,500	
Loans			11,000	00
Cash on hand December 31, 1912:	0 0	0.1		
Cash in Bank	18,358	801	•	
Proceeds of Note held by United States Trust				
Co. of N. Y. to meet overdrafts	25,000	00	43,358	80
			43,350	
			\$242,618	08

E. & O. E.

CHARLES LANIER, Treasurer

NEW YORK, December 31, 1912

^{*}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.

† Since the sum of \$17,828.49 has been carried forward to the 1913 Budget to meet unpaid pledges and contracts of 1912, the net cash balance in the General Account on December 31, 1912, was \$530.31.

RECEIPTS

GEOLOGY AND INVERTEBRATE PALÆONTOLO	GY:		
Bailey Collection of Meteorites:			
J. Pierpont Morgan, Jr			\$1,500 00
MINERALOGY:			
MATILDA W. BRUCE FUND:			
Interest		\$660 00	
Interest		V 000 00	
MINERAL HALL DECORATION FUND;			
Nevada Consolidated Copper Co		397 25	
			1,057 25
Mammalogy and Ornithology:			
NORTH AMERICAN ORNITHOLOGY FUND, SERIES 2	2 :		
	501 26		
Henry Clay Pierce	250 00		
		1,751 26	
Mrs. Frank K. Sturgis Fund:			
Balance		3 26	
CONGO EXPEDITION FUND:			
Balance		2,606 00	
CRANDALL OÖLOGICAL FUND:			
Balance		1,160 00	
WHALE MODEL FUND:			
Balance		1,000 00	
THIRD AFRICAN EXPEDITION FUND:			
J. Pierpont Morgan	250 00		
	250 00		
		18,500 00	
SOUTH AMERICAN EXPLORATION FUND:			
Clark Lombard Ring	500 00		
Paul Griswold Howes	,00C OC		
	200 00		
	500 00		
Geoffrey O'Connell	500 00	3,700 (0	
South Georgia Expedition Fund:			
Arthur Curtiss James		1,500 00	
Atthur Curuss James		1,500 00	30,220 61
Carried forward			\$32,777 86

DISBURSEMENTS

-9
GEOLOGY AND INVERTEBRATE PALÆONTOLOGY:
Bailey Collection of Meteorites:
Purchase of Collection\$1,500 00
Mineralogy:
MATILDA W. BRUCE FUND:
Purchase of Mineral Specimens\$500 00 Transferred to Mineralogy, General Account, for amount advanced for purchase of specimens 160 00 \$660 00
MINERAL HALL DECORATION FUND:
Services for Mural Painting of Shovel Pit, Ely, Nevada
for Mural Painting 67 34 397 25 1,057 25
Mammalogy and Ornithology:
NORTH AMERICAN ORNITHOLOGY FUND, SERIES 2:
Purchase of equipment and expenses of field work in U.S. of Colombia, for preparation of bird groups
Congo Expedition Fund:
For expenses of field work in Africa, salaries of Messrs. Lang and Chapin and equipment of expedition
THIRD AFRICAN EXPEDITION FUND:
For expenses of field work in Africa in charge of W.S. Rainsford 15,112 85
Transferred to Mammalogy and Ornithology, General Account, for amount advanced for expenses of W. S. Rainsford 1,003 00 16,115 85
SOUTH AMERICAN EXPLORATION FUND: Purchase of equipment and expenses of field work
South Georgia Expedition Fund:
Equipment and transportation of field assistant to South Georgia Island
Carried forward\$27,544 52

RECEIPTS

1912

Brought forward\$32,777 8	6
VERTEBRATE PALÆONTOLOGY:	
Vertebrate Palæontology Field Fund: Henry Fairfield Osborn\$2,000 00	
HORSE EXPLORATION FUND: Frank K. Sturgis	0
Anthropology:	
EAST ASIATIC FUND: Balance \$2,340 49	
Bureau of Missions Fund: Balance	
Primitive Peoples of Southwest Fund: Balance	
Mural Paintings Fund: Balance 1,000 00	
CATLIN PAINTINGS FUND: Ogden Mills	
EUROPEAN ARCHÆOLOGY FUND: Henry Fairfield Osborn	.0
Invertebrate Zoölogy:	
ASHOKAN WATERSHED BIOLOGICAL SURVEY FUND: Balance	
Tahiti Fund: Balance	
Invertebrate Zoölogical Exploration Fund; S. D. Coykendall	
Emerson McMillin	0

Carried forward......\$54.136 76

DISBURSEMENTS

1912

	1912			
	Brought forward		.\$27,544	52
VERT	TEBRATE PALÆONTOLOGY:			
V	ERTEBRATE PALÆONTOLOGY FIELD FUND: For field expenses	\$700 0	0	
	Transferred to Vertebrate Palæontology, General Account, for field expenses		2,000	00
ANTI	HROPOLOGY:			
E	AST ASIATIC FUND: Purchase of specimen	5 00	0	
В	UREAU OF MISSIONS FUND: Purchase of specimens	335 00	o	
P	RIMITIVE PEOPLES OF SOUTHWEST FUND: For expenses of field work and purchase of specimens	4,428 60	ó	
C	ATLIN PAINTINGS FUND: Purchase of George Catlin Collection of Indian Paintings	10,000 00	· •	
E	UROPEAN ARCHÆOLOGY FUND: Expenses of George Grant MacCurdy, for European archæological material	100 00	14,868	66
Inve	rtebrate Zoölogy:			
A	SHOKAN WATERSHED BIOLOGICAL SURVEY FUND: For expenses of field work	71 50)	
T	AHITI FUND: Preparation of Tahitian Relief Map	180 00)	
In	IVERTEBRATE ZOÖLOGICAL EXPLORATION FUND: For expenses of field work			
	General Account, for field work 36 34	186 34	437	84

Carried forward......\$44,851 02

RECEIPTS

Brought forward			\$54,136 76
ICHTHYOLOGY AND HERPETOLOGY:			
Dodge Ichthyology Fund: Balance\$ Cleveland H. Dodge	2,500 00		
FISH BIBLIOGRAPHY FUND: Mrs. Isaac M. Dyckman	2,500 00	\$3,887 87	4,887 87
Public Health:			
HYGIENE EXHIBIT FUND: Felix M. Warburg			1,500 00
PUBLIC EDUCATION:			
	1,186 33 1,084 20	2,270 53	
Transportation Fund: Balance		100 00	
CHILDREN'S ROOM FUND: Balance A Friend	91 99 5 00	96 99	2,467 52
PREPARATION AND EXHIBITION:			
SEA ELEPHANT PREPARATION FUND: Arthur Curtiss James			2,000 00
Publications:			
JESUP NORTH PACIFIC EXPEDITION PUBLICATIONS: Balance		2,295 53	
Trachodon Memoir Fund: Henry Fairfield Osborn		25 00	
			2,320 53
Total net receipts for the development of specific departments		\$0	57,312 68
Carried forward			\$67,312 68

DISBURSEMENTS

Brought forward		\$	344,851 02
ICHTHYOLOGY AND HERPETOLOGY:			
DODGE ICHTHYOLOGY FUND:			
For expenses of field work and purchase of specime	ns	\$2,448 53	
FISH BIBLIOGRAPHY FUND:		V111- 33	
Preparation of bibliography of fishes		687 75	3,136 28
PUBLIC HEALTH:			
HYGIENE EXHIBIT FUND:			
For transportation and installation of the exhibit			
of the Department of Public Health at Wash-	ø		
ington, D. C	\$1,275 75		
for services of preparator for the exhibit	100 00		
PUBLIC EDUCATION:			1,375 75
JONATHAN THORNE MEMORIAL FUND: For services of instructors and transportation of			
the blind and preparation of casts		737 42	
TRANSPORTATION FUND:		737 4-	
For transportation of crippled children to lectures.	61 7 0		
Transferred to Public Education, General Account, for transportation of crippled children to lectures	38 30		
CHILDREN'S ROOM FUND:		100 00	
Purchase of supplies		6 30	
PREPARATION AND EXHIBITION:			843 72
Transferred to Preparation and Exhibition, General			
Account, for material and services of preparator			
mounting Sea Elephants			1,000 00
Publications:			
JESUP NORTH PACIFIC EXPEDITION PUBLICA	TIONS .		
For services preparing manuscript	110115	208 00	
Trachodon Memoir Fund:			
Transferred to Publications, General Account, for			
part payment of plate for Tyrannosaurus Memoir		25 00	
			233 00
Total net disbursements for the developmen departments			420 77
•			439 77
Carried forward	• • • • • • • •	§	51,439 77

RECEIPTS

PENSION FUND: Balance	∞
Payment made by Estate of John J. Clancy 2,500 MEMORIAL HALL FUND: Mrs. Morris K. Jesup 1,000 INTEREST ON CREDIT BALANCES: Earnings to December 31, 1912 751 SOUTH AMERICAN BIRD FUND: Refund from Field Assistant 234 CROCKER LAND EXPEDITION FUND: George Borup Guarantee:	00
Mrs. Morris K. Jesup	
Earnings to December 31, 1912	28
Refund from Field Assistant	
George Borup Guarantee:	04
W. W. Atterbury. 200 00 Herbert Austin. 25 00 J. Sanford Barnes, Jr. 25 00 A. W. Beckman. 10 00 Laurence V. Benét. 75 00 Arthur C. Blagden. 10 00 Harry G. Bryant. 100 00 E. W. Clark. 100 00 Harry E. Converse. 30 00 Zenas Crane. 500 00 W. R. Cross. 25 00 Thomas DeWitt Cuyler 500 00 James Lloyd Derby. 15 00 Richard S. Dow. 40 00 Grenville T. Emmet. 100 00 H. Lloyd Folsom. 25 00 C. W. Gordon. 100 00 Joseph C. Grew. 25 00 G. G. Grundy. 20 00 M. H. Harrington 50 00 J. J. Higginson, Jr. 10 00 W. H. Hobbs. 500 J. Frederick Hahn and C. T. Stewart. 25 00 Carried forward. 572,708	

DISBURSEMENTS

Brought forward	••••	\$51,439 77
MORRIS K. JESUP BAS-RELIEF FUND: Payment to sculptor for bas-relief of late President Morris K. Jesup	\$1,000 00	
Transferred to General Account, General Supplies and Expenses, for advance payment to sculptor	1,500 00	2,500 00
INTEREST ON CREDIT BALANCES:		
Transferred to Interest on Credit balances, General Account.		751 28
SOUTH AMERICAN BIRD FUND: Transferred to Mammalogy and Ornithology, for purchase of field equipment		234 04
CROCKER LAND EXPEDITION FUND:		
Purchase of equipment for expedition	3,144 49 22,017 51	25,162 00

RECEIPTS

1912

Brought	forward	 \$72,798 00

CROCKER LAND EXPEDITION FUND (Continued):

George Borup Guarantee (Continued):

Lydig Hoyt	\$20	00		
Thomas H. Hubbard	2,500	00		
Mrs. Morris K. Jesup	500	00		
Aymar Johnson	5	00		
Fritz Kaufmann	I	00		
L. D. Kellogg	1,000	00		
C. H. Kelsey	50	00		
Mrs. F. Larkin	25	00		
John Larkin	25	00		
Chas. F. Mathewson	50	00		
George L. McAlpin	50	00		
Ogden Mills	500	00		
G. Frederick Norton	50	00		
M. H. Neuwahl	5	00		
New York Academy of Sciences.	500	00		
J. Donaldson Nichols	2	00		
James C. Parrish	100	00		
Samuel T. Peters	250	00		
Lewis A. Platt	500	00		
Frederick Potter	500	00		
Samuel Rea	50	00		
Edmund P. Rogers	5	00		
John S. Rogers	5	CO		
Franklin D. Roosevelt	15	00		
Isaiah Scheeline	5	00		
Jacob H. Schiff	250	00		
Mortimer L. Schiff	250	00		
T. L. Schurmeier	25	00		
Henry Seligman	250	00		
Isaac N. Seligman	250	$\bigcirc\bigcirc$		
Joseph L. Seligman	25	00		
Robert P. Simpson	25	CO		
Harry Slutzger	IO	00		
B. Symonds	IO	00		
W. B. Thomas	200	00		
Andrew G. Weeks	15	00		
R. H. Williams	250	00	\$10,603	00

Donald B. MacMillan Guarantee:

Edward O. Achorn	\$5	()()
Anonymous	2	00
H. L. Bagley	25	00

DISBURSEMENTS

1912

RECEIPTS

1912

Brought forward...... \$72,798 00

CROCKER LAND EXPEDITION FUND (Continued):

Donald B. MacMillan Guarantee (Continued):

Harry Balfe	\$100 00
Frank E. Bradbury	10 00
Arthur T. Brown	5 00
W. A. Clifford	I 00
Frederick O. Conant	25 00
A. P. Cook	5 00
Charles Sumner Cook	10 00
Edward W. Cox	10 00
Zenas Crane	1,000 00
Philip Dana	25 00
John A. Devine	1 00
John F. Eliot	5 00
Thomas J. Emery	10 00
Frederick A. Fisher	10 00
A. A. French	50 00
J. Arthur Furbish	5 00
Levi H. Greenwood	200 00
Clarence Hale	10 00
James C. Hamlen	10 00
W. H. Hastings	I 00
J. Everett Hicks	5 00
Rufus H. Hinckley	10 00
Henry Hornblower	200 00
Rayton E. Horton	2 5 00
Thomas H. Hubbard	2,500 00
William M. Ingraham	10 00
A. Marshall Jones	5 00
F. R. Kimball	15 00
J. W. MacDonald	15 00
Charles F. Mathewson	10 00
George C. Menard	50 00
Joseph E. Moore	5 00 10 00
Paul B. Morgan	100 00
Thomas F. Moses	25 00
Franklin C. Payson	10 00
Henry S. Payson	10 00
N. Pierce	10 00
W. A. Powers	5 00
W. E. Preble	5 00
W. A. Robinson	2 00
D. A. Sargent	10 00
Otto C. Scales	1 00

DISBURSEMENTS

1912

Brought forward.....\$80,087 09

RECEIPTS

1912

Brought	forward	\$72,708 00
Diongini	Joi war a	3/2,/40 00

CROCKER LAND EXPEDITION FUND (Continued):

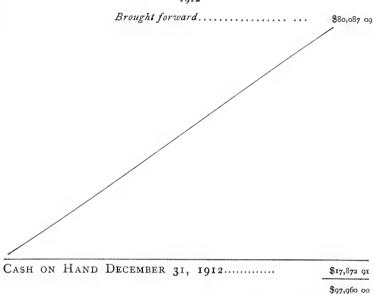
Donald B. MacMillan Guarantee (Continued):

	•		,		
George B. Sears	\$5	00			
I. B. Sewall	5	00			
Arthur L. Small	_	00			
Edward Stamwood	10	00			
W. D. Stockbridge	IO	00			
Charles A. Stone	200	00			
John E. Thayer	1,000	00			
S. C. Thayer	-	00			
Townsend W. Thorndike	25				
Edwin S. Webster	200	00			
Frank G. Webster	100	00			
Hanson H. Webster	5	00			
A. B. White	10				
Harold S. White	I	00			
Worcester Academy	300	00			
S. E. Young	10		\$6,454 00		
American Geographical Society			6,000 00		
Colgate University			1,000 00		
Yale University			1,000 00		
Dodge Ichthyology Fund			100 00	25,162	00
				\$97,960	00

amined and Approved $\left\{ egin{array}{ll} ANSON & W. & HARD \\ OGDEN & MILLS \\ PERCY & R. & PYNE \end{array} \right\} \left\{ egin{array}{ll} Auditing \\ Comm \end{array} \right.$ Committee

DISBURSEMENTS

1912



CHARLES LANIER, Treasurer

E. & O. E. NEW YORK, December 31, 1912

CROCKER LAND EXPEDITION FUND ACCOUNT

RECEIPTS

1912

Transfer from Special Funds Account. \$22,017 51

SUBSCRIPTION:

INTEREST ON CREDIT BALANCES..... 245 73

\$23,263 24

Examined OGDEN MILLS Auditing Committee

CORPORATE STOCK ACCOUNT

RECEIPTS

DEPARTMENT OF PARKS...... \$21,252 25

Interest on Credit Balances..... 4 33

\$21,256 58

Examined OGDEN MILLS Anditing PERCY R. PYNE

INCIDENTAL ACCOUNT*

RECEIPTS

RECEIPTS FROM INDIVIDUALS AND SOCIETIES \$2,366 28

INTEREST ON CREDIT BALANCES...... 1 03

\$2,367 31

Examined ANSON W. HARD Auditing OGDEN MILLS Committee

[•] The moneys of this account do not form any part of the income proper of the Museum. They simply represent cases in which it is advisable for the Museum to act as agent; for example, the services of attendants at the mortings of the New York Academy of Sciences are paid through this account out of funds supplied by the New York Academy.

CROCKER LAND EXPEDITION FUND ACCOUNT

DISBURSEMENTS

1012

REFUND OF SUBSCRIPTION:

YALE UNIVERSITY 1,000 00

\$5,698 20 Cash on Hand..... 17,565 04

\$23,263 24

CHARLES LANIER, Treasurer

E. & O. E.

NEW YORK, December 31, 1912

CORPORATE STOCK ACCOUNT

DISBURSEMENTS

PAYROLLS OF MECHANICS, ETC..... \$21,252 25

INTEREST ON CREDIT BALANCES:

TRANSFERRED TO INTEREST ON BALANCES, GENERAL ACCOUNT.....

4 33

\$21,256 58

CHARLES LANIER, Treasurer

E. & O. E.

NEW YORK, December 31, 1912

INCIDENTAL ACCOUNT

DISBURSEMENTS

DISBURSEMENTS FOR INDIVIDUALS AND

SOCIETIES.....\$2,366 28

INTEREST ON CREDIT BALANCES:

TRANSFERRED TO INTEREST ON CREDIT BALANCES, GENERAL ACCOUNT.....

I 03

\$2,367 31

CHARLES LANIER, Treasurer

E. & O. E.

NEW YORK, December 31, 1912

LIST OF ACCESSIONS, 1912

DEPARTMENT OF PUBLIC EDUCATION

By GIFT

C. G. ABBOTT, New York City.
2 Squirrels, I weasel, I fox, 5 birds, collections of birds' eggs, rocks and shells.

D. L. BENNETT, New York City. Nest of black hornet.

A. S. BICKMORE, New York City.

1 Microscope and 1 desk.

CHARLES BOHEM, New York City.
Book of pressed sea mosses.

H. L. BRIDGMAN, Brooklyn, N. Y.
6 Photographs showing scene of excavations in Soudan, Egypt.

MRS. M. E. BULLARD, New York City. Stuffed owl.

MRS. H. S. DEWEY, Brooklyn, N. Y.
2 Sea fans, 3 shells and 1 piece brain coral.

ARTHUR E. KRAUSE, Jersey City, N. J. 2 Click beetles.

ESTATE OF JACOB W. MACK, through MAURICE MARKS, New York City.

Mounted eagle.

MISS ANNIE MILLER, New York City.

Doll dressed as Scotch Newhaven fisherwoman.

JOHN T. NAGLE, New York City.

Nest of hornet, Monmouth, N. J.

MISS EVELYN PURDIE, Boston, Mass. 139 Bird skins.

G. SEYMOUR WILLSON, New York City.
33 Prints of gold mines in Brazil.

FRANK H. WOOD, New Bedford, Mass.
Photograph of whaling vessel "Canton."

By PURCHASE

53 Photographs, 2 dolls and 10 colored pictures, from Russia, Denmark and Sweden.

DEPARTMENT OF MINERALOGY

By GIFT

MATILDA W. BRUCE FUND.

75 Specimens, including Ænigmatite, Alexandrite, Apophyllite, Barsowite, Barysilite, Bellite, Brookite, Carnotite, Celestite, Cerussite, Chalcanthite, Childrenite, Cuprite, Datolite, Dolomite, Dumortierite, Dundasite, Enhydros, Euxenite, Glaucophane, Gold Nugget, Hematite, Heulandite, Hinsdalite, Jaulingite, Kornelite, Kreittonite, Microcline, Mirabilite, Native Gold, Orpiment, Pectolite, Pickeringite, Prehnite, Pyroxene, Quartz Crystals, Rammelsbergite, Sand Corundum, Scheelite, Schirmerite, Scolecite, Sepiolite, Strüverite, Stilbite, Tourmaline, Turquoise, Veszelyite, Walchowite, Ytterfluorite.

SEYMOUR EASTON, Gouverneur, N. Y.

12 Specimens massive Talc, and I specimen fibrous Talc.

A. D. GABAY, New York City.

2 Specimens Pyrite in Clay, South River, N. J.

DEPARTMENT OF GEOLOGY, transfer.

I Specimen Arsenopyrite, I Artificial Gypsum, I Williamsite, I Edenite, 2 Florentine Mosaics, Syracuse, N. Y.

A. D. MACKAY, Chicago, Ill.

I Specimen Magnesite, Province of Quebec, Canada.

J. D. MALLONEE, New York City.

32 Sheets Mica with Tourmaline inclusions, Gilsum, N. H.

D. S. MARTIN, Brooklyn, N. Y.

19 Specimens Tourmalines, Mesa Grande, Cal.

- J. P. MORGAN, New York City.
 - I Specimen Amethyst (large Geode crust), Brazil.
 - I Specimen Tourmaline (pink center, very large), on Quartz, Rumford Falls, Me.
 - I Specimen Tourmaline (Rubellite), Pala, Cal.
 - I Specimen Rubellite, San Diego, Cal.
 - I Specimen Enhydros (water-bottle), Uruguay, S. A.
 - 2 Specimens Kunzite, Pala, Cal.
 - I Specimen Pearl in Mother-of-Pearl Shell, Thursday Island.
 - I Specimen Pearl, Middle West, United States.
 - I Specimen Shell in which above was found,
 - 3 Specimens Shells (Unio).
 - I Specimen Epidote and Quartz, Katchikan, Prince of Wales Island, Alaska.
 - I Quartz Sphere (41/2" diameter), China.
 - I Specimen Gold in Quartz, California.
 - 3 Specimens Phenacite, Bahia, Brazil.
 - I Specimen Topaz (rolled pebble, very large), Ceylon.
 - I Specimen Benitoite, Benito Co., Cal.
 - I Specimen Morganite and blue Beryl (intergrowth), California.

- 1 Specimen Aquamarine, Brazil.
- I Specimen Euclase (in matrix with Topaz), Brazil.
- I Specimen Tourmaline var. Rubellite, Madagascar.
- I Specimen brown Tourmaline, Madagascar.
- I Specimen green Tourmaline, Madagascar.

NEVADA CONSOLIDATED COPPER CO., New York City.

I Painting of "The Shovel Pit," Ely, Nevada.

ALBERT OPERTI, New York City.

- I Specimen Epidosyte, Wilcox Head, North Greenland.
- 1 Specimen Pyrite, Mt. Operti, Peary Expedition, 1896.
- H. J. SPINDEN, New York City.

12 Specimens Quartz, Rio Tinto Mines, Spain.

J. H. THOMPSON, New York City.

40 Specimens miscellaneous minerals, including Actinolite, Beryl, Calcite, Copper, Chalcopyrite, Fibrolite, Garnet, Gypsum, Hornblende, Magnetite, Masonite, Mica, Pyroxene, Rhodonite, Silver, Tourmaline, Tremolite, Vesuvianite.

TREIBACHER CHEMICAL WORKS, New York City.

I Specimen Allanite and I specimen Cerite, Norway.

BY EXCHANGE

F. A. CANFIELD, Dover, N. J.

- I Specimen Aegirite, Narsarsuk, Greenland.
- 1 Specimen Benitoite in matrix, Benito Co., Cal.
- I Specimen Californite, Orville, Cal.
- 1 Specimen Garnet and Magnetite, Vaskö, Hungary.
- 3 Specimens Orthoclase, Greverlyn, Cornwall.
- I Specimen Palagonite, Escondido, Cal.
- I Specimen Tourmaline, Pala, Cal.
- I Specimen Turquoise, San Bernardino Co., Cal.

SEYMOUR EASTON, Gouverneur, N. Y.

- I Bag Talc powder.
- 3 Specimens fibrous Talc.
- 14 Specimens massive Talc.

E. O. HOVEY, New York City.

- I Specimen Astrophyllite, Langesfiord, Norway.
- I Specimen Pectolite, Great Notch, N. J.
- I Specimen Laumonite, Great Notch, N. J.
- I Specimen Datolite, Great Notch, N. I.

M. E. KLECKNER, Tiffin, Ohio.

21 Specimens crystals of Celestite, Tiffin, Ohio.

ALBERT H. PETEREIT, New York City.

- 13 Specimens Chiastolite, Madera Co., Cal.
- 14 Sections Tourmaline, Mesa Grande, Cal.
- I Specimen Gold (with Mispickel), California.
- 1 Specimen Gold, Nova Scotia.

ALBERT H. PETEREIT-Continued

- I Specimen Calcite, Mexico.
- I Specimen Waringtonite, Utah.
- 1 Specimen Chrysocolla, California.
- I Specimen Tourmaline, California.
- I Specimen Marcasite (pseudomorph), Richland Co., Wis.

By Purchase

- I Specimen Analcite, New Jersey.
- I Specimen Andesine, France.
- I Specimen Astochite, Sweden.
- I Specimen Baddelevite, Brazil.
- I Specimen Barite, New South Wales.
- I Specimen Embolite, New South Wales.
- I Specimen Guanoxalate, Peru.
- I Specimen Knopite, Sweden.
- I Specimen Kaolin (pseudomorph), Brazil.
- I Specimen Lepidolite, Ural Mountains.
- I Specimen Molvbdenite, New South Wales.
- I Specimen Monazite, southern Australia.
- I Specimen Nephelite, Italy,
- I Specimen New Nickel Arsenide, Prussia.
- I Specimen Niccolite, Prussia.
- I Specimen Opal, Australia.
- I Specimen Quartz, New South Wales.
- I Specimen Quartz (prismatic cleavage), France.
- I Specimen Quartz, Aosta, Italy.
- I Specimen Quartz (pseudomorph), Tyrol.
- I Specimen Quartz (pseudomorph), Germany.
- I Specimen Smithsonite, New South Wales.
- I Specimen Strontianite, Germany.
- I Specimen Stilbite (Faserheulandite), Austria.
- I Specimen Synchisite, Greenland.
- 585 Wooden models illustrating the crystal forms of the principal minerals.

THROUGH MUSEUM EXPEDITION

2 Specimens Aragonite, Glasgow, Mont.; 2 specimens Aragonite, Santa Clara, Cuba; 2 specimens Calcite, Trinidad, Cuba; 2 specimens Cinnabar, Chisas, Tex. Collected by Barnum Brown.

DEPARTMENT OF MAMMALOGY AND ORNITHOLOGY

MAMMALS

By GIFT

CARL E. AKELEY, New York City.

Skin and skull of Bat, and skin and skull of Elephant Shrew, British East Africa.

CLEVELAND ALLEN, Congers, N. Y.
Skin and skull of Zapus, Rockland County, N. Y.

MRS. C. D. ATWOOD, New York City. Chihuahua Dog.

DUKE OF BEDFORD, Woburn, England.
2 Skins and skeleton of Equus prjevalskii.

JOSEPH DUNN BURRELL, Brooklyn, N. Y. Scrimshawed tooth of Sperm Whale.

FRANK M. CHAPMAN, Englewood, N. J. 3 Flat skins of *Potos*, Colombia.

COLORADO MUSEUM OF NATURAL HISTORY, Denver, Colo. 9 Specimens of Ochotona with skulls, Colorado.

DEPARTMENT OF PARKS, New York City.

48 Monkeys, I Angora Goat, I Nylghau, I Ocelot, 2 Leopards, I Eland, I Sheep, I Elk (young), I Opossum, I Tiger, I Mouflon, I Axis Deer, I Lioness, I Black Bear, I Axis Deer (young), I Red Fox, 2 Gray Foxes, I Raccoon, I Hyæna,—Total, 68 specimens received in the flesh from the Central Park Menagerie.

MISS AMY R. EDWARDS, Brooklyn, N. Y. Antlers of South American Deer.

G. CLYDE FISHER, Baltimore, Md. Skin and skull of Mus alexandrinus, Cornelia, Ga.

GEORGE BARTON FRENCH, New York City.

Bromide enlargement of photograph of Gorilla, Congo District,

Africa.

L. A. FUERTES, Ithaca, N. Y.

I Rabbit, Ithaca: I Bat, Samoa.

MADISON GRANT, New York City. Skull of *Ursus emmonsi*, Yakutat, Alaska.

FRANCIS HARPER, College Point, N. Y.

1 Skull each of Bear, Wild Cat and Raccoon, Georgia.

ESTATE OF ELIZA KUHL HUGHES, Copper Hill, N. J. 13 Specimens of American mammal pelts.

C. B. ISHAM, New York City. Skin and skull of Sciurus, and skin of Thomomys, Parkdale, Oreg.

ALFRED J. KLEIN, Nairobi, British East Africa.

31 African mammals and 1 skin of Civet Cat from near Nairobi.

J. G. KNOWLTON, New York City. Skull of Vulpes, Ponds Inlet.

THE NATURE SHOP, New York City. Skin and skeleton of Monkey.

NEWARK MUSEUM, Newark, N. J. Red Bat.

NEW YORK ZOÖLOGICAL SOCIETY, New York City.

2 Fur Seals, I Sea Elephant, I Squirrel, 2 Grant's Zebras, I Loris, 2 Rats, I Tasmanian Wolf, I Monkey, I Cebu Monkey, I Green Monkey, I Spider Monkey, 4 Kinkajous, 2 Lemurs, I Cavy, I Muntjac, I Arctic Fox, I Red Fox, 2 Pandas, I Himalayan Bear, 2 Sun Bears, I Black Bear, I Polar Bear, I Rocky Mountain Goat, I Reed Buck, I European Buffalo, I Roe Deer, I Hangul Deer, I Chinese Water Deer, I Sambar Deer, I Lynx, 2 Ocelots, I Sloth, I Snow Leopard, 5 Hooded Seals, 4 Beavers, I Binturong, I Baboon, I Mangabey, 2 Coati Mundi, I Barbary Sheep, I Porcupine, I Tiger, I Galago, I Phalanger, I Mongoose, I Ringtail Cat, I Palm Cat, I Civet Cat, I Herpestes.—Total, 67 specimens received in the flesh from the New York Aquarium and the New York Zoölogical Park.

YOSHIKAZU OKAMIYU, New York City.

Skin and skull of Harbor Seal.

LEONAND C. SANFORD, New Haven, Conn. Newfoundland Rabbit.

HENRY THURSTON, Floral Park, L. I.

3 Specimens of Bats, I alcoholic Bat and I specimen of Lepus, Florida.

W. A. VAN RENSSELAER, Salt Point, N. Y. Skin and skull of European Hare.

C. DUBOIS WAGSTAFF, New York City. Polished teeth of Sperm Whale.

EDWARD E. AND MARGARET B. WILLIAMS, New York City.
Mounted Deer head, from near St. Paul, Minn.

WALTER WINANS, Pluckley, Kent, England.

3 Skins and skulls of Sika Deer, 4 Rabbits, 3 Hedgehogs and 4 Weasels.

By Exchange

G. T. EMMONS, Princeton, N. J. Skin of *Ursus emmonsi* (rug).

By Purchase

10 African Elephant skulls; 64 mammals, China; 45 small mammals and 15 Bats in alcohol, Chile; 1 Albino Porcupine (Erethizon); 3 Lophiomys; 1 Mongoose; 2 Giant Forest Hogs; 24 mammals, Venezuela; 14 small eastern mammals; 1 melanistic Woodchuck; 1 Muntjac; 3 specimens Tarsius (1 alcoholic); 48 mammals, Colombia; 6 small mammals, Nicaragua; Mountain Sheep, New Mexico; 7 specimens Tursiops tursio, Cape Hatteras; 5 skins and skulls of Brachylagus idahoensis, Oregon.

THROUGH MUSEUM EXPEDITIONS

Large collection of mammals, Korea, and small sharks and whale material, Japan. Collected by R. C. Andrews.

630 Small mammals, Colombia. Collected by L. E. Miller.

289 Small mammals, Oregon. Collected by H. E. Anthony.

95 Small mammals, Colombia. Collected by W. B. Richardson.

14 Mammals, Colombia. Collected by Mrs. E. L. Kerr.

139 mammals from arctic America, including a series of Barren Ground Caribou and skins and skulls of Barren Ground Bear. Collected by R. M. Anderson.

BIRDS

By GIFT

C. G. ABBOTT, New York City.

10 European and eastern North American bird skins.

CARL E. AKELEY, New York City.

5 Skins of new genus of Ibis and 2 skins of Barbet, Africa.

GEORGE S. ANDERSON, Illoilo, Panay, P. I. Skin of Pigeon.

ANONYMOUS.

5 Song-birds, I Gull and I Woodpecker, in the flesh.

JAMES BALLANCE, New York City.

3 Birds' nests.

MRS. J. BANNON, Oscawana, N. Y.
Adult male Peacock, in the flesh.

C. G. BEHRENS.

Egg shells of "Pajub" (species of Wild Turkey), Guatemala.

GEORGE BENNERS, Ambler, Pa.

Nest and 4 eggs of Golden-cheeked Warbler.

DAVID LINNÆUS BENNETT, Plainfield, N. J.

Crow, in the flesh.

F. BLASCHKE, New York City.

Skin of Sandpiper and skin of Cuckoo.

B. S. BOWDISH, Demarest, N. J.

3 Song-birds, in the flesh.

HOWARTH S. BOYLE, Elmhurst, L. I.

2 Sandpipers, 2 Warblers, 1 Tree Swallow, 1 Sparrow and 1 songbird, in the flesh.

E. B. BRONSON, New York City.

10 Bird skins from Africa.

J. B. BURST, Ridgewood, N. J.

Fore-arm bones of wounded ducks showing healed fractures.

CARLOS M. CAMPOS, Aguada Pasajeros, Cuba.

14 Birds in the flesh (alcoholic), Cuba.

FRANK M. CHAPMAN, Englewood, N. J. Song-bird, in the flesh.

LEONARD M. DAVIS, New York City.

1 Skin of Grouse and 1 skin of Owl.

L. DE HASS, Elmhurst, L. I. 3 Song-birds, in the flesh.

DEPARTMENT OF PARKS, New York City.

5 Pheasants, 3 Pigeons, 2 Rails, I Black-capped Petrel, 2 Storks, I Heron, 5 Swans, I Goose, I Vulture, I Hawk, 8 Eagles, I Falcon, I Owl, 6 Cockatoos, I3 Parrots, 2 Toucans, 4 songbirds.—Total, 57 specimens received in the flesh from the Central Park Menagerie.

R. DONKER, New York City.

Song-bird, in the flesh.
JONATHAN DWIGHT, Jr., New York City.

I Auk, 3 Golden-eyed Ducks and I Owl.

CLARENCE H. EAGLE, New York City. 842 Bird skins, North America.

WILLIAM FLOYD, Mastic, N. Y.

I Plover, 4 Ducks, I Cormorant, 12 Sandpipers, I Jaeger, in the flesh.

D. GLUCK, New York City.

Goatsucker, in the flesh.

JOHN A. GROSSBECK, New York City. Song-bird, in the flesh.

FRANCIS HARPER, College Point, N. Y. Hawk, in the flesh.

JOHN H. HENDRICKSON, Long Island City, L. I. Shore-bird, in the flesh.

EDWARD HILL'S SONS & CO., New York City.

Mounted Kiwi and mounted song-bird.

RUDOLPH KASAL, Hackensack, N. J.

31 Mummified birds, consisting of 1 Parrot, 1 Kingfisher, 7 Hummingbirds and 22 song-birds, South America.

J. T. LLOYD, Ithaca, N. Y.

45 Bird skins, Upolu, Samoa, including 2 Tooth-billed Pigeons.

WILLIAM MACK, New York City.

I Parrot and I song-bird, in the flesh.

L. ALFRED MANNHARDT, Cold Spring, N. Y. Hawk.

W. DE W. MILLER, Plainfield, N. J.

2 Song-birds, in the flesh.

ROY W. MINER, New York City. Song-bird, in the flesh.

MASON MITCHELL, Apia, Samoa.

3 Parakeets, I Tooth-billed Pigeon, 3 Honey-eaters, in the flesh, I skin of Duck and I skin of Godwit, from Samoa.

WILLIAM FELLOWES MORGAN, Jr., Short Hills, N. J.
Mummified Falcon from a tomb at Thebes.

LIEF NEANDROSS, Ridgefield, N. J.

2 Woodpeckers and 2 song-birds, in the flesh.

NEW YORK ZOÖLOGICAL SOCIETY, New York City.

2 Cassowaries, 6 Guans and Curassows, I Pheasant, I2 Quails and Partridges, I4 Pigeons, 2 Terns, I Gull, 6 Shore-birds, I Crane, I Ibis, I Stork, 3 Jabirus, 2 Herons, 3 Boatbills, I Crested Screamer, I Flamingo, I Swan, II Geese and Ducks, I Turkey Vulture, 2 Hawks, 6 Eagles, I Harpy Eagle, 3 Falcons, 3 Owls, 2 Cockatoos, 2I Parrots, 3 Cuckoos, 4 Woodpeckers, 2 Flycatchers and 99 song-birds.—Total, 216 specimens received in the flesh from the New York Zoölogical Park.

JOHN TREADWELL NICHOLS, Englewood, N. J. Mounted Hawk.

WILLIAM B. NICHOLS, Oyster Bay, L. I. Duck, in the flesh.

JOHN W. PHILLIPS, New York City. Nest of Baltimore Oriole, Canaan, N. Y.

C. B. RIKER, Mountain Station, N. J. Skins of 4 Manakins and 1 Owl.

WILLIAM C. RIVES, Washington, D. C. 3 Skins of song-birds.

JAMES RODWAY, Georgetown, British Guiana.

2 Skins, I nest and 3 eggs of Hoatzin and 2 adult and 2 young birds in alcohol.

MRS. E. ROSENBERGER, New York City. Canary, in the flesh.

MRS. F. G. R. ROTH, Englewood, N. J. Parrot, in the flesh.

LOUIS RUHE, New York City.
Parrot, in the flesh.

LEONARD C. SANFORD, New Haven, Conn. 2 Geese.

P. SEALEY, Puerto Barrios, Guatemala. Skin of Goatsucker,

W. J. SMITH.

1 Skin of Wedge-tailed Eagle, Australia, and 2 Parrots, in the flesh.

SELAH B. STRONG, Setauket, L. I. Hawk, in the flesh.

HENRY THURSTON, Floral Park, L. I.

2 Flat skins and I head of Ibis, I skin of Kingfisher, I Torso skeleton of Heron, Sterna of 4 song-birds; I Owl, I Heron, I Sandpiper, I Woodpecker and I4 song-birds, in the flesh.

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

44 Prepared skeletons of birds, consisting of Ducks, Gulls, Shore-birds, Owls and song-birds.

S. M. VAN ALLEN, Jamaica, N. Y.

European Whimbrel, in the flesh. The first United States record.

C. L. VAN BOGAERT, New York City.

Song-bird.

JUSTUS VON LENGERKE, New York City. 34 Hawks and 4 Crows, in the flesh.

A. C. WILMERDING, New York City.

Jaeger, in the flesh,

WALTER WINANS, Pluckley, Kent, England.

Skin of Hawk.

MABEL OSGOOD WRIGHT, Fairfield, Conn.

Flat skin of Prothonotary Warbler. This specimen is the only record of the species for Connecticut.

By Exchange

BROOKLYN INSTITUTE OF ARTS AND SCIENCES, Brooklyn, N. Y. Hoatzin (alcoholic).

DURBAN MUSEUM, Natal, Africa.

Skins of I Heron, 10 Picariæ and 10 Oscines, Africa.

L. A. FUERTES, Ithaca, N. Y.

Skin of I Duck, and I Wood-hewer.

By Purchase

1,077 Bird skins, North China; 202 Bird skins, Chile; 2 Skins of Wild Rock Pigeons, 1 Skull of Hornbill, 1 skull of Crow; 7 Swans, in the flesh.

THROUGH MUSEUM EXPEDITIONS

- 218 Bird skins and 101 sets consisting of 408 eggs, arctic America. Collected by R. M. Anderson.
- 357 Bird skins and 4 eggs, Colombia. Collected by Mrs. E. L. Kerr.
- 34 Local song-birds in the flesh. Collected by F. E. Lutz.
- I Skin of Gallinule, 2 Swifts (alcoholic). Collected by Dwight Franklin.
- 37 Bird skins, Oregon. Collected by H. E. Anthony.
- Soo Bird skins, Colombia. Collected by W. B. Richardson.
- 1,918 Bird skins and a few nests and eggs, Colombia. Collected by Arthur A. Allen and Leo E. Miller.
- 1,947 Bird skins, including 6 nests, 4 eggs and 5 young of Cock-ofthe-Rock (*Rupicola*) and 1 egg of Curassow, Colombia. Collected by Leo E. Miller.
- 15 Bird skins, Korea. Collected by Roy C. Andrews.

DEPARTMENT OF VERTEBRATE PALÆONTOLOGY

By GIFT

DUKE OF BEDFORD, Woburn, England.
Skeleton of the Prievalsky Wild Horse.

R. BROOM, Springs, Transvaal, South Africa.

Portion of skull of *Dicynodon* from Karroo Formation of South Africa, illustrating the origin of the mammalian ear-bones.

WARREN DELANO, New York City.

Norwegian Horse and I Jamaica Hinny.

DEPARTMENT OF MAMMALOGY, transfer.

Zebra skeleton.

LANGDON GIBSON, Schenectady, N. Y.

Skull of fossil Walrus dredged from Penobscot Bay, Me.

ANDREW RAMSAY, Mt. Savage, Md.

Slab with two footprints of Chirotherium (?).

FRANK K. STURGIS, New York City.

Skeleton of Eohippus, four-toed horse, Lower Eocene of Wyoming.

By Exchange

KÖNIGL. BAYERISCHE AKADEMIE DER WISSENSCHAFTEN, Munich, Germany.

Small collections of fragmentary jaws and teeth, Eocene of Patagonia.

PEABODY MUSEUM, New Haven, Conn.

Casts of skull, wing and other parts of *Pteranodon*, Niobrara formation, Cretaceous of Kansas.

UNIVERSITY OF CALIFORNIA, Berkeley, Cal.

2 Skulls, lower jaw and fore-limb bones of Ground Sloth, asphalt bed of Rancho La Brea, Los Angeles, Cal.

By Purchase

I Calf head; I skull of Boötherium, Hebron, Ind.; head of Horse 42 years old.

THROUGH MUSEUM EXPEDITIONS

Fossil bones, Ciego de Montero, Cienfuegoes, Cuba. Collected by Carlos de la Torre and Barnum Brown.

Skull of *Moschops* and skeleton of *Endothiodon*, and other Permian reptiles, South Africa. Collected by R. Broom.

209 Specimens of fossil mammals, Ralston and Wasatch formations.

Lower Eocene of Wyoming. Collected by Walter Granger.

130 Specimens of fossil mammals, including part of skull and jaws of new insectivore, Basal and Lower Eocene of New Mexico. Collected by Walter Granger. Fossil mammals, Alaska, Meade River and Point Barrow. Collected by Vilhjalmr Stefansson.

3 Skeletons of the "Clawed Ungulate" Moropus, Agate Spring Quarry, Nebr. Collected by Albert Thomson.

Skeletons, skulls and various other remains of dinosaurs, Edmonton and Belly River Cretaceous deposits on Red Deer River, Alberta. Collected by Barnum Brown.

DEPARTMENT OF ICHTHYOLOGY AND HERPETOLOGY

FISHES

By GIFT

CLEVELAND H, DODGE FUND.

7 Australian lungfishes; 5 Ptyctodonts and I shark tooth; 150 Cuban fishes; 18 models of deep-sea fishes; 12 skeletons of fishes, mounted in glass jars; I Lepisosteus tristachus (mounted), Cuba; 450 fishes, South America and Pacific coast; I Dapedius colei, Lyme Regis, England; 5 mounted fishes, Maine; I Naucrates ductor, Cape Cod, Mass.; I Hypsypops rubicundus, California; 10 fishes, Calcutta; 25 Amia calva (young) and 25 Lepisosteus, Oconomowoc, Wis.; 5 mounted fishes, Japan; 31 alcoholic fishes, Java; plaster casts of I Thresher Shark and I Mola; 6 models of extinct fishes, 3 models of fossil fishes and 3 of living fishes; 62 Shark embryos and young, Naples.

AMERICAN SCENIC AND HISTORIC PRESERVATION SOCIETY, New York City.

> 3 Fossil sharks' teeth: 2 Carcharodon megalodon and I Oxyrhina hastalis. Collected by the late John Townsend.

C. WM. BEEBE, New York City.

4 Siluroids, I Poecilid, I Tetrodontid, I Cichlid, 3 Hæmulids, 3 Labrids, I Antennariid, I Sparid, I Tylosurid, I Scarid.

F. BLASCHKE, New York City.

Dried head of Cristivomer namayeush, Canada.

C. F. BOSTWICK, JR., New York City.

10 Goldfish and 1 Shiner.

HOWARTH S. BOYLE, Elmhurst, L. I.

Mustelus canis, Far Rockaway, N. Y.

BARNUM BROWN, New York City.

Fossil teeth and fragments of Cyprinoids and Siluroids, Pleistocene, Mexico.

ISAAC BUCHANAN, Elizabeth, N. J.

6 Dried and 9 alcoholic specimens of Danio analipunctatus, Rasbora heteromorpha, Callichthys punctatus, Barbus conchonius and 10 living fishes. BUFFALO SOCIETY OF NATURAL SCIENCES, Buffalo, N. Y. 4 Casts of fossil fish remains.

D. S. BULLOCK, Lapeer, Mich. 32 Fishes, South America.

CARLOS M. CAMPOS, Aguada Pasajeros, Cuba.

7 Manjuari and 2 Heros.

MORTON L. CHURCH, Marshall, N. C.

I Cottus ictalops, I Diplesion blennioides, I Notropis coccogenis, I Notropis photogenis, 2 Rhinichthys cataractæ, I Notropis whiplii, I Moxostoma alleghaniensis, I Catostomus nigricans and I Micropterus salmoides, Marshall, N. C.

RUSSELL J. COLES, Danville, Va.

8 Fishes, 2 embryos of rays, and several jaws and anatomical preparations, Cape Lookout, N. C.

JOHN D. CRIMMINS, New York City. Mounted Sailfish, Miami, Fla.

BASHFORD DEAN, Riverdale, N. Y.

10 Minnows, Hot Springs, Canadian Rockies; I Acipenser huso, I Acipenser ruthenus, Volga River, Europe; 5 Chlamydose-lachus embryos, 4 Myxine glutinosa eggs, I Gonorhynchus abbreviatus, 3 Bdellostoma eggs, 4 Ceratodus forsteri embryos, 7 Ceratodus forsteri eggs, Japan, California and Australia.

CARLOS DE LA TORRE, Havana, Cuba.

Fossil shark teeth in piece of matrix and Etmopterus hillianus Poey, Matanzas, Cuba.

DEPARTMENT OF INVERTEBRATE ZOÖLOGY, transfer.

15 Fundulids, 50 Poecilids, Florida and British Guiana; 5 Anguilla chrysypa, Edgewater, N. J.; 1 young Tarpon and 5 Sticklebacks; 27 fishes, South America and West Indies.

DEPARTMENT OF MINERALOGY, transfer.

6 Skate eggs, I Sturgeon scale, I Sea-horse, one-fourth pound of fish hooks, from J. H. Thompson's collection.

DEPARTMENT OF VERTEBRATE PALÆONTOLOGY, transfer.
12 Fossil sharks' teeth.

JOSEPH H. DOERR, New York City. Scales of Drumfish, Long Beach, L. I.

MRS. RICHARD DONKER, New York City.

2 Gambusia affinis. RICHARD DORN, New York City.

22 Fishes, British Guiana; 2 Trichogaster lalius and 1 small fish.

J. A. DOUGLAS, Babylon, L. I. Pseudopriacanthus altus.

DELAFIELD DUBOIS, New York City.

Top of head of Skate, south shore, L. I.

E. FRAAS, Stuttgart, Germany.

2 Fossil Chimæroid dental plates.

E. W. GUDGER, State Normal College, Greensboro, N. C.

4 Egg-shells of Ginglymostoma, Tortugas, Fla.

FRANCIS HARPER, College Point, N. Y.

Specimens of Green Killy, Star-headed Minnow, Top Minnow, Banded Pickerel and Nine-spined Sunfish, Okefenoke Swamp, Ga.

THE HEROINE CO., New York City.

30 Fishes from deep waters southeast of New York.

JOHN HISCOX, New York City.

Peristedion miniatum, found outside of New York Bay.

M. P. HITE, Quogue, N. Y.

41 Egg capsules of Raja, East Quogue.

R. D. O. JOHNSON, New York City.

20 Silurids and 20 Characinids, Antioquia, Colombia.

W. L. JOSSELYN, New York City.

14 Fishes, Falkland Islands.

F. A. LUCAS, New York City.

Siphostoma fuscum, Plymouth, Mass.

WILLIAM MACK, New York City.

I Fundulus diaphanus and I Tetragonopterus, Yucatan; 10 Goldfish and 60 other fishes.

WM. C. METCALF, New York City.

Salmo irideus, Callicoon Creek, Sullivan Co., N. Y.

Mrs. W. A. MORIARTY, Spring Lake, N. J. 2 Fish skulls, Ocean Beach, N. J.

NEW YORK ZOÖLOGICAL SOCIETY, New York City.

5 Albino Lake Trout, 200 specimens of Aquarium fishes, including *Pantodon* and freshwater Tetrodonta, 2 living fishes from Porto Rico, I *Pseudopriacanthus altus*, 8 *Hippocampus hudsonius*, I *Mycteroperca*, I *Iridio* and 6 alcoholic fishes.

JOHN T. NICHOLS, Englewood, N. J.

4 Flounders, 3 Pipefishes, 5 Mullets and 10 other fishes, Mastic, L. I.; 2 Eupomotis gibossus, Englewood, N. J.

A. PELSONG, Miami, Fla.

Dentition of Drumfish, Miami.

MR. PINKOSSON, Gainesville, Fla.

125 Lepomis pallidus, 3 Abramis crysoleucas, 4 Pomoxis sparoides, Florida.

CHARLES H. ROGERS, New York City.

Left dentary of Lophius piscatorius, Long Beach, N. Y.

RALPH S. SAUNDERS, New York City.

Deep Bigeye, Pseudopriacanthus altus (Gill).

H. J. SPINDEN, New York City.

20 Cichlids, Siluroids and Poecilids, Guatemala.

VILHJALMR STEFANSSON, New York City.

5 Mallotus villosus, Point Barrow, Alaska.

EDGAR E. TELLER, Milwaukee, Wis.

16 Fossil fishes, Devonic (Hamilton), Milwaukee.

EDWIN THORNE, New York City.

4 Sharks' jaws.

HENRY THURSTON, Floral Park, L. I.

1 Cypselurus heterurus, 1 Trichiurus lepturus, 1 Fundulus similis, 1 Cyprinodon carpio, 3 Stolephorus mitchelli and 1 Lagodon rhomboides, Florida.

WM. H. WIEGMANN, New York City.

I Chilomycterus schapfi, I Monacanthus hispidus and I Poronotus triacanthus, Long Island, N. Y.

By Exchange

BRITISH MUSEUM OF NATURAL HISTORY, London, England. 5 Cichlid fishes, South America.

CARNEGIE MUSEUM, Pittsburgh, Pa.

19 Fossil fishes, Upper Eocene, Monte Bolca, Italy; 3 fossil fishes, Upper Jurassic, Solenhofen, Bavaria.

JOSEPH A. CLUBB, Liverpool, England.

Protopterus annectans, living, in cocoon, Congo valley, Africa.

CORNELL UNIVERSITY, Ithaca, N. Y.

12 Living Ammocœtes, from near Ithaca.

D. S. JORDAN, Stanford University, Cal.

Macrorhamphosus gracilis, Canary Islands.

KÖNIGL. NATURALIEN-SAMMLUNG, Stuttgart, Germany.

2 Dental plates of Protopterus libyeus, Lower Oligocene, Egypt.

INSTITUT OCÉANOGRAPHIQUE, Monaco.

17 Specimens (14 species) of deep-sea fishes.

ROYAL AGRICULTURAL AND COMMERCIAL SOCIETY, Georgetown, British Guiana.

I Large Arapaima skin and 20 fishes from British Guiana.

I. O. SNYDER, Stanford University, Cal.

I Squalus mitsukurii (co-type), Misaki, Japan.

E. C. STARKS, California.

6 Adult and 100 embryo fishes, Pacific coast.

C. H. STERNBERG, Lawrence, Kans.

Pectoral fin-spines of Protosphyrana, Cretaceous, Kansas.

UNITED STATES NATIONAL MUSEUM, Washington, D. C. 50 Deep-sea and other fishes.

UNIVERSITY MUSEUM OF ZOÖLOGY, Cambridge, England.

2 Specimens of Polypterus, 3 Calamoichthys and 2 Protopterus, River Gambia and McCarthy's Island.

UNIVERSITY OF KANSAS, Lawrence, Kans. 12 Fishes.

By Purchase

Mounted Sunfish (Mela mela), and set of eggs of least bittern for use in group of Amia.

THROUGH MUSEUM EXPEDITIONS

33 Sharks (including 8 skins), 2 Chimæroids, 200 Teleosts and 3 sharks' jaws, Japan. Collected by R. C. Andrews.

Material for *Amia*, *Scaphirhynchus* and Gar pike groups, Wisconsin. Collected by Dwight Franklin.

150 Fishes, Cuba. Collected by J. T. Nichols.

200 Fishes, chiefly from British Guiana. Collected by William Warfield.

AMPHIBIANS

By GIFT

CLEVELAND H. DODGE FUND.

14 Cryptobranchus allegheniensis. I Pipa americana, I Amblystoma mexicana, I Siphonops crasiliensis, I Proteus anguinis, I Salamandra maculosa, 5 Pelobates fuscus, 10 Hyla versicolor.

W. A. ANGELL, Providence, R. I.

Amblystoma punctatum,

THOMAS BARBOUR, Cambridge, Mass.

6 Photographs of Rana goliath and habitat, Kamerun, Africa.

G. A. BOULENGER, F.R.S., London, England.

2 Alytes obstetricans with eggs, I Coccilian.

HOWARTH S. BOYLE, Elmhurst, L. I.

2 Rana pipiens, 2 Rana clamitans.

HERBERT BROWN, Tucson, Ariz.

Hyla arenicolor.

MORTON L. CHURCH, Marshall, N. C.

2 Salamanders, Tennessee.

DEPARTMENT OF INVERTEBRATE ZOÖLOGY, transfer.

8 Hyla cinerea, I Bufo quercicus, 7 Hyla squirella, 4 Hyla femoralis, 5 Acris gryllus, I Plethodon glutinosus, 8 Bufo sternosignatus, I Phryniscus, 3 Rana sp., I Hylodes sp., 2 Engystoma carolinense; collection of amphibians, British Guiana.

RICHARD DOW, New York City.

Tree Toad, British Guiana.

OGDEN GILES, New York City.

3 Batrachians, South America.

R. D. O. JOHNSON, New York City.
Collection of batrachians, Colombia.

F. E. LUTZ, Ramsey, N. J.

Acris gryllus.

WILLIAM MACK, New York City.

6 Amphibians.

SIGURD NEANDROSS, Ridgefield, N. J.

Rana catesbiana.

NEW YORK ZOÖLOGICAL SOCIETY, New York City.
2 Pipa americana, t Rana tigrina.

JOHN TREADWELL NICHOLS, Englewood, N. J. 2 Batrachians, Cuba.

JOHN L. PHILLIPS, New York City. Toad, Santo Domingo.

ALANSON SKINNER, Tompkinsville, S. I.

1 Bufo quercicus and 2 Hyla squirella, Florida.

J. J. THORNBER, Tucson, Ariz.

Bufo punctatus.

HENRY THURSTON, Floral Park, L. I.

9 Bufo fowleri, 2 Hyla cinerea, I Hyla squirrella, I Rana sphenocephala, I Bufo lentiginosus.

UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.

1 Amblystoma punctatum, 3 Diëmyctylus viridescens, 2 Plethodon erythronotus.

SWALE VINCENT, Winnipeg, Canada. Rana pipiens.

G. von KROCKOW, Brooklyn, N. Y. Plethodon glutinosus,

By Exchange

DURBAN MUSEUM, Natal, Africa.

I Megalixalus spinifrons and I Chiromantis xerampelina, South Africa.

MUSEUM OF COMPARATIVE ZOÖLOGY, Cambridge, Mass.

1 Astylosternus robustus, 1 Megalophrys montana, 1 Rhacophorus leucomystax, 1 Notatrema marsupiatum, 1 Phyllomedusa hypochondrialis, 1 Siphonops mexicana, 2 Rhinoderma darwinii, 1 Onychodactylus japonicus, 2 Xenopus mulleri, 1 Typhlotriton spelæus, 1 Alytes obstetricans.

ROYAL AGRICULTURAL AND COMMERCIAL SOCIETY, Georgetown, British Guiana.

45 Batrachians and I Coccilian, South America.

UNIVERSITY OF KANSAS, Lawrence, Kans.

2 Bufo lentiginosus americanus, I Bufo cognatus, 4 Rana catesbiana, 6 Rana pipiens, I Acris gryllus, 4 Chorophilus nigritus, I Chrophilus triscriatus, I Engystoma carolinense, I Hyla versicolor, 3 Amblystoma tigrinum.

THROUGH MUSEUM EXPEDITION

7 Bufo alvarius, 7 Bufo punctatus, 34 Scaphiopus couchii, 14 Rana pipiens, Tucson, Ariz. Collected by Miss M. C. Dickerson.

REPTILES

BY GIFT

CLEVELAND H. DODGE FUND.

1 Crotaphytus collaris, 1 Sistrurus miliarius, 1 Tomistoma schlegelii, 1 Anguis fragilis, 1 Amphisbæna alba, 1 Chamæleo vulgaris,

CARL E. AKELEY, New York City. Typhlops, Mt. Kenia, Africa.

GEORGE S. ANDERSON, Iloilo, Panay, P. I. Lachesis wagleri.

LINWOOD I. ANDREWS, Conimicut, R. I. Chelopus insculptus.

C. WM. BEEBE, New York City.

Rat snake, Orinoco Delta, South America,

HOWARTH S. BOYLE, Elmhurst, L. I.

I Chelydra serpentina, I Ophibolus doliatus triangulus.

HERBERT BROWN, Tucson, Ariz.

2 Callisaurus ventralis, 2 Cnemidophorus gularis, I Sceloporus clarkii, I Sceloporus magister, 2 Phrynosoma douglassinhernandesi, 2 Tantilla, I Glauconia humilis, I Thamnophis eques, I Thamnophis elegans.

B. H. BUXTON, New York City.

3 Lizards, Algiers, Africa.

C. V. CRASTER, Orange, N. J.

Chicken snake, Nassau, Bahama Islands.

DEPARTMENT OF INVERTEBRATE ZOÖLOGY, transfer.

4 Snakes and 1 lizard, British Guiana; 1 Amphisbæna fuliginosa, 1

Oxybelis fulgidus, I Sceloporus undulatus, 2 Anolis carolinensis, 2 Eumeces, I Cnemidophorus sexlineatus, 2 Homonata darwinii, 2 Anolis sp., I tree snake.

DEPARTMENT OF PARKS, New York City.

2 Python sebæ.

RICHARD DOW, New York City. 2 Snakes, British Guiana.

SPENCER FRANCIS, Seven Oaks, Fla.

2 Lygosoma laterale.

DWIGHT FRANKLIN, New York City. Snake, Cuba,

OGDEN GILES, New York City.

3 Lizards and 1 snake, South America.

W. W. GRANT, Englewood, N. J.

1 Sceloporus undulatus, Augusta, Ga.

F. A. GRINNELL, Mt. Riga, N. Y. Black snake skin.

R. D. O. JOHNSON, New York City. Reptiles from Colombia.

F. E. LUTZ, Ramsey, N. J.

Thamnophis sirtalis, New Jersey.

WILLIAM MACK, New York City.

I Turtle, 2 lizards, I young terrapin and I Anolis carolinensis.

C. S. MEAD, Suffield, Conn.

3 Amphisbana, Cuba.

F. G. METZGER, Yulan, N. Y.

Crotalus horridus, New York.

NEW YORK ZOÖLOGICAL SOCIETY, New York City.

3 Crocodilus palustris, 3 Alligator mississippiensis, I Crocodilus rhombifer, I Thalassochelys caretta, I Chelonia imbricata, I Chelonia mydas, I Crocodilus intermedius, 2 Sauromalus n. sp., 2 Sauromalus hispidus, I Amphibolurus barbatus, 2 Lacerta ocellata, 1 Ophisaurus apus, 2 Zonurus giganteus, 2 Lachesis neuwiedii, 3 Testudo pardalis, 5 Ctenosaura hemilopha, 3 Uromastix hardwickii, I Cinixys erosa, I Testudo tabulata, I Gymnodactylus platurus, 3 Testudo elegans, 2 Varanus griseus, I Testudo sp., I Ophibolus doliatus coccineus, I Testudo iberia, I Abastor erythrogrammus, I Bitis arietans, 2 Coluber quatuorlineatus, 3 Cyclophis astivus, 2 Elaps lemniscatus, 1 Elaps fulvius, I Echis carinata, I Epicrates cenchris, I Lachesis gramineus, I Ophibolus sp., 2 Sepedon hamachates, 2 Spilotes variabilis, 2 Spilotes Sp., I Sistrurus miliarius, 2 Vipera ammodytes, I Zamensis mucosus, 3 Crotalus atrox, I Crotalus cerastes, I Crotalus durissus, 7 Crotalus horridus, I Corallus madagascariensis, I Corallus cookii, I Corallus cookii var. ruschenbergeri, I Cerastes vipera, 3 Heloderma suspectum, I Chelodina longicollis, I Aromochelys sp., I Eumeces schneideri, 4 Herpetodryas carinatus, 4 Eunectes murinus, 1 Testudo polyphemus, I Sepedon sp., 3 Eryx conicus, 4 Eryx johnii, I Cyclops sp., I Egernia cunninghami, I Scincus officinalis, 2 Tupinambis teguixin, 3 Trachysaurus rugosus, 2 Ancistrodon piscivorus, I Ancistrodon contortrix, I Coluber corais, 3 Naja tripudians, 1 Naja bungarus, 1 Tiliqua gigas, 1 Lachesis mutus, 7 Vipera russellii, I Python spilotes, I Vipera ammodytes, 2 Python seba, I Python molorus, 3 Sistrurus catenatus, I Naja haje, 2 Coluber obsoletus, 2 Zamenis flagelliformis, 2 Pituophis catenifer, II Lachesis lanccolatus, I Liopeltis vernalis, I Thamnophis saurita, I Ophibolis getulus boylii, I Iguana tuberculata, I Oxyrophus clalia, I Natrix fasciata, I Natrix fasciata sipedon, I Natrix sipedon, I Heteredon platyrhinus, 4 Boa constrictor, I Aromochelys sp.

JOHN TREADWELL NICHOLS, Englewood, N. J.

I Lizard, Cuba; I Chrysemys picta, Long Island.

JOHN L. PHILLIPS, New York City.

5 Lizards, 3 snakes, Barahona, Santo Domingo.

ALBERT M. REESE, Morgantown, W. Va.

9 Alligator mississippiensis (embryos) 3/4"-1 1.2", Florida.

LOUIS RUHE, New York City.

3 Chelodina longicollis (young), Australia.

ALANSON SKINNER, Tompkinsville, S. I.

I Sistrurus miliarius, I Eumeces quinquelineatus and I Anolis carolinensis, Florida.

JOSEPH C. THOMPSON, San Francisco, Cal.

Gerrhonotus multicarinatus.

J. J. THORNBER, Tucson, Ariz.

4 Coleonys variegatus, I Elaps euryxanthus and I Arizona elegans, Tucson.

HENRY THURSTON, Floral Park, L. I.

I Storeria dekayi, I Thamnophis sirtalis, I Anolis sirtalis, I Cnemidophorus sexlineatus, I Anolis carolinensis.

By Exchange

DURBAN MUSEUM, Natal, Africa.

I Agama aculeata, 2 Agama atricollis, 1 Zonurus cordylus, 1 Zonurus polyzonus, 2 Chamæsaura macrolepis, 2 Gerrhosaurus flavigularis, 2 Mabuia sulcata, 3 Dasypeltis scabra, 1 Sepedon hæmachates, 2 Causus rhombeatus.

MUSEUM OF COMPARATIVE ZOÖLOGY, Cambridge, Mass.

I Calotes jubatus, I Gymnodactylus marmoratus, I Ptychozoon kuhli, I Amphisbæna fuliginosa, 2 Podocnemis expansa, 2 Cnemidophorus lemniscatus, I Basiliscus americanus, I Ameiva surinamensis, I Hydrophis hardwickii, I Chersydrus granulatus, I Anguis fragilis, I Agama.

ROYAL AGRICULTURAL AND COMMERCIAL SOCIETY, Georgetown, British Guiana.

2 Amphisbana, South America.

UNIVERSITY OF KANSAS, Lawrence, Kans.

I Ophisaurus ventralis, I Chrysemys marginata, I Pseudemys elegans, 2 Cinosternum pennsylvanicum, I Chelydra serpentina, 3 Cistudo ornata, 3 Crotaphytus collaris, 3 Holbrookia maculata,
 I Cnemidophorus sexlineatus, I Eumeces obsoletus, I Eumeces quinquelineatus, 3 Sceloporus undulatus.

By Purchase

I Sceloporus clarkii, I Phrynosoma solare, 2 Crotalus molossus, I Crotalus atrox, I Thamnophis sp., and I Rhinochilus sp., Tucson, Ariz.

THROUGH MUSEUM EXPEDITION

I Coleonyx variegatus, 19 Callisaurus ventralis, 2 Holbrookia maculata approximans, 4 Holbrookia texana, 31 Uta stansburiana, 11 Uta ornata, 5 Sceloporus clarkii and Sceloporus magister, 22 Phrynosoma solare, 3 Heloderma suspectum, 19 Cnemidophorus gularis, Cnemidophorus sexlineatus and Cnemidophorus tessalatus, 2 Dipsosaurus dorsalis, 1 Crotaphytus wislizenii, 2 Rhinochilus lecontei, 3 Thamnophis eques, 1 Thamnophis elegans, 1 Hypsiglena ochrorhyncha, 4 Crotalus atrox, 1 Crotalus tigris, 5 Kinosternon sonoriense, 3 Gopherus agassizii, Arizona. Collected by Miss M. C. Dickerson.

DEPARTMENT OF INVERTEBRATE ZOÖLOGY INVERTEBRATES

By GIFT

G. W. J. ANGELL, New York City.

I Gibbium psylloides and a collection of local Coleoptera.

J. W. ANGELL, New York City.

2 Specimens of Hymenoptera and 86 specimens of Coleoptera, Richmond Park, London, and a collection of local Coleoptera.

RICHARD C. BACKUS, New York City.

Centipede, Cuernavaca, Morelos, Mexico.

H. G. BARBER, Roselle Park, N. J.

2 Cerambycidae, Fort Montgomery, N. J.

C. WM. BEEBE, New York City.

5 Arachnida, Cobbs Island, Va.; 9 Crustacea, La Brea, near coast of Venezuela; 228 Lepidoptera, Asia and Malay Archipelago; a collection of invertebrates, Florida, Nova Scotia and Bronx Park.

PERCY BILLINGS, Chicago, Ill.

2 Corals, Fiji Islands.

E. A. BISCHOFF, Irvington, N. J. Coleoptera.

W. W. BLAKE, Mexico City, Mex.

Book injured by Sitodrepa panicea.

MRS. WM. H. BLISS, New York City.
A living ant colony.

HOWARTH S. BOYLE, Elmhurst, L. I. Invertebrates, Long Island.

J. CHESTER BRADLEY, Ithaca, N. Y.
2 Paratypes of Dolichotrypes hopkinsi.

H. H. BREHME, Newark, N. J.

Lepidoptera from various localites.

BARNUM BROWN, New York City. Coleoptera, Cuba,

B. H. BUXTON, New York City.

1 Peripatus nicaraguensis (var. isthmicola), Costa Rica; 7 specimens of Cirolana fortis (Gurney), Africa; Scorpions, spiders and a centipede, various localities.

J. G. CALLISON, New York City.

2 Ticks from the human ear.

THOMAS L. CASEY, Washington, D. C. Collection of Coleoptera, various localities.

H. S. CHATFIELD, New York City. Beetle, Calcutta, India.

MORTON L. CHURCH, Marshall, N. C.

5 Crawfish, mouth of limestone cave.

T. D. A. COCKERELL, Boulder, Colo. 31 Specimens of bees. WILLIAM P. COMSTOCK, Newark, N. J.

I Erebus odora, 8 Thecla putnami and 15 other insects, various localities.

CORNELL UNIVERSITY, Ithaca, N. Y.

I Paratype of Eresia texana seminole Skinner and 2 Henicocephalus culicis, Georgia.

E. DAECKE, Harrisburg, Pa.

2 Orthofidonia semiclarata, Rockville, Pa.

D. P. DAVIS, New York City.

143 Specimens of Diurnal Lepidoptera, Colombia and Brazil.

WILLIAM T. DAVIS, New Brighton, N. Y.

Lepidoptera, Guatemala, and various local insects.

CARLOS DE LA TORRE, Havana, Cuba.

20 Shrimp (Barbouria poeyi), Cojimar, Cuba.

DEPARTMENT OF ICHTHYOLOGY AND HERPETOLOGY, transfer.
Beetle from "cocoon" of lungfish, Congo valley.

E. L. DICKERSON, Newark, N. J.

4 Tragidion coquus.

JACOB DOLL, Brooklyn, N. Y.

4 Orthosia bicolorata, Central Park, New York City.

RICHARD DOW, New York City.

Invertebrates, British Guiana.

R. P. DOW, Brooklyn, N. Y. Local Coleoptera.

DURBAN MUSEUM, Natal, Africa.

13 Insects, South Africa.

JONATHAN DWIGHT, JR., New York City.

Several Tortricids, including pupæ and nests, Tadousac, Canada.

ADOLPH ELWYN, New York City.

12 Nematodes from bullfrog. JAS. H. EMERTON, Boston, Mass.

Spiders and insects, Lakehurst, N. J.

GEORGE P. ENGELHARDT, Brooklyn, N. Y.

Lepidoptera and Coleoptera, North Conway, N. H., and various local insects.

JOHN D. EVANS, Trenton, Ont.

I Cymatophora virginalis, I Sciagraphia orillata.

GEORGE H. FIELD, San Diego, Cal.

6 Nola apera.

WM. T. FORBES, Worcester, Mass.

3 Lepidoptera, United States.

DWIGHT FRANKLIN, New York City.

Log with caddice cases, Prairie du Chien, Wis.

A. D. GABAY, New York City.

A series of sponges (mostly commercial) showing peculiar and characteristic growths, Bahamas and Mediterranean Sea.

M. F. GATES, New York City.

Pupæ of Pseudosphinx tetrio, West Indies.

GEORGE B. GRINNELL, New York City.

Odynerus nest with wasps.

JOHN A. GROSSBECK, New York City.

Collection of North American Geometridæ, containing over a hundred types and cotypes.

GAYLORD C. HALL, New York City.

Apantesis figurata, Runyon, N. J.

E. D. HARRIS, New York City. Insects.

N. P. HITE, Quogue, N. Y.

2 Specimens Suberites compacta var.

HAMILTON HOLT, New York City. Corals, South America.

JOHN SHERMAN HOYT, New York City. Culex atropalpus, Rowayton, Conn.

C. W. JOHNSON, Boston, Mass.

Diptera.

R. D. O. JOHNSON, New York City. About 2,000 Lepidoptera, Colombia, S. A.

W. L. JOSSELYN, New York City. 38 Invertebrates, Falkland Islands.

FRED KESSLER, New York City. Arthropods and Annulates.

E. W. KIERNAN.

Wasps attacked by a parasitic fungus, Porto Rico.

KATHERINE KIRKLAND, San Antonio, Tex. Arilus cristatus, Texas.

JOHN KOEHLER, New York City. Invertebrates, Newfoundland.

C. W. LENG, New York City. 2,000 Specimens of Coleoptera, various localities.

F. E. LUTZ, Ramsey, N. J. Invertebrates, Mississippi and Pennsylvania.

MRS. M. LYNE, New York City.

Beetle, Venezuela. WILLIAM MACK, New York City.

Invertebrates. W. McGUCKIN, New York City.

22 Artificial flies (fishing lure).

T. H. McHATTON, Athens, Ga. About 150 pinned insects.

MISS R. MANNING, New York City. Lamellicorn beetle, Monte Cristo, San Domingo.

FRANK R. MASON, Philadelphia, Pa. 132 Cerambycidæ, various localities. CHARLES S. MEAD, Suffield, Conn.

Invertebrates, Isle of Pines, Cuba.

T. C. MERRILL, Colorado, Tex.

Philampelus achemon.

MISS B. S. MILLER, New York City.

Nest of leaf-cutting bee, Washington, N. Y.

W. DE W. MILLER, Plainfield, N. J. 7 Teras minuta, Matawan, N. J.

Mrs. W. A. MORIARTY, Spring Lake, N. J. Fulgur egg cases, Ocean Beach, N. J.

MISS MABEL MURRAY.

Praying Mantis, Leghorn, Italy.

J. W. MUTCHLER, Boonton, N. J. Invertebrates, Cedar Lake, N. J.

NATURAL MANUFACTURING CO., New York City.

1 Lot of artificially colored Sertularia.

FRANCIS C. NICHOLAS, New York City. Insects, Nogales, Sonora, Mexico.

JOHN TREADWELL NICHOLS, Englewood, N. J. Crustacea, Cuba.

RAYMOND C. OSBURN, New York City.

2 Specimens Gastrophilus hamorrhoidalis. Dawson, N. D.

R. F. PEARSALL, Brooklyn, N. Y. Geometridæ, South America.

C. L. POLLARD, New Brighton, N. Y. Local insects.

HENRY RAMSTADT, Jr., Chicago, Ill. Geometridæ, Fort Canby, Wash.

H. J. SHANNON, Jamaica, L. I.

Lycosa cinerea and Lasius niger.

JOHN D. SHERMAN, Jr., Brooklyn, N. Y.
Local beetles.

ERNEST SHOEMAKER, Brooklyn, N. Y. 47 Local Coleoptera and other insects.

GEORGE SILLY, Turks Islands, W. I.
Various invertebrates, Turks Islands,

C. E. SLEIGHT, Ramsey, N. J. Local insects.

MRS. ANNIE TRUMBULL SLOSSON, New York City. Beetle.

W. J. SMITH.

Butterflies in Denton mounts.

STATEN ISLAND ASSOCIATION OF ARTS AND SCIENCES, New Brighton, N. Y.

72 Specimens of Longicorn Coleoptera and several specimens of bird lice.

THEODORE SUTRO, New York City.

Corydalis cornuta, Westkill, N. J.

WM. H. THATCHER, New Brunswick, N. J. Paratenodera sinensis, New Jersey.

J. H. THOMPSON, New York City. Corals and horseshoe crabs.

EDWIN THORNE, Babylon, L. I.

Copepods taken from Dusky Shark, Fire Island, N. Y.

HENRY THURSTON, Floral Park, N. Y. Invertebrates, New York and Florida.

ERNEST B. TRACY, New York City.
Insects, Fishels Brook, Newfoundland.

A. L. TREADWELL, Poughkeepsie, N. Y.

II Vials of Annulates, including 15 cotypes, Hawaii, and Woods Hole, Mass.

G. VON KROCKOW, Brooklyn, N. Y. Local invertebrates.

G. H. WAILES, New York City.

23 Microscopic slides of Rhizopod Protozoans, New York and New Jersey.

WILLIAM WARFIELD, Princeton, N. J.

Insects, chiefly Lepidoptera, British Guiana.

F. WINTERSTEINER, Long Island City, N. Y. Local Coleoptera.

FLOYD WOODWARD, New York City.

Nest of Vespa maculata, Morristown, N. J.

By EXCHANGE

G. W. J. ANGELL, New York City. 84 Cerambycidæ.

NEW YORK STATE MUSEUM, Albany, N. Y. 36 Vials of Myriapoda.

UNIVERSITY OF CALIFORNIA, Berkeley, Cal. 54 Vials of Annulates, California and Honolulu.

A. E. VERRILL, Stony Creek, Conn.

64 Vials of Annulates, including 6 cotypes, Bermuda and Florida.

M. E. WALSH, Sockaboema, Java. 270 Lepidoptera, Java.

By Purchase

48 Specimens Geometridæ, various localities.

1 Rothschildia zacateca, Rio Bogata, San Cristobal, Mex.

Series of 4 Membracid models.

A collection of Coleoptera and Lepidoptera, Brazil.

48 Microscopic slides of mounted Rotifera, prepared by C. F. Rousselet.

112 European Geometridæ.

THROUGH MUSEUM EXPEDITIONS

- 2 Centipedes, 6 Scorpions and numerous insects, Miraflores and San Bernardo, Cal. Collected by Pingree I. Osburn.
- 8 Crustaceans and 4 Cephalopods, Japan. Collected by Roy C. Andrews.
- Insects, Bahama Islands, and about 1,000 local insects, Crugers, N. Y. Collected by H. E. Crampton.
- Over 4,000 invertebrates, chiefly insects, Florida. Collected by J. A. Grossbeck.
- Bryozoa and algæ, Woods Hole, Mass. Collected by Roy W. Miner.
- Myriapods, insects, spiders and other invertebrates, Greylock Range, Mass. Collected by Roy W. Miner.
- 8 Crustacea, Zacapa River, Guatemala, Central America. Collected by H. J. Spinden.
- 58 Crustacea, I octopus, and various mollusc shells, north coast of North America. Collected by Vilhjalmr Stefansson.
- Leeches, Norton Lake, Pawling, N. Y., and Redding, Conn. Collected by A. L. Treadwell.
- About 5,000 local insects. Collected by F. E. Lutz.

MOLLUSCA

By GIFT

- A. D. GABAY, New York City.
 - 3 Pearl blisters from pearl clam, I very large polished *Haliotis* rufescens Swains, California; 22 shells, Red Sea and West Indies.
- P. W. JARVIS, Dominica, W. I.
 - 13 Vials Dominican land shells.
- Mrs. W. A. MORIARTY, Spring Lake, N. J. Marine shells.
- FRANCIS C. NICHOLAS, New York City.
 - 65 Specimens Bulimulus dealbatus (?), found 30 miles east of Sonora, Mex.
- JOHN TREADWELL NICHOLS, Englewood, N. J.
 - 14 Mollusca, Cuba.
- MISS W. SAYRE, New York City.
 - About 2,000 small shells.
- GEORGE SILLY, Turks Islands, W. I.
 - Shells, Turks Islands.
- GASTON J. VIVES, La Paz, L. C.
 - 8 Specimens pearl oysters (Meleagrina), La Paz, showing newly formed pearls in situ.
- SILAS C. WHEAT, Brooklyn, N. Y.
 - 2 Specimens Pecten magellanicus Gmelin, Rockaway Beach.

By Exchange

HENRY FAIRFIELD OSBORN, New York City.

Collection of shells consisting of 631 specimens of 288 species; 32 families of univalves and 21 families of bivalves.

THROUGH MUSEUM EXPEDITIONS

Marine, land and fresh water shells, comprising 60 genera and 80 species, 230 specimens, Cuba, Mexico and Texas. (In this collection may be noted fragments and nodular groupings of shells and corals dredged from the mud surrounding the wreck of the Maine, Havana, Cuba.) Collected by Barnum Brown.

3,500 Mollusca, including 150 fossils from New Providence and neighboring cays, Bahama Islands. Collected by H. E. Crampton.

Various mollusc shells, Point Barrow, Alaska. Collected by Vilhjalmr Stefansson.

DEPARTMENT OF GEOLOGY AND INVERTEBRATE PALÆONTOLOGY

By GIFT

ANACONDA COPPER MINING CO., Butte, Mont.

21 Specimens rocks and ores and 1 specimen artificial Bornite.

J. H. BEACH, New York City.

7 Specimens Plumbago, Ceylon, Colombia, S. A.

CHARLES L. BERNHEIMER, Elberon, N. J.

4 Concretionary iron-stone tubes, Eatontown, N. J.

WM. H. BROWN, New York City.

Beach sand and pebbles, elevated beach o miles north of Burlington, Vt.

CALUMET & HECLA MINING CO., Calumet, Mich.

Stamp rock and amygdaloid Copper ores.

DEPARTMENT OF MINERALOGY, transfer.

Meteorites, 51 falls and finds.

DEPARTMENT OF VERTEBRATE PALÆONTOLOGY, transfer.

6 Specimens Ficus russelli, 5 specimens Gastropods, 4 specimens pine cones; and 1,022 species, 4,000 specimens, of Triassic and Tertiary fossils, Vienna, Austria.

E. R. DODGE, New York City.

Shell conglomerate and water-worn stones, North Long Branch, N. J.

ALFRED D. ISRAEL, New York City.

22 Small slabs Italian Marble.

MAMMOTH CAVE ESTATE, Mammoth Cave, Ky.

Stalactites from Mammoth Cave and 11 photographs of interior of the cave.

J. P. MORGAN, JR., New York City.

A general collection of meteorites and minerals owned and collected by the late Prof. S. C. H. Bailey, from various localities; r fossil leaf, Wootton, Colo.

M. A. NEWTON, West Rutland, Vt.

1 Hydromica Schist, Vermont.

GRANT B. SCHLEY, New York City.

Calcite crystals from cave in El Potosi Mine, Chihuahua, Mexico, and 22 photographs of the cave.

S. S. SIMONS, Leola, Pa.

Imprint of cystid plate, Lower Cambrian, near Lancaster, Pa.

EDWIN B. SMITH, New York City.

1 Specimen Sinter, Yellowstone Park.

J. J. STEVENSON, New York City.

2 Specimens Phillipsia stevensoni, Uniontown, Pa.

MARCOS J. TRAZIVUK, New York City.

Sword, from ruins of Military Barracks at St. Pierre, Martinique.

UNITED STATES GEOLOGICAL SURVEY, Washington, D. C.

215 Bottles Petroleum, from Kentucky, Ohio, Illinois, Wyoming, Kansas, Oklahoma, Louisiana and West Virginia.

By Exchange

J. H. CAILLET, Vesoul, France.

6 Ammonites, Tarcenay, Doubs, France.

FOOTE MINERAL CO., Philadelphia, Pa.

- I Meteorite, Amalia Farm, near Gibeon, German South Africa.
- 2 Slices Meteorite, "Kingston," New Mexico.
- 1 Meteorite, "Ahumada," Mexico.
- 1 Meteorite, "Estacado," Mexico.
- 1 Meteorite, "Casas Grandes," Mexico.

By Purchase

Polished slab, Tennessee Marble.

1 Meteorite, "Guerrero," Chihuahua, Mexico.

Sand-polished Quartzite, Luverne, Minn.

I Section Meteorite, "Lampa," Desert of Atacama, Chile.

1 Section Meteorite, "Cullison," Kansas.

42 Carboniferous insects.

I Slice Meteorite, "Shrewsbury," Pennsylvania.

3 Transparencies of Grand Canyon.

500 Specimens fossil corals, Gastropods, etc., Gosau District, Germany.

1 Meteorite, "Ness Co.," Kansas.

I Encrinus liliiformis.

European Paleozoic fossils.

16 Holocystites (Niagara Group), Jefferson Co., Ind.

Relief Map of Panama Canal Zone.

THROUGH PURCHASE AND EXCHANGE

I Slice Meteorite, "Reed City," Michigan.

1,350 Meteorites, "Holbrook," Arizona, stone shower.

Slice of Meteorite, "Amalia Farm," Africa.

I Slice Meteorite, Paulding Co., Ga.

Meteorite, "Shelburne," Ontario.

Meteorite, "Saline," Sheridan Co., Kans.

Meteorite, "Kilbourn," Columbia Co., Wis.

Meteorite, "Kermichel," Morbihan, France.

Meteorite, "Cruz del Aire," Mexico.

THROUGH MUSEUM EXPEDITIONS

- 250 Specimens fossils, shells and corals, Alabama, Florida, Montana, Texas and Cuba. Collected by Barnum Brown.
- 175 Specimens invertebrates and plants, Alberta, Canada. Collected by Barnum Brown.
- 22 Specimens powdered and fused Silica, Sand and Limestones, Iron, Shale, etc., Meteor Crater, Arizona. Collected by E. O. Hovey.
- I. Pot-hole, Grenville limestone, Russell, N. Y. Collected by E. O. Hovey.
- 200 Specimens Agatized Wood, near Adamana, Ariz. Collected by E. O. Hovey.
- 2 Types fossil insects, Wichita Basin, Tex. Collected by W. D. Matthew.

DEPARTMENT OF ANTHROPOLOGY

By GIFT

L. P. ADAMS, New York City.

3 Stone arrow-heads, 2 stone axes and 1 stone scraper, State of Guanajuato, Mex.

GEORGE S. ANDERSON, New York City.

4 Igorot head axes and 1 pipe, Philippine Islands.

C. WM. BEEBE, New York City.

Sample of resin used by Dyaks.

MRS. C. WM. BEEBE, New York City.

Animal skulls, wrapped in palm leaves as a feast offering, Sokais, Malay Peninsula.

HENRY E. CRAMPTON, New York City.

Baskets, bows and arrows and three models of canoes, Aracuna and Ackawoi Indians, Brazil and British Guiana.

LEOPOLD DEMUTH, New York City.

Turkish nargile.

DEPARTMENT OF MINERALOGY, transfer.

2 Egyptian mortars and a pestle, Egypt.

DEPARTMENT OF VERTEBRATE PALÆONTOLOGY, transfer.
Pottery vessels and potsherds, Rio Arriba Co., N. Mex.

JAMES DOUGLAS, New York City.

17 Baskets from the Chetemache, Choctaw, Hupa and Pomo.

G. T. EMMONS, Princeton, N. J.

Stamp for face painting from the Tlingit and pair of leggings from Oregon.

EDWARD FORSHAY, New York City,

Arrow-point, Unionport, N. Y.

ROBERT LUDLOW FOWLER, New York City.

I Chair, I bow, 2 arrows, I paint brush, I fish hook, I spoon and I necklace. Alaska.

JAMES T. GARDNER, New York City.

An archæological perforated stone, New Jersey.

W. O. GREEN, Louisville, Ky.

Spear-head and arrow-head, Jefferson County, Ky.

MISSES ISABELLE H. AND C. M. C. HARDIE, New York City. Ethnological collection from Mindanao, Philippine Islands.

MRS. E. H. HARRIMAN, New York City.

Ethnological collection, Alaskan Eskimo and the Indians of the north Pacific coast.

A. E. HEIGHWAY.

Bag, Valiente Indians, Chiriqui Lagoon, S. A.

ESTATE OF ELIZA KUHL HUGHES, Copper Hill, N. J. Ethnological collection, South America.

J. G. KNOWLTON, New York City.

Cache objects and a knife, Admiralty Inlet; 6 skulls, Eskimo of Ponds Inlet.

MRS. CHARLES H. KNOX, New York City.

I Basket hat, Sitka; I small slate totem pole, Fort Wrangel, Alaska.

MISS MACKENZIE, New York City.

Ethnological collection, Ogowe District, Bulu tribe, Cameroon, Africa.

J. D. MALLONEE, Mt. Vernon, N. Y.

Wooden mortar and pestle, Gilsum, N. H.

CHARLES W. METZGER, Yulan, N. Y.

Polishing stone found near York Lake, Sullivan Co., N. Y.

F. G. METZGER, Yulan, N. Y.

2 Polishing stones found near York Lake, Sullivan Co., N. Y.

OGDEN MILLS, New York City.

Indian sketches in oil by George Catlin.

MASON MITCHELL, Apia, Samoa.

Kava bowl and cocoanut cup, Samoa.

J. PIERPONT MORGAN, New York City,

2 Royal clubs prepared from the horns of the white rhinoceros.

FRANCIS C. NICHOLAS, New York City.

Belt, anklets, and cocoons from which anklets are made Yaqui Indians, Sonora, Mex.

MISS MARY CUHANE ROGERS, Derry, N. H.

Pottery head and fragments of wall with fresco paint, San Juan Teotihuacan.

C. H. SAUER.

Spear-head, Sumatra or Borneo; tool handle with broken blade, Australia; 4 bones probably used in magic, Australia.

C. W. SCHMIDT, New York City.

Neck ornament, German New Guinea; shell arm-ring, Herbertshöhe, New Britain.

M. K. SHALER, Brussels, Belgium.

Ethnological collection, from the Congo, Africa.

MRS. WALTER SHIRLAW, New York City.

Collection from the Crow and Cheyenne of Montana.

MRS. EDWARD SILK, New York City.

Hammerstone, arrow-points, and pestle found near Middletown, N.Y.

ALANSON SKINNER, Tompkinsville, S. I.

Knife blade, found on bank of Wissahoming Creek, Colmar, Pa.; woven basswood bag, Menomini Indians, Wisconsin.

MRS. ANDREW H. SMITH, Geneva, N. Y. Bridle, Mexico.

ESTATE OF EDMOND REUEL SMITH, New York City. Ethnological collection from the Congo, Africa.

A. F. SPIEGELBERG, Santa Fé, N. Mex.
Dried buffalo meat from 101 Ranch.

H. J. SPINDEN, New York City.

Porcupine quill-worked head-dress, Standing Rock Reservation, N. Dak.

MRS. RUTH STERRY.

2 Bows, 15 arrows, 2 knife sheaths, 1 beaded ornament, 2 bandoliers.

FREDERICK TAYLOR, F.R.G.S., New York City.

Ethnological collection, Andaman Islands.

J. H. THOMPSON, New York City.

2 Pieces of buck horn, 3 arrow points and archaeological stone ax, North America.

HENRY THURSTON, Floral Park, N. Y.

I Piece of trade pottery, I piece of native pottery, trade beads and two native shell beads, mound at Seven Oaks, Fla.

FRANK A. VANIER, New York City.

Spear-head, Philippine Islands.

W. S. WENSLEY, New York City. 3 Pairs moccasins, San Carlos Apache, Pueblo and Mexican.

CHARLES R. WHITTIER, New York City.

Broken pestle found in 1867 on the beach at Marblehead.

H. A. J. WILKENS, New York City.

Copper implement, Cuzco, Peru.

WILLIAM FLOYD AND BLAIR S. WILLIAMS, Mastic, L. I.
Parts of three skeletons, Sandy Point, Mastic, L. I.

FRANK WOOD, New Bedford, Mass.

Piece of tapa cloth, South Sea Islands.

By Exchange

AUSTRALIAN MUSEUM, Sidney, Australia.

Ethnological collection, Australia.

G. T. EMMONS, Princeton, N. J.

Ethnological collection, Alaska and north Pacific coast.

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

Cast of "Neanderthal" skeleton and cast of Mauer jaw; hafted maul, 2 hafted hammers, hafted spade, handle of stone hammer, hammerstone, wooden implements, skin sack, coiled baskets, found with "copperfied mummy" on an island off the coast of Chile.

FRANK WOOD, New Bedford, Mass.

3 Paddles, South Sea Islands; 6 Baskets, New England.

By Purchase

Eskimo kayak and outfit.

2 Buffalo hide shield covers. Mandan.

Navajo medicine man's outfit, New Mexico.

Collection of pottery fragments and stone objects, Argentine.

Collection of Swiss Lake Dweller relics, containing I partially drilled ax, 30 stone implements, chipped points, etc.

3 Nootka baskets.

10 Pottery vessels.

Ethnological collection, Shawnee and Delaware of Oklahoma.

Tubular pipe, stone celt and stone paint cup, banks of the Hudson, Deny Point, Newburgh.

Small silver figurine.

Pottery vessel representing the "snail god," I celt, 4 knives, I pottery whistle representing human figure, 3 pottery spindle whorls, I bone spindle whorl and I amulet, Costa Rica.

47 Photographs of Southwest Indians.

About 100 terra cotta heads and a collection of obsidian objects, San Juan Teotihuacan, Mexico.

I Moose hide canoe and 3 baskets from the Penobscot and ethnological collection from the Malecite, Oldtown, Me.

Model of dance house with ivory figures, Alaska.

I Navajo medicine basket.

Ethnological collection, Penobscot Indians.

Ethnological collection, Luzon, Philippine Islands.

Stone tablet, Pekin, China.

Ethnological specimens, Indians of Virginia.

Archæological collections from European caverns, including a stone slab bearing an engraving of a horse, Aurignacian Period.

THROUGH MUSEUM EXPEDITIONS

- Ethnological collection, Ute and Wind River Shoshone, from Colorado and Wyoming. Collected by Robert H. Lowie.
- Archæological collections from the Rio Grande valley, chiefly from the ruins of Galisteo valley and Potrero Viejo. Collected by Nels C. Nelson.
- Ethnological collection, Potawatomi Indians, Carter's Siding, Wis. Collected by John V. Satterlee.
- Archæological collection, New Jersey rock-shelters. Collected by Max Schrabisch.
- Ethnological collections, Menomini and Potawatomi Indians, Wisconsin. Collected by Alanson Skinner.
- Ethnological and archæological collections, Maya sculptures and pottery, Rio Grande Pueblos and the Hopi of New Mexico. Collected by H. J. Spinden.
- Ethnological and archæological collection, Eskimo of Coronation Gulf and Point Barrow. Collected by Vilhjalmr Stefansson.
- Molds from the Temple of the Tigers, Chichen Itza, Yucatan. Collected by Edward H. Thompson.
- Ethnological collections from the Mandan, Ft. Berthold Reservation, N. Dak. Collected by Gilbert L. Wilson.
- 3 Aleutian baskets, 16 Tlingit baskets, 1 Athapascan basket; 1 arrow-straightener, tinder and strike-a-light, Blackfoot. Collected by Clark Wissler.

DEPARTMENT OF PUBLIC HEALTH

By GIFT

AGRICULTURAL COLLEGE, Madison, Wis.

1 Bacterial culture.

ANONYMOUS.

I Bacterial culture.

BIEHN BACTERIAL LABORATORIES, Chicago, Ill.

11 Bacterial cultures.

BUREAU OF ANIMAL INDUSTRY, Washington, D. C. 3 Bacterial cultures.

BUREAU OF PLANT INDUSTRY, Washington, D. C. 6 Bacterial cultures.

H. WARREN CROWE, Yelverton, England.

2 Bacterial cultures.

HARVARD MEDICAL SCHOOL, Boston, Mass. 16 Bacterial cultures.

A. P. HITCHENS, Glen Olden, Pa.

I Bacterial culture.

HYGIENIC LABORATORY, Washington, D. C. 5 Bacterial cultures.

JOHNS HOPKINS UNIVERSITY HOSPITAL, Baltimore, Md. 2 Bacterial cultures,

KRAL'S, F., BAKTERIOLOGISCHES MUSEUM, Vienna, Austria.

10 Bacterial cultures.

LEDERLE LABORATORIES, New York City.
4 Bacterial cultures.

MARYLAND STATE HEALTH DEPARTMENT, Baltimore, Md. 2 Bacterial cultures.

MT. PROSPECT LABORATORY, Brooklyn, N. Y.

1 Bacterial culture.

NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN, Roxbury, Mass.

5 Bacterial cultures.

NEW YORK AGRICULTURAL EXPERIMENT STATION, Geneva, N. Y.

7 Bacterial cultures.

NEW YORK POST GRADUATE MEDICAL COLLEGE, New York City. 3 Bacterial cultures.

NEW YORK STATE VETERINARY COLLEGE, Ithaca, N. Y. I Bacterial culture.

PARKE, DAVIS & CO., Detroit, Mich. 3 Bacterial cultures.

PUBLIC HEALTH AND MARINE HOSPITAL SERVICE, San Francisco, Cal.

2 Bacterial cultures.

RHODE ISLAND AGRICULTURAL EXPERIMENT STATION, Kingston, R. I.

2 Bacterial cultures.

RUTLAND STATE SANATORIUM, Rutland, Mass. 2 Bacterial cultures.

L. P. SHIPPEN, Baltimore, Md. 1 Bacterial culture.

J. P. SIMONDS, Indianapolis, Ind.

1 Bacterial culture.

UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa. 4 Bacterial cultures.

UNIVERSITY OF VERMONT, Burlington, Vt. 3 Bacterial cultures.

UNIVERSITY OF WISCONSIN, Madison, Wis.

7 Bacterial cultures.

By Exchange

KRAL'S, F., BAKTERIOLOGISCHES MUSEUM, Vienna, Austria. 9 Bacterial cultures.

DEPARTMENT OF WOODS AND FORESTRY

By GIFT

AMERICAN RATTAN AND REED MANUFACTURING CO.,
Brooklyn, N. Y.

Piece of small rattan, 50 feet long.

E. H. BABBITT, Hanover, N. H.

Specimen of chestnut showing natural grafting.

ARTHUR C. DUCAT, U. S. A.

Piece of wood, Philippine Islands.

W. C. WOLCOTT, Brooklyn, N. Y.

2 Specimens of wood (Comino crespo), one finished, one rough, Antioquia, Colombia.

INCORPORATION

AN ACT

TO INCORPORATE THE

AMERICAN MUSEUM OF NATURAL HISTORY

Passed April 6, 1869

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. John David Wolfe, Robert Colgate, Benjamin H. Field, Robert L. Stuart, Adrian Iselin, Benjamin B. Sherman, William A. Haines, Theodore Roosevelt, Howard Potter, William T. Blodgett, Morris K. Jesup, D. Jackson Steward, J. Pierpont Morgan, A. G. P. Dodge, Chas. A. Dana, Joseph H. Choate and Henry Parish, and such persons as may hereafter become members of the Corporation hereby created, are hereby created a body corporate, by the name of "The American Museum of Natural History," to be located in the City of New York, 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.*

SEC. 2. Said Corporation shall have power to make and adopt a Constitution and By-Laws, and to make rules and regulations for the admission, suspension and expulsion of its members, and their government, the number and election of its officers, and to define their duties, and for the safe keeping of its property, and, from time to time, to alter and modify such Constitution, By-Laws, Rules and Regulations. Until

an election shall be held pursuant to such Constitution and By-Laws, the persons named in the first section of this Act shall be, and are hereby declared to be, the Trustees and Managers of said Corporation and its property.

- SEC. 3. Said Corporation may take and hold by gift, devise, bequest, purchase or lease, either absolutely or in trust, for any purpose comprised in the objects of the Corporation, any real or personal estate, necessary or proper for the purposes of its incorporation. †
- SEC. 4. Said Corporation shall possess the general powers, and be subject to the restrictions and liabilities, prescribed in the Third Title of the Eighteenth Chapter of the First Part of the Revised Statutes, and shall be and be classed as an educational corporation.*
 - SEC. 5. This Act shall take effect immediately.

STATE OF NEW YORK,
OFFICE OF THE SECRETARY OF STATE.

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom, and of the whole of said original law.

Given under my hand and seal of Office at the City of Albany,

[I., S.] this fourteenth day of April, in the year one thousand eight hundred and sixty-nine.

D. WILLERS, Jr., Deputy Secretary of State.

[†] Section 3. As amended by Chapter 303, Laws of 1898, of the State of New York, entitled "An Act to amend chapter one hundred and nineteen, laws of eighteen hundred and sixty-nine, entitled 'An Act to incorporate the American Museum of Natural History,' relative to its charter."

^{*} Sections 1 and 4. As amended by Chapter 162 of the Laws of 1909, entitled "An Act to amend chapter one hundred and nineteen of the laws of eighteen hundred and sixty-nine, entitled "An Act to incorporate the American Museum of Natural History," in relation to classifying said corporation and modifying its corporate purposes."

CONTRACT

WITH THE DEPARTMENT OF PUBLIC PARKS

FOR THE OCCUPATION OF THE NEW BUILDING

This Agreement, made and concluded on the twenty-second day of December, in the year one thousand eight hundred and seventy-seven, between the Department of Public Parks of the City of New York, the party of the first part, and the American Museum of Natural History, party of the second part, witnesseth:

Whereas, by an Act of the Legislature of the State of New York, passed April 22d, 1876, entitled "An Act in relation to the powers and duties of the Board of Commissioners of the Department of Public Parks, in connection with the American Museum of Natural History, and the Metropolitan Museum of Art," the said party of the first part is authorized and directed to enter into a contract with the said party of the second part, for the occupation by it of the buildings erected or to be erected on that portion of the Central Park in the City of New York, known as Manhattan Square, and for transferring thereto and establishing and maintaining therein its museum, library and collections, and carrying out the objects and purposes of said party of the second part; and,

Whereas, a building contemplated by said act has now been erected and nearly completed and equipped in a manner suitable for the purposes of said Museum, as provided in the first section of the Act of May 15, 1875, known as Chapter 351, of the Laws of 1875, for the purpose of establishing and maintaining therein the said Museum, as provided by the said last-named act, and by the Act of April 5, 1871, known as Chapter 290, of the Laws of 1871; and,

Whereas, it is desired as well by the said party of the first part, as by the said party of the second part, that, immediately upon the completion and equipment of said building, the said party of the second part should be established therein, and should transfer thereto its museum, library and collections, and carry out the objects and purposes of the said party of the second part;

Now, therefore, it is agreed by and between the said parties as follows, namely:

First.—That the said party of the first part has granted and demised and let, and doth, by these presents, grant, demise and let, unto the said party of the second part, the said buildings and the appurtenances thereunto belonging, to have and to hold the same so long as the said party of the second part shall continue to carry out the objects and purposes defined in its charter; or such other objects and purposes as by any future amendment of said charter may be authorized; and shall faithfully keep, perform, and observe the covenants and conditions herein contained on its part to be kept, performed and observed, or until the said building shall be surrendered by the said party of the second part, as hereinafter provided.

Secondly.—That neither the party of the first part, its successor or successors, nor the Mayor, Aldermen and Commonalty of the City of New York, shall be in any manner chargeable or liable for the preservation of the said building or the property of the party of the second part which may be placed therein, against fire, or for any damage or injury that may be caused by fire to the said property; but it is agreed that, damages as aforesaid excepted, the said party of the first part will keep said building, from time to time, in repair.

Thirdly.—That as soon after the completion and equipment of said building as practicable, said party of the second part shall transfer to, and place and arrange in said building, its museum, library and collections, or such portion thereof as can be properly displayed to the public therein, and shall have and enjoy the exclusive use of the whole of said building,

subject to the provisions herein contained, and the rules and regulations herein prescribed, during the continuance of the term granted, or until a surrender thereof, as herein provided.

Fourthly.—That the exhibition halls of said building shall. on Wednesday, Thursday, Friday and Saturday of each week. and on all legal or public holidays, except Sundays, be kept open and accessible to the public, free of charge, from nine o'clock A.M. until half an hour before sunset, under such rules and regulations as the party of the second part shall from time to time prescribe; but on the remaining days of the week the same shall be only open for exhibition to such persons, upon such terms as the said party of the second part shall from time to time direct. But all professors and teachers of the public schools of the City of New York, or other institutions of learning in said city, in which instruction is given free of charge, shall be admitted to all the advantages afforded by the said party of the second part, through its museum, library, apparatus, and collections, or otherwise, for study, research and investigation, free of any charge therefor, and to the same extent and on the same terms and conditions as any other persons are admitted to such advantages, as aforesaid.

Fifthly.—That the museum, library and collections, and all other property of said party of the second part, which shall or may be placed in said building, shall continue to be and remain absolutely the property of said party of the second part, and neither the said party of the first part nor the said the Mayor, Aldermen and Commonalty, shall by reason of said property being placed in said building, or continuing therein, have any right, title, property or interest therein; nor shall the said party of the second part, by reason of its occupation and use of said building under this agreement, acquire, or be deemed to have any right, title, property or interest in said building, except so far as expressly granted by this agreement.

Sixthly.—That the said party of the second part shall, on or before the first day of May, in every year, during the continuance of this agreement, submit to the said party of the first part, its successor or successors, a detailed printed report of the

158 Contract

operations and transactions of the said party of the second part, and all its receipts and payments, for the year ending with the 31st day of December next preceding.

Seventhly.—That said party of the first part shall have, at all times, access to every part of the said building for general visitation and supervision, and also for the purpose of the performance of the duties devolved upon it by the laws of the State of New York, or of the City of New York. That the police powers and supervision of said party of the first part shall extend in, through and about said building. That the said party of the second part may appoint, direct, control and remove all persons employed within said building, and in and about the care of said building, and the museum, library and collections therein contained.

Eighthly.—That said party of the second part may, at any time, after the expiration of three, and before the expiration of six, months from the date of the service of a notice in writing to said party of the first part, its successor or successors, or to the Mayor of the City of New York, of its intention so to do, quit and surrender the said premises and remove all its property therefrom: and upon and after such notice, the said party of the second part shall and will, at the expiration of the said six months, quietly and peaceably yield up and surrender unto the said party of the first part and its successors all and singular the aforesaid demised premises. And it is expressly understood and agreed by and between the parties hereto that if the said party of the second part shall omit to do, perform, fulfill or keep any or either of the covenants, articles, clauses and agreements, matters and things herein contained, which on its part are to be done, performed, fulfilled or kept, according to the true intent and meaning of these presents, then and from thenceforth this grant and demise shall be utterly null and And in such case it shall and may be lawful for said Department to serve or cause to be served on the said party of the second part a notice in writing declaring that the said grant hereinbefore made has become utterly null and void and thereupon the said party of the first part, its successor or successors (ninety days' time being first given to the said party of the second part to remove its property therefrom), may reënter, and shall again have, repossess and enjoy the premises aforementioned, the same as in their first and former estate, and in like manner as though these presents had never been made, without let or hindrance of the said party of the second part, anything here contained to the contrary notwith-standing.

Ninthly.—And it is further expressly understood and agreed, by and between the parties hereto, that this agreement may be wholly canceled and annulled, or, from time to time, altered, or modified, as may be agreed, in writing, between the said parties, or their successors, anything herein contained to the contrary in anywise notwithstanding.

In witness whereof, the party of the first part hath caused this agreement to be executed by their President and Secretary, pursuant to a resolution of the Board of Commissioners of said Department, adopted at a meeting held on the thirtieth day of January, in the year of our Lord one thousand eight hundred and seventy-eight; and the said party of the second part hath caused the same to be executed by their President, and their official seal affixed thereto, pursuant to a resolution of the Trustees of the American Museum of Natural History, adopted at a meeting held on the twelfth day of February, in the year of our Lord one thousand eight hundred and seventy-seven.

In presence of D. Porter Lord.

JAMES F. WENMAN,

President Department of Public Parks of the City of New York.

WILLIAM IRWIN,

Secretary Department of Public Parks of the City of New York.

ROBERT L. STUART,

President American Museum of Natural History.

SEAL of the American Museum of Natural History STATE OF NEW YORK,
City and County of New York,

On this 12th day of February, in the year 1878, before me personally came James F. Wenman, President of the Department of Public Parks of the City of New York, and William Irwin, Secretary of the said Department of Public Parks, with both of whom I am personally acquainted, and both of whom being by me duly sworn, said that they reside in the City and County of New York; that the said James F. Wenman is the President, and the said William Irwin is the Secretary of the said Department of Public Parks, and that they signed their names to the foregoing agreement by order of the Board of Commissioners of the said Department of Public Parks, as such President and Secretary.

W. C. BESSON,

[SEAL.]

(73) Notary Public N. Y. Co.

STATE OF NEW YORK,
City and County of New York,

On this 12th day of February, in the year 1878, before me personally came Robert L. Stuart, the President of the American Museum of Natural History, with whom I am personally acquainted, who being by me duly sworn, said that he resides in the City and County of New York, that he is the President of the American Museum of Natural History, and that he knows the corporate seal of said museum, that the seal affixed to the foregoing agreement is such corporate seal, that it is affixed thereto by order of the Board of Trustees of said American Museum of Natural History, and that he signed his name thereto by the like order, as President of said Museum.

W. C. BESSON,

[SEAL.]

(73) Notary Public N. Y. Co.

Recorded in the office of the Register of the City and County of New York in Liber 1426 of Cons., page 402, February 16, A. D. 1878, at 9 o'clock A.M., and examined.

Witness my hand and official seal,

FREDERICK W. LOEW,

[SEAL.]

Register.

Note.—July 25, 1892, by consent of the Trustees, section fourth was modified to enable the Trustees to open the Museum free to the public "throughout the year, excepting Mondays, but including Sunday afternoons and two evenings of each week."

June 29, 1893, by consent of the Trustees, section fourth was modified to enable the Trustees to open the Museum free of charge to the public "throughout the year for five days in each week, one of which shall be Sunday afternoon,

and also two evenings of each week.'

CONSTITUTION

OF THE

AMERICAN MUSEUM OF NATURAL HISTORY

IN THE CITY OF NEW YORK

REVISED AND AMENDED TO FEBRUARY 5, 1912

ARTICLE I

This Corporation shall be styled The American Museum of Natural History.

ARTICLE II

The several persons named in the charter, and such others as they may add to their number, which shall not exceed twenty-five in all at one time, and in addition, the Mayor, the Comptroller, and the President of the Department of Public Parks, of the City of New York, for the time being, ex-officio, shall be the Trustees to manage the affairs, property and business of the Corporation.

The members of the Board of Trustees holding office at the time of the regular quarterly meeting of November, 1905, shall then, or at the first meeting of the Board thereafter, be divided by lot into five classes of five members each, to serve for the terms of one, two, three, four and five years respectively from the date of the annual meeting of February, 1006. The Board of Trustees at each annual meeting thereafter, or an adjournment thereof, shall by ballot, by a majority vote of the Trustees present at the meeting, elect five Trustees to supply the places of the class whose term expires at that meeting; said newly elected Trustees to hold office for five years or until their successors are elected. In case of a vacancy in the Board by death, resignation, disqualification or otherwise, the vacancy shall be filled by ballot, in like manner, by the Board of Trustees at any regular meeting or special meeting. for the unexpired term. No person shall be eligible for election as Trustee unless his name shall be presented by the Nominating Committee at a regular or special meeting of the

Board previous to the meeting at which his name shall be acted upon. Written notice of such election and the vacancy to be filled shall be sent to the Trustees at least one week prior to said meeting.

ARTICLE III

The Trustees shall meet regularly, on the first Monday of every February and May, and the second Monday of November, at an hour and place to be designated, on at least one week's written notice from the Secretary, and shall annually, at the regular meeting in February, elect the officers and committees for the ensuing year. They shall also meet at any other time to transact special business on a call of the Secretary, who shall issue such call whenever requested so to do, in writing, by five Trustees, or by the President, and give written notice to each Trustee of such special meeting, and of the object thereof at least three days before the meeting is held.

ARTICLE IV

Section 1. The officers of said Corporation shall be a President, a First Vice-President, a Second Vice-President, a Treasurer and a Secretary, who shall be elected from among the Trustees. These officers shall be elected by ballot, and the persons having a majority of the votes cast shall be deemed duly elected. They shall hold their offices for one year or until their successors shall be elected.

SEC. 2. The Board of Trustees shall appoint each year, in such manner as it may direct, the following Standing Committees: an Executive Committee, an Auditing Committee, a Finance Committee and a Nominating Committee. These Committees are all to be elected from the Trustees, and the members shall hold office for one year or until their successors shall be elected.

The Board of Trustees shall also have authority to appoint such other committees or officers as they may at any time deem desirable, and to delegate to them such powers as may be necessary.

The Board of Trustees shall have power to appoint a Director who, acting under the authority and control of the President, shall be the chief administrative officer of the Museum; but shall not be a member of the Board. He shall hold office during the pleasure of the Board.

ARTICLE V

SECTION 1. The President shall have the general supervision, direction and control of the affairs of the Corporation, and shall preside at all the meetings of the Museum and of the Trustees. In his absence or inability to act, the First or Second Vice-President shall act in his place, or in the absence of these officers, a Trustee appointed by the Executive Committee.

SEC. 2. The Secretary shall be present, unless otherwise ordered by the Board, at all the meetings of the Museum and Trustees, of the Executive Committee and such other Committees as the Board may direct. He shall keep a careful record of the proceedings of such meetings, shall preserve the seal, archives and correspondence of the Museum, shall issue notices for all meetings of the Trustees and various committees, and shall perform such other duties as the Board may direct.

The Board of Trustees shall have power to appoint an Assistant Secretary, who, under its direction, shall perform the duties of the Secretary in his absence or inability to act. The Assistant Secretary shall be an administrative officer of the Museum and shall act under the direction of the President or the Secretary. He shall hold office during the pleasure of the Board.

SEC. 3. The Treasurer shall receive and disburse the funds of the Museum. He shall report in writing, at each regular meeting of the Trustees, the balance of money on hand, and the outstanding obligations of the Museum, as far as practicable; and shall make a full report at the annual meeting of the receipts and disbursements of the past year, with such

suggestions as to the financial management of the Museum as he may deem proper.

The Board of Trustees shall have power to appoint an Assistant Treasurer, who shall perform such duties as it may direct, and who shall hold office during its pleasure.

SEC. 4. The accounts of the Museum shall be kept at the General Office, in books belonging to it, which shall at all times be open to the inspection of the Trustees.

ARTICLE VI

The Executive Committee shall consist of nine Trustees, the President, the Secretary and the Treasurer ex-officio and six others, to be appointed each year in the manner provided in Article IV. They shall have the control and regulation of the collections, library and other property of the Museum; and shall have power generally to conduct the business of the Museum, subject to the approval of the Board. Five members of the Committee shall constitute a quorum for the transaction of business.

ARTICLE VII

The Auditing Committee shall consist of three Trustees. They shall have the books of the Museum duly audited, at least once in six months, by an authorized public accountant to be selected by them.

ARTICLE VIII

The Finance Committee shall consist of five Trustees, the Treasurer *ex-officio* and four others to be elected each year in the manner provided in Article IV. They shall have general charge of the moneys and securities of the Endowment and other permanent funds of the Museum, and such real estate as may become the property of the Corporation, with authority to invest, sell and reinvest the same, subject to the approval of the Board of Trustees.

Three members shall constitute a quorum.

ARTICLE IX

The Nominating Committee shall be composed of three Trustees, to whom shall be first submitted the names of any persons proposed as candidates for election to membership in the Board of Trustees. The Committee shall report on such candidates from time to time, as it may deem to be for the interest of the Museum. A fortnight before the annual meeting they shall prepare and mail to each member of the Board of Trustees a list of the candidates for officers and Trustees to be balloted for at the said meeting.

ARTICLE X

Nine Trustees shall constitute a quorum for the transaction of business, but five Trustees meeting may adjourn and transact current business, subject to the subsequent approval of a meeting at which a quorum shall be present.

ARTICLE XI

By-Laws may be made from time to time by the Trustees providing for the care and management of the property of the Corporation and for the government of its affairs, and may be amended at any meeting of the Trustees by a vote of a majority of those present, after a month's notice in writing of such proposed amendment.

ARTICLE XII

Any person contributing or devising \$50,000 in cash, securities or property to the funds of the Museum may be elected a Benefactor of the Museum.

Any person contributing \$10,000 to the funds of the Museum, at one time, may be elected an Associate Benefactor of the Museum, who after being so elected shall have the right in perpetuity to appoint the successor in such associate benefactorship.

Any person contributing \$1,000 to the funds of the Museum, at one time, may be elected a Patron of the Museum, who

after being so elected shall have the right in perpetuity to appoint the successor in such patronship.

Any person contributing \$500 to the funds of the Museum, at one time, may be elected a Fellow of the Museum, who after being so elected shall have the right to appoint one successor in such fellowship.

No appointment of a successor shall be valid unless the same shall be in writing, endorsed on the certificate, or by the last will and testament.

Any person contributing \$100 to the funds of the Museum, at one time, may be elected a Life Member of the Museum.

Any person may be elected to the above degrees, who shall have given to the Museum books or specimens, which shall have been accepted by the Executive Committee, or by the President, to the value of twice the amount in money requisite to his admission to the same degree.

Benefactors, Associate Benefactors, Patrons, Fellows and Life Members shall be elected by the Board of Trustees or by the Executive Committee, and the President and Secretary shall issue diplomas accordingly under the seal of the Museum.

In recognition of scientific services rendered, the Trustees may also elect Honorary Fellows of the Museum in their discretion.

ARTICLE XIII

Any Trustee who shall fail to attend three consecutive regular meetings of the Board shall cease to be a Trustee, unless excused by the Board.

ARTICLE XIV

No alterations shall be made in this Constitution, unless at a regular meeting of the Trustees, or at a special meeting called for this purpose; nor by the votes of less than a majority of all the Trustees; nor without notice in writing of the proposed alterations, embodying the amendment proposed to be made, having been given at a previous regular meeting.

BY-LAWS

REVISED AND AMENDED TO FEBRUARY 5, 1912

Ι

If any Trustee shall accept a salary from this Corporation he shall thereby be disqualified for the time being from acting as a Trustee thereof; provided, that the Board of Trustees shall have power to suspend the operation of this law in any special case.

II

Any vacancies occurring in the membership of the several committees during the interval between the regular meetings of the Board of Trustees may be filled at a regular meeting of the Executive Committee, until the next meeting of the Board.

III

The regular meetings of the Executive Committee shall be held on the third Wednesday of each month, but special meetings may be held at any other time on a two days' call issued by order of the President, or at the request of three of its members.

IV

All bequests or legacies, not especially designated, and all membership fees, excepting Annual and Sustaining Membership fees, shall hereafter be applied to the *Permanent Endowment Fund*, the interest only of which shall be applied to the use of the Museum as the Board shall direct.

\mathbf{v}

SECTION 1. No indebtedness (other than for current expenses) shall be incurred by any committee, officer or employee of the Museum, except as provided for in the Constitution.

SEC. 2. No bills shall be paid unless approved by the Director or, in his absence, the Assistant Secretary, and countersigned by one of the following named Trustees: President, Chairman of the Executive Committee, or Treasurer.

SEC. 3. The accounts of the Museum shall be under the care of a Bursar, who, on recommendation of the President and the Treasurer, shall be appointed by the Board of Trustees and be under its direction. He shall give such bonds for the faithful performance of his duties as the Board may direct, and shall hold office during the pleasure of the Board. The Bursar, acting under the direction of the President or Treasurer, shall be the official representative of the Treasurer at the Museum, and as such shall be the head of the Treasurer's office there.

VI

The Board of Trustees shall have power to appoint, on recommendation of the Director, a Superintendent of Building and such other officers as may be deemed necessary, who, acting under the instruction of the Director, shall have charge of the construction, maintenance, alterations and repairs of the buildings, and shall be responsible for their sanitary condition. They shall hold office during the pleasure of the Board.

VII

The Board of Trustees shall have power to appoint a Registrar, who, acting under the instruction of the Director or Assistant Secretary, shall inspect all incoming and outgoing shipments, and shall attend to the details of matters relating to customs.

VIII

Benefactors, giving \$50,000, are each entitled to I Subscriber's Ticket, 10 Complimentary Season Tickets and 10 Tickets for a single admission.

Associate Benefactors, giving \$10,000, are each entitled to I Subscriber's Ticket, 10 Complimentary Season Tickets and 10 Tickets for a single admission.

Patrons, giving \$1,000, are each entitled to I Subscriber's Ticket, 5 Complimentary Season Tickets and 10 Tickets for a single admission.

Fellows, giving \$500, are each entitled to I Subscriber's Ticket and IO Tickets for a single admission.

Life Members, giving \$100, are each entitled to 1 Subscriber's Ticket and 7 Tickets for a single admission.

Sustaining Members, paying \$25 yearly, are each entitled to I Subscriber's Ticket and 5 Tickets for a single admission.

Annual Members, paying \$10 yearly, are each entitled to 1 Subscriber's Ticket and 4 Tickets for a single admission.

Note.—A Subscriber's Ticket admits to the Members' Room, also to all Receptions and Special Exhibitions, and may be used by any member of the Subscriber's family.

The Single Admission Tickets admit the bearers to the Members' Room, and are issued to Subscribers for distribution among friends and visitors.

FOR THE CONSTRUCTION OF THE FOUNDATION FOR THE SOUTHEAST WING AND COURT BUILDING OF THE AMERICAN MUSEUM OF NATURAL HISTORY

LEGAL ENACTMENTS OF 1911

BY THE BOARD OF ALDERMEN

AN ORDINANCE providing for an issue of corporate stock of The City of New York in the sum of two hundred thousand dollars, to provide means for additions to Museum of Natural History, under the jurisdiction of the Department of Parks, Manhattan and Richmond.

Be it Ordained by the Board of Aldermen of The City of New York as follows:

Section 1. The Board of Aldermen hereby approves of and concurs in the following resolution adopted by the Board of Estimate and Apportionment July 17, 1911, and authorizes the Comptroller to issue corporate stock of The City of New York to the amount and for the purposes therein specified:

"Resolved, That, pursuant to the provisions of section 47 of the Greater New York Charter, as amended, the Board of Estimate and Apportionment hereby approves of the issue of corporate stock of The City of New York to an amount not exceeding two hundred thousand dollars (\$200,000), to provide means for the construction of a foundation for the southeast wing and court building of the American Museum of Natural History, under the jurisdiction of the Department of Parks, Boroughs of Manhattan and Richmond, and that when authority therefor shall have been obtained from the Board of Aldermen, the Comptroller be and is hereby authorized to issue said corporate stock of The City of New York in the manner provided by section 169 of the Greater New York Charter, the proceeds thereof to the amount of the par value of the stock to be applied to the purposes aforesaid."

Adopted by the Board of Aldermen July 31, 1911, a majority of all the members elected voting in favor thereof.

Received from his Honor, the Mayor, Sept. 19, 1911, without his approval or disapproval thereof; therefore, as provided in section 40 of the Greater New York Charter, the same took effect as if he had approved it.

(Signed) P. J. Scully, Clerk.

APPROPRIATIONS AND EXPENDITURES MADE THEREON TO DECEMBER 31, 1912

RECEIPTS:

By Direct Appropriation (C.D.P. 3b)......\$200,000 00

EXPENDITURES:

Phillips & Worthington (boring for foundation)	\$448	83		
Engineers' Services	89	26		
Benedetto & Egan Construction Co. (excavating)	49,796	00		
Architects' Fees (reserved)	37,857	1.4	88,191	23
Balance December 31, 1912			\$111,808	77

FOR THE EQUIPMENT AND CONSTRUCTION OF PERMANENT IMPROVEMENTS TO THE AMERICAN MUSEUM OF NATURAL HISTORY

LEGAL ENACTMENTS OF 1911

BY THE BOARD OF ALDERMEN

AN ORDINANCE providing for an issue of corporate stock of The City of New York in the sum of seventy-five thousand dollars, to provide means for furnishings for Museum of Natural History, under the jurisdiction of the Department of Parks, Manhattan and Richmond.

Be it Ordained by the Board of Aldermen of The City of New York as

follows:

Section 1. The Board of Aldermen hereby approves of and concurs in the following resolution adopted by the Board of Estimate and Apportionment July 17, 1911, and authorizes the Comptroller to issue corporate stock of The City of New York to the amount and for the purposes therein specified:

"Resolved, That, pursuant to the provisions of section 47 of the Greater New York Charter, as amended, the Board of Estimate and Apportionment hereby approves of the issue of corporate stock of The City of New York to an amount not exceeding seventy-five thousand dollars (\$75,000), to provide means for the purchase of cases, bookstacks, furniture, etc., for equipment, and the construction of permanent improvements for the American Museum of Natural History, under the jurisdiction of the Department of Parks, Boroughs of Manhattan and Richmond, and that when authority therefor shall have been obtained from the Board of Aldermen, the Comptroller be and is hereby authorized to issue said corporate stock of The City of New York in the manner provided by section 169 of the Greater New York Charter, the proceeds thereof to the amount of the par value of the stock to be applied to the purposes aforesaid."

Adopted by the Board of Aldermen July 31, 1911, a majority of all the

members elected voting in favor thereof.

Received from his Honor, the Mayor, Sept. 19, 1911, without his approval or disapproval thereof; therefore, as provided in section 40 of the Greater New York Charter, the same took effect as if he had approved it.

(Signed) P. J. SCULLY, Clerk.

APPROPRIATIONS AND EXPENDITURES THEREON TO

DECEMBER 31, 1912			
RECEIPTS:			
By Direct Appropriation (C.D.P. 3c)		\$75,000	00
Cancellation by Request		10,000	00
Available Balance			
EXPENDITURES:			
Contracts Paid:			
Balfour & Koch \$2,278 00			
The Van Dorn Iron Works Co 3,872 00	\$6,150 00		
Open Market Orders	16,679 34		
Mechanics' Pay Roll	22,755 08		
Outstanding Open Market Orders	1,523 22		
Contracts Outstanding:			
Joseph Di Benedetto \$2,698 oo			
American Wood Working Machin-			
ery Co 1,100 00			
The Snead & Co. Iron Works 4,320 00			
Trowbridge & Livingston 508 03	8,626 03	55,733	67
Balance December 31, 1912		\$0,266	33

LEGAL ENACTMENTS OF 1912

Appropriation of Special Revenue Bonds by the Board of Estimate and Apportionment (R.D.P. 31).

Resolved, That the resolution adopted by the Board of Aldermen on May 28, 1912, requesting an issue of special revenue bonds in the sum of ten thousand dollars (\$10,000), the proceeds whereof to be used by the Department of Parks, Manhattan and Richmond, for the purpose of making necessary repairs to the American Museum of Natural History, all obligations incurred hereunder to be contracted for before December 31, 1912, be and the same is hereby approved of and concurred in by the Board of Estimate and Apportionment, and for the purpose of providing means therefor, the Comptroller be and is hereby authorized, pursuant to the provisions of subdivision 8 of section 188 of the Greater New York Charter, to issue special revenue bonds of The City of New York to an amount not exceeding ten thousand dollars (\$10,000), redeemable from the tax levy of the year succeeding the year of their issue, provided no portion of said proceeds shall be used for the payment of services of departmental employees.

Adopted by the Board of Estimate and Apportionment July 11, 1912.

APPROPRIATIONS AND EXPENDITURES THEREON TO DECEMBER 31, 1912

RECEIPTS:		
By Direct Appropriation (R. P. D. 3l)	\$10,000	00
EXPENDITURES:		
For repointing brick and stone work, repairing and replacing roof and skylights, replacing window sashes, replacing electric fixtures and relaying tile floor	9,992	50
Balance December 31, 1912	\$7	50

LIST OF TRUSTEES AND TERMS OF SERVICE

1869-1912

The Mayor of the City of New York	.1908-1909.	1010-
The President of the Department of Parks		
The Comptroller of the City of New York		
Auchincloss, Hugh	.1876-1890	
Bickmore, Albert S	. 1885-	
Bishop, H. R	.1882-1891	
Blatchford, Richard M		
Blodgett, William T	.1869-1875	
Bowdoin, George S	.1903-	
Choate, Joseph H	.1869-	
Colgate, Robert	.1869-1885	
Constable, James M		
Cuyler, Cornelius C	.1904-1909	
Cuyler, Thomas DeWitt	.1910-	
Dana, Chas. A	. 1869-1872	
Dodge, A. G. Phelps	.1869-1872	
Dodge, Cleveland H	.1904-	
Dodge, W. E., Jr	. 1872-1903	
Douglas, James	.1909-	
Drexel, Joseph W	.1872-1888	
Field, Benjamin H	.1869-1893	
Gerry, Elbridge T	.1894-1902	
Grant, Madison	.1911-	
Green, Andrew H	.1869-1903	
Grinnell, Moses H.	.1869-1872	
Haines, William A	.1869-1880	
Hard, Anson W	.1894-	
Harriman, Oliver	.1878-1895	
Havemeyer, H. O	.1898-1907	
Havemeyer, Theodore A	.1891-1897	
Haven, George G	. 1892-1895	
Hewitt, Abram S	.1874-1903	
Huntington, Archer M	.1909-1912	
Hyde, Frederick E	.1899-1909	
Hyde, James H	.1903-1907	
Iselin, Adrian		
Iselin, Adrian, Jr		
James, Arthur Curtiss		
James, D. Willis		
James, Walter B	-11011-	

174	Trustees
Jesup, Morris K	1869-1908
Juilliard, A. D	1898-
Kissel, Gustav E	1894-1911
Landon, Charles G	1882-1893
Lanier, Charles	1874-
Low, Seth	
Mills, D. O	1882-1910
Mills, Ogden	
Morgan, J. Pierpont	1869-
Morgan, J. Pierpont, Jr	
Morton, Levi P	1889-1890
Osborn, Henry Fairfield	1901-
Ottendorfer, Oswald	1886-1900
Parish, Henry	1869-1872
Potter, Howard	1869-1880
Pyne, Percy R	1872-1895
Pyne, Percy R	1900-
Robb, J. Hampden	1886-1911
Rockefeller, William	1895-
Rogers, Archibald	1891-1910
Roosevelt, Theodore	1869-1878
Roosevelt, Theodore	1886–1891
	1869-1874
Stebbins, Henry G	1869-1874
Stevens, Frederic W	1873-1882
Steward, D. Jackson	1869-1898
Stuart, Robert L	1869882
Trevor, John B	1872-1888
Trevor, John B	
Vanderbilt, Cornelius	1878-1899
Warburg, Felix M	,
Wickersham, George W	
	1891-1904
Wolfe, John David	1869-1872

LIST OF MEMBERS

February 3, 1913

BENEFACTORS

By contribution of \$50,000 or upwards, or through honorary election

Mrs. Morris K. Jesup. J. Pierpont Morgan. Henry Fairfield Osborn.

ASSOCIATE BENEFACTORS

By contribution of \$10,000 or upwards, or through honorary election

GEORGE S. BOWDOIN.
CLEVELAND H. DODGE.
ARCHER M. HUNTINGTON.
ARTHUR CURTISS JAMES.
A. D. JUILLIARD.
CHARLES LANIER.
JOSEPH F. LOUBAT.

OGDEN MILLS.
J. PIERPONT MORGAN, JR.
HENRY FAIRFIELD OSBORN.
PERCY R. PYNE.
WILLIAM ROCKEFELLER.
JACOB H. SCHIFF.
FELIX M. WARBURG.

PATRONS

By contribution of \$1,000 or upwards, or through honorary election

EDWARD D. ADAMS.
JOHN ANDERSON.*
JAMES ANGUS.*
HICKS ARNOLD.*
RICHARD ARNOLD.*
WILLIAM H. ASPINWALL.*
JOHN JACOB ASTOR.*
WILLIAM WALDORF ASTOR.
HUGH AUCHINCLOSS.*
BENJAMIN AYMAR.*
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