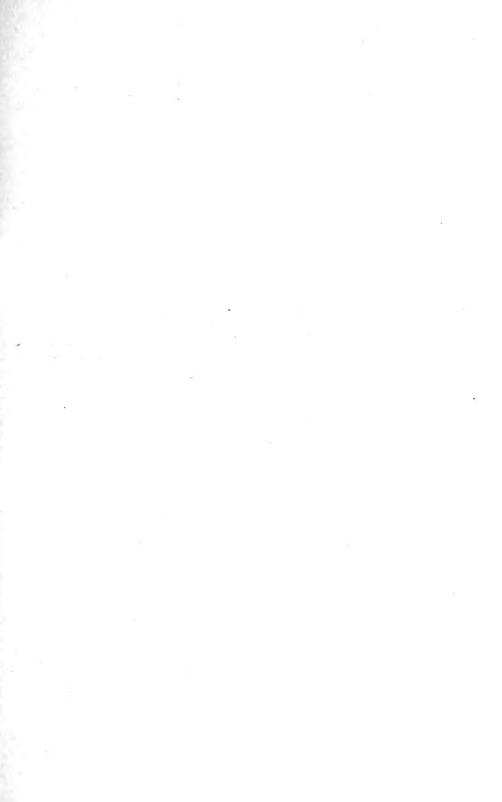


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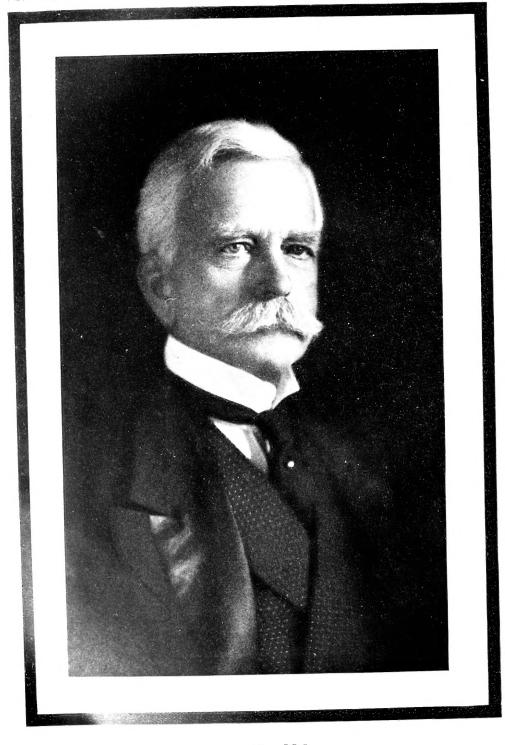
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FIELD MUSEUM OF NATURAL HISTORY

PUBLICATION 119

Vol.3

REPORT SERIES.

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Vol. III, No. 1.

# ANNUAL REPORT OF THE DIRECTOR

TO THE

# BOARD OF TRUSTEES

FOR THE YEAR 1906

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CHICAGO, U. S. A. January, 1907

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FIELD MUSEUM OF NATURAL HISTORY-REPORTS, VOL. III.

### THE BOARD OF TRUSTEES.

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### DECEASED.

Norman Williams. Marshall Field, Jr. George R. Davis. Huntington W. Jackson.

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JAN., 1907.

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> DEPARTMENT OF BOTANY. CHARLES F. MILLSPAUGH, Curator. JESSE M. GREENMAN, Assistant Curator.

> > DEPARTMENT OF GEOLOGY.

OLIVER C. FARRINGTON, Curator. H. W. NICHOLS, Assistant Curator. ELMER S. RIGGS, Assistant Curator Paleontology. ARTHUR W. SLOCOM, Assistant Curator Section of Invertebrate Paleontology.

DEPARTMENT OF ZOOLOGY.

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> recorder. D. C. Davies.

THE LIBRARY. Elsie Lippincott, Librarian.

> taxidermist-in-chief. Carl E. Akeley.

# ANNUAL REPORT OF THE DIRECTOR. 1905-1906.

To the Trustees of Field Museum of Natural History:

The death of Mr. Marshall Field, the founder of the Museum, has occurred since the date of the last report. The Trustees of the Museum have expressed their estimate of Mr. Field's character and services to society, by formal resolutions. The Director and scientific and business staff of the institution have no opportunity of offering their tribute except through the medium of this report.

It would be difficult to convey an adequate idea of the impression made upon the working body of the Museum by the death of Mr. Field without apparent exaggeration, but this must be said: There was no one in the service of the Museum who did not feel an uncommon, solemn sense of personal loss and individual grief.

Mr. Field visited the Museum much oftener than would have been supposed by those acquainted only with his business habits. He had a better understanding of the purposes, the needs, the difficulties, and the possibilities of the Museum than any person except those intimately associated with its direct management. It cannot be said that Mr. Field was proud of the Museum, but he was grateful that this institution had grown up in Chicago. He was conscious that his public spirit was doing good for society, and he was aware of the fact that his aid had contributed to give Chicago a standing as a culture seeking and teaching community, in every thoughtful, intellectual center, at home and abroad.

Mr. Field did not command respect; he invited it. No one connected with the institution, from the least to the greatest in importance, but had been made to feel by some indescribable look, movement or expression, of which Mr. Field was complete master, that the efforts of this particular person were understood and appreciated by him. It gave everyone connected with the Museum the greatest satisfaction to know that Mr. Field was in the building and was inspecting his work. His questions and observations, though often keen and searching, were always marked by modesty and deference, and strangers seeing him pass about the courts and halls would not distinguish him from a casual visitor.

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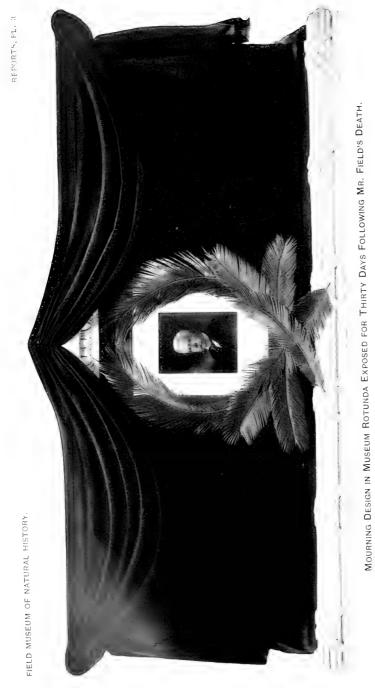
The serious and anxious bearing of all of the employees in the Museum,— the common laborer, the janitor, the skilled workman, the clerks,— and throughout the entire staff during the week preceding his death, and the expressions and manner of regret and grief after his death, disappearing very slowly as the days grew, gave unquestioned testimony of the genuineness of the prevailing unusual sorrow that the improving and helpful influence of the splendid character, whose name was borne by the institution for which they labored, had been withdrawn.

Naturally, while Mr. Field officially had nothing to do with the conduct of the Museum, many questions in one way and another reached him for advice and decision. Mr. Field was wise in his conception of a subject, and he seemed to get directly at the positive and negative elements of a problem. He was just and fair, and in weighing out a general proposition, he never appeared to lose account of the individual equation, that is to say, what the result might be at present, or in the future, to any individual, no matter how humble, who might be involved in the outcome. In cases where he had learned of the illness or misfortune of any one connected with the Museum. his personal and helpful attentions, where possible, were never lacking, while his individual courtesies were numerous and unfailing. From the day that Mr. Field permitted his name to be used in designating the institution, no one connected with it doubted the security of its future, nor the certainty of its development along right lines. His name was a great asset, as it has become a valuable legacy.

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1906:

The announcement of the change in the name of the Museum has been received with satisfaction by contemporaries, and with the approval of the general public. This change established, as it states clearly, the scope of the institution. In anticipation of this step, the Curators of the departments have been engaged for some time in removing irrelevant material, and since the date of the change, which carried with it a contraction of operations to within the exact lines of the natural sciences, much other material has been taken from exhibition and the departments readjusted to the new order of things.

Coincident with the change in the name of the Museum, the Trustees made overal alterations in the articles of incorporation and the by-laws of the corporate body. Among these, an important .



### JAN., 1907. ANNUAL REPORT OF THE DIRECTOR.

change was that of the fiscal year, which was made to close December thirty-first, instead of September thirtieth, each year. This report, consequently, covers fifteen months—namely, from October first, 1905, to December thirty-first, 1906.

A provision in the will of Mr. Field gave to the Museum the sum of four million dollars for a building to be erected upon a site to be furnished for that purpose, provided a suitable one is procured within six years from the date of Mr. Field's death. The plans for the new building which Mr. Field had under personal and constant supervision for over a year before his death, and in which he took the deepest interest, were upon a scale calling for the expenditure of more than four million dollars. The architects have, therefore, been engaged the past year in conforming the plans to these new conditions, and in this work the Director and the Curators of the scientific departments have been giving aid. The plans are now practically complete, and all of the authorities have agreed upon their adaptability and ampleness to and for the practical purposes of the Museum, and, when pending questions affecting the proposed site in Grant Park shall have been determined, work upon the new building will be com-Messers. D. H. Burnham & Company are the architects. menced.

The donation of \$20,000, made by Robert F. Cummings for the purpose of an ethnological survey of the Philippine Islands, has enabled the Museum to inaugurate this work among the peoples of that archipelago. It is believed that the contribution of Mr. Cummings will be supplemented from other sources, if not increased by himself, and that the Museum will be able to maintain parties for investigation and collection in these islands for several years. Account of what has already been accomplished in carrying into effect the intentions of this contribution will be found in this report, among the references to the department of Anthropology.

MAINTENANCE.— The amount expended for the maintenance of the Museum from October 1, 1905, to December 31, 1906, was \$156,415, which, considering the period covered, fifteen months, is well within the authorized Budget. This is especially gratifying when the unusual cost of repairs and improvements to the building is considered, which, as years go on, naturally demand increased attention and watchfulness. The total amount expended, as shown by the financial statement, was \$236,740; the difference is accounted for by special appropriations for cases, expeditions, and collections purchased.

STAFF OF THE MUSEUM. - The resignation of Curator D. G. Elliot

of the Department of Zoölogy, and his acceptance of the post of Honorary and Supervisory Curator of the same department, was an important change in the scientific staff during the year. The change was the result of the consideration of two years, and is intended to give Mr. Elliot greater freedom of action with regard to his individual work and movements, and at the same sime to retain to the department, over which he has presided since the opening of the Museum, the benefits of his scholarly attainments and wide Museum experience. His successor as Curator of the department is Charles B. Cory, lately of Boston, but now a resident of Chicago, who, since the inauguration of the Museum, has been the Curator of Ornithology. Ornithology now becomes a division of the department of Zoölogy, and Mr. Cory becomes the curator of all the divisions and sections that would naturally come under Zoölogy. The personnel of the departmental staff remains otherwise unchanged.

LECTURE COURSES. — Three Lecture Courses have been given since the date of the last Annual Report, and a gratifying increase in the attendance has to be recorded. There have been very few lectures when the demands for admission have not exceeded the capacity of the hall.

Following is the Twenty-third Lecture Course, with the subjects and lecturers, delivered during the months of October and November, 1905:

Oct.	7. — "Land of the Maya."
	Dr. Charles F. Millspaugh, Curator of Botany.
Oct.	14. — "The Making of the Grand Cañon."
	Prof. A. R. Crook, Northwestern University,
	Evanston, Ill.
Oct.	21. — ''Hayti — The Negro Republic.''
	Mr. George V. Nash, New York Botanical Garden.
Oct.	28. — "The Trout and Salmon of North America."
	Dr. Seth E. Meek, Assistant Curator of Zoölogy.
Nov.	4. — "The Fishes of Illinois."
	Dr. Seth E. Meek, Assistant Curator of Zoölogy.
Nov.	11. — "Primitive Art."
	Dr. Clark Wissler, Curator of Anthropology,
	American Museum of Natural History.
Nov.	18. — "Meteorites."
	Dr. O. C. Farrington, Curator of Geology.

JAN., 1907. ANNUAL REPORT OF THE DIRECTOR. II 25. — "The Nesting Habits of Birds." Nov. Dr. N. Dearborn, Assistant Curator of Ornithology. The following is the Twenty-fourth Lecture Course, delivered during the months of March and April, 1906: 3. — "Colors of Flowers, Fruits, and Foliage." March Prof. W. H. Dudley, Platteville, Wisconsin. March 10. — "Some Aspects of Archæological Work in Central America." Dr. Alfred M. Tozzer, Harvard University. March 17. — "The Work of a State Geological Survey." Prof. H. Foster Bain, Director, Illinois Geological Survey. March 24. — "How People Live in Congo Land." Dr. D. W. C. Snyder, Lecturer for the Board of Education, City of New York. 31. — "Love and War Among Animals." March Mr. Ernest Ingersoll, New York City. 7. — "Glaciers," April Prof. N. M. Fenneman, University of Wisconsin. 14. — "The Seri Indians of Sonora." April Dr. W J McGee, Director, St. Louis Public Museum. 21. — "How Plants Breathe." April Prof. C. R. Barnes, University of Chicago. The following is the Twenty-fifth Lecture Course, delivered during the months of October and November, 1906: 6. — "The Racial Problems of Oceania." Oct. Dr. Alfred Cort Haddon, F. R. S., F. Z. S., University of Cambridge, England. 13. — "Social and Religious Evolution in Melanesia." Oct. Dr. Alfred Cort Haddon, F. R. S., F. Z. S., University of Cambridge, England. 20. - "The Century Plant, and some other Plants of the Oct. Dry Country." Prof. William Trelease, Director, Missouri Botanical Garden, St. Louis. 27. — "Within the Arctic Circle." Oct. Prof. J. H. Gore, The George Washington University, Washington, D. C.

- Nov. 3. "Deep Sea Fishing and Fishes." Dr. S. E. Meek, Assistant Curator of Zoölogy.
- Nov. 10. "An Ornithologist in Guatemala." Dr. N. Dearborn, Assistant Curator, Division of Ornithology. .
- Nov. 17. "Some Phases of Plant Distribution." Dr. J. M. Greenman, Assistant Curator of Botany.

PUBLICATIONS. — The following list is presented, giving the titles of publications issued since the date of the last report, with the number of pages and illustrations:

- Pub. 104. Zoölogical Series, Vol. VII., No. 1. "An Annotated List of a Collection of Reptiles from Southern California and Northern Lower California." By S. E. Meek. 19 pp., 3 illustrations (half tones), edition 1,500.
- Pub. 105. Zoölogical Series, Vol. VI. "A Check List of Mammals of the North American Continent, the West Indies, and the Neighboring Seas." By D. G. Elliot. 761 pp., edition 2,000.
- Pub. 106. Botanical Series, Vol. II., No. 3. "Prænunciæ Bahamenses — I. Contribution to a Flora of the Bahamian Archipelago." Bv C. F. Millspaugh. 47 pp., edition 1,500.
- Pub. 107. Report Series, Vol. II., No. 5. Annual Report of the Director to the Board of Trustees, for the Year 1904– 1905. 101 pp., 11 illustrations (half tones), edition 2,500.
- Pub. 108. Zoölogical Series, Vol. VII., No. 2. "A Catalogue of the Fishes of Bermuda, with Notes on a Collection made in 1895 for Field Museum." By T. H. Bean. 69 pp., 14 illustrations, edition 1,500.
- Pub. 109. Geological Series, Vol. III., No. 2. "The Shelburne and South Bend Meteorites." By O. C. Farrington. 16 pp., 13 illustrations (half tones), 2 maps, edition 1,500.

JAN., 1907. ANNUAL REPORT OF THE DIRECTOR.

- Pub. 110. Geological Series, Vol. II., No. 7. "The Carapace and Plastron of Basilemys Sinuosus. A New Fossil Tortoise from the Laramie Beds of Montana." By E. S. Riggs. 8 pp., 3 illustrations (half tones), edition 1,500.
- Pub. 111. Geological Series, Vol. III., No. 3. "New Forms of Concretions." By H. W. Nichols. 29 pp., 9 illustrations (half tones), edition 1,500.
- Pub. 112. Geological Series, Vol. III., No. 4. "Zoisite from Lower California." By O. C. Farrington. 3 pp., 1 illustration (half tone), edition 1,500.
- Pub. 113. Geological Series, Vol. II., No. 8. "A List of Devonian Fossils collected in Western New York. With Notes on their Stratigraphic Distribution." By A. W. Slocom. 9 pp., 2 illustrations (one map and one half tone), edition 1,500.
- Pub. 114. Geological Series, Vol. II., No. 9. "Hypsocrinus, A New Genus of Crinoids from the Devonian." By Frank Springer and A. W. Slocom. 5 pp., 1 illustration, edition 1,500.
- Pub. 116. Zoölogical Series, Vol. VII, No. 3. "Description of Three New Species of Fishes from Middle America." By S. E. Meek. 3 pp., edition 1,500.

The Museum Exchange List now numbers 1,207 names, of which 589 are in foreign countries and 618 in the United States and its possessions.

The following table shows the number of exchanges with each of the foreign countries:

Canada,	27	Yucatan, 2
Central America,	6	Argentine Republic, II
Cuba, West Indies, and Ceylon,	7	Brazil, 10
Mexico,	<b>1</b> 6	British Guiana,
Chile,	2	Malta, I
Peru,	2	Norway,
U. S. Colombia,	2	Portugal, 5
Uruguay,	I	Roumania,
Austria,	20	Russia,
Belgium,	1.4	Spain, 5
Denmark,	4	Sweden, 10
France,	5.2	Switzerland, 14
Germany,	128	China, I

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Great Britain,		*	95	India,
Greece,			2	Japan, 6
The Netherlands,.			13	East Africa,
Australia, .			26	Egypt,
Fiji Islands,			I	Liberia, I
New Zealand, .			6	South Africa,
Borneo,			I	
Tasmania,			2	Total
Italy			31	

The following table shows the number of exchanges receiving the different publications:

Anthr	ropo	olog	gica	ul,							
Botar	nica	1, .									
Ornit	hold	ogic	al,							<b></b>	
Zoölo	gica	ı1,									
Repor	rt,		,								
The	กมโ	olic	at	ion	s ai	re (	list	ribu	teđ	to the different states as follows	•
	^										
Alabama,										Nebraska,	
Arizona,											
Arkansas,										New Hampshire,	
California,										New Jersey,	
Colorado,								~		New York,	1
Connecticu										North Carolina,	
Delaware,										New Mexico,	
District of										Ohio,	
Florida,								2		Oregon,	
Georgia,										Pennsylvania,	
Illinois,								· · ·		Rhode Island, 5	
Indiana,										South Carolina,	
Iowa, .								~		South Dakota, 2	
Kansas,										Tennessee, 2	
Kentucky,										Texas	
Louisiana,										Utah,	
Maine,										Vermont,	
Maryland,										Virginia, 3	
Massachus										Washington,	
Michigan,										West Virginia, 4	ł
Minnesota										Wisconsin, 17	
Mississippi	,							3		Wyoming, 2	:
Missouri,								I 5			
Montana,.								3		Total 610	

The following tables show the number of exchanges receiving the different publications:

#### JAN., 1907. ANNUAL REPORT OF THE DIRECTOR.

Geological,									336
Ornithologi	cal,	•							177
Zoölogical,									
Report,									

• The following table shows the number of exchanges with each of the Insular Possessions.

Philippine Islands,				•	•					•	2
Porto Rico,				•	•	•	•		•		I
Hawaii,	· •		٠	•			•	•			5
Total											8

The number of exchanges receiving the different publications in the Insular Possessions are as follows:

Anthropologic	a1,					•			2
Botanical,									
Geological,									
Ornithological									
Zoölogical,									
Report, .									

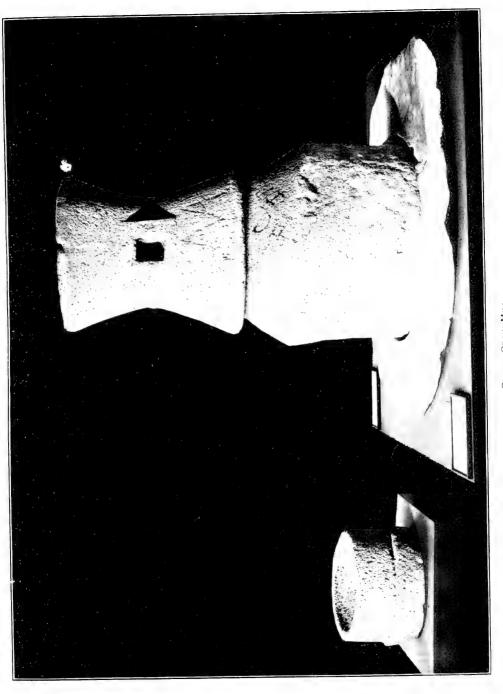
LIBRARY. - During the period covered by this report 5,187 books and pamphlets have been added to the Library, doubling the accessions of recent years. Among the purchases of special interest are: Blanco's Flora de Filipinas; Historia Naturali Palmarum; Biologia Centrali Americana, Botany and Zoölogy; a collection of zoölogical works obtained from Dr. D. G. Elliot, consisting of 1,244 books and pamphlets; and a collection of botanical works brought together by Dr. C. F. Millspaugh, consisting of 1,500 books, and pamphlets. Among the gifts special mention is made of the "Investigations and Studies in Jade," describing and illustrating the Bishop collection in the Metropolitan Museum in New York. This magnificent edition, presented by the estate of the late Heber R. Bishop of New York, was privately printed and limited to 100 copies. The Museum is to be congratulated upon being one of the fortunate recipients. Noteworthy gifts were also received from the Duc de Loubat; Dr. Antonio Penafiel, City of Mexico, Mexico; Dr. T. J. Cheeseman, Auckland, New Zealand; Dr. Edward Seler, Berlin, Germany; Mr. George Murray Guion, Chicago; Anthropological Society of Bombay, Calcutta, India; Musee du Congo, Bruxelles, Belgium; Musee d'Histoire Naturelle, Marseilles, France; Svenska Sallskapet Antropologia och Geografi, Stockholm, Sweden; Rijks Musee van Natuurlijke Histoire, Leyden, Netherlands; Cincinnati Museum of Natural History; and the Missouri Botanical Garden. St. Louis. Exchanges have been

received from 625 societies and institutions and 137 individuals. Continuous efforts are made to effect exchanges with contemporary institutions, and during the year 125 names have been added to the mailing list. No changes of importance have been made in the routine work of the library. Twelve installments of the John Crerar Library cards have been received and filed and 12,483 cards revised and newly written for the three catalogues. The books and pamphlets are distributed as follows:

						Bo	oks	and Pamphlets.
								31,766
								.1,275
								2,786
								5,082
								850
•	· ·	· · ·	· · · · ·	· · · · · ·	· · · · · · ·	· · · · · · · ·	· · · · · · · · · · ·	Books :

DEPARTMENTAL CATALOGUING, INVENTORVING, AND LABELING.— The cataloguing in the Department of Anthropology has been continued throughout the year as rapidly as possible, over eight thousand specimens being catalogued, and a card catalogue made of over seventy-five hundred specimens, all of which have been entered in the inventory books, which now number thirty. Owing to the great amount of material which has been received by this department during the year, and owing to the absence of the Assistant Curator of Ethnology on expedition for a large part of the year, a great deal of cataloguing had to be postponed. The manuscripts of specimen labels for the North Pacific Coast collections, numbering several thousand, have been prepared and are in the hands of the Museum printer. Case labels have been printed for six Northwest Coast Halls, as well as for all cases in California Hall, and nearly all have been put in place.

In the Department of Botany, the cataloguing of organized and new material has been kept up to date in the forty-nine record books of the department. In this work, 15,490 entries have been made during the year, making a total of 193,498 in all. It is worthy of special notice that during the year a complete series of the extensive and valuable Card-Index of Genera, Species and Varieties of Plants published since 1885 (formerly issued by Miss Josephine A. Clark, Librarian of the Department of Agriculture, Washington, but latterly published by the Gray Herbarium of Harvard University), containing over 40,000 printed cards, has been acquired and carefully arranged, and a new steel case, especially designed to accompany the steel herbarium cases secured last year, has been installed to accommodate this index and the Index Botanique Universelle.



ROMAN GRAIN MILL.

### JAN., 1907. ANNUAL REPORT OF THE DIRECTOR.

The work of cataloguing and inventorying has kept pace with the accessions in the Department of Geology, all material being entered as received. The total number of entries in the nineteen record books of the department is 63,102, of which 9,367 were made during the year. Approximately two thousand photographs are now preserved in the albums of this department; one hundred and seventyeight being added during the year. To the series of photograph files, six have been added and one hundred additional photographs filed in them. In addition to the usual entry in the inventory books for the collections of vertebrate paleontology, a card catalogue has been inaugurated, which shows for each specimen its Museum and field number, when collected, locality, horizon, preparation and disposal, and a detailed description. The most important work of labeling performed was that of the systematic mineral collection. This labeling was required by the reinstallation of this collection. The new labels prepared show the name of the species, its number in Dana's system, its common name, if any, its chemical composition, the Museum number of the specimen, and its locality. The labels are of black cardboard and printed with aluminum ink. Each label is of a size to fit the block upon which the specimen is mounted, these blocks being in turn of sizes to fit the specimens. A total of 4,303 labels has been prepared for this collection, 2,871 of which have been printed. For the gem collection of Higinbotham Hall, labels have been prepared in part. These labels are printed with black ink on white cardboard to match the pads on which the gems are mounted, and correspond in size with the pads. They show the name and locality of the specimen, and, in the case of cut stones, the weight in carats. A total of 300 labels has been provided for this collection and in addition eighteen case labels. Labels have been prepared for the collections of Hall 78 throughout, a total of 744 labels having been so prepared. These labels show the name of the specimen, its Museum number, and the locality whence obtained, and also state any special uses or characters of the material. Other labels prepared in the Department have been chiefly for new specimens installed. These include 68 labels for fossils, 206 for meteorites, 240 for ores, and one large descriptive label for the relief map of Niagara River.

In the Department of Zoölogy the work of inventorying, cataloguing, and labeling has claimed careful attention. The exactness and minuteness of the catalogue of the Illinois bird collection may be especially noted. In the division of mammalogy much time has been

### 18 FIELD MUSEUM OF NATURAL HISTORY-REPORTS, VOL. III.

given to cataloguing, and a card catalogue of the general collection is almost completed. The identification and cataloguing of the various collections in the divisions of Ichthyology and Herpetology has been continued, bringing this phase of the work nearly up-todate. The services of one of the collectors has been thus employed. The year's work in the Museum on catalogues and inventories is shown in detail below:

	Re	o. of cord ooks.	Total No. of Entries to Dec. 31, 1906.	Entries during 1905-1906.	Total No. of Cards Written.
Department of Anthropology,	. 3	0	80,124	7,576	84,014
Department of Botany, .	. 5	9	193,490	15,490	*
Department of Geology, .	. 2	20	62,202	9,367	6,630
Department of Zoölogy, .	. 2	20	57,350	5,738	22,412
The Library,	. 1	1	50,889	7,187	54,874
Section of Photography, .		6	48,923	8,824	

ACCESSIONS. - The most important accessions in the Department of Anthropology during the year have been acquired by purchase; the largest being a collection of several thousand objects from certain islands of the South Pacific, purchased from a dealer in Hamburg. A small collection, numbering about one thousand objects, was also purchased, most of the specimens representing the ethnology of the Polynesian Islands, and Benin, Africa. The benefaction of Mr. Robert F. Cummings made possible the purchase of two small, but exceedingly interesting, ethnological collections from the Philippine Islands. Either directly or indirectly, a considerable amount of material has been obtained through Museum expeditions. Such is the material from the Cheyenne, collected by Mr. James Mooney; from certain tribes of the Northwest Coast, collected by Dr. C. F. Newcombe; from Borneo, collected by Mr. Alleyne Ireland; from the Pawnee, collected by the Curator; and a large collection from the Mission Indians of Southern California, collected by the Assistant Curator of Archæology. Among the important gifts to the Department during the year are those of Mr. Edward E. Ayer from Mexico, India, and the Philippine Islands; from Mr. Martin A. Ryerson, an excellent collection of Swiss Lake relics, and a very interesting ancient Roman silver service from Mrs. Chauncey J. Blair.

In the Department of Botany, the herbarium has been augmented during the past year by several important collections. Some of the

<sup>\*</sup>This department does not use a card catalogue.

more noteworthy among these are the following: By gift: from Prof. J. W. Harshberger, 161 plants of Pennsylvania; from Capt. John Donnell Smith, 180 herbarium specimens, and 46 illustrations of Central American plants; from Mr. C. C. Haynes, 17 Hepaticeæ; from Dr. George F. Gaumer, 374 plants of Yucatan; from Miss Edith M. Farr, 34 plants of British Columbia; from Mr. Albert H. Moore, 66 plants of Bermuda; from Prof. W. A. Kellerman, 33 plants of Guatemala; from the Geological Survey of Canada, through Mr. J. M. Macoun, 20 plants of Canada; from Miss Amy C. Lawton, 105 plants of Nebraska; from the University of Chicago, through Prof. Charles R. Barnes, 122 plants of Mexico, collected by Prof. C. R. Barnes, Dr. C. J. Chamberlain, and Dr. W. J. G. Land. By exchange: from the Royal Botanic Gardens, Kew, 134 plants of Yucatan, collected by Dr. Geo. F. Gaumer; from the New York Botanical Garden, 615 plants of California, and 358 plants, chiefly from the Bahamas and the West Indies; from Mr. J. J. Carter, 96 plants of Pennsylvania, and 13 from Maryland; from Estacion Central Agronomica, Cuba, 748 plants of Cuba; from Mr. Virginius H. Chase, 188 specimens of fungi; from the Bureau of Science, Department of the Interior, Manila, 996 plants of the Philippine Islands; from Prof. L. M. Umbach, 938 plants, chiefly from Montana; from Naturhistorisches Hofmuseum, Vienna, through Prof. A. Zahlbruckner, 1072 plants of South Africa, collected by Ecklon and Zeyher; from the Herbarium of Krug and Urban, through Prof. I. Urban, 50 herbarium specimens, consisting principally of type material. By purchase: from Mr. W. E. Broadway, 338 plants of Grenada, W. I.; from Mr. O. B. Metcalfe, 578 plants of New Mexico, collected by himself; from Mr. A. H. Curtiss, 306 plants of Cuba; from Mr. J. J. Carter, 227 plants of Florida; from Dr. Edward Palmer, 160 plants of Mexico; from Prof. J. W. Blankinship, 606 plants of Montana; from Mr. J. C. Blume, 100 plants of Colorado; from Mr. A. A. Heller, 532 plants of California; from Mr. T. S. Brandegee, 737 plants of Mexico, collected by Dr. C. A. Purpus; from Mr. Alex E. Wight, 402 plants of Jamaica. From Expeditions: 762 plants of the Bahamas, collected by Mr. L. J. K. Brace; Mrs. E. G. Britton; Dr. N. L. Britton and Mr. L. J. K. Brace; Dr. N. L. Britton and Dr. C. F. Millspaugh; Mr. George V. Nash and Mr. N. Taylor; 1062 plants of Mexico, collected by Dr. J. M. Greenman; 616 plants of the Lake Chicago Basin, collected by Mr. O. E. Lansing, Jr.

The following table shows the additions to the herbarium during the year, distributed geographically; it also indicates the total number of mounted sheets of herbarium specimens in the collection from the corresponding localities up to November 25, 1906:

1 3	<b>I</b> -	 	 	 J,			
Locality.					F	dditions to Ierbarium 1905–1906	Total in òrgan- ized Herbarium to Nov. 25, 1906
Africa						1072	1247
Bahamas (in general),							266
Abaco,						300	301
Andros,						I	311
Cat Cay,						13	I4
Grand Turk,						51	55
Great Bahama, .						205	606
Great Isaac, .						. I	· I
Inaugua,						7	40.3
Little Inaugua, .						2	31
New Providence,						101	1504
North Bimini, .						16	17
South Bimini, .						4	5
Bermuda,						66	211
California,						1142	9454
Canada (in general),						24	1742
Alberta,						I	2
British Columbia,						45	264
Central America,						46	47
Colorado,						101	4422
Costa Rica,						4	318
Cuba,						1047	3915
Isle of Pines, .						I 2	650
Dominica,						28	74
Florida,						231	8994
Germany,						2	3940
Grenada,						269	768
Guatemala,						226	351
Guiana, British, .						2	68
Haiti,						20	204
Honduras,						56	II2
Idaho,						I 2	710
Illinois,						294	14536
Indiana						95	3190
Iowa,						74	858
Jamaica,						314	3045
Japan,						· ·	0.0
Formosa,						Ι	10
Kansas,						I	125
							~

									dditions to Herbarium	Total in org <b>an-</b> ized Herba <b>r</b> ium
Locality	•								1905-1906	to Nov, 25, 1906
Maine, .									I	701
Maryland,									I 3	608
Massachusett	s,								2	1599
Mexico, .									1553	11090
Minnesota,									3	477
Missouri, .			•						3	565
Montana, .									1445	2862
Nebraska,									105	147
New Jersey,									I	I 2 2 I
New Mexico,									47 I	1340
New York,									25	4035
North and So	outh	ı D	ako	ta,					9	I 2 2
Oklahoma,									I	45
Panama, .									I	28
Patagonia,									I	I
Pennsylvania	· ,								257	5939
Philippine Isl	land	ls,							996	997
Porto Rico,									I	3125
Texas, .									2	2420
United States	s of	Со	lon	ıbia	,				1	2313
Venezuela,										
Trinidad	,								31	8.4
Washington,									51	255I
Wisconsin,									I	820
Wyoming,									19	322
Yucatan,									307	4430
									11403	

Among the important gifts in the Department of Geology may be mentioned a collection numbering 1,077 specimens of minerals and fossils from Charles A. Sawyer, in the name of his mother, Mrs. Elizabeth E. T. Sawyer. It is especially valuable for its stalactites from Galena, Illinois, and stalactites and minerals from numerous other localities. Mr. Ira B. Meyers presented to the Museum a superb fulgurite more than nine feet in length, doubtless one of the finest specimens in existence. The late Prof. Henry A. Ward presented 41 sections of meteorites for microscopic study, making a total of more than 100 such slides received through his kindness. A fine series of crystallized barite showing a new habit and locality for this mineral was presented by Julian Pickles. A valuable representation of the kimberlite occurring in northeastern Kentucky was obtained by the

gift of about 100 pounds from Austin Q. Millar. Mr. Millar also presented a series of gem garnets and olivines occurring at the same locality. About eighty specimens of garnet and sapphire from the United States of Colombia were presented by F. Pereira Gamba. A series of fossil plants from Ziegler, Illinois, containing many excellent specimens was presented by Joseph Leiter. Prof. C. N. Gould gave thirty-two specimens of sand-barite crystals of unusual character. From Harry Hill a good series of tin and bismuth ores from Alaska was received, and from the Premier Diamond Mining Company, a model of the Cullinan diamond, which is an exact fac-simile of this largest known diamond. Accessions by exchange include twenty specimens of the minerals and ores of Rhodesia, from the Rhodesia Museum, South Africa. In this collection an occurrence of gold in talc is especially noteworthy, and other unusual occurrences are shown. By exchange with the University of Arizona a section of the Weaver meteorite weighing 372 grams was acquired, and, from the Natural History Museum of Paris, 62 grams of the La Becasse meteorite. From Dr. A. Brezina, Vienna, were received five specimens of new meteorite falls, and from the late Prof. H. A. Ward, a large section of the Cobija meteorite. A number of specimens of rare minerals were obtained from Mr. W. C. E. Seeboeck, also by exchange. A number of purchases were made within the year, chief among which may be enumerated relief maps of the Panama Canal, of New York City and vicinity, of the State of New York, of the United States showing rainfall and temperature, and of Niagara river and vicinity. Besides these, the Museum acquired by purchase a section of the Ilimaes meteorite weighing 393 grams, a full-sized slab of the Estacado meteorite, 28 inches by 16 inches, and individual examples of the Ness City and Modoc falls. Other additions by purchase include a large series of the lavas and other products of the eruption of Vesuvius of 1906; a slab of fossil echinoids from California; and about 100 specimens of Ordovician fossils of Bohemia, containing about 50 species new to the collections.

In the Department of Zoölogy an exceedingly large number of specimens were added—by gift, purchase, exchange and expedition. A collection of one hundred and seventy specimens of mammals was purchased from Professor Cory, most of the material having been taken in Florida and the West Indies. During the year in all six hundred and thirty specimens have been added to the collection of mammals. The most interesting mammals purchased were those from

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a London dealer, which included a Chinese water deer, a blue duiker, a white-eared kob and a chimpanzee; all of which, with the exception of the last being species new to the Museum collection. About one thousand bird skins were purchased from Professor Corv. and 448 bird skins from Guatemala from Mr. William B. Richardson. By the expeditions of Mr. Heller, Mr. Barber, and Mr Dearborn about twelve hundred specimens of bird skins were added to the collections, from Guatemala. In Illinois, Mr. Ferry and Mr. Dearborn secured about six hundred specimens of birds, eggs, and nests during the year. Dr. Tarleton H. Bean during his visit to the Bermudas collected about eighteen hundred specimens of fishes, many new to the Museum collections and some new to science. The efforts of Dr. Meek in Central America yielded about fifteen hundred specimens of fishes and a large number of shells and other zoölogical specimens. The purchase of one hundred specimens of mounted fishes from Hawaii from S. F. Denton of Wellesley, Mass., was an important acquisition. The additions during the year in the Division of Entomology aggregated 14,435 specimens; of this number 11,921 were purchased, 1,094 were collected by assistants and others on Museum expeditions, and 1,420 were presented. In the Division of Osteology 110 new specimens have been added to the collection and 464 skulls have been bleached and cleaned for use in the study collection of mammals. Twenty-seven skeletons were cleaned and prepared, but not mounted. The classification of accessions follows:

		Number of Accessions					umber of accessions.	Number of Specimens.		
Gifts, .									196	8,288
Exchanges,										5,850
Collected,									69	27,763
Purchase,									80	28,107
Collated,									9	78
Transfer,									5	100

EXPEDITIONS AND FIELD WORK.— The Curator of Anthropology continued his investigations among the Arapaho and Pawnee, the work in connection with the last-named tribe being performed on behalf of the Carnegie Institution of Washington. Assistant Curator Owen made his second visit to the Mission Indians, in Southern California, among whom he spent the first five months of the year, visiting a number of tribes and revisiting others. As a result of this expedition the collection from the Mission Indians is fairly complete. Mr.

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James Mooney continued his researches among the Cheyenne, in accordance with the arrangements entered into with the Bureau of Ethnology. Dr. Newcombe concluded the work which he began last year among the Haida and Kwakiutl. By far the most important expedition of the year has been that of Assistant Curator Simms to the Philippine Islands. This was made possible by the generosity of Mr. R. F. Cummings, which is referred to elsewhere in this Report. The fund subscribed by Mr. Cummings is to be used in defraying the expense of exploration in the Philippine Islands for the next four or five years, which shall have for its object the investigation of the linguistic stocks, their physical types and the general culture of the Non-Christian tribes of the Philippine Islands. Mr. Simms spent five months among Igorrot tribes in northern Luzon, and is now returning to Chicago, after having made an extensive collection, numbering over fifteen hundred objects. Miss Laura E. Benedict has also begun work in the Islands, and is at the present time conducting investigations among the Bagobo. In December Mr. F. C. Cole of the Museum staff left for the Islands to take up systematic investigation of the tribes, commencing with those of Luzon. It is predicted that from the results of these expeditions the Museum will not only acquire an extensive and interesting collection of objects illustrating the culture of the tribes of the Islands, but also that some important contributions to the knowledge of these tribes will be made. Dr. J. M. Greenman, Assistant Curator, Department of Botany, passed the greater part of the months of January and February in Mexico. The object of this expedition was two-fold: First, to obtain additional material and a field knowledge of the Leguminosæ, towards the elaboration of this group in the forthcoming Flora of Yucatan; second, to study the flora of the coastal region of Vera Cruz, chiefly in the so-called *Tierra Caliente*, in order to ascertain its relation to the flora of the xerophytic regions of Yucatan. As a result of the expedition over eleven hundred plants, including herbarium specimens and formalin material, were secured. Two months were spent in Europe by the Curator of Botany, in visiting and investigating the material and methods of installation in as many Natural History Museums as was consistent with the time at his disposal. During this visit the following Museums and Gardens were studied: The British Museum of Natural History, South Kensington, the Kensington Gardens, the Botanical Gardens and Museums at Kew and the Linnean Society, London; the Manchester Museum of Owens College, Manchester;

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the Free Public Museum, Liverpool; the Museum of the Royal College of Surgeons, London; the Rijks Museum and Herbarium, Leyden; the Kolonial Museum, Haarlem; the Museum der Provinz-Hannover, Hannover: the Botanischer Garten, Steglitz: the Botanisches Museum, Schöneberg; the Naturhistorisches Musuem and the Museum für Völkerkunde, Berlin; the Königl. Hofmuseum, the Grosser Garten, the Botanischer Garten, and the Technologische Hochschule. Dresden; the Museum Regni Bohemiae and Botanischer Garten, Praag; the K. K. Hofmuseum, Vienna; the Museo Storia Naturale, the Giardino Botanico, and the Reale Instituto di Studi Superiori, Florence; the gardens of the Villa Pallavicini, Genoa; the Museum Civico and Giardini Publici, Milan; the Cantonal School and Museum, Luzerne, the Herbarium Boissier and Natural History Museum, Geneva; the Jardin des Plantes and its great museums, Paris; the Dendrological Museum and the Museum of the Congo, Brussels; the Botanisches Museum and Naturhistorisches Museum, Hamburg; and the Naturhistorisches Museum, Bremen. O. E. Lansing, Jr., a preparator in this department, made occasional trips during the summer months in and around Chicago, and secured much desirable material.

Early in February, a report having been received of a fall of meteorites in western Kansas, the Curator of Geology visited that section for purposes of investigation. His studies in the vicinity resulted in the discovery and the acquisition of one of the largest and finest meteorites of the fall. In addition, a number of other individual aerolites of the fall were obtained from residents of the locality. The collecting of vertebrate fossils in the field was continued by a party in charge of Assistant Curator Riggs during four months of the summer. Owing to heavy rains and the impossibility of securing proper camp help, the work of the party was considerably hindered, but a good collection of hitherto unrepresented forms was nevertheless obtained. The formation in which the work was carried on was the Loup Fork Miocene of Nebraska and Wyoming. A typical series of the fossils of this period was secured, and a large number of specimens were obtained, chief among which may be mentioned one excellent titanothere skull; thirty-one specimens of various forms of the camel family; twenty-four specimens of Oreodonts, representing three or four different genera and including in one specimen four individuals; four incomplete skeletons of fossil dogs and two mustellines; two nearly complete skeletons and several skulls of rodents and four quite complete specimens of turtles. The opening of some new quarries at Romeo, Illinois, having disclosed fossiliferous strata not hitherto available, collecting was carried on by Mr. Slocom at the locality at intervals. In addition, he visited some already known but not lately worked localities of the same formation, such as those at Lemont, Hawthorne, Elmhurst, and Thornton, Illinois. In August about two weeks were also spent by Mr. Slocom collecting among the Middle Devonian areas in the vicinity of Little Traverse Bay, Michigan. Field work in Guatemala was continued for the Department of Zoölogy by C. M. Barber until May of this year. The Assistant Curator of Zoölogy was engaged for four months in the winter of 1006 in making a collection of fishes and reptiles in Guatemala, Nicaragua, and also in the Southern extremity of Mexico. The commission to the Bermudas of Dr. Tarleton H. Bean was fruitful in results, an extensive collection of fishes numbering over 1800 specimens representing 166 species having been secured. Dr. Dearborn of the Division of Ornithology spent several months in Guatemala, with the result that over 1000 specimens of bird skins were taken. Collecting trips were made to Fox Lake, Joliet, Henry, and Havana, Illinois, and also Olive Branch, at the southern extremity of the state. In continuation of plans for the assembling of exhibition groups and study specimens, representing the birds of Illinois, an expedition under H. W. Menke of the Section of Taxidermy has been at work during the past year at Harlowarden, the estate of President Higinbotham. The locality, near Joliet, Illinois, proved rich in bird fauna and afforded special facilities for prosecuting the work, which consisted in taking the casts of leaves, making color notes for the accessories, the preparation of bird skins and eggs, photographing for backgrounds, and the collection of scientific data. For the groups, the members of the party collected nests and their natural supports, adult birds, eggs, and young, as it seemed best for illustrating nesting habits; casts of leaves, color notes, photographic studies for backgrounds, as aids for installation. For the study series, adult birds including seasonal and other variations, young birds of different ages, illustrating development of plumage, skeletons, nests, eggs and food studies were obtained. The tangible results of the season's efforts consisted of the gathering of 283 birds; 213 eggs, 48 nests; 617 casts of leaves and 195 negatives of habitat. It is estimated that there is complete material in this result for thirtyseven groups. The members of the East African expedition arrived at Mombassa, October 8, 1905, and sailed from the same port, return-

ing with the collection, December 21, 1906, Of the intervening fourteen months, twelve months were spent in active field work. The tangible results are represented by a shipment of over seventeen tons of natural history material, chiefly zoölogical. The collection includes some four hundred skins of mammals ranging in size from that of a rabbit to that of an elephant, about twelve hundred small mammal skins, eight hundred bird skins and a fair number of mammal and bird skeletons. The expedition also secured about one thousand photographic negatives, as well as other studies of the material collected, such as plaster casts, measurements, leaves, mounting accessories, etc. A small collection of anthropological material was obtained from among the Masai, Kikuyu and Kamba tribes. The collection of large mammal skins includes material for groups of about twenty species of antelopes; a buffalo group of six individuals; a fine series of lions - eight specimens; two large elephants, complete; one rhinoceros; one hippopotamus and many other specimens of more than passing interest.

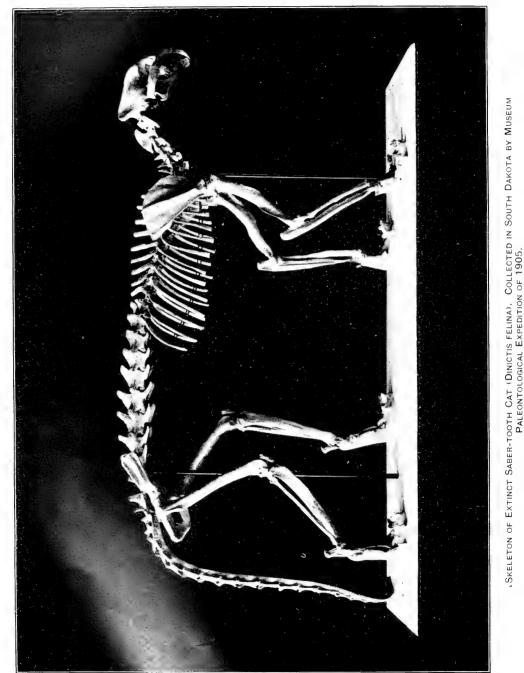
The following list indicates the 32 various expeditions sent out during the year:

during the year.	
Locality.	Collector. Material.
Bahamas,	Louis J. K. Brace, Herbarium Specimens.
Bermudas,	T. H. Bean, Fishes, Reptiles, and In- vertebrates.
Guatemala,	S. E. Meek, Fishes and Reptiles.
Guatemala,	N. Dearborn, Birds.
Mexico,	J. M. Greenman, Herbarium Specimens.
Mission Region, So. Cali-	
fornia,	
The Everglades, Florida.	Chas. B. Cory, Nests and Eggs, Birds, and scientific notes.
Joliet, Ill.,	H. W. Menke and Assist- Material for Bird Groups.
	tants.
Nebraska and Wyoming,	E. S. Riggs, Vertebrate Fossils.
Nebraska and Wyoming, Henry, Ill.,	E. S. Riggs, Vertebrate Fossils. J. F. Ferry, Birds.
	J. F. Ferry, Birds.
Henry, Ill.,	J. F. Ferry, Birds. S. E. Meek, Fishes.
Henry, Ill., Henry, Ill., Guatemala,	J. F. Ferry, Birds. S. E. Meek, Fishes. C. M. Barber, Birds, Mammals, Fishes and Reptiles.
Henry, Ill., Henry, Ill., Guatemala, Cairo, Ill.,	J. F. Ferry, Birds. S. E. Meek, Fishes. C. M. Barber, Birds, Mammals, Fishes and Reptiles. E. Heller, Mammals.
Henry, Ill., Henry, Ill., Guatemala,	J. F. Ferry, Birds. S. E. Meek, Fishes. C. M. Barber, Birds, Mammals, Fishes and Reptiles. E. Heller, Mammals.
Henry, Ill., Henry, Ill., Guatemala, Cairo, Ill.,	<ul> <li>J. F. Ferry, Birds.</li> <li>S. E. Meek, Fishes.</li> <li>C. M. Barber, Birds, Mammals, Fishes and Reptiles.</li> <li>E. Heller, Mammals.</li> <li>C. F. Newcombe, Haida Ethnology.</li> </ul>
Henry, Ill., Henry, Ill., Guatemala, Cairo, Ill., North Pacific Coast, .	<ul> <li>J. F. Ferry, Birds.</li> <li>S. E. Meek, Fishes.</li> <li>C. M. Barber, Birds, Mammals, Fishes and Reptiles.</li> <li>E. Heller, Mammals.</li> <li>C. F. Newcombe, . Haida Ethnology.</li> <li>Alfred R. Brown, Ethnological Specimens.</li> </ul>
Henry, Ill., Henry, Ill., Guatemala, Cairo, Ill., North Pacific Coast, . Andaman and Nicobar	<ul> <li>J. F. Ferry, Birds.</li> <li>S. E. Meek, Fishes.</li> <li>C. M. Barber, Birds, Mammals, Fishes and Reptiles.</li> <li>E. Heller, Mammals.</li> <li>C. F. Newcombe, . Haida Ethnology.</li> <li>Alfred R. Brown, Ethnological Specimens.</li> <li>E. B. Chope, Insects.</li> </ul>
Henry, Ill., Henry, Ill., Guatemala, Cairo, Ill., North Pacific Coast, . Andaman and Nicobar Islands, Illinois, Little Traverse Bay, Mich.	<ul> <li>J. F. Ferry, Birds.</li> <li>S. E. Meek, Fishes.</li> <li>C. M. Barber, Birds, Mammals, Fishes and Reptiles.</li> <li>E. Heller, Mammals.</li> <li>C. F. Newcombe, . Haida Ethnology.</li> <li>Alfred R. Brown, . Ethnological Specimens.</li> <li>E. B. Chope, Insects.</li> <li>A. W. Slocom, Invertebrate Fossils.</li> </ul>
Henry, Ill., Henry, Ill., Guatemala, Cairo, Ill., North Pacific Coast, . Andaman and Nicobar Islands, Illinois,	<ul> <li>J. F. Ferry, Birds.</li> <li>S. E. Meek, Fishes.</li> <li>C. M. Barber, Birds, Mammals, Fishes and Reptiles.</li> <li>E. Heller, Mammals.</li> <li>C. F. Newcombe, . Haida Ethnology.</li> <li>Alfred R. Brown, Ethnological Specimens.</li> <li>E. B. Chope, Insects.</li> </ul>

Philippine Islands, .	S. C. Simms,	Luzon Ethnology.
. (R. F. Cummings Exp.) Philippine Islands, (R. F. Cumings Exp.)	F. C. Cole,	Luzon Ethnology.
Kansas,	O. C. Farrington,	Meteorites.
British East Africa {	Carl E. Akeley,	Mammals, Birds, Etc.

INSTALLATION, REARRANGEMENT AND PERMANENT IMPROVEMENT. — There is more material in the Department of Anthropology awaiting installation than there has been at any previous time during the last ten years. This is due to the fact that for three years very few cases have been provided, although several collections of great magnitude have been received. This has made necessary a thorough rearrangement of the stored material of the Department, for which to provide even temporary shelter it has been necessary to utilize discarded cases which the Department of Botany found unsuitable for exhibition purposes. It is estimated that material is now in storage sufficient to fill at least six exhibition halls. The installation of the Northwest Coast collection has been completed, the Kwakiutl collection having been installed in Halls 11 and 12, Salish collection in Hall 13, Bella Coola and Nootka in Hall 15.

The new installations in the Department of Botany of old and additional material accomplished during the year make a very creditable showing in the natural orders represented. They are as follows: Two cases have been added to the five previously representing the Pine Family, one presenting the carpology of the Pinaceæ, together with many interesting products of the family; the other illustrating the use of Pine barks in native textile products and other ways; the case illustrating the utilization of the needles of the Long Leaf Pine has been reorganized and augmented. The five cases representing the great family of the Grasses have received expansion by five new ones. One of these contains a very valuable and typical series of the useful bamboos of Japan; another has been installed with the various utilizations of the fiber grasses and paper-making grasses; another exemplifies the manufacture of sugar from the sugar-cane and shows different forms of native sugars from many parts of the world; another extends the products of Indian Corn; another has been devoted to the various cereal grains; and the one case formerly illustrating the types of maize has been amplified by a second, completing this important feature. The three cases formerly representing the Palm Family



have been augmented by five others, installed with particularly interesting material, as follows: one case showing the growth and utilization of the Creeping Palms (the rattan and ivory-nut palms); another case illustrating by a fine series of specimens the character and utilizations of the wood, ekels, and leaf of the Cocoanut Palm; another displays the various uses of the cocoanut itself, its "meat" and "shell;" another has been arranged to illustrate the various kinds of fruits in the Palmæ and their utilization; another shows the fibers and other products of the Black Palms (Borassus, Arenga, and Corvphal), the fifth being devoted to the Bermuda Palmetto (Sabal Blackbeurnianun). The Lilv Family now has representation in a complete case of various products and characters, as has also the Banana Family. A halfcase has been installed with interesting products of the Ginger Family, another with a fine series of the fruits of the Walnut Family, and a third adds to the former representation of the Fig Family a complete series illustrating the manufacture of Siamese and Laos papers from the bark of Streblus asper. A full case has been installed with various fibers of the Nettle Family, and another devoted to the wide range of fibrous materials yielded by the Mallow family. The three cases formerly devoted to the Legumes have been augmented by two others devoted to the Ground-nut, Gums, and various fruits and seeds of economic value or botanic interest. A half-case now inaugurates an exhibit of the Rose Family; another the Cycads and their starches, the Yews, the Rushes, the Naiads, and the Candle trees; and a third has been devoted to the Sedges and their utilization. A beginning has also been made in the proper casing of the extensive dendrological collections of the Department, three cases having been installed with the unique series of Jamaica woods, and a fourth devoted to a complete illustration of the products of destructive distillation of wood. In addition to these installations, considerable time has been devoted to the further and more complete organization of the study-reference material. This valuable series (duplicating for the purposes of investigators the specimens entering into the permanent installations) is daily proving its great usefulness to the ends of the Department.

The most important work of installation in the Department of Geology has been the entire reinstallation of the collections of systematic mineralogy and structural geology. These collections occupied Halls 63, 64 and 65. All former cases were removed and new cases provided for the collection throughout. Twenty-two wall cases and sixteen floor cases were provided. Each wall case has two

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swinging lights of plate glass 68 x 70 inches in size. The interiors are fitted with shelves supported by metal brackets, which are screwed to strips of strap-iron having holes at intervals of one inch. The shelving is thus adjustable at small intervals of height or width to suit the demands of installation. The interiors of the cases are lined with painter's muslin stretched tightly and painted black, giving a smooth, even finish. The specimens are installed immediately upon the shelves. The labels are supported by individual wooden strips in which slots are cut. The floor cases are made as in paleontology, so that the small specimens can be easily and thoroughly examined. For this purpose it is obviously necessary to bring the specimen to the height of the eve and as little removed from it laterally as possible. Cases of the "A" type best meet this requirement and at the same time provide more exhibition space to a given amount of floor space than a flat case. The cases adopted for this purpose were made four inches higher than those used in paleontology and the exhibition portion carried three inches lower. Thus, increased exhibition space was gained, the lights being 36 x 58 inches in size, as compared with those 31 x 56 inches used previously. It having been found that ground glass, as hitherto used in the top and ends, was not necessary for lighting, wooden panels were used in its place, thus securing an effect of greater richness and solidity. Triangular wooden screens occupy the interior of the case as before, and upon these the minerals are installed. Each specimen occupies an individual block which is fastened to the screen. The blocks used vary in size, according to the size of the specimen. The front of each block is beveled and provided with a bead which supports the label. All the case interiors are black and the labels are black cardboard, printed with aluminum ink. The plan of keeping the fittings and labels subordinate in general to the specimens themselves is thus maintained and a satisfactory and attractive effect secured. The floor cases are, as stated, reserved for specimens so small as to require close inspection in order to have their features of interest revealed. The collections were completely worked over before installation, so as to incorporate all new material and weed out duplicates from the exhibition series. About ten thousand specimens are now on exhibition in this collection. For the collection illustrating structural geology only wall cases are employed, since these are exceptionally adapted to the exhibition of large specimens and the collection is mostly of this character. The specimens as thus installed are well lighted and the hall makes a very satisfactory

appearance. A relief map illustrating the oil-fields of the United States has been prepared and hung in Hall 71, devoted to petroleum and its products. This map is uniform in size and treatment with those already on exhibition, illustrating the distribution of zinc, copper, and iron ores. In Halls 76 and 77, devoted to physiographic geology, fifteen of the large relief maps have been covered with glass. This insures protection from further injury by dust and enhances the appearance of the display. The collections in Hall 78 have been remounted and relabeled throughout. A number of additional shelves have been provided for the cases, in order to accommodate the large increase in the collections due to material received chiefly from the Louisiana Purchase Exposition. These include large additions to the series of abrasives, salt, barite, phosphates and micas. The mounting is in the shape of individual blocks and stands calculated to exhibit each specimen to the best advantage. The four large floor cases containing the collection of gems in Higinbotham Hall have been thoroughly renovated. The case linings having become much discolored through age and the entrance of dust, the cases were therefore completely relined with white silk crepe. Pads of the same material bound with white silk cord were prepared, and upon these the individual specimens have been mounted. New labels printed on white cardboard have also been provided. Thus, a background of uniform color is obtained, against which the gems form the only coloring, and the effect is very satisfactory. Case labels were also provided for the cases in this hall throughout. For the large Triceratops skull collected by the Paleontological Expedition in Montana in 1904, a special case 5 x 7 x 7 feet was constructed and installed in Hall 36. The large Mosasaurus slab, 3 x 12 feet, obtained the same year, was installed in one of the wall cases in Hall 59. Other specimens of fossil vertebrates installed include large skulls of Elotherium and Aceratherium, a skeleton of Dinictis, and several smaller skulls. The wall cases in Hall 66, containing volcanic products, rock textures, etc., have been thoroughly cleaned and the specimens reinstalled. Such work of cleaning and reinstallation, made necessary by the temporary cases employed, will not be required when permanent cases are provided. Three individual fulgurites have been assembled and mounted. In the paleontological laboratory the following specimens have been worked out and mounted: Complete skeleton of Mosasaurus twelve feet long; complete skeleton of Dinictis felina; complete head of Elotherium ingens; complete head of Hyracodon nebrascensis; two skulls of Aceratherium; two skulls of Mesohippus bairdii; one

#### 32 FIELD MUSEUM OF NATURAL HISTORY-REPORTS, VOL. III.

skull of Daphænus; one skull of Hoplophoneus; one skull of Dinictis; pelvic girdle of Elasmosaurus.

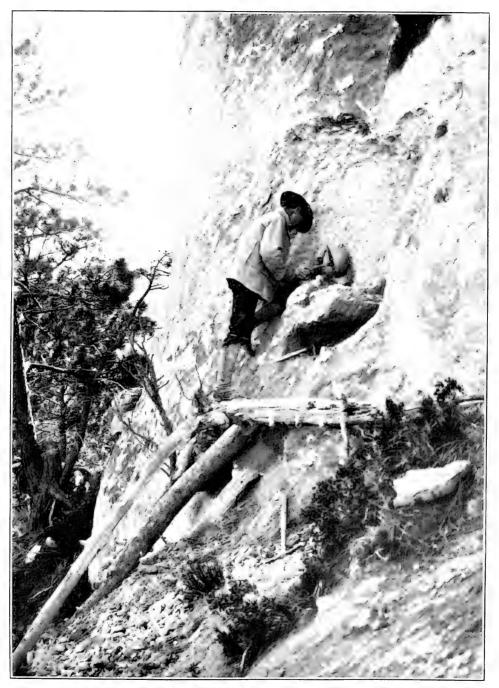
In the Department of Zoölogy, comparatively little new installation was attempted. This is in a measure due to the resignation of Curator Elliot and the absence from the Museum of the Taxidermistin-Chief. However, the Coral collection was very carefully gone over. reinstalled. and new labels prepared. The work on the Illinois Bird Collection is progressing and will soon be open for inspection by the public. No large mammals or groups were placed on exhibition, although several are in process of construction. The division of Entomology has been provided during the year with one hundred and twenty-six glass-topped drawers with racks, and ten dust-proof tin cabinets for the preservation of both pinned and unpinned insects. The pressing needs of an exhibition collection of local insects has not been forgotten. For this purpose two table cases have been prepared and assigned a position in an alcove of the West Court. In these cases will be placed representatives of Illinois insects as soon as the various orders are properly prepared for exhibition. In the Division of Osteology eight complete skeletons were mounted and placed on exhibition and seventy-one skulls were mounted for the special craniological study collections. In addition, four hundred and sixty-four skulls have been bleached and cleaned for use in the study collection of mammals.

TAXIDERMY. — Owing to the absence of the Taxidermist-in-Chief, who has been on expedition in Africa, work in this section, as represented by the construction of groups for exhibition, has been practically suspended. But much of importance and value has been accomplished, and a large number of individual specimens have been mounted for the systematic series. The inventory of the skins on hand in this section — skins intended for mounting or exchange has been carefully revised and amended to date, and presents a formidable list in both numbers and varieties.

PRINTING. — The number of labels and other impressions made by the Section of Printing is as follows:

				Labels.	Other Impressions.
Department of Anthropology,		· .		2,098	3,600
Department of Botany,				1,298	12,300
Department of Geology,				7,564	2,520
Department of Zoölogy,				1,642	10,815
Director's Office,				3	55,529
Higinbothan, Hall,				076	
Library,					II,200

FIELD MUSEUM OF NATURAL HISTORY.



DISCOVERY OF THREE ASSOCIATED SKELETONS OF PROMERYCHOCHŒRUS PINE RIDGE, NEBRASKA, MUSEUM PALEONTOLOGICAL EXPEDITION OF 1906.

It may be worthy of mention that the distinctness of the printing on black labels has been much intensified. This improvement has been brought about by the use of a size first and then the application of an aluminum bronze powder. The former method was to use aluminum ink only, which necessitated the taking of three or four impressions of each label in order to obtain a final clear effect. While more time is required to print the labels by means of the bronze powder, the results seem to justify the additional labor.

PHOTOGRAPHY. — The Section of Photography has had an unusually active year. The following is a tabulated statement of the work done:

		Negatives.	Prints.	Lantern Slides.	Enlarge <sup>-</sup> ments
Director's Office,		67	151		
Department of Anthropology,		1,342	2,197	242	56
Department of Botany, .		182	483	65	
Department of Geology, .		126	440	I 2 I	IO
Department of Zoölogy, .		66	1,308	293	
General Distribution,			38 I	369	
Totals	 	 .1,783	4,960	1,090	66

Total number of inventory entries to December 31, 1906..48,923 Entries from October 1, 1905 to December 31, 1906..... 8,824 Negatives developed for Prints mounted for Department of Anthropology,\* 312 Department of Anthropology, 1,500 Negatives developed for Prints mounted for Department of Botany, . . Department of Geology, . 240 25 Negatives developed for Department of Geology, . 146 Negatives developed for Department of Zoölogy, .

Total, . . . . . . . 001 Total. . . . . 1,525 \*Negatives made in the field by expeditions.

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ATTENDANCE. --- The total attendance for the period covered by the Report is 254,516. Appended is a list of classes, thirty or more, that visited the Museum during the year just closed. An analysis of the daily attendance is also given.

LIST OF CLASSES.

Schools and Locations.	Teachers.	Pupils.
Jewish Training School — 199 West Twelfth pl.,	. 2	32
Chase — Cornelia st. and Point pl.,	. I	40
Normal Practice - Stewart ave. and Sixty-eighth st.,		40
Englewood High - W. Sixty-second and Stewart ave., .		30
Chicago Kindergarten College — 1200 Michigan ave.	. 1	39
Bryant — Riverside, Illinois,		44
Perkins Bass - Sixty-sixth and May sts.,		37

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Keith — Thirty-fourth and Dearborn sts.,	2	40
Hyde Park High - Fifty-seventh st. and Kimbark ave.,	2	57
Hyde Park High - Fifty-seventh st. and Kimbark ave.,	2	56
School of Education — University of Chicago, Chicago, Ill.,	4	68
Hyde Park High — Fifty-seventh st. and Kimbark ave.,	I	58
Hyde Park High - Fifty-seventh st. and Kimbark ave.,	2	54
Hyde Park High (Branch) - Fifty-fourth st. and Monroe ave.,	2	51
University of Chicago — Chicago, Ill.,	I	43
Hyde Park High (Branch) - Fifty-fourth st. and Monroe ave.,	I	74
Normal Practice — Stewart ave. and Sixty-eighth st.,	I	31
Hyde Park High (Branch) — Fifty-fourth st. and Monroe ave.,	I	41
Hyde Park High (Branch) - Fifty-fourth st. and Monroe ave.,	I	37
Hyde Park High (Branch) - Fifty-fourth st. and Monroe ave.,	I	52
Normal Practice - Stewart ave. and Sixty-eighth st.,	3	34
David Swing Sixteenth and String sts.,	I	31
School of Education - University of Chicago, Chicago, Ill.,	3	31
College of Physicians and Surgeons - Honore and Congress sts.,	I	61
Parkman - Fifty-first st. and Princeton ave.,	I	40
Normal Practice — Stewart ave. and Sixty-eighth st.,	I	36
Normal Practice — Stewart ave. and Sixty-eighth st.,	I	35
Brentano - North Fairfield and W. Diversey aves.,	I	31
John Marshall High — West Adams st. near Kedzie ave.,	I	45
Hyde Park High (Branch) - Fifty-fourth st. and Monroe ave.,	I	31
Oglesby — Seventy-seventh and Green sts.,	I	31
School of Education - University of Chicago, Chicago, Ill.,	I	30
Parkside - Seventieth st. and Seipp ave.,	2	39
Parkside - Seventieth st. and Seipp ave.,	2	36
Chicago Home for the Friendless - 5059 Vincennes ave., .	I	30
Lewis-Champlain - Sixty-second st. and Princeton ave.,	I	33
Van Vlissingen - One Hundred and eighth pl, near Wentworth.	I	59
Paul Revere - Seventy-second st. and Ellis ave.,	r	45
Van Vlissingen - One Hundred and Eighth pl. nr. Wentworth.	Т	41
Chase — Cornelia st. and Point pl.,	I	32
McCosh — Champlain ave. and Sixty-sixth st.,	I	38
Parkside - Seventieth st. and Seipp ave.,	I	31
Joseph Warren — Ninety-second st. and Central Ave.,		251
Oliver Goldsmith — 210 Maxwell st.,		101
McCosh — Champlain ave. and Sixty-sixth st.,	I	38
Hammond — Hammond, Indiana,	4	126
Kinzie — Ohio st. and La Salle ave.,	I	44
Englewood High - West Sixty-second st. and Stewart ave., .	I	83
Moody Bible Institute — 80 Institute pl.,		33
Central and Riverside — Hammond, Indiana,	3	67
Riverside — Hammond, Indiana,	2	67
Lafayette, Franklin, and Central — Hammond, Indiana,	9	247
Smyth — Thirteenth st. near Blue Island ave.,	I	31
Riverside — Hammond, Indiana,	2	61
Frances E. Willard - Forty-ninth st. and St. Lawrence ave.,	I	39

Hyde Park High (Branch) - Fifty-fourth st. and Monroe ave.,		45
Sander — Blue Island, Illinois,		38
Wilcox, Berry Lake, East Chicago - East Chicago, Indiana,	3	34
Foster - South Union ave. and O'Brien st.,	I	41
South Side - Blue Island, Illinois,	2	59
Hyde Park High - Fifty-seventh st. and Kimbark ave.,		46
Keith - Thirty-fourth and Dearborn sts.,	2	52
Frances E. Willard - Forty-ninth st. and St. Lawrence ave.,	I	44
South Side and Seymour - Blue Island, Illinois,	2	78
Shields - Forty-third and Rockwell sts.,	I	34
Greenwood and Sander - Blue Island, Illinois,	2	66
Hyde Park High (Branch) - Fifty-fourth st. and Monroe ave.,	Ι	81
Greenwood - Blue Island, Illinois,	2	37
Fuller - Forty-second st. and St. Lawrence ave.,	I	39
Seymour - Blue Island, Illinois,		96
Fuller - Forty-second st. and St. Lawrence ave.,	I	40
Lake High - Union ave. and West Forty-seventh pl.,	I	39
Garfield - Johnson st. and Fourteenth pl.,	I	39
Seymour - Blue Island, Illinois,	2	62
Coonley - Leavitt st. and Bell Plain ave.,	I	34
Seymour and Whittier - Blue Island, Illinois,	2	123
Cameron - Monticello and Potomac aves.,	I	42
Fuller - Forty-second st. and St. Lawrence ave.	I	30
Fallon - West Forty-second and Wallace sts.,	I	30
Brenan — Lime st. near Archer ave.,	I	31
Sullivan — Eighty-third st. and Houston ave.,	4	181
Foster — South Union st. and O'Brien st.,		78
Taylor — Avenue "J" and Ninety-ninth st.,	3	224
Pullman — Pullman, Illinois,		69
Frances E. Willard - Forty-ninth st. and St. Lawrence ave.,	I	32
Charles R. Darwin - Edgewood ave. and Catalpa Court,	I	31
Kershaw - Union ave. and West Sixty-fourth st., .		30
University of Chicago - Chicago, Illinois,		32
Dore — West Harrison st. near Halsted,		153
Alfred Tennyson California ave. and Fulton st.,		31
George W. Curtis - One Hundred and Fourteenth pl. nr. State,		32
Foster — South Union and O'Brien sts.,		33
University of Chicago Chicago, Illinois,		84
Chicago Training School for Missions — 4949 Indiana ave.,	I	40
Moody Bible Institute — 80 Institute pl.,	3	60
Tilton — West Lake st. and Forty-second ave., .		71
Normal Practice - Stewart ave. and Sixty-eighth st.,		40
Bryant — Riverside, Illinois,		35
Bryant — Riverside, Illinois,	I	42
University of Chicago — Chicago, Illinois,	2	75
University of Chicago — Chicago, Illinois,		30
Keith — Thirty-fourth and Dearborn sts.,		66
Keith — Thirty-fourth and Dearborn sts.,	2	43
		.0

Hyde Park High - Fifty-seventh st. and Kimbark ave., . 81 3 Hyde Park High - Fifty-seventh st. and Kimbark ave., . I 46 Hyde Park High - Fifty-seventh st. and Kimbark ave., . Ι 36 Hyde Park High - Fifty-seventh st. and Kimbark ave., . . I 102 University of Chicago - Chicago, Illinois, . . . . 2 31 Hyde Park High - Fifty-seventh st. and Kimbark ave., . . 2 54 Normal Practice --- Stewart ave. and Sixty-eighth st., . I 38 .

Herewith are also submitted financial statements, list of accessions, names of members, etc.

FREDERICK J. V. SKIFF Director.

## FINANCIAL STATEMENT.

#### RECEIPTS AND DISBURSEMENTS

From October 1, 1905, to December 31, 1906.

#### RECEIPTS.

Cash in Treasurer's hands, September 30, 1905, . Petty Cash on hand, September 30, 1905, Dues of Members —	\$
Corporate,	
Annual,	2,240.00
Admissions and Check Rooms,	6,775.40
Sale of Guides,	400.00
South Park Commissioners,	18,750.00
Interest on Investments,	67,364.90
Interest on daily balances	267.27
Huntington W. Jackson Library Fund,	60.00
Final Dividend on World's Columbian Exposition	
Stock,	233.43
Sale of Securities,	55,000.00
Donations —-	00.
Robert F. Cummings,	4,000.00
Martin A. Ryerson,	I,500.00
Stanley Field,	250.00
Watson F. Blair,	250.00
E. E. Ayer,	250.00
W. J. Chalmers,	250.00
Cyrus H. McCormick,	250.00
W. I. Buchanan,	25.35
Department of Mines and Mining, World's	0.00
Columbian Exposition,	50.00
Sundry Receipts,	290.28
Marshall Field Endowment and Building Fund,	1,100,000.00
Field Endowment Income, Real Estate	112,000.00
Field Endowment Income, Bonds and Mortgages,	3,977.55

\$1,384,860.88

Salaries,	\$ 87,227.90 15,418.20 9,180.15 4,140.08
Wages, \$ 4,384.45	
Fuel and Supplies,	12,309.48
Repairs and Alterations —-	
Wages of Carpenters, Painters, Roofers, . \$11,608.06	
Material used—paints, oils, lumber, glass, etc. 2,096.38	13,704.44
Furniture and Fixtures —	
Cases and Bases,	
Sundries,	19,898.81
The Library —.	
Books and Periodicals,	
Binding,	-
Sundries,	6,067.07
Sections of Printing and Photography,	1,479.56
Collections purchased,	32,229.02
Departmental Expenses,	7,285.71
General Expense Account —	
Freight, Expressage and Teaming, \$ 2,395.00	
Stationery, Postage, and Telephone, etc., . 1,017.96	
Expeditions,	
Publications,	
Sundries,	27,800.48
	\$236,740.90
In Treasurer's hands, December 31, 1906 \$39,741.48 In Treasurer's hands, December 31, 1906, Field	
Endowment and Building Funds,	
Petty Cash on hand,	
Illinois Trust & Savings Bank stock	
Mortgages, Bonds, etc.,	1,148,119.98

DISBURSEMENTS.

\$1,384,860.88





### ATTENDANCE AND RECEIPTS FROM OCTOBER 1, 1905, TO DECEMBER 31, 1906.

Attendance.

Paid Attendance —							
Adults,				•		23,111	
Children,						I,32I	24,432
Free Admission on Pay Days —							
School Children,						7.532	
Students,						3.306	
Teachers,						762	
Members: Corporate,						27	
Annual,						II4	
Life,						2	
Officers' Families,						126	
Special,						36	
Press,							11,936
Admission on Free Days							
Saturdays,						44.633	
Sundays,							218,148
Total Attendance, .							254,516
Highest Attendance on any day (Augu	1st 12	, 10	06)	,			7,691
Highest Paid Attendance on any day							54 <b>8</b>
Average Daily Admissions (453 days),							561
Average Paid Admissions (322 days),							75
0	CEIPTS						
Guides sold — 1,600 at 25 cents each,							\$ 400.00
Articles Checked - 17,311 at 5 cents e							805.55
Admissions,							5,009.85
							\$7.175.40

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## ACCESSIONS.

#### DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AMERICAN MUSEUM OF NATURAL HISTORY, New York City.

Cast of carved stone figure A bear-like figure, a pit on top of head, arms and legs clasped round a stump—Fraser Plains, Washington (exchange).

AYER, E. E., Chicago.

Large obsidian seal ring — Mexico.

Ethnological specimens - Philippine Islands.

Ethnological specimens from the Moro, Lake Lanao, Philippine Islands. Woven Shield from the Congo, Africa.

Ethnological specimens, consisting of spears; swords, and knives, cannon, and helmets — Philippine Islands.

2 Egyptian images.

BLAIR, MRS. CHAUNCEY J., Chicago.

Solid silver table service, consisting of 20 pieces — I large plate, 3 small plates, 3 small dishes, I large cup, I shell-shaped cup, 6 large spoons, 5 salt spoons — Tivoli, Italy.

BROOKLYN INSTITUTE OF SCIENCE AND ART, Brooklyn, N. Y. Skulls and skeletons of Cliff Dwellers — Arizona (exchange).

CASEY, JOHN, Lehigh, Iowa.

7 flint scrapers, 12 flint arrow-heads, 1 stone hoe, 1 stone, notched edge — Iowa.

CLEMENS, F. L., Durango, Colo.

Large earthenware coiled vessel -- Cliff Ruins, near Durango, Colo.

CUMMINGS, R. F., Philippine Expedition.

120 Ethnological specimens from native tribes, Philippine Islands.

Ethnological specimens from Igorrot tribes, Island of Luzon, Philippine Islands. (Collected by S. C. Simms).

20 Ethnological specimens, Philippine Islands.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by Geo. A, Dorsey:

Pawnee Buffalo hide lariat - Oklahoma.

Skidi fox skin warriors' head-dress — Oklahoma.

One group of seven figures — Hamatsa, or cannibal dancers, coming out of secret room.

Collected by Alleyne Ireland:

Skull taken by Dyaks in head-hunting raid - Borneo.

Collected by James Mooney: Chevenne and Arapaho Ethnological specimens - Oklahoma. Collected by C. F. Newcombe: Ethnological specimens - North West Coast. Collected by C. L. Owen: Ethnological objects from Mission Indians of Southern California. Purchases: Ethnological specimens from Tarahuamari Indians of Mexico. Buffalo robe with ornamental porcupine quill. Ashanti skulls. New Guinea skulls. Ethnological specimens from Pacific Islands. Ethnological specimens - Siberia. 4 arrow-points, 1 pendant. Ethnological specimens - Pacific Islands. 2 skulls - New Guinea. 1 skull - Solomon Islands. Archæological specimens - Northern Indiana. Skulls - Argentine. Ethnological specimens - Malay States. Porro baskets, Puyallup baskets, Haida baskets, Arapaho specimens. Specimens of bronze, iron, wood, and ivory - Benin, Africa. Archæological specimens - Mexico. Ethnological specimens - Kwakiutl Indians. Maori skulls - New Zealand. Pawnee sacred bundle and contents - Pawnee, Oklahoma. Sacred bundle and contents and "star chart," Big Black Meteor -Pawnee, Oklahoma. Ethnological specimens - Northern Iroquois. Ethnological specimens from Seminoles - Florida. HANCOCK, MRS. STODDARD, Chicago. 1 Fiji spear. LYMAN J. CHESTER. I George Washington china saucer. I Peruvian bronze casting of a sacrifice by fire. RYERSON, M. A., MCCORMICK, CYRUS H., FIELD, STANLEY, BLAIR, WATSON F., CHALMERS, W. J. Ethnological and Archæological specimens, copper implements, Wampum belts - Wisconsin. RYERSON, MARTIN A., Chicago. Swiss lakes dwelling material - Switzerland. TAFT, W. D. C., Chicago. Stone implements of various kinds -- Central Illinois. WYMAN BROS., Chicago. Implements of quartz, etc.- Wading River, N. Y.

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#### DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

- ARTHUR, PROF. J. C., Agricultural Experiment Station, La Fayette, Indiana. 7 herbarium specimens — various localities.
- BLAKESLEE, DR. A. F., Halle, Germany.

1 specimen Phycomyces nitens --- Germany.

- BRACE, L. J. K., Nassau, New Providence. 1 specimen Nashia inaguensis, Millspaugh — Nassau, New Providence.
- 3 herbarium specimens Bahamas.

BRANDEGEE, T. S., San Diego, California.

13 herbarium specimens — Mexico.

- BUREAU OF SCIENCE, Department of the Interior, Manila, P. I.
  - 996 herbarium specimens Philippine Islands (exchange).
- CALKINS, W. W., Chicago.
  - 8 specimens lichens Illinois.
- CARTER, J. J., Peters Creek, Pennsylvania.

109 herbarium specimens — Maryland and Pennsylvania (exchange).

- CHAMBERLAIN, DR. C. J., Chicago.
- 1 herbarium specimen Vera Cruz, Mexico.
- CHASE, V. H., Wady Petra, Illinois.

188 specimens fungi and lichens — various localities (exchange).

- CORN PRODUCTS COMPANY, THE, Chicago.
  - 23 specimens corn products.
  - 1 economic specimen amylin.
- COULTER, PROF. JOHN M., University of Chicago.

o herbarium specimens - North Dakota.

- DEPARTMENT OF ANTHROPOLOGY, Field Museum of Natural History. 6 economic specimens — Vancouver Island, B. C. (transfer).
- DEPARTMENT OF GEOLOGY, Field Museum of Natural History.

10 specimens of peat products — California and Austria (transfer).

- DEPARTMENT OF ZOOLOGY, Field Museum of Natural History.
  - 12 herbarium specimens Guatemala (transfer).
  - 6 herbarium specimens Guatemala (transfer).

66 herbarium specimens — Henry, Illinois (transfer).

EMRICK, DR. G. M., Chicago.

20 herbarium specimens — Mexico.

- ESTACION CENTRAL AGRONOMICA, Santiago de las Vegas, Cuba.
  - 419 herbarium specimens Cuba (exchange).
  - 46 specimens cryptogams Cuba (exchange).
  - 141 herbarium specimens Cuba (exchange).
  - 132 herbarium specimens Cuba (exchange).
- FARR, MISS EDITH M., Philadelphia, Pa. 34 herbarium specimens — British Columbia. 1 herbarium specimen — Alberta.
- FIELD MUSEUM OF NATURAL HISTORY.
  - Collated by J. M. Greenman:
    - 3 descriptions of plants.

AL REPORT OF THE DI

4 plates and descriptions of plants.
1 tracing and description of Otopappus verbesinoides, Benth.
Collated by C. F. Millspaugh:
33 herbarium specimens parts of dried plants — Cuba, Florida, and Bahamas.

11 herbarium specimen parts of dried plants - Bahamas and Cuba.

18 portions of herbarium specimens — various localities.

3 fragments Senecio Hookeri and Senecio Lugens, 1 tracing of Senecio Hookeri — Canada.

1 fragmentary herbarium specimen — Guatemala.

Collected by L. J. K. Brace:

762 herbarium specimens — Bahamas.

Collected by J. M. Greenman:

510 herbarium specimens, dried fruits and fruits in formalin — Vera Cruz and Yucatan.

Collected by O. E. Lansing, Jr.:

2 specimens leaves and fruiting stems Typha latifolia — Indiana.

126 herbarium specimens — Lake Chicago basin.

Collected by N. L. Britton and C. F. Millspaugh:

10 specimens fruits in formalin — Bahamas.

Purchases:

50 herbarium specimens-Grenada, W. I.

471 herbarium specimens - New Mexico.

275 herbarium specimens — Cuba.

30 herbarium specimens — Grenada, W. I.

3 economic specimens.

227 herbarium specimens — Southern Florida.

11 products of Sabal, Blackburnianum, and native tobacco - Bermuda.

160 herbarium specimens — Mexico.

34 herbarium specimens — Grenada, W. I.

606 herbarium specimens — Montana.

9 economic specimens.

100 herbarium specimens — Colorado.

I economic specimen.

525 herbarium specimens — California.

5 economic specimens - West Virginia.

116 herbarium specimens — Grenada, W. I.

717 herbarium specimens — Mexico.

6 economic specimens.

30 herbarium specimens — Grenada, W. I.

10 economic specimens of Lodoicea sechellarum - Seychelles Islands.

201 herbarium specimens — Jamaica.

8 economic specimens of drugs.

4480 herbarium specimens.

254 specimens American woods — North America.

GATES, FRANK, C., Chicago.

1 herbarium specimen - Ravenswood, Illinois.

1 herbarium specimen — Chicago.

11 herbarium specimens - Illinois (exchange). 16 herbarium specimens — Illinois (exchange). GAUMER, DR. GEORGE F., Izamal, Mexico. 123 herbarium specimens — Yucatan. 2 herbarium specimens - Yucatan. 1 herbarium specimen — Yucatan. 1 herbarium specimen - Yucatan. GEOLOGICAL SURVEY OF CANADA, Ottawa, Canada. 20 herbarium specimens - Canada. GOODALL MATTING COMPANY, Kennebunk, Maine. 7 economic specimens. GRAY HERBARIUM, Harvard University, Cambridge, Mass. I tracing and 2 descriptions of plants. GREENMAN, J. M., Chicago. 1 economic specimen - Formosa. 46 herbarium specimens - Yucatan. 1 herbarium specimen — Germany. HALL, HERMAN J., Chicago. 1 specimen fruit stalk — Chicago. HARSHBERGER, PROF. J. W., West Philadelphia, Pa. 161 herbarium specimens — Pennsylvania. HAYNES, CAROLINE C., Highlands, N. J. 17 herbarium specimens — various localities. HAYNES, PIERRE E., Chicago. 60 herbarium specimens - Channel Lake, Illinois. HERB. KRUG & URBAN, Berlin, Germany. 50 herbarium specimens (exchange). HESSLER, MRS. JOHN C., Chicago. 1 specimen rope - Ellison Bay, Wisconsin. HILL, E. J., Chicago. 1 herbarium specimen — Illinois. HOLLICK, DR. ARTHUR, Bronx Park, New York City. 1 coniferous amber, 1 coniferous lignite - Staten Island, N. Y. KELLERMAN, PROF. W. A., Columbus, Ohio. 6 herbarium specimens — Guatemala. 12 herbarium specimens — Guatemala. 7 herbarium specimens — Guatemala. 8 herbarium specimens - Guatemala. 11 herbarium specimens — Guatemala. 23 herbarium specimens — Guatemala. KUHN, CHARLES, Chicago. 1 package cigars. LANSING, O. E., JR., Chicago. 1 specimen rice. I specimen corn confection. LAWTON, MISS AMY C., Omaha, Nebraska. 105 herbarium specimens - Omaha, Nebraska.

#### MILLSPAUGH, C. F., Chicago.

- I specimen popcorn.
- I specimen puffed rice balls confection.
- I specimen cocoanut confection.
- 2 economic specimens.
- 2 specimens nuts.
- I specimen popcorn balls.
- r economic specimen.
- 8 economic specimens.
- I specimen "Jesuit chestnut rosary"- Lucerne, Switzerland.
- 3 economic specimens Berlin, Germany.
- 1 specimen blue gum rosary Pisa, Italy.
- 4 economic products Berlin, Germany.
- I basket, I wasp nest Wisconsin.
- 1 specimen Polyporus lucidus Ephraim, Wisconsin.
- r specimen preserved dates.
- 3 specimens products.
- MILLSPAUGH, MRS. C. F., Chicago.
  - 5 economic specimens Germany.
- MILLSPAUGH, HOWARD, Elmira, N. Y.
  - 1 specimen dried sweet corn.
- MISSOURI BOTANICAL GARDEN, St. Louis, Mo.
  - I economic specimen (exchange).
- MOORE, ALBERT H., Cambridge, Mass.
- 66 herbarium specimens Bermuda.
- MORRIS, E. L., Washington, D. C.
- 1 herbarium specimen Patagonia.
- NATURHISTORISCHES HOFMUSEUM, Vienna, Austria.
  - 1072 herbarium specimens South Africa (exchange).
- NEWCOMBE, DR. C. F., Victoria, B. C.
  - 5 economic specimens Vancouver Island.
    - 6 specimens dried fruits British Columbia.
    - 5 herbarium specimens Yale, B. C.
- NEW YORK BOTANICAL GARDEN, Bronx Park, New York.
  - 2 specimens dried fruits New Providence Island, Bahamas (exchange).
    - 659 herbarium specimens various localities (exchange).
    - 258 herbarium specimens various localities (exchange).
    - 100 herbarium specimens -- Jamaica (exchange).
  - I herbarium specimen Culebra Island, Porto Rico (exchange).
- NICHOLS, H. W., Chicago.
  - 1 economic specimen California.
- OSTERHOUT, GEORGE E., New Windsor, Colorado.
  - 1 herbarium specimen Colorado.
- POPE BEET SUGAR FACTORY, CHAS., Riverdale, Illinois.
  - 21 specimens showing beet sugar process.
- ROSING, B., Chicago.
  - 3 economic specimens.

ROYAL GARDEN, Kew, London, England.

134 herbarium specimens — Yucatan (exchange).

SCHUTZE, MRS. EVA WATSON, Chicago.

1 specimen bayberry candle dips — New Jersey.

SMITH, JOHN DONNELL, Baltimore, Maryland. 180 herbarium specimens — Guatemala, Honduras, and Costa Rica. 46 plates of Central American plants.

UMBACH, L. M., Naperville, Illinois.

712 herbarium specimens — Montana (exchange).

193 herbarium specimens — various localities (exchange).

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

1 herbarium specimen — Costa Rica.

6 specimens fungi — Mexico (exchange).

3 herbarium specimens - Texas, Mexico, and Oklahoma (exchange).

3 fragments of herbarium specimens - U. S. of Colombia and Mexico.

UNITED STATES SUBTROPICAL LABORATORY, Miami, Florida.

2 economic specimens — Florida.

1 economic specimen — Florida (exchange).

UNIVERSITY OF CHICAGO, Chicago.

122 herbarium specimens — Mexico.

#### DEPARTMENT OF GEOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AMERICAN MUSEUM OF NATURAL HISTORY, New York City.

5 prints illustrating Cape York meteorite.

ANDERSON, JAMES, Glasgow, Scotland.

2 specimens typical black-band iron ore, raw and calcined — near Glasgow, Scotland.

BARRINGER, D. M., Philadelphia, Pa.

4 pieces iron shale, 1 shale ball — Coon Butte, Arizona.

BICKFORD BROS., Norway, Maine.

1 crystal cæsium beryl — Buckfield, Maine.

BIRD, EDWARD, Salt Lake City, Utah.

3 specimens variscite — Stockton, Utah.

BINBY, MAYNARD, Salt Lake City, Utah.

1 specimen brochantite, 2 specimens wurtzite, 1 specimen agatized bone, 1 specimen opalized tree  $9\frac{1}{2}'' \ge 20''$  Utah and Idaho.

BOTTSFORD, H. L., Calumet, Michigan.

1 specimen whitneyite — Calumet, Michigan.

BREZINA, DR. ARISTIDES, Vienna, Austria.

1.5 grams Honolulu meteorite, 1.7 grams Pricetown meteorite, 1.2 grams Ottawa meteorite, 2.9 grams Kerilis meteorite, 0.5 grams Orvinio meteorite (exchange).

CHAVES, DIOCLESIAN, Museo de Nicaragua, Managua, Nicaragua.

1 fossil footprint — Managua, Nicaragua.

CORBETT, H. R., Chicago.

1 specimen cobalt ore, 1 specimen copper ore - Sumter, Oregon.

CORY, CHARLES B., Chicago.

2 specimens flint concretions, I specimen fossil wood, I specimen fossil shell — Desert of Sahara.

DOWNING, A. M., Chicago.

1 specimen silver ore — Tabotacachi Mine, Sonora, Mexico.

EGGERS, H. F., Chicago.

1 specimen concretion — Eureka Springs, Arkansas.

FIELD, MRS. L. W., Orange, California.

I group of quartz crystals — Green River, Wyoming.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by Dr. T. H. Bean:

296 fossil land shells, 66 fossil sea shells, 8 fossil sponges, 99 nodules, 18 rocks and cave forms — Bermuda.

Collected by O. C. Farrington:

2 specimens loess, 2 specimens volcanic ash — Scott and Ness Counties, Kansas.

1 meteorite, weight 7 lbs. - Modoc, Kansas.

Collected by S. E. Meek:

2 specimens pumice — Lake Amatitlan, Guatemala.

Collected by C. L. Owen:

r smoky quartz crystal — San Jacinto Mountains, California.

Collected by E. S. Riggs:

I nearly complete skull of Triceratops, 3 incomplete skulls of Triceratops, 2 partial skeletons of Triceratops, 3 partial skeletons of Plesiosaurs, I carapace of large fossil turtle, 25 specimens fossil sea-crabs — Montana.

82 specimens vertebrate fossils — South Dakota.

99 specimens vertebrate fossils — Western Nebraska.

Collected by A. W. Slocom:

- 16 specimens fossil sponges, 186 specimens fossil corals, 201 specimens fossil crinoids, 138 specimens fossil cystoids, 105 specimens fossil brachiopods, 64 specimens fossil trilobites, 56 specimens fossil molluscs, etc.; 1 specimen sphalerite, 7 specimens pyritized wood— Romeo and Lemont, Illinois.
  - 2760 specimens (73 species) invertebrate Devonian fossils Little Traverse Bay, Mich.

851 specimens invertebrate fossils, 21 specimens minerals, 3 specimens rocks — Suburbs of Chicago.

Purchases:

1 specimen iridescent quartz crystal.

4 charts illustrating origin of ores.

5 specimens minerals, 1 slab fossil echinoids - California.

393 grams Ilimæs meteorite — Chile.

104 fossil trilobites, cystoids, molluses, etc. - Rokitzan, Bohemia.

1956 grams (4 specimens) Modoc meteorite — Modoc, Kansas.

I relief map of Niagara River and vicinity.

1 Ness City meteorite — Kansas.

I full-sized section Estacado meteorite.

1 polished slab orbicular diorite — Dehesa, California.

1 specimen green tourmaline - Newry, Maine.

54 specimens volcanic products, r photograph — Mt. Vesuvius, Italy. 4 relief maps.

1 specimen tourmaline - Ramona, San Diego County, California.

16 specimens lava and ashes of Mt. Vesuvius eruption of 1906 —Italy. 1 copper boulder, weight 13 lbs. — Delavan, Wisconsin.

GAMBA, F. PEREIRA, Pasto, Department Narino, Colombia.

79 specimens garnets, sapphires and ilmenites, 3 specimens gem-bearing rock — River Mayo near Mercaderes, Cauca, Colombia.

GOULD, PROF. C. N., University of Oklahoma, Norman, Oklahoma.

32 specimens sand-barite crystals — Vicinity of Norman, Oklahoma. GUION, G. MURRAY, Chicago.

> I specimen quartz and hematite, I specimen banded novaculite, I specimen limonite concretion — New York, Arkansas, and Indian Territory.

GUTHRIE, OSSIAN, Chicago.

1 photograph of diorite boulder.

HEIGHWAY, DR. A. E., New York City.

1 specimen chrysoprase — Visalia, California.

- 1 specimen zinc ore La Moza, Cuba.
- HILL, HARRY, Chicago.

13 specimens tin ores and associated rocks, 3 specimens native bismuth — Seward Penin., Alaska.

HUGHES, MRS., Parlaville, Hamilton, Bermuda.

I specimen volcanic dust from St. Vincent, B. W. I., I specimen volcanic dust from Island of Martinique, B. W. I.

JUDD, COL. L. S., Quartzsite, Arizona.

3 specimens dumortierite, 1 specimen barite — La Cholla Dist., Yuma County, Arizona.

KAY, PROF. G. F., University of Kansas, Lawrence, Kansas.

2 specimens minerals — Colorado and Utah.

KENKEL, L. V., Eggleston, Michigan.

1 fulgurite - Eggleston, Michigan.

LEITER, JOSEPH, Ziegler, Illinois.

14 specimens fossil plants — Ziegler Coal Co.'s Mine, Illinois.

CHAMBER OF COMMERCE, Los Angeles, California.

- I specimen tourmaline with albite, I specimen cyanite California and Arizona (exchange).
- MARCH, JOHN, Tribune, Kansas.

1 specimen agate — Scott County, Kansas.

McKAY, W. J., Chicago.

1 specimen ozocerite - Fort Worth, Utah.

McMAHON, GEORGE, Chicago.

29 specimens ores, minerals and rocks - Cripple Creek, Colorado.

MEYER, EDGAR L., St. Georges, Bermuda.

230 fossil land shells, 1 fossil sea shell, 17 specimens cave forms — St. Georges, Bermuda.

MEYER, IRA B., Chicago. I 'fulgurite 9 feet in length in sections - Chesterton, Indiana. MILLAR, A. Q., Minneapolis, Minnesota. 6 specimens kimberlite and alteration products - Elliott County. Kentucky. 47 specimens kimberlite and associated rock - Elliott County, Kentucky. 500 specimens garnet and chrysolite — Elliott County, Kentucky, MUSEE d'HISTOIRE NATURELLE, Paris, France. 62 grams La Becasse meteorite (exchange). PETERSEN, NICHOLAS, Chicago. 1 specimen No. 2 fire clay - Baston Mountains, Crawford County, Arkansas. PICKLES, JULIAN, Morrellton, Missouri. 5 specimens crystallized barite - Morrellton, Missouri. PIERCE, HENRY B., Golconda, Illinois. 2 specimens transparent fluorite — Golconda, Illinois. PREMIER (TRANSVAAL) DIAMOND MINING COMPANY, LIMITED, London, England. 1 model of "Cullinan" diamond. RHODESIA MUSEUM, THE, Bulawayo, Rhodesia. 20 specimens minerals, ores and rocks (exchange). RONAN, THOMAS, Chicago. 1 specimen galena with chalcopyrite - South Africa. SAWYER, ELIZABETH E. T., 1077 specimens of minerals and fossils. SEEBOECK, W. C. E., Chicago. 16 specimens minerals (exchange). SHAEFFER, SAMUEL, Ness City, Kansas. 2 specimens novaculite, I specimen pelecypod shell - Ness City, Kansas. SHIELDS, JOHN, Shelburne, Ontario. 2 photographs illustrating place of fall of Shelburne meteorite (exchange). UNIVERSITY OF ARIZONA, Tuscon, Arizona. 372 grams Weaver meteorite - Weaver Mountains, Arizona (exchange). WARD, PROF. H. A., Chicago. 41 sections of meteorites for microscopic study. 120 grams Cobija meteorite — Cobija, Chile (exchange). WARREN, CAPT. J. H., Oskaloosa, Iowa. 1 glaciated boulder - Oskaloosa, Iowa. UNIVERSITY OF CHICAGO, Chicago. 6 specimens fossil crinoids - St. Paul, Indiana. WENDT MRS. MATHILDA, San Remo, Italy. 1 framed photograph.

### DEPARTMENT OF ZOOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)	
AKELEY, C. E., Chicago.	
1 flying squirrel.	
ALFARO, ANASTASIO, San Jose, Costa Rica, C. A.	
2 lizards, 2 rattlesnakes, 2 rattlesnake skins, 1 rattlesnake head —	
West slope of Costa Rica.	
ALLEN, MISS, Bermuda.	
1 shell — The Flatts, Bermuda.	
BARBER, C. M., Chicago.	
r barred owl — Laporte, Indiana.	
10 bird lice — Laporte, Indiana.	
BATTY, J. H., New York City.	
r Coiba black howler monkey — Coiba Island, U. S. Colombia.	
34 bird skins — Panama.	
BAYLOR UNIVERSITY, Waco, Texas.	
104 reptiles and amphibians (exchange).	
BRACE, L. J. K., Nassua, Bahama.	
i butterfly — Crooked Island, Bahamas.	
BRAND, CHARLES J., Washington, D. C.	
12 beetles — Tempe, Arizona.	
BRIMLEY BROS., Raleigh, N. C. 26 salamanders, 45 toads, 6 lizards, 52 snakes, 41 turtles (exchange).	
BRITISH MUSEUM, London, England.	
2 fishes — Argentina, S. A. (exchange).	
44 lizards (exchange).	
150 fishes — Europe and Asia (exchange).	
CARPENTER, C. H., Chicago.	
2 spiders — Saugatuck, Michigan.	
CHOPE, E. B., Chicago.	
3 frogs — Chicago.	
CORY, C. B., Chicago.	
3 Japanese glass sponges.	
1250 insects — United States and Cuba.	
1 bobolink, 2 finches, 6 warblers, 1 throsher, 1 chickadee, 5 kinglets,	
3 thrushes — United States.	
DEARBORN, N., Chicago.	
6 flies — Chicago.	
DERBY, JR., WILLIAM M., Chicago.	
2 wood ducks — Central Illinois.	
DEWEY, C. L., Chicago.	
1 mink — Dowagiae, Michigan.	
DUPEE, W. H., Chicago.	
2 mountain sheep — Lower California.	
FANCHER, LLOYD, Davis, Indiana.	
r great-horned owl — Davis, Indiana.	
FIELD MUSEUM OF NATURAL HISTORY.	

Collected by C. M. Barber:

40 lizards, 16 salamanders, 11 frogs, 12 toads, 15 snakes, 150 fishes, 25 land crabs — Guatemala, C. A.

- 51 river turtles Havana, Illinois.
- 138 bird skins Guatemala.
- 1 scorpion Patulul, Guatemala.
- 12 crayfish Laporte, Indiana.
- 25 clams, 15 snail shells Fox Lake, Illinois.
- 25 land snail shells Willow Springs, Illinois.
- 6 toads, 2 frogs, 17 salamanders, 50 cricket frogs Laporte, Indiana; Willow Springs and Fox Lake, Illinois.
- Collected by T. H. Bean:
  - 11 sea-urchins and star fish, 44 corals, sea-whips, sea-fans, etc., 19 sea-cucumbers, 3 sea-anemones, 20 sponges, 15 specimens of hydroids — Bermuda.
  - 1818 fishes, 147 lizards, toads, frogs and toad-tadpoles, 116 spiders centipedes, millipedes, bugs, roaches, beetles, etc., 1176 shells, chitons, slugs, naked molluses, etc., 11 squids and octopi, 170 erabs, lobsters, crayfish, isopods, barnacles, etc., 57 worms, 11 bryozoa, 1 jelly-fish, 1 group of ascidians, 1 lot of fish parasites, 1 stomach of fish Bermuda.
  - Collected by E. B. Chope:
    - 2 snakes, 3 salamanders Willow Springs, Illinois.
    - I lacewing, 2 caddice-flies, 3 stoneflies, 7 grasshoppers, 16 dragon-flies, 35 butterflies, 38 flies, 45 bees, wasps, etc., 144 bugs, 144 moths, 401 beetles — Walworth, Wisconsin.
    - 25 land snail shells Willow Springs, Illinois.
- Collected by N. Dearborn:
  - 2 bats Los Amates, Guatemala.
  - 1 squirrel Los Amates, Guatemala.
  - 61 bird skins Chicago.
  - 1 turtle, 45 fishes --- Los Amates, Guatemala.
  - 1000 bird skins Guatemala.
- Collected by J. F. Ferry:
  - 2 snakes, 3 frogs Lake County and Waukegan, Illinois.
  - 485 bird skins Illinois.
- Collected by William J. Gerhard:
- 3 moths, 2 butterflies Willow Springs and Chicago, Illinois.
- Collected by Edmund Heller:
  - 1 lizard British East Africa.
  - 10 frogs Olive Branch, Illinois.
  - 12 snakes Fox Lake, Illinois.
  - r barred owl Olive Branch, Illinois.
  - 2 fox squirrels, 16 chipmunks, 2 striped spermophiles, 1 woodchuck, 28 northern white-footed mice, 17 Michigan white-footed mice, 3 house mice, 8 Norway rats, 38 common meadow voles, 6 prairie meadow voles, 7 muskrats, 3 jumping mice, 3 rabbits, 3 weasels, 1 skunk, 28 short-tailed shrews, 12 long-tailed shrews — Iilinois.

#### 52 FIELD MUSEUM OF NATURAL HISTORY-Reports, Vol. III.

Collected by E. Heller and C. M. Barber:

- $_4$  pig skulls, I tapir skull, I bat  $\rightarrow$  Guatemala.
- 4 Virginia opossums, I white-eyed opossum, I three-toed anteater, I great anteater, 3 armadillos, 3 white-tailed deer, 4 white-lipped peccaries, 2 tapir, 2 tree squirrels, 2 jaguarondi cats, I grison, I coati — Guatemala.

49 bird skins — Guatemala.

Collected by S. E. Meek:

1500 fishes, 300 reptiles — Guatemala and Nicaragua.

- 26 leeches, 45 shells, 1 freshwater sponge Lake Amatitlan, Guatemala.
- 20 ticks, 2 centipedes, 5 dragon-fly nymphs Mexico. Nicaragua, and Guatemala.

25 shells — Lake Nicaragua.

- 10 shells San Francisco, Nicaragua.
- 40 sea-shells, 6 crabs Corinto, Nicaragua.

Collected by E. S. Riggs:

9 rattlesnakes, 6 gartersnakes, 1 gopher snake, 12 horned toads — Rawhide Buttes, Wyoming.

Purchases:

- 152 butterflies (77 species) Natal, South Africa.
- 30 bats, 1 anteater, 5 deer, 20 squirrels, 12 opossums, 2 porcupines, 7 sloths, 25 monkeys, 37 mice, 30 rats, 2 agouti --- U. S. Colombia, S. A.

1 bear, 4 monkeys - Telok Betong, South Sumatra.

- 1 moth, 44 butterflies --- Natal, South Africa.
- 2 antelope, 1 deer, 1 chimpanzee.

1 mountain lion.

228 beetles, 4 lizards — Turkey in Asia.

445 bird skins - Nicaragua and Costa Rica.

17 moths — vicinity of Weenen, Natal, South Africa.

414 bird skins - Philippine Islands.

1 rough-leg hawk — South Chicago.

26 humming birds, 1 cotinga, 2 pipras, 1 caliste.

10819 beetles --- United States and Canada.

100 specimens Hawaiian Islands fishes.

- 1002 bird skins various localities.
- 700 shells, 500 insects, I bear skin and skeleton, 4 cougar, 60 mammals — various localities.
- ı live alligator Mississippi.

107 mammal skins.

- 4 indigo bunting eggs, 3 yellow-throated vireo eggs, 3 gadwall duck eggs, 8 wood duck eggs New York, Iowa, and Nevada.
- 10 birds' nests and 41 eggs.

FIFIELD, G. H., Whiting, Indiana.

I albatros head and wings.

FISCHER, EUGENE, Chicago.

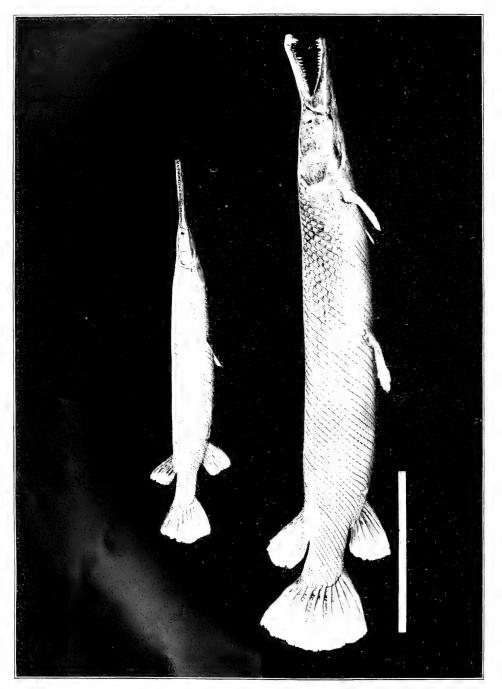
1 skunk — Nekoosa, Wisconsin.

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FIFLD MUSEUM OF NATURAL HISTORY

MELLINTS, E. V.



LEPISOSTEUS OSSEUS, LONG-NOSED GAR PIKE. LEPISOSTEUS TRISLŒCHUS, ALLIGATOR GAR PIKE. DEPARTMENT OF ZOÖLOGY. PRESENTED BY MR. W. R. MUELLER, CHICAGO.

FREISSER, JULIUS, Chicago. 3 turtles - McHenry, Illinois. 1 moth — Chicago. GAULT, B. F., Glenn Ellyn, Illinois. 2 bats, 1 water-rat -- Florida and South America. 1 bat - Cayenne, French Guiana, S. A. GERHARD, WILLIAM J., Chicago. 36 dragon-flies - Pennsylvania and New Jersey. GILL, GEORGE M., Lebanon, Tennessee. 1 praying mantis - Lebanon, Tennessee. 1 beetle — Tuscaloosa, Alabama. GRACE, C. H., Chicago. I live alligator. GUERET, E. N., Chicago. 1 snake - Willow Springs, Illinois. I wasp, I centipede, I bug, 2 spiders, 5 beetles - Chicago. HAYWARD, TUCKER. 8 beetles - St. David's Island, Bermuda. HILL, CHARLES, Chicago. 2 beetles, 3 flies, 2 sawflies, 3 bugs, 2 wasps and parasites, 1 stonefly, 2 dragon-flies, I bee, I wasp - Chicago and Palos Park, Illinois. JACKSON, H. V., Durango, Mexico. 1 centipede, 1 whip-tailed scorpion, 2 scorpions, 6 spiders, 3 grasshoppers, 3 praying mantis, 1 larva, 1 beetle, 4 bees and wasps, 1 egg mass, 1 salamander — near Durango, Mexico. KENKEL, LOUIS V., Chicago. 1 silver mole and skull - Jackson Park, Chicago. LEWY, ALFRED, Chicago. 1 sharp-shinned hawk - Chicago. MANN, WILLIAM M., Helena, Montana. 2 beetles --- Wathena, Kansas. MEYER, EDGAR L. 2 shells - Bermuda. MUELLER, F. R., Chicago. 1 alligator - Louisiana. MUNZNER, H., Chicago. I sawfly, 2 spiders, I bug, I beetle, I fly, I wasp, I hornet - Harvey, Illinois. NEILSON, MRS. L. F., Chicago. 11 humming birds, 1 sunbird, 1 starling. O'BRIEN, WILLIAM, Chicago. I spider - Chicago. PEDERSEN, J. K., Chicago. 1 muskrat — Jackson Park, Chicago. POLING, O. C., Quincy, Illinois. I fly, 2 stoneflies, 5 ant-lions, 7 beetles, 7 bees, wasps and parasites, 8 bugs - Quincy, Illinois, and Southern Arizona.

#### 54 FIELD MUSEUM OF NATURAL HISTORY-REPORTS, VOL. III.

PRAY, L. J., Chicago.

6 ground squirrels, 1 gopher, 1 rabbit — Fox Lake, Illinois. 2 squirrels — Dowagiac, Michigan.

RADDATZ, R. C., Chicago.

1 bat — Jackson Park, Chicago.

1 centipede, 2 beetles — Antigo, Wisconsin.

2 tree-toads, 1 frog — Wisconsin and Fox Lake, Illinois.

SPURLING, MR., Bermuda.

1 star-fish — Castle Harbor, Bermuda.

STEBBINS, J. H., Chicago.

r centipede — Chicago.

TUCKER, ARCHDEACON, Bermuda.

1 shell — North Shore, Bermuda.

U. S. NATIONAL MUSEUM, Washington, D. C. 29 fishes (20 species). 9 bats (exchange).

WALLISTER, GUSTAV, Chicago.

1 scorpion — Chicago.

WILLIAMSON, E. B., Bluffton, Indiana.

13 crayfish — Bluffton, Indiana.

WOLCOTT, A. B., Chicago.

1 grasshopper, 14 bugs, 2 bectles, 2 flies, 9 bees, wasps, etc., 2 weevils, 2 spiders, 2 bees — Illinois, Indiana, and Texas.

#### SECTION OF PHOTOGRAPHY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

ELLIOT, D. G., New York City.

43 lantern slides.

FIELD MUSEUM OF NATURAL HISTORY.

Made by C. M. Barber:

50 negatives of general views, landscapes, etc. - Guatemala.

Made by C. H. Carpenter;

1783 negatives, 890 lantern slides, 5160 prints, 66 enlargements, 991 negatives developed, 1525 prints mounted.

Made by N. Dearborn:

155 negatives bird studies, general views, etc. — United States and Guatemala.

Made by George A. Dorsey:

8 negatives of Indian ceremonials, 12 negatives of archæological subjects.

Made by J. M. Greenman:

48 negatives of plant studies, general views, etc. — Mexico and Yucatan.

Made by S. E. Meek:

120 negatives general views, landscapes, etc. --- Guatemala.

Made by C. F. Millspaugh:

174 negatives of museums, institutions, general views, etc. - Europe.

# JAN., 1907. ANNUAL REPORT OF THE DIRECTOR.

Made by C. L. Owen:

156 negatives general views, landscapes, etc. --- California.

Made by E. S. Riggs:

- 93 negatives of general views, landscapes, etc. Bad Lands, South Dakota.
- 60 negatives of general views, landscapes, etc. Nebraska Paleontological Expedition, 1906.

Made by S. C. Simms:

12 negatives general views, etc. - Philippine Islands.

Made by A. W. Slocom:

29 negatives of general views, landscapes, etc. — Romeo, Illinois, Chicago, and Bay View, Michigan.

Purchase:

15 negatives of the "Paul Kane" pictures.

## THE LIBRARY.

## BOOKS, PAMPHLETS, AND SERIALS.

(ACCESSIONS ARE BY EXCHANGE UNLESS OTHERWISE DESIGNATED.)

ACIREALE. REALE ACCADEMIA DI SCIENZE, Acireale, Italy.

Rendiconti e memorie, ser. 3, v. 4, 1904–5.

ADAMS, FRANK D., Montreal, Canada.

2 reprints.

AGUILERA, JOSÉ G., Mexico, Mexico. 3 pamphlets.

ALABAMA AGRICULTURAL EXPERIMENT STATION, Auburn, Ala. Bulletin, current numbers (gift).

ALABAMA GEOLOGICAL SURVEY, University, Ala.

т тар.

ALASKA EXPERIMENT STATION.

Bulletin, current numbers (gift).

ALBANY MUSEUM, Grahamstown, Cape Colony.

Records, v. 1, pts. 5–6.

ALLEN, GLOVER M., Cambridge, Mass. 1 pamphlet.

AMERICAN ACADEMY OF ARTS AND SCIENCES, Boston, Mass. Proceedings, current numbers.

1 pamphlet.

AMERICAN ANTHROPOLOGICAL ASSOCIATION, Washington, D. C. Memoirs, v. 1, nos. 1-2.

AMERICAN ANTIQUARIAN SOCIETY, Worcester, Mass. Proceedings, current numbers.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Philadelphia.

Proceedings, 54th and 55th meetings, 1904-5 (gift).

AMERICAN CHEMICAL JOURNAL PUBLISHING COMPANY, Baltimore, Maryland.

Journal, current numbers.

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### JAPANESE WOODS.

The installation in this case shows some of the more important Japanese woods. Each species is represented by a colored illustration of the plant in flower and fruit; and under the illustration are two portions of the trunk, one clearly displaying the natural bark, the other showing an unfinished and a finished surface of the wood in the same plane.  A Device a structure of the second secon second sec REPORTS, PL. VIII.

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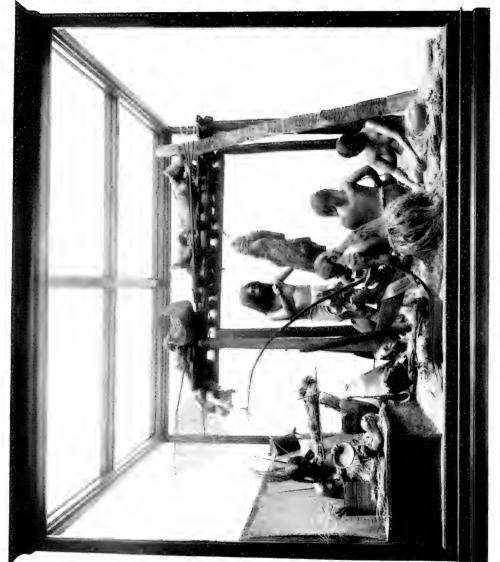
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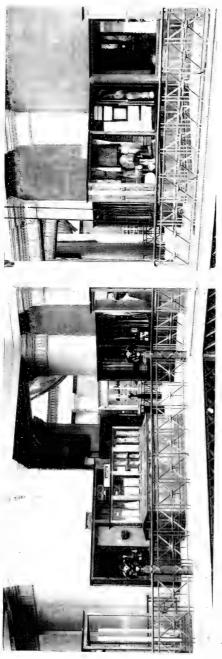
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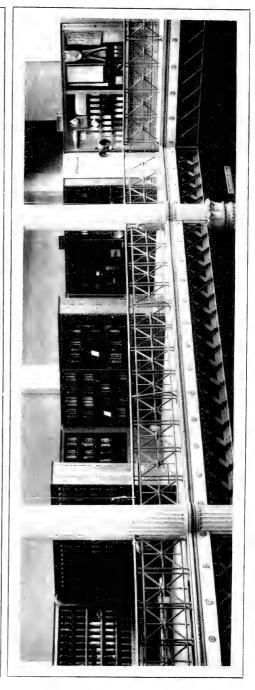
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# GALLERY IN THE NORTH COURT, DEPARTMENT OF BOTANY.

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These views show a portion of the exhibit of useful articles derived chiefly from the natural family *Gramineæ*, or grasses. The upright cases are so disposed as to form successive alcoves in which related products are grouped, thus affording a ready means for comparison. The cases in the lower view are continuous with those of the upper from left to right.

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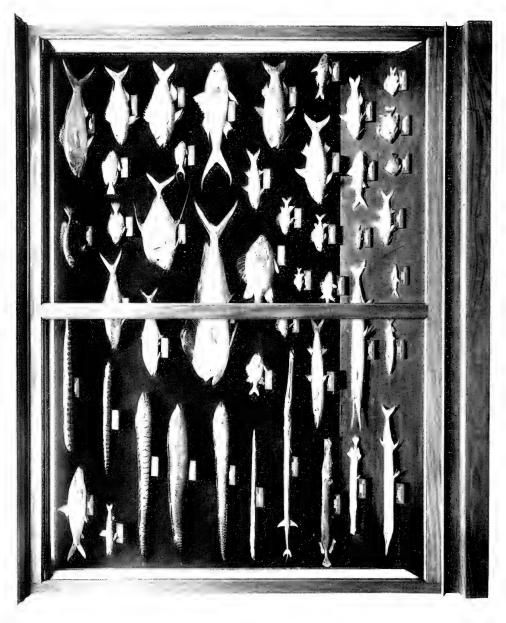
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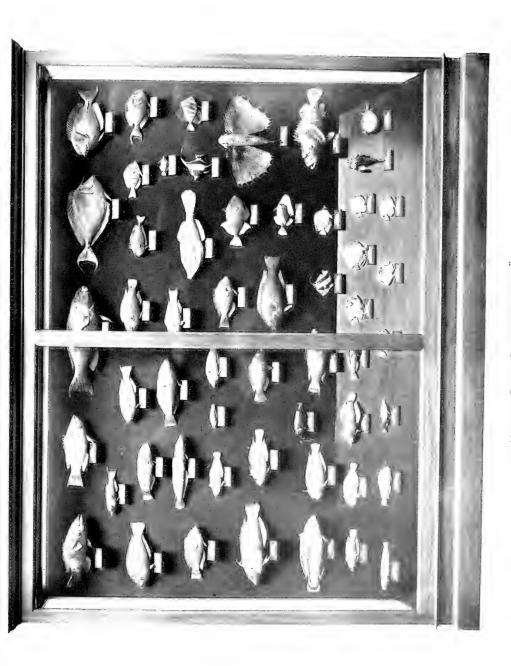
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DEPARTMENT OF STATE. WILLIAM H. HINRICHSEN. Secretary of State.

To All to Whom These Presents Shall Come, Greeting:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the roth day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

*Now, therejore,* I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninetythree, and of the Independence of the United States the one hundred and eighteenth. W. H. HINRICHSEN,

[SEAL .

Secretary of State.

TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned, citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to-wit:

 $\tau_{\star}$  . The name of such corporation is the ''COLUMBIAN MUSEUM OF CHICAGO.''

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archæology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

#### (Signed),

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohlsaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, Geo. F. Bissell, John R. Walsh, Chas. Fitzsimons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

# STATE OF ILLINOIS, } ss.

COOK COUNTY. 55.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893. G. R. MITCHELL,

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate Members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate Members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November, 10th, 1905, in the office of the Secretary of State for Illinois.

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# AMENDED BY-LAWS.

#### (April 30, 1906.)

## ARTICLE I.

#### MEMBERS.

SECTION I. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons, and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be ground of forfeiture of annual membership.

This said annual membership shall entitle the member to:

First.—Free admittance for himself and family to the Museum on any day.

Second.— Ten tickets every year admitting the bearer to the Museum on pay days.

' *Third.*— A copy of every publication of the Museum sold at the entrance door, and to the Annual Reports.

Fourth.— Invitations to all receptions, lectures, or other entertainments which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of association, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of association shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members, shall, within ninety days of their respective election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payments within said time shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. The annual dues of Corporate Members shall be five dollars (\$5.00) after the first year of membership, and no one shall exercise the rights of a Corporate Member until his dues are paid; and]a delinquency of six months in the payment of annual dues shall be ground for forfeiture of corporate membership. Corporate Members becoming Life Members, Patrons, or Honorary Members shall be exempt from dues.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars at any one time shall, upon the unanimous vote of the Trustees, become a Life Member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board of Trustees, upon recommendation of the Executive Committee, from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and by virtue of their election as Patrons shall also be Corporate Members.

SEC. 6. Honorary Members shall be chosen from among persons who have rendered eminent service to science, art, or mechanics. They shall be chosen by a vote of the Trustees, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

SEC. 7. All members of whatever class shall be eligible to appointment upon committees other than the Executive Committee.

#### ARTICLE II.

#### OFFICERS.

SECTION 1. The respective members of the Board of Trustees now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled by a majority vote of the remaining members of the Board of Trustees at any regular meeting.

SEC. 2. The other officers shall be Président, two Vice-Presidents, Secretary and Treasurer, and an Executive Committee of four persons, who shall be chosen by ballot by the Board of Trustees from their own number as early as practicable after the annual meeting in each year. The President shall be *ex-officio* a member of the Executive Committee and Chairman thereof, in addition to the other four members. The Secretary and Treasurer may, or may not, be the same person, and the Secretary may, or may not, be a Corporate Member.

Any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds' of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The President shall appoint from among the Trustees a Committee on Finance, a Committee on Property, an Auditing Committee, and a Committee on Buildings and Grounds, who shall serve during the pleasure of the Board.

SEC. 4. The officers shall perform such duties as ordinarily appertain to their respective offices, and such other duties as the Board of Trustees may from time to time devolve upon them. The Treasurer shall give bond in such amount and with such surety as shall be approved by the Executive Committee, and shall disburse the funds of the Museum only in accordance with the directions of the Executive Committee, upon the signature and counter-signature of such officers as the Executive Committee shall empower thereto.

SEC. 5. The Executive Committee shall have full control of the affairs of the Museum, under the general supervision of the Board of Trustees.

#### ARTICLE III.

#### MEETINGS.

SECTION 1. The annual meeting of the Corporate Members shall be held upon the last Monday of January in each year.<sup>T.</sup> At such meetings the Corporate

## 102 FIELD MUSEUM OF NATURAL HISTORY-REPORTS, VOL. III.

Members shall transact such business as may properly come before the meeting. Special meetings of the Corporate Members shall be called at any time by the Secretary upon written request of twenty Corporate Members. In such case thirty days' notice by mail shall be given to Corporate Members of the time, place and purpose of such meetings.

SEC. 2. Regular meetings of the Board of Trustees shall be held upon the last Monday of January, April, July, and October of each year. Special meetings may be called by the President at any time upon reasonable notice by mail, and shall be called upon the written request of three Trustees. Five Trustees shall constitute a quorum, but meetings may be adjourned by any less number from day to day, or to a day fixed.

#### ARTICLE IV.

#### AMENDMENTS.

SECTION I. These By-Laws may be amended at any regular meeting of the Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at the last regular meeting preceding, or shall be recommended by the Executive Committee. /

FIELD MUSEUM OF NATURAL HISTORY.





Hall 64. Systematic Minerals and Ornamental Stones.

# HONORARY MEMBERS.

EDWARD E. AYER HARLOW N. HIGINBOTHAM

CHARLES B. CORY STANLEY McCORMICK

DECEASED.

MARY D. STURGES

# PATRONS.

ALLISON V. ARMOUR FREDERICK W. PUTNAM WILLIAM I. BUCHANAN FREDERICK J. V. SKIFF WILLARD A. SMITH

## 104 FIELD MUSEUM OF NATURAL HISTORY-REPORTS, VOL. III.

# CORPORATE MEMBERS.

ADAMS, GEORGE E. ALDIS, OWEN F. ARMOUR, ALLISON V. AYER, EDWARD E.

BARTLETT, A. C. BLACK, JOHN C. BLAIR, WATSON F. BLATCHFORD, ELIPHALET W. BUCHANAN, W. I. BUCKINGHAM, EBENEZER BURNHAM, DANIEL H. BUTLER, EDWARD B.

CHALMERS, W. J. CHATFIELD-TAYLOR, H. C. CLARK, JOHN M. CURTIS, WILLIAM E.

EASTMAN, SIDNEY C. ELLSWORTH, JAMES W.

GAGE, LYMAN J. GETTY, HENRY H. GUNSAULUS, FRANK W. GUNTHER, C. F.

HEAD, FRANKLIN H.

HIGINBOTHAM, H. N. HUTCHINSON, CHARLES L.

JONES, ARTHUR B.

KOHLSAAT, HERMAN H.

LATHROP, BRYAN

McCAGG, E. B. McCORMICK, CYRUS H. MANIERRE, GEORGE MITCHELL, JOHN J.

PATTERSON, ROBERT W. PECK, FERD. W. PUTNAM, FREDERICK W.

REAM, NORMAN B. RYERSON, MARTIN A.

SKIFF, FREDERICK J. V. SMITH, BYRON L. SMITH, WILLARD A. SPRAGUE, A. A. STOCKTON, JOSEPH STONE, MELVILLE E.

WALKER, EDWIN WALSH, JOHN R.

#### DECEASED.

ARMOUR, PHILIP D. BAKER, WILLIAM T. BISSELL, GEORGE F. CRAWFORD, ANDREW DAVIS, GEORGE R. FITZSIMONS, CHARLES HALE, WILLIAM E. HARPER, WILLIAM R. HATCH, AZEL F. JACKSON, HUNTINGTON W. LEITER, L. Z. McCLURG, A. C. McNALLY, ANDREW PEARCE, J. IRVING PETERSON, ANDREW PULLMAN, GEORGE M. SCHNEIDER, GEORGE SCOTT, JAMES W. WALLER, R. A. WILLIAMS, NORMAN



Non-Version Wile A Ptarminan (Lagopus Lagopus). Illustrating Protective Coloration.

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# JAN., 1907. ANNUAL REPORT OF THE DIRECTOR.

# LIFE MEMBERS.

ADAMS, GEORGE E. ALDIS, OWEN F.

BARRETT, MRS. A. D. BARRETT, ROBERT L. BARRETT, S. E. BARTLETT, A. C. BLAIR, CHAUNCEY J. BLAIR, WATSON F. BOOTH, W. VERNON BURNHAM, D. H. BUTLER, EDWARD B.

CARTER, JAMES S. CARTON, L. A. CHALMERS, WILLIAM J. CRANE, R. T.

DEERING, CHARLES DRAKE, TRACY C.

FARWELL, WALTER FAY, C. N. FIELD, STANLEY FULLER, WILLIAM A.

GARTZ, A. F. GRISCOM, CLEMENT A. GROMMES, JOHN B.

HAMILL, ERNEST A. HILL, LOUIS W. HUGHITT, MARVIN HUTCHINSON, C. L.

INGALLS, M. E. [PORTER SPRAGUE, OTHO S. A. ISHAM, MRS. KATHERINE

JOHNSON, M. D., FRANK S. **JOHNSON, MRS. ELIZABETH** JONES, ARTHUR B. [AYER

KEITH, ELBRIDGE G. KING, FRANCIS

KING, JAMES C. KIRK, WALTER RADCLIFFE

LAWSON, VICTOR F.

McCORMICK, MRS. McCORMICK, CYRUS H. McCORMICK, HAROLD F. MACVEAGH, FRANKLIN MITCHELL, J. J. MURDOCH, THOMAS

NEWELL, A. B.

ORR, ROBERT M.

PEARSONS, D. K. PIKE, EUGENE S. PORTER, GEORGE T. PORTER, H. H. PORTER, H. H., Jr.

REAM, MRS. CAROLINE P. REAM, NORMAN B. REVELL, ALEX. H. RUSSELL, EDMUND A. RYERSON, MRS. CARRIE H. RYERSON, MARTIN A.

SCHLESINGER, LEOPOLD SCOTT, ROBERT S. SINGER, C. G. SMITH, BYRON L. SMITH, ORSON SPRAGUE, A. A. STURGES, GEORGE

THORNE, GEORGE R. TREE, LAMBERT

WELLS, M. D. WILLARD, ALONZO J. WOLFF, LUDWIG

# ANNUAL MEMBERS.

ADAMS, CYRUSH. ADAMS, MILWARD ALLERTON, ROBERT H. AMBERG, WILLIAM A. ARMOUR, GEORGE A.

BAILEY, EDWARD P. BAKER, SAMUEL BANGA, DR. HENRY BARNES, CHARLES J. BARRELL, JAMES BEAUVAIS, E. A. BECKER, A. G. BELDEN, J. S. BILLINGS, C. K. G. BILLINGS, Dr. FRANK BIRKHOFF, GEORGE, Jr. BLAINE, MRS. EMMONS BLAIR, HENRY A. BOAL, CHARLES T. BOTSFORD, HENRY BOUTON, C. B. BOUTON, N. S. BRADWELL, JAMES B. BREMNER, DAVID F. BREYFOGLE, WM. L. BROOKS, JAMES C. BROWN, GEORGE F. BROWN, WILLIAM L. BURLEY, CLARENCE A.

CABLE, R. R. CARPENTER, A. A. CARPENTER, MYRON J. COMSTOCK, WILLIAM C. CONKLING, ALLEN CONOVER, CHARLES H. COOLBAUGH, MRS. ADDIE R. COONLEY-WARD, MRS. L. A. CORWITH, CHARLES R. COWAN, W. P. COX, ALFRED J. CRANE, CHARLES R. CUDAHY, JOHN CUMMINGS, E. A. CURTIS, D. H.

DAL, DR. JOHN W. DAY, A. M. DAY, CHAPIN A. DEERING, JAMES DEERING, WILLIAM DELANO, F. A. DEMMLER, K. DILLMAN, L. M. DUNHAM, MISS M. V. DURAND, ELLIOTT DWIGHT, JOHN H.

EDWARDS, J. A. EISENDRATH, W. N. EMMERICH, CHARLES

FAIR, R. M. FARNSWORTH, GEORGE FORSYTH, ROBERT FRANK, HENRY L. FRASHER, JOHN E. L. FULLER, O. F. FÜRST, CONRAD

GAYLORD, FREDERIC GLESSNER, J. J. GOODRICH, A. W. GORDON, EDWARD K. GRAHAM, E. R. GREEN, E. H. R. GREY, CHARLES F. GREY, WILLIAM L. GUION, GEORGE MURRAY GURLEY, W. W.

# JAN., 1907.

HAMILTON, I. K. HARDING, AMOS J. HARRIS, GEORGE B. HARRIS, JOHN F. HARRIS, N. W. HARRISON, W. PRESTON HASKELL, FREDERICK T. HERTLE, LOUIS HITCHCOCK, R. M. HOLDOM, JESSE HOLT, GEORGE H. HOPKINS, JOHN P. HORNER, ISAAC HOSKINS, WILLIAM HOUGHTELING, JAMES L.

INSULL, SAMUEL

JEFFERY, THOMAS B. JENKINS, GEORGE H. JONES, J. S.

KEEFER, LOUIS KEENE, JOSEPH KEEP, ALBERT KEITH, W. SCOTT KELLEY, WILLIAM E. KENT, WILLIAM KIMBALL, EUGENE S. KIMBALL, MRS. MARK KOEHLER, THOMAS N.

LAFLIN, ALBERT S. LAMB, FRANK H. LAWSON, VICTOR F. LAY, A. TRACY LEFENS, THIES J. LEIGH, EDWARD B. LINCOLN, ROBERT T. LINN, W. R. LOGAN, F. G. LORD, J. B. LOWDEN, FRANK O. LYTTON, HENRY C.

McCREA, W. S. McGUIRE, REV. H. McLENNAN, J. A. McWILLIAMS, LAFAYETTE MACFARLAND, HENRY J. MAGEE, HENRY W. MANSON, WILLIAM MANSURE, E. L. MARKWALD, LIEUT. ERNST MAY, FRANK E. MAYER, DAVID MAYER, LEVY MEAD, W. L. MERRYWEATHER, GEORGE MEYER, MRS. M. A. MILLER, CHARLES P. MILLER, JOHN S. MIXER, C. H. S. MOORE, L. T. MOORE, N. G. MORRIS, EDWARD MORRIS, NELSON MULLIKEN, A. H. MULLIKEN, CHARLES H.

NATHAN, ADOLPH NOLAN, JOHN H. NORTON, O. W. NOYES, LA VERNE W.

OEHNE, THEODORE ORB, JOHN A. ORTSEIFEN, ADAM OSBORN, HENRY A.

PALMER, PERCIVAL B. PARKER, FRANCIS W. PATTERSON, W. R. PEARSON, EUGENE H. PECK, CLARENCE I. PETERS, HOMER H. PETERSON, WM. A. PINKERTON, W. A. PORTER, WASHINGTON

RANDALL, THOMAS D. RAYNER, JAMES B. REHM, JACOB RIPLEY, E. P. ROSENBAUM, JOSEPH ROSENFELD, MAURICE ROSENTHAL, MRS. OSCAR RUMSEY, GEORGE D. 107

RUNNELLS, J. S. RYERSON, MRS. MARTIN SCHAFFNER, JOSEPH SCHMIDT, DR. O. L. SCHMITT, ANTHONY SCHWARTZ, G. A. SEARS, JOSEPH SEIPP, MRS. C. SEIPP, W. C. SELFRIDGE, HARRY G. SELZ, MORRIS SHEDD, JOHN G. SHORTALL, JOHN G. SKINNER, THE MISSES SMITH, F. B. SNOW, MISS HELEN E. SOPER, JAMES P. SOUTHWELL, H. E. SPENCE, MRS. ELIZABETH E. SPOOR, J. A. STEELE, HENRY B.

STOCKTON, JOHN T. STUART, ROBERT

TEMPLETON, THOMAS TOBEY, FRANK B. TURNER, E. A.

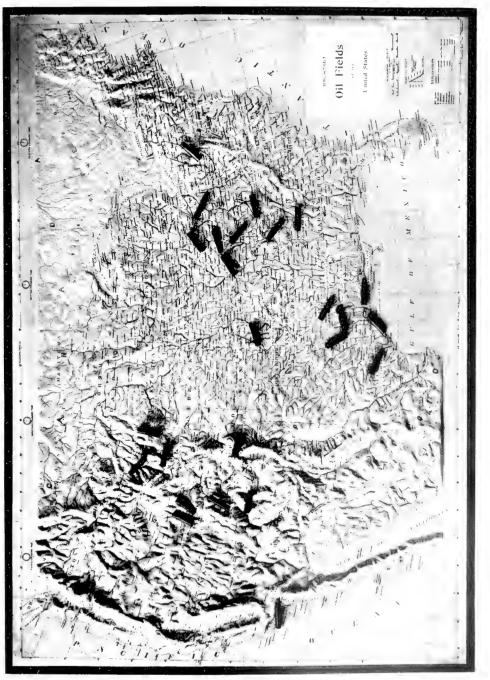
UIHLEIN, EDWARD G.

VIERLING, ROBERT

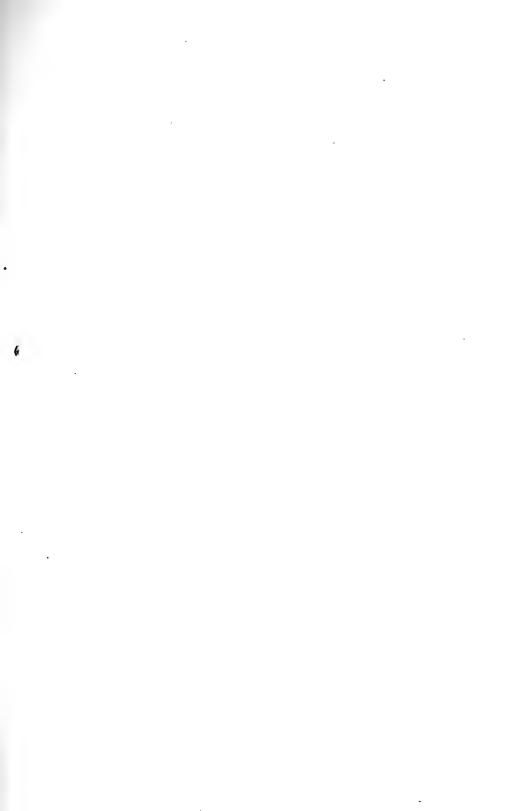
WACKER, CHARLES H. WALKER, JAMES R. WALKER, WILLIAM B. WALLER, EDWARD C. WARNER, EZRA J. WEBSTER, GEORGE H. WHITE, A. STAMFORD WHITEHEAD, W. M. WILSON, MRS. ELLA J. WILSON, M. H. WOOD, S. E. WOODCOCK, LINDSAY T.

DECEASED.

BREGA, CHARLES W. BURLEY, FRANK E. LOWENTHAL, B. MERRICK, L. C. SHIPMAN, DANIEL B. TILTON, MRS. L. J. WOOSTER, CLARENCE K.



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# FRONT ELEVATION OF PROPOSED NEW MUSEUM BUILDING.

REPORTS, PL. XVIII.

FIELD MUSEUM OF NATURAL HISTORY.

FIELD MUSEUM OF NATURAL HISTORY

PUBLICATION 128

REPORT SERIES.

Vol. III, No. 2

# ANNUAL REPORT OF THE DIRECTOR

# TO THE

# BOARD OF TRUSTEES

# FOR THE YEAR 1907



Chicago, U. S. A. January, 1908

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# THE BOARD OF TRUSTEES.

GEORGE E. ADAMS. OWEN F. ALDIS. EDWARD E. AYER. WATSON F. BLAIR. WILLIAM J. CHALMERS. STANLEY FIELD. HARLOW N. HIGINBOTHAM. FREDERICK J. V. SKIFF.

ARTHUR B. JONES. GEORGE MANIERRE. CYRUS H. MCCORMICK. GEORGE F. PORTER. NORMAN B. REAM. MARTIN A. RYERSON. EDWIN WALKER.

# DECEASED.

NORMAN WILLIAMS. MARSHALL FIELD, JR.

GEORGE R. DAVIS. HUNTINGTON W. JACKSON.

# OFFICERS.

HARLOW N. HIGINBOTHAM, President. MARTIN A. RYERSON, First Vice-President. STANLEY FIELD, Second Vice-President. FREDERICK J. V. SKIFF, Secretary. BYRON L. SMITH, Treasurer. D. C. DAVIES, Auditor and Assistant Secretary.

# COMMITTEES.

EXECUTIVE COMMITTEE.

Edward E. Ayer.	W. J. CHALMERS.	GEORGE MANIERRE.				
WATSON F. BLAIR.	STANLEY FIELD.	MARTIN A. RYERSON.				
	FINANCE COMMITTEE.					
WATSON F. BLAIR.	Arthur B. Jones.	MARTIN A. RYERSON.				
	COMMITTEE ON BUILDING.					
W. J. CHALMERS.	CYRUS H. MCCORMICE	K. STANLEY FIELD.				
	AUDITING COMMITTEE.					
George Manierre.	George E. Adams.	ARTHUR B. JONES.				

# STAFF OF THE MUSEUM.

director. Frederick J. V. Skiff.

DEPARTMENT OF ANTHROPOLOGY.

GEORGE A. DORSEY, Curator.

S. C. SIMMS, Assistant Curator Division of Ethnology. CHARLES L. OWEN, Assistant Curator Division of Archæology. BERTHOLD LAUFER, Assistant Curator of Asiatic Ethnology.

DEPARTMENT OF BOTANY.

CHARLES F. MILLSPAUGH, Curator.

JESSE M. GREENMAN, Assistant Curator.

#### DEPARTMENT OF GEOLOGY.

OLIVER C. FARRINGTON, Curator. H. W. NICHOLS, Assistant Curator. ELMER S. RIGGS, Assistant Curator Paleontology. ARTHUR W. SLOCOM, Assistant Curator Section of Invertebrate Paleontology.

DEPARTMENT OF ZOOLOGY.

CHARLES B. CORY, Curator. SETH E. MEEK, Assistant Curator. WILLIAM J. GERHARD, Assistant Curator Division of Entomology. Edward N. GUERET, Assistant Curator Division of Osteology. N. DEARBORN, Assistant Curator Division of Ornithology.

RECORDER.

D. C. DAVIES.

THE LIBRARY. Elsie Lippincott, *Librarian*.

> TAXIDERMIST-IN-CHIEF. Carl E. Akeley.

# ANNUAL REPORT OF THE DIRECTOR. 1907.

To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1907.

The Museum has operated one year under its new By-Laws, whose complete revision was demanded by the establishment of its scope and the definition of its endowment. In revising the rules and regulations governing the staff of the Museum, the responsibilities and authority of the various officers and their relations to each other were clearly set forth, and the experiences of the year under these rules, have satisfactorily tested their rationality and effectiveness. The rearrangement of the financial and executive system of the Institution, including the election of an Auditor, has simplified and unified the business of the Museum.

A most important event of the year was a contribution from Mrs. T. B. Blackstone to defray the expenses of an expedition to Tibet, for collecting and study. Dr. Berthold Laufer lately of Columbia University accepted the charge of this expedition and is to devote three years to the work. Further reference to this expedition is made elsewhere.

The controversy as to the site in Grant Park for the new Museum building has made progress in the Courts, but at the date of this report remains undecided. Much attention has been given to the interior plans of the new structure, more especially to the suites of offices, the location and arrangement of the lecture halls, the admission of visitors, checking systems, etc.

MAINTENANCE.— The sum of \$161,750 was appropriated by the Trustees for the necessary expenses of maintenance during the fiscal year. The actual amount expended was \$135,512, leaving a balance within the anticipated expenses of the year of \$26,238. In addition to the cost of maintenance, sums were expended, upon authority of the Board of Trustees, for collections, books, expeditions, field work, and exhibition cases, that brought the total to approximately \$180,000. This left a balance within the estimated income of \$16,000. Comparing the expenses of maintenance of this year with those of previous

years, a slight increase is discovered in the compensation of the staff and assistants, and in amounts expended for material for maintenance and repairs to the building. The matter of repairing and calcimining the exterior walls of the Museum has received considerable attention, and a contrivance introduced by Mr. Akeley, Chief Taxidermist, seems to have solved the problem, and the entire North front of the Museum and most of the two Annexes have received an outward application of stucco, greatly improving the appearance of the building. It is the intention to complete the work as soon as weather conditions allow.

STAFF OF THE MUSEUM.— One addition was made during the year to the Staff, that being the appointment of Dr. Berthold Laufer as Assistant Curator of Asiatic Ethnology. Dr. Laufer is a graduate of the University of Berlin and has for over ten years been a student of Chinese and Tibetan culture. He has been associated with the Museum für Völkerkunde, of Berlin; conducted two expeditions into Asia for the American Museum of Natural History; one into Siberia and the other into China, both in the interest of the Jesup North Pacific Expedition. More recently Dr. Laufer has been associated with the Department of Chinese, Columbia University.

LECTURE COURSES.— Two series of Lectures have been given since the date of the last Annual Report, which were illustrated, and covered an unusually wide range of research and travel. The lectures are given at Fullerton Hall, in the Art Institute, and the attendance of the public indicates a continued interest in this means of public instruction.

Following is the Twenty-sixth Lecture Course, with the subjects and lecturers delivered during the months of March and April, 1907:

March 2.—"The Iron Ores of the Minnesota Ranges."

Prof. C. W. Hall, University of Minnesota.

March 9.—"Scientific Notes on the Russian Convict Island of Sakhalin."

Mr. Charles H. Hawes, University of Cambridge, England.

March 16 .- "Bird Husbandry."

Dr. N. Dearborn, Assistant Curator, Division of Ornithology, Field Museum of Natural History.

March 23 .--- "The Blackfoot Indians."

Dr. Clark Wissler, Curator of Anthropology, American Museum of Natural History.

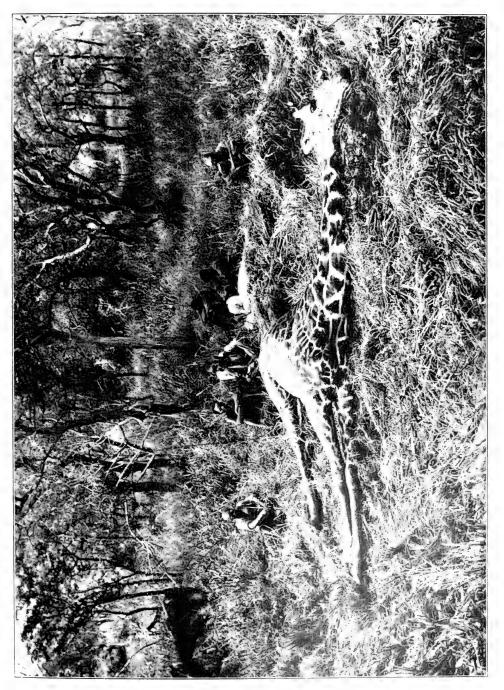
Jan.,	1908. Annual Report of the Director.	115
March	n 30.—"A Superposed Vegetation — The Plant Rusts." Prof. J. C. Arthur, Purdue University, La Indiana.	
April	6.—"The Monuments of a Prehistoric Race." Mr. Frederick I. Monsen, New York City.	
April	13.—"The Indiana of Nature — Its Evolution." Prof. W. S. Blatchley, State Geologist, India	na.
April	20.—"How Some Insects have Solved the Problem of Prof. Herbert Osborn, Ohio State University	
April	27.—"Physiography and Life in Western Norway." Prof. Mark S. W. Jefferson, State Normal Ypsilanti, Michigan.	College,
	The following is the Twenty-seventh Lecture Course, d g the months of October and November, 1907:	lelivered
Oct.	<ul> <li>5.—"In Quest of the Golden Trout of the Southe Sierras."</li> <li>Dr. Barton W. Evermann, Ichthyologist United States Bureau of Fisheries.</li> </ul>	
Oct.	12.—"The Landfall of Columbus." Dr. Charles F. Millspaugh, Curator of Botan Museum of Natural History.	y, Field
Oct.	19.—"Earthquakes viewed in a New Light." Prof. Wm. H. Hobbs, Professor of Geology, sity of Michigan.	Univer-
Oct.	26.—"Here and There in Greece." Dr. C. H. Weller, Professor of Greek and Arch State University of Iowa.	aeology,
Nov.	2.—"A Naturalist in Western Nicaragua." Dr. Seth E. Meek, Assistant Curator of 2 Field Museum of Natural History.	Zoology,
Nov.	9.—"The Indians of Alaska." Dr. Geo. B. Gordon, Curator of Anthropolog Museum of Science and Art, Philadelphia,	
Nov.	<ul> <li>16.—"The R. F. Cummings Philippine Ethnological tion."</li> <li>Mr. S. C. Simms, Assistant Curator of Eth Field Museum of Natural History.</li> </ul>	

- Nov. 23.—"Zoölogical Collecting in British East Africa Part I." Mr. C. E. Akeley, Taxidermist-in-Chief, Field Museum of Natural History.
- Nov. 30.—"Zoölogical Collecting in British East Africa Part II." Mr. C. E. Akeley, Taxidermist-in-Chief, Field Museum of Natural History.

PUBLICATIONS.— The established series of publications has been continued and the issues have appeared at the customary intervals.

Below will be found the titles issued since December 31, 1906, with the number of pages and illustrations:

- Pub. 115.—Zoological Series, Vol. VIII. "A Catalogue of the Collection of Mammals in the Field Museum of Natural History." By D. G. Elliot. 694 pp., 92 illustrations (half tones), edition 1,500.
- Pub. 117.—Botanical Series, Vol. II, No. 4. "Studies in the Genus Citharexylum." By J. M. Greenman. 6 pp., edition 1,500.
- Pub. 118.— Botanical Series, Vol. II, No. 5. "Flora of the Sand Keys of Florida." By C. F. Millspaugh. 53 pp., 19 illustrations (zinc etchings), edition 1,500.
- Pub. 119.— Report Series, Vol. III, No. 1. Annual Report of the Director to the Board of Trustees, October 1905– December 31, 1906. 108 pp., 16 illustrations (half tones), edition 2,500.
- Pub. 120.— Geological Series, Vol. III, No. 5. "Analyses of Iron Meteorites." By O. C. Farrington. 51 pp., edition 1,500.
- Pub. 121.— Zoological Series, Vol. VII, No. 4. "Synopsis of the Fishes of the Great Lakes of Nicaragua." By S. E. Meek. 35 pp., 2 illustrations (half tones), edition 1,500.
- Pub. 122.— Geological Series, Vol. III, No. 6. "Meteorite Studies II." By O. C. Farrington. 19 pp., 15 illustrations (half tones), edition 1,500.
- Pub. 123.— Geological Series, Vol. II, No. 10. "New Crinoids from the Chicago Area." By A. W. Slocom. 33 pp., 15 illustrations (zinc etchings and half tones), edition 1,500.



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Pub. 124.— Zoological Series, Vol. VII, No. 5. "Notes on Fresh Water Fishes from Mexico and Central America." By S. E. Meek. 25 pp., edition 1,500.

Pub. 125.— Ornithological Series, Vol. I, No. 3. "Catalogue of a Collection of Birds from Guatemala." By Ned Dearborn. 69 pp., 4 illustrations (half tones), edition 1,500.

Pub. 126.— Botanical Series, Vol. II, No. 6. "New or Noteworthy Spermatophytes from Mexico, Central America and the West Indies." By J. M. Greenman. 41 pp., edition 1.500.

The Museum Exchange List now numbers 1,231 names, of which 594 are in foreign countries and 637 in the United States and its possessions.

The following table shows the number of exchanges with each of the foreign countries:

Argentine Republic			II	India 15
Australia			27	Japan 6
Austria			29	Liberia
Belgium			15	Mexico
Borneo			I	Malta I
Brazil			IO	Netherlands 13
British Guiana .			I	New Brunswick 1
Canada			27	New Zealand 6
Central America			6	Norway 8
Ceylon			I	Peru 2
Chile				Portugal 5
China			I	Roumania
Cuba			4	Russia
Denmark			4	Spain 5
East Africa			I	Sweden 10
Egypt			I	Switzerland
France			53	South Africa 10
Fiji Islands			I	Tasmania 2
Germany			126	U. S. Colombia
Great Britain .			97	Uruguay I
Greece				West Indies 2
Italy			31	Yucatan 2
				Total

The following table shows the number of foreign exchanges receiving the different publications:

Anthropological								289
Botanical .								200
Geological .								328
Ornithological								186
Zoological .								275
Report								594

The publications are distributed to the different States and Insular Possessions as follows:

Alabama							•	2	Nevada · I
Arizona								I	New Hampshire 5
Arkansas								I	New Jersey 16
California							÷	32	New York 93
Colorado								13	North Carolina 5
Connecticu	t							23	New Mexico I
Delaware								2	Ohio
District of	Col	um	bia					79	Oregon I
Florida								I	Pennsylvania
Georgia								I	Rhode Island 5
Illinois .								74	South Carolina
Indiana								12	South Dakota 2
Iowa .								13	Tennessee 2
Kansas .								9	Texas 2
Kentucky								2	Utah I
Louisiana								4	Vermont
Maine .								5	Virginia 3
Maryland								II	Washington
Massachuse	etts							60	West Virginia 4
								II	Wisconsin
Minnesota								II	Wyoming
Mississippi								2	Philippine Islands 2
									Porto Rico
16									Hawaii 5
Nebraska								3	Total $\overline{637}$
		•	•	•	•	•	•	/	10000

The following tables show the number of domestic exchanges receiving the different publications:

Anthropological								264
Botanical .								
Geological .								
Ornithological								
Zoological .								285
Report								637

The distribution of the publications to foreign countries continues to be accomplished through the courtesy of the Bureau of International Exchanges of the Smithsonian Institution.

The eighth edition of the Guide was issued during the year, and several improvements will be noted in its general make-up. The descriptions of the collections, in several instances, have been curtailed, thus making the book more convenient for ready reference. This issue is illustrated which it is expected will add to its value and interest.

# JAN., 1908. ANNUAL REPORT OF THE DIRECTOR.

LIBRARY.— The accessions in the Library during the year aggregated in volumes and pamphlets 2,755; by purchase 386, by gift and exchange 2,369, bringing the total number of books and pamphlets in the library to 44,514, distributed as follows:

				В	ooks	and Pamphlets.
General Library						33,091
Department of Anthropology						1,466
Department of Botany						3,695
Department of Geology .						5,299
Department of Zoölogy .						963

The routine work of classifying, labeling, accessioning, and cataloguing the books and pamphlets as they were received continued through the year on the same basis as in preceding years. Through the medium of exchange with contemporary institutions, upon which the library depends largely for its growth, it continues to receive valuable publications. Exchanges have been received from 583 institutions and 130 individuals. Gifts to the General Library worthy of special mention have been received from Mr. Stephen Sommier, Florence, Italy, I volume; Mr. Theodor Koch-Grunberg, Berlin, 4 volumes; Mr. John W. Barrett, Washington, D. C., 10 volumes; Mr. H. N. Higinbotham, Chicago, 28 volumes; Mr. Frederick J. V. Skiff, 81 volumes; Naturhistorische Verein, Bonn, 58 volumes; Naturforschende Gesellschaft, Zurich, 47 volumes; Royal Society, London, 38 volumes; Geological Survey of Canada, 12 volumes; Maryland Geological Survey, 7 volumes. Twelve installments of the John Crerar Library cards have been received, alphabetically arranged, and filed; 11,211 cards have been written and distributed in the catalogue. A special feature of the work during the year has been the formation of a Library of Exposition Literature. The volumes presented for the formation of this library by Sir Henry Trueman Wood, Commissioner to the World's Columbian Exposition, Mr. H. N. Higinbotham, President of the World's Columbian Exposition, and Frederick J. V. Skiff, approximated 1,100 books and pamphlets. From this collection, 668 titles have been selected, chronologically arranged, accessioned, catalogued, and installed in a special room provided for the purpose. The unbound books are at present in the bindery, and the miscellaneous pamphlets will be filed in neat cloth boxes. The whole forms a very creditable reference library of literature on Expositions from 1851 to 1904. The duplicates of this material have been arranged in three groups. Group 1 contains 260 titles, group 2 contains 156

titles, group 3 contains 88 titles. These several groups have been packed separately, and await further disposition. A number of valuable books have been purchased during the year, but many more are desired, particularly in the departments of Anthropology and Botany.

DEPARTMENTAL CATALOGUING, INVENTORYING AND LABELING. — The cataloguing in the Department of Anthropology has been continued almost without interruption throughout the year, over 12,000 specimens having been catalogued, and a card catalogue made of about 7,500 specimens, all of which have been entered in the inventory books, which now number twenty-seven.

All the specimens of a number of installed cases in the Department of Botany have been exhaustively labeled; all labels for the dendrologic installation are printed and in readiness for use. The copy has been written for all the unlabeled material that has been installed; all new material has been properly organized, catalogued and cared for; the index of vernacular names and references augmented by several thousand cards, and all matters pertaining to the collections and work of the department kept rigidly up to date.

Specimens in the Department of Geology are inventoried and catalogued as received. The total number of entries made during the year is 10,635, which, added to the previously recorded number, gives 72,837 as the total present number of entries in the Department. The principal work of labeling performed was in connection with the systematic mineral collection and the collections in Hall 78. For the systematic minerals a total of 1,925 labels was prepared during the year, of which 1,536 have been printed and distributed. The sizes of labels used for this collection are governed by those of the specimen mounts, four different forms being employed. For the collections in Hall 78, 957 labels have been prepared, of which 838 have been printed and distributed. These labels also vary in size, according to the size of the mount, three forms being employed, besides descriptive labels. Aluminum ink and black cardboard have been used for all these labels. The increased interest evinced by visitors in these collections since the labeling has been completed is noticeable and gratifying. Additional labels prepared during the year have included fourteen fully descriptive labels for the relief maps and about one hundred labels for meteorites and paleontological specimens.

In the Department of Zoölogy considerable clerical work was accomplished, the entries in the inventory books registering 9,445,

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while over 1,000 cards were added to the box catalogue. In the Division of Ornithology over 7,000 labels were prepared, and attached to the specimens in the study collection.

The year's work on catalogues and inventorying is shown in detail as follows:

	No. of Record Books	Total No. of Entries to Dec. 31, 1907.	Entries during 1907.	Total No. of Cards Written.
Department of Anthropology .	31	93,020	12,896	96,910
Department of Botany	49	219,800	26,310	
Department of Geology	20	72,837	10,635	6,630
Department of Zoölogy	2 I	67,452	10,102	23,911
The Library	II	57,130	6,241	66,085
Section of Photography	6	59,523	10,600	

ACCESSIONS.- The most important additions to the Department of Anthropology during the year have been acquired through expeditions. Foremost among these is the material obtained by Assistant Curator Simms from the Igorot tribes of northern Luzon, chiefly from the provinces of Lepanto, Bontoc, and Nueva Vizcaya. Mr. Simms remained many months in this region, as noted in the last report, engaged in investigation under the Robert F. Cummings fund. The collection is probably the largest and most representative ever made from any one tribe in the Island. Second in importance is a large and representative collection of ethnological specimens, illustrating the culture of the Sauk and Fox Indians, of Tama, Iowa, made by Dr. William Jones. This collection admirably supplements one made at the same place several years ago by the Curator of the Department. As a result of the expedition from the Department of Zoölogy in British East Africa, Mr. C. E. Akeley brought back several hundred unusually interesting specimens, representative of the culture of several tribes of that region. Mr. V. Shaw Kennedy, who accompanied Mr. Akeley on that expedition, brought a number of specimens to Chicago with him, and has presented them to the Museum. From Vice-president Ryerson has been received, as a gift, a small but valuable collection made a few years ago by Curator Cory among the Seminoles of Florida. From Tuan Fang, a viceroy of The Two Kiang Provinces, China, was received a very interesting, ancient Chinese monument, bearing inscriptions in excellent state of preservation. This gift of the Viceroy was to commemorate his visit to this Institution. Of the collections acquired by purchase, the largest was that secured from a well-known

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London dealer in ethnological material. This collection consisted almost exclusively of rare specimens from different islands of the Pacific, especially Polynesia, and some unusually interesting material from Benin, West Africa. The most notable specimens in this collection are four beautifully carved ceremonial clubs from the Marquesas Islands. From Mr. Irving Channon, for many vears a missionary to Micronesia, was secured by purchase a collection of several hundred specimens from that region, especially from the Marshall and Gilbert groups. These specimens are of more than usual value, for they were collected personally by Mr. Channon, and are thoroughly identified as to locality. From Mr. Rudolph Parkinson, Ralum, Bismarck Archipelago, was secured by purchase seventyseven skulls from New Britain. Two exchanges with other institutions have been made during the year, which are worthy of mention. One is with the Brooklyn Institute Museum, whereby this Institution secured a large quantity of osteological material from the Southwest, and a small, but carefully selected collection of ethnological specimens from the peublo of Zuñi. Arrangements were made during the year whereby the Museum expects to receive shortly from the Museum für Völkerkunde, of Berlin, a considerable portion of the great collection made in the interior of Brazil by Theodore Koch. Word has been received by the Museum that Mr. Cole has shipped from Manila a very large collection of ethnological material, which he has accumulated during his two years' residence with the Tinguianes, in northwestern Luzon, especially in the province of Abra.

In the Department of Botany the most important accession during the year is the complete herbarium of the University of Chicago, founded upon the collections of Prof. John M. Coulter, and augmented under his direction. This herbarium has been entirely rearranged for the purpose of cataloguing and distribution into the organized herbarium of the Museum. It is found to contain about 51,000 specimens, of which about three fourths are mounted. The principal collectors represented by fairly complete sets are: O. D. Allen; Baker, Earle & Tracy; John Ball, Thomas H. Bonser, Wm. Canby, M. A. Carleton, John M. Coulter, A. H. Curtiss, Drake & Dickson, B. W. Evermann, M. L. Fernald, Heyde & Lux, Volney Havard, F. H. Horsford, Thos. Howell, Marcus E. Jones, T. H. Kearney, Jr., T. Kirk, B. F. Leeds, J. G. Lemmon, G. C. Neally, Edward Palmer, S. B. Parish, H. N. Patterson, C. G. Pringle, C. A. Purpus, J. Reverchon, Sadie Rider, Robinson &



FIELD MUSEUM OF NATURAL HISTORY.



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Schrenk, J. N. Rose, J. H. Sandberg, H. E. Seaton, Mrs. Dr. Henry Sheldon, J. H. Simpson, John K. Small, John Donnell Smith, W. N. Suksdorf, W. F. Thurrow, E. B. Uline, Geo. R. Vasev, Mrs. S. B. Walker, H. N. Whitford, and W. G. Wright. With this herbarium the University transfers all its taxonomic research to this Museum. Another important herbarium has been secured in that of the noted Swedish botanist, Dr. L. J. Wahlstedt. The collection numbers approximately 15,000 specimens, chiefly of European plants, and is especially rich in Characea, Viola, and Epilobia. The Characea alone are represented by upwards of 2200 critically determined specimens, and the Viola by about 1500 specimens. Some of the more noteworthy series of exsiccate, illustrating these groups of plants included in the herbarium, are the following: Die Characeen Europa's in getrockneten Exemplaren, Prof. Dr. A. Braun, Dr. L. Rabenhorst and Dr. E. Stizenberger; Characeæ Americanæ exsiccatæ, T. F. Allen; Characeæ Scandinaviæ exsiccatæ quas distribuerunt O. Nordstedt et L. J. Wahlstedt; Characeæ of Denmark, P. Nielsen; Characeæ exsiccatæ, Migula, Sydow et Wahlstedt; Characeæ of Great Britain, A. Bennett; Characeæ of England, H. &. I. Groves; Characeæ suecicæ, O. Nordstedt; Characeæ suecicæ, L. J. Wahlstedt; Algæ Scandinaviæ exsiccatæ, quas adjectis Characeis, distribuit John Erh. Areschoug; Violæ Sueciæ exsiccatæ, Neuman, Wahlstedt, Murbeck; Viola exsiccata, W. Becker. The Wahlstedt herbarium also contains many other important collections, including the excellent series, Marsiliaceæ in horto Berolinense cultæ, editæ 1870, A. Braun; Flora exsiccata, and Rosarum Europearum exsiccatarum, M. Gandoger. The other notable acquisitions are: G. M. Emerick, Mexico, 257; Barbados Botanic Station, 115; C. Conzatti, Mexico, 362; Estacion Agronomica de Cuba, 156; Edward Palmer, Mexico, 949; N. Y. Botanical Garden, West Indies, 1362; A. A. Heller, California, 1320 and Oregon, 419; W. A. Kellerman, Guatemala, 207; Louis J. K. Brace, Bahamas, 1715; Britton & Millspaugh, Bahamas, 922; C. C. Deam, Guatemala, 89, C. G. Pringle, Mexico, 343; C. A. Purpus, Mexico, 519; Bureau of Science, Philippines, 94; Frank C. Gates. Illinois, 137; Pere Duss, Guadeloupe, 1046, and Martinique, 574; W. W. Calkins, Illinois, 221; American Colony, Palestine, 172; Theo. Holm, Colorado, 201, and District of Columbia, 333; Mrs. M. Tuttle. California, 240; Mrs. E. G. Britton, Bahamas, 190; U. S. National Herbarium, Central America, 186; Caldwell & Baker, Cuba, 82; Grav's N. A. Cyperaceæ & Graminæ, 158; and F. Lindheimer, Texas,

623. The mounting and incorporation of the Patterson herbarium has been completed, and a large number of sheets from the herbarium of John K. Small, acquired some time ago, have been organized, catalogued and inserted. The accessions for the year (in so far as the specimens have been inserted in the organized herbarium) represent the following localities:

Alaska	NORTH AMERICA	ADDED THIS YEAR	TOTAL IN HERBARIUM
Canada	Alaska	8	319
Anticosti Island       6       6         British Columbia       7       276         Grinnell Land       7       276         Grinnell Land       2       12         Labrador,       3       3         Manitoba       3       3         North West Territory       12       12         New Brunswick       10       558         Nova Scotia       10       558         Nova Scotia       41       732         Alabama       41       732         American Plains       3       89         Arizona       518       3,522         Arkansas       27       185         California       1,701       11,448         Colorado       518       3,522         Arkansas       137       836         District of Columbia       137       836         District of Columbia       137       836         District of Columbia       1,556       15,655         Indiana       1,556       15,655         Indiana       1,556       15,655         Indiana       121       941         Maine       175       853	Canada	118	1,840
British Columbia       7       276         Grinnell Land       6       12         Labrador,       2       152         Manitoba       3       3         North West Territory       12       12         New Brunswick       10       558         Nova Scotia       6       102         United States:       6       102         Alabama       41       732         American Plains       3       89         Arizona       518       3,522         Arkansas       27       185         California       1,701       11,448         Colorado       815       5,354         Connecticut       11       217         Delaware       137       836         District of Columbia       3900       1,868         Florida       174       9,929         Florida Keys       1       223         Georgia       43       3,025         Idaho.       6       718         Illinois       1,556       15,655         Indiana       91       3,254         Indian       175       853         Marie <t< td=""><td>Alberta</td><td>15</td><td>16</td></t<>	Alberta	15	16
Grinnell Land       6       12         Labrador,       2       152         Manitoba       3       3         North West Territory       12       12         New Brunswick       10       558         Nova Scotia       6       102         United States:       41       732         Alabama       41       732         Armerican Plains       3       89         Arizona       518       3,522         Arkansas       27       185         California       17,701       11,448         Colorado       815       5,354         Connecticut       11       217         Delaware       390       1,808         Florida       174       9,029         Florida Keys       1       223         Georgia       43       3,025         Idaho       6       718         Illinois       1,556       15,565         Indiana       1,556       15,655         Indian Territory       18       149         Iowa       10       175       853         Maryland       70       738         Massachuse	Anticosti Island	6	6
Grinnell Land       .       <	British Columbia	7	276
Manitoba       3       3         North West Territory       12       12         New Brunswick       10       558         Nova Scotia       6       102         United States:       3       89         Alabama       41       732         American Plains       3       89         Arizona       518       3,522         Arkansas       27       185         California       11       217         Delaware       137       836         District of Columbia       390       1,808         Florida       11       217         Delaware       137       836         District of Columbia       10       174         Georgia       43       3,025         Idaho       6       718         Illinois       1       156       15,565         Indiana       91       3,254         Indian Territory       12       91       3,254         Indian       10       176       10         Lowa       10       176       10         Lowa       10       176       533         Indian Cerritory	Grinnell Land	6	I 2
North West Territory       12       12         New Brunswick       10       558         Nova Scotia       10       558         Valied States:       41       732         American Plains       10       3       89         Arizona       11       27       185         California       11,701       11,448       Colorado       11,701       11,448         Colorado       11       217       Delaware       137       836         District of Columbia       11       217       90       Islama       174       9,929         Florida       174       9,929       Florida Keys       122       23       Georgia       43       3,025         Idaho       11       223       Georgia       13,56       15,565       15,565         Indiana       11       175       144       149         Iowa       10       121       941       144         Maine       121       941       145	Labrador,	2	152
North West Territory       1       12       12         New Brunswick       10       558         Nova Scotia       6       102         United States:       41       732         American Plains       3       89         Arizona       518       3,522         Arkansas       27       185         California       1,701       11,448         Colorado       1,71       11,217         Delaware       1,71       13,7         Georgia       1,74       9,929         Florida Keys       1,74       1,923         Georgia       1,756	Manitoba	3	3
New Brunswick       .       <	North West Territory		
Nova Scotia       . <td< td=""><td></td><td>10</td><td>558</td></td<>		10	558
Alabama	Nova Scotia	6	
American Plains       3       89         Arizona       518       3,522         Arkansas       27       185         California       1,701       11,448         Colorado       1,701       11,448         Colorado       815       5,354         Connecticut       11       217         Delaware       137       836         District of Columbia       390       1,808         Florida       174       9,929         Florida Keys       1       223         Georgia       43       3,025         Idaho       6       718         Illinois       1,556       15,565         Indiana       91       3,254         Indian Territory       18       149         Iowa       10       176         Louisiana       121       941         Maine       70       738         Massachusetts       156       1,089         Michigan       156       1,089         Minnesota       9       587         Missouri       25       1,757         Missouri       41       626	United States:		
American Plains       .	Alabama	41	732
Arizona       518       3,522         Arkansas       27       185         California       1,701       11,448         Colorado       815       5,354         Connecticut       1       217         Delaware       1       11         Delaware       137       836         District of Columbia       1       390       1,808         Florida       1       174       9,929         Florida Keys       1       223         Georgia       43       3,025         Idaho       6       718         Illinois       91       3,254         Indiana       91       3,254         Indian Territory       1       121         Iowa       10       176         Louisiana       10       176         Louisiana       10       176         Maine       175       853         Maryland       132,038       136         Michigan       132,038       100         Michigan       132,038       100         Michigan       156       1,089         Minnesota       9       587         Missou	American Plains	. 3	
Arkansas			
California       1,701       11,448         Colorado       815       5,354         Connecticut       11       217         Delaware       137       836         District of Columbia       390       1,808         Florida       174       9,029         Florida Keys       174       9,029         Florida Keys       1       223         Georgia       43       3,025         Idaho       6       718         Illinois       1,556       15,565         Indiana       91       3,254         Indiana       91       3,254         Indiana       91       3,254         Indiana       10       176         Louisiana       10       176         Louisiana       121       941         Maine       70       738         Massachusetts       156       1,989         Minnesota       9       587         Mississippi       25       1,757         Missouri       41       626	Arkansas	27	
Colorado       815       5,354         Connecticut       11       217         Delaware       137       836         District of Columbia       390       1,808         Florida       174       9,029         Florida Keys       1       223         Georgia       174       9,029         Florida Keys       1       223         Georgia       43       3,025         Idaho       6       718         Illinois       1,556       15,565         Indiana       91       3,254         Indiana       91       3,254         Indiana       1       10       176         Louisiana       1       10       176         Louisiana       1       121       941         Maine       1       70       738         Massachusetts       156       1,989         Minnesota       9       587         Mississippi       25       1,757         Missouri       1       626	California	,	
Connecticut       1       217         Delaware       1       137       836         District of Columbia       390       1,808         Florida       174       9,929         Florida Keys       174       9,029         Florida Keys       174       9,029         Florida Keys       1       223         Georgia       43       3,025         Idaho       6       718         Illinois       1,556       15,565         Indiana       91       3,254         Indiana       10       176         Louisiana       10       176         Louisiana       121       941         Maine       70       738         Massachusetts       156       1,989         Minnesota       9       587         Mississippi       25       1,757         Missouri       41       626	Colorado	,	
District of Columbia       .	Connecticut	0	
District of Columbia	Delaware	137	836
Florida       . </td <td>District of Columbia</td> <td></td> <td>0</td>	District of Columbia		0
Florida Keys       .       .       .       1       223         Georgia       .       .       .       .       43       3,025         Idaho       .       .       .       .       6       718         Illinois       .	Florida		0,020
Idaho.       6       718         Illinois       1,556       15,565         Indiana       91       3,254         Indian Territory       18       149         Iowa       18       149         Iowa       30       1,269         Kansas       10       176         Louisiana       10       121         Maine       10       175         Massachusetts       10       175         Michigan       156       1,989         Minnesota       9       587         Mississippi       25       1,757         Missouri       41       626	Florida Keys	-	
Idaho.       .       .       .       .       .       6       718         Illinois       .	Georgia	43	3,025
Indiana       . </td <td>Idaho</td> <td></td> <td></td>	Idaho		
Indiana       . </td <td>Illinois</td> <td>1,556</td> <td>15,565</td>	Illinois	1,556	15,565
Indian Territory       .	Indiana		
Kansas       . <td>Indian Territory</td> <td>18</td> <td>÷ -</td>	Indian Territory	18	÷ -
Kansas       . <td>Iowa</td> <td>30</td> <td>1,269</td>	Iowa	30	1,269
Maine       175       853         Maryland       70       738         Massachusetts       111       20038         Michigan       111       111         Minnesota       111       111         Mississippi       111       111         Missouri       111       111	Kansas	-	
Maryland       .       .       .       .       .       70       738         Massachusetts       .       .       .       .       .       .       413       2,038         Michigan       . <td>Louisiana</td> <td>I 2 I</td> <td>941</td>	Louisiana	I 2 I	941
Maryland       .       .       .       .       70       738         Massachusetts       .       .       .       .       .       413       2,038         Michigan       . <td>Maine</td> <td>175</td> <td>853</td>	Maine	175	853
Michigan       156       1,989         Minnesota       9       587         Mississippi       25       1,757         Missouri       41       626	Maryland		
Michigan       156       1,989         Minnesota       9       587         Mississippi       25       1,757         Missouri       41       626	Massachusetts		10
Mississippi         25         1,757           Missouri         41         626	Michigan		+
Mississippi         . <th< td=""><td>Minnesota</td><td>9</td><td>587</td></th<>	Minnesota	9	587
Missouri	Mississippi	2	
	Montana	16	2,772

									ADDED	TOTAL IN
United States:										HERBARIUM
Nebraska									3	IGI
Nevada									34	139
New Hampshire.								. *	237	933
New Jersey									163	1,397
New Mexico									213	1,604
New York									378	4,561
North Carolina .									110	863
Ohio									40	659
Oregon									910	4,054
Pacific Coast									47	366
Pennsylvania									498	6,542
Rhode Island									84	466
Rocky Mountains .									IQ	700
South Carolina									44	541
South Dakota									I	83
Tennessee									113	661
Texas									936	3,621
Utah									180	539
Vermont									232	1,029
Virginia									148	743
Washington									436	3,113
West Virginia									38	1,210
Wisconsin									10	7.3.4
Wyoming	÷								307	611
Yellowstone National	Pa	rk							25	264
Mexico.									2,955	19,241
Coronados Islands	÷			÷					=,955 I	
Lower California					-		•		242	1,380
Yucatan		•			•	•	•	•	-4-2 I	4,610
	•	•	•	•	•	•	•	•	-	4,019
Central America										
Costa Rica	٠	٠	•	•	·	·	•	·	28	366
Guatemala	•		•	•	•	•		٠	415	748
Honduras	•		•	•	•	·	•	•	II	189
Nicaragua	•		•	•	•	•	•	·	I	85
Panama	·		•	·		·		•	I	37
San Salvador	•	•	•	•	•	•	•	·	20	20
United States of Colombia	•	•	•	·		·	•	•	99	2,418
West Indies										
Antigua									I	II
Bahamas										
Acklin's Island									255	256
Conception Island	l								50	50
Andros									00 I	1,216
Cat Island .									247	367
Crooked Island									237	294

125

West Indias:							ADDED	TOTAL IN
Bahamas							THIS YEAR	HERBARIUM
Eleuthera .							415	576
Fortune Islan	đ						223	308
Little San Sal	vađ	or					44	44
Long Island							1.10	140
New Providen	ce						95	1,757
Rum Cay .							7.5	76
Watling's							15.4	185
Barbados							225	305
Bermuda							253	473
Cuba							241	4,243
Guadeloupe							1,046	1,059
Iamaica							703	3,819
Martinique							574	60 I
Porto Rico .							168	3,334
Culebras Island .						Ţ	122	210
Europe							<i>,</i>	
Austro-Hungary							36	4,101
Belgium .							3	70
England							61	133
Finland			,				4	8
France							9	1,453
Germany							IOI	4,046
Italy							8	913
Norway							6	207
Poland							I	42
Russia							76	1,226
Scotland							I	I 2
Spain							I	41
Sweden .							5	462
Switzerland							I 2	1,005
Africa .							3	1,440
Australia	,						115	781
Formosa							2	1.020
Palestine							172	827
Philippine Islands		•				•	0.1	1,068
Total							22,650	1,000
1 01/11							22,030	

It is to be understood that the above summary does not include the whole herbarium, but only tabulates localities that have received additions during the past year.

Among the accessions by gift in the Department of Geology, the following may be mentioned: a large specimen of crystallized copper from Cananea, Mexico, from Mr. Edward E. Ayer; four superb specimens of emerald and aquamarine, one specimen of parisite, and

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eight specimens gold ores, all from the United States of Colombia. from Señor F. Pereira Gamba; eleven specimens rough and polished smoky quartz crystal from Butte, Montana, from Mr. A. P. Pohndorf; seven relief maps from the Atlas School Supply Company; seven specimens of the diamond-bearing rocks of Pike County, Arkansas, from Mr. A. Q. Millar; two large specimens lead and zinc ores from Platteville, Wisconsin, from the Empire Mining Company; five specimens Peruvian vanadium ores, from the American Vanadium Company; nineteen specimens clavs and briquettes, from Mr. John J. Moroney; and several specimens copper ores and barites, from the Chicago Copper Refining Company. Several valuable accessions were received by exchange, among which may be mentioned a large section, of the Santa Rosa meteorite, from Mrs. L. A. Coonley-Ward; of the Elm Creek meteorite, from Ward's Natural Science Establishment; and of the Goalpara meteorite, from the Geological Survey of India. From the Geological Survey of Canada was received, in a similar manner, a fine cast of the Iron Creek meteorite; from J.E. Narraway, a series of fossil trilobites, and other invertebrates, and from Junius Henderson, a series of Cretaceous mollusks from Colorado. The most important accession by purchase was that of the Fultz collection of invertebrate fossils, numbering over five thousand specimens. This collection is especially valuable for the series of crinoids and blastoids of Lower Carboniferous age which it contains. They were collected from the Burlington limestone, at the locality which furnished the finest specimens ever secured while it lasted, but which is no longer productive. In addition, about four thousand invertebrate fossils from other localities in the Mississippi Valley were secured with the collection. A small collection purchased from Prof. A. H. Cole furnished about 250 specimens of Palæozoic invertebrates from New York and Vermont localities. A seventeen pound individual of the Admire meteorite was purchased; also a fine series of topaz associated with phenacite, from Chatham, New Hampshire. Accessions by expeditions include about forty specimens of ores, minerals, and rocks from the north shore of Lake Superior, collected by the Curator; about nine hundred specimens Devonian invertebrate fossils, from Little Traverse Bay, Michigan, collected by the Assistant Curator of Invertebrate Paleontology, and about forty specimens erosion forms, from Little Sister Bay, Wisconsin, collected by the Curator of Botany.

The Curator of Zoölogy reports that the accessions in the Division

of Ornithology number 626 specimens, most of which were collected by members of the staff, in Illinois and adjoining states. There were 216 specimens added by purchase, and a number of valuable gifts also appear in the list. The Department collected mammal skins in Illinois, Wisconsin, and California, numbering nearly 500 skins. The expedition conducted by Chief Taxidermist Akeley contributed mammal specimens from British East Africa, mention of which is made elsewhere. In the divisions of Ichthyology and Herpetology, there were added, approximately, 2,000 specimens, of which one half were received from the East African Expedition. The number of insects added were considerable over 3,500, mostly from Illinois, Michigan, and Wisconsin. The Museum also purchased a valuable collection of shells from a collector in Indianapolis. An interesting series of shells, illustrating the pearl button manufacture, was presented by the Automatic Button Company, of Muscatine, Iowa. Two sponges and two hydroids from Cape Nome were presented by Mr. H. A. Ring.

EXPEDITIONS AND FIELD WORK .- During part of the year the Curator of Anthropology continued his investigations among the Pawnee, in behalf of the Carnegie Institution of Washington. In connection with this work he spent ten weeks at Columbia University, working up the linguistics of the Skidi Pawnee, under the direction of Dr. Franz Boas. Three investigators are now in the field in the Philippine Islands, engaged in ethnological investigation, funds for this work having been generously provided by Mr. Robert F. Cummings, as referred to in the last report. Miss Laura E. Benedict is still among the Bagobo, where she has been now for nearly two years. Mr. Fay Cooper Cole left Chicago in December, 1906, and proceeded to northwestern Luzon, where he has remained since, investigating the ethnology of the little-known Tinguianes, in the province of Abra, Ilocos Sur, and Ilocos Norte. During this time Mr. Cole has made several hundred photographs, a large number of life masks, and has made numerous physical anthropological studies. At the present time he is engaged in linguistic investigations. Dr. William Jones left Chicago in August, and proceeded to Manila, whence, after making certain preparations, he left for a period of at least two years' investigation among the practically unknown tribes in eastern and northern Luzon. When last heard from, Dr. Jones was ascending the Cagayan River, and expects to make his headquarters at Echague. His special object in this region will be the investigation of the Negritos. Before

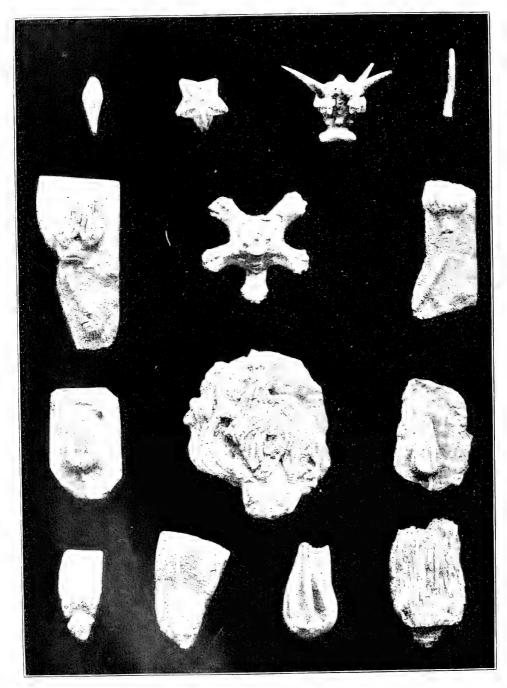


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leaving for the Philippines, Dr. Jones spent a month among the Sauk and Fox Indians of Tama, Iowa, making a study of their material culture, and obtaining specimens for the Museum. Through the generosity of Mrs. T. B. Blackstone, who has recently provided a fund, the department has been able to add to its staff Dr. Berthold Laufer, who is now making preparation to start for a three years' period of investigation in Tibet. This gift of Mrs. Blackstone marks a new era in the history of the department. It is not only the largest sum ever set aside for one specific object, but it enables the department to undertake an investigation of almost universal interest, and to place in charge of it one thoroughly competent. As a result of the Blackstone Tibetan Expedition, it is expected that not only will there be assembled a great collection illustrating every phase of the material culture of the Tibetans, which will be of the very greatest value to all students of the history of Asiatic culture, but it is believed that, through Dr. Laufer's investigation in early Tibetan literature, he will make material contributions to the general history of human culture. In this connection, it is interesting to note that the Newberry Library has made a special contribution of \$4,000.00, which is to be expended by Dr. Laufer, during his three year's residence in Asia, in the purchase of a library of Tibetan literature.

The Curator of the Department of Botany, in company of Dr. N. L. Britton, Director of the New York Botanical Garden, spent ten weeks of the early spring in a continuance of their explorations of the Bahamian Archipelago. A schooner was chartered and commissioned, at Nassau, from which large and particularly exhaustive collections were made on Eleuthera, Cat Island, Conception Island. Little San Salvador, Long Island and Watling's. All these islands were crossed afoot at several points, and traversed for considerable distance in all directions, from a number of landing places. The expedition returned about two thousand specimens, and secured critical notes, observations, and photographs of fully fifteen hundred more. This work was also augmented by commissioning Mr. Louis J. K. Brace to explore thoroughly Acklin's Island, Crooked Island, Fortune Island, and the north end and northwest side of Andros. His work resulted in two thousand additional specimens from these interesting localities. Another expedition, in continuance of this same work. was sent out in December, consisting of Dr. M. A. Howe, Mr. Percy Wilson, and Louis Brace; they are to undertake the southeastern islands of the group - French Cavs, Samana, Mariguan, the Caicos.

and the Ragged Cays. Mr. Huron H. Smith, Preparator in Dendrology, spent six weeks in southeastern Missouri, at three forest points, in the collection of North American Forestry material. The collections, amounting to over a car load of material, will be reported upon later. Mr. O. E. Lansing, Jr., has continued his field work in the Lake Chicago Basin, adding a number of species to his quite exhaustive series from this region.

The Curator of the Department of Geology collected a series of ores, minerals, and rocks from various localities on the north shore of Lake Superior during a trip made to that region in July. Some valuable geological photographs of the region were also made. Photographs illustrating the ancient shore-lines of Lake Chicago, designed for exhibiting in connection with the relief map of the region, were also made by the Curator during the fall. Mr. A. W. Slocom carried on some collecting in the region of Little Traverse Bay, Michigan, continuing the work of last year. Especially fine series which he secured were those of fossil corals, stromatoporoids and brachiopods. Pleistocene fossils, from the marls of Oden and Kegomic, were also obtained. In all about nine hundred specimens were obtained, which, added to those collected last year, afford a representative series of the Hamilton and Pleistocene fossils of the region. Occasional visits were also made by Mr. Slocom to quarries in the Chicago Basin, for the purpose of securing any new material excavated. From this material, and that previously secured, he described during the year nine new species of crinoids. No field work was undertaken in vertebrate paleontology, the work of erecting the Dinosaur skeleton having, of necessity, engrossed the entire attention of the staff.

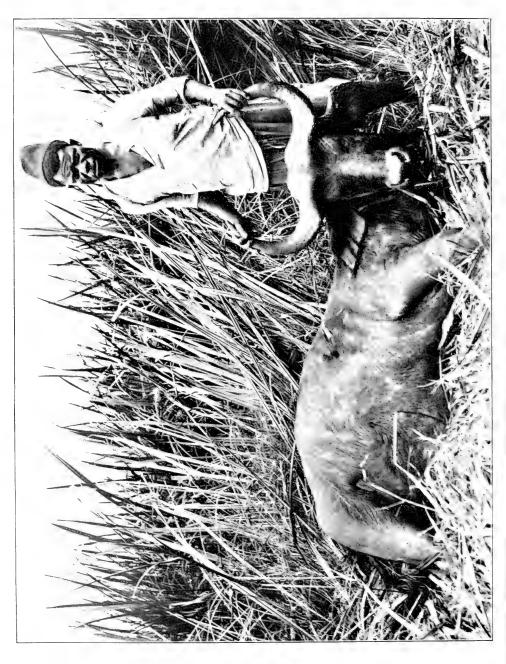
At the date of the last Report, the African expedition was on its way back to the United States. Mr. C. E. Akeley, the Chief of the Expedition, provides the following narrative:

"We left Chicago August 13, 1905, arriving in London August 26th, where we joined Mr. Vernon Shaw-Kennedy, who had gone on some weeks in advance for the purpose of preparing the outfit, most of which, consisting of supplies, food, tents, amunition, photographic material, etc., was purchased in London. Mr. Edmund Heller, who had been called from field work in Central America to accompany the expedition, overtook us in London, and on September 8th, we sailed from Dover by the S. S. President of the D. O. A. Line, arriving at Mombasa, East Coast of Africa, on October 8th. Our goods were duly landed, passed through the customs; porters, gun-bearers, and

personal servants were engaged, licenses procured, and on October 14th, we boarded a train on the Uganda Railway and on the following day arrived at Nairobi, 327 miles inland. October 18th, we began active operations in the field, within twenty-five miles of Nairobi. on the Athi Plains. Two and a half months were spent in this region, and in the number of specimens collected, this was the most productive period of the entire trip. On December 30th we moved our camp, by rail, to Kijabe, forty-four miles up the line, for the purpose of securing a series of Cape Buffalo. A month spent here resulted in obtaining only a single specimen of Buffalo and a fair number of other specimens, among which were a series of Colobus Monkeys and a Rhinosceros. The following month (February) was spent at Lake Elementeita, fifty miles northwest of Kijabi, and this proved a reasonably profitable month. About March 8th the outfit was again moved by rail to Molo, 484 miles from the coast, where we went into camp some twelve miles south of the railway. Our stay here was made exceedingly unpleasant by the incessant cold rains, and failure, again, to secure Buffalo contributed to our discomfiture. We were fairly recompensed, however, for the time spent, by the addition to our collections of a series of Topi, a series of Jackson's Harteebest, a very fine male lion, and a number of smaller mammals. Early in April we returned coastwards to Voi, 100 miles inland from Mombasa. We had postponed our visit to Voi until the last because of the unhealthfulness of the region, and the two weeks spent there resulted in a meagre showing of material collected, owing to fever attacking two of our party, as well as a large number of the employed natives. The caravan was discharged at the close of our work at this place, and we returned to Nairobi, and proceeded to pack the collections for shipment. Messers. Shaw-Kennedy and Heller made preparations to return home at this time. The work of packing the collections occupied five weeks, the lack of proper facilities making it a tedious task; fifty barrels that had been ordered from London proved useless, and obliged us to resort to the use of old oil casks obtained from the Railway Company. About May 1st, upon receipt of instructions from the Museum authorities, application was made for permission to cross the Tana River in quest of Buffalo, which was granted, on the understanding that we were not to avail ourselves of the privilege until July. It was therefore decided to employ the intervening time in collecting accessory material for some of the groups, specimens for which had been previously secured. Accordingly, about June 1st, we

engaged the necessary porters and returned to Athi Plains, where three weeks were spent at Kijabe in making studies for Lion and other groups, and three days in gathering accessory material for a Colobus Monkey group. We then moved to Naivasha (June 28th), with the intention of collecting birds and accessories for a group of the aquatic birds of the Lake Naivasha region. Upon our arrival at the lake, we learned that a closed season had been declared, but, anticipating no difficulty in securing permission to collect the limited amount of material required, application was made to the authorities, who, much to our surprise, refused the desired privileges. Ten days were lost in awaiting this disappointing decision. The trans-Tana trip had been indefinitely postponed on account of trouble with the natives at the base of Mt. Kenya, where the government had sent troops, and were at this time, July 10th, engaged in warfare, but as it seemed likely that the trouble was nearing the end, the services of Mr. R. J. Cunningham, professional hunter and safari runner, were secured, and we headed for Fort Hall and the Tana River, with the intention of looking for Elephants on the way; three weeks were spent on the Aberdare Mountains, during which time we prepared the skin of one Elephant, a series of Duiker, and a number of other specimens. Upon our arrival at Fort Hall, August 14th, we found H. M. Commissioner, Col. Hayes-Sadler, with his suite, about to depart in company with the Sub-Commissioner, Mr. S. L. Hinde, on a trip into trans-Tana country. Permission was given us to shoot Elephants on Mt. Kenya, as well as Buffalo on the plains. We were honored with an invitation from the Commissioner to accompany the official party so far as our routes paralleled, an invitation which was gratefully accepted. A week later, the edge of the forest at the base of Mt. Kenva was reached, and here work with the Elephants was begun. The five weeks spent among the Elephants was eminently satisfactory in point of experience, and knowledge gained of the habits of these interesting animals, but disappointing in that we failed, for want of time, in securing all the specimens required for the group. The return from Mt. Kenya to the Tana River was distressingly slow and tedious, owing to the difficulties encountered in securing porters to move the material, but the Tana was finally reached on October 2nd, and a few days later we proceeded down the river in search of Buffalo. Some six weeks elapsed before we finally succeeded in securing the last of the six specimens desired. The three months in trans-Tana country were months of hard work





and bitter disappointments, but results, on the whole, were satisfactory, in that the material obtained was eminently desirable, and difficult to secure. We returned to Fort Hall on November 22nd, and with 175 porters proceeded to Nairobi with the collections. Mr. Cunningham returned by way of the Aberdare, to bring in the Elephant and other skins that had been left on the summit of the mountains, nearly four months previously. We reached Nairobi November 27th and proceeded with the final packing of the collection, which was shipped by rail to Mombasa, which port it left December 21st, on the S. S. Admiral; trans-shipped at Naples, and arrived at New York January 28th. The consignment of 84 packages, weighing upwards of 17 tons, arrived at the Museum in perfect condition."

It seems a fitting opportunity for both the Museum management and the members of the expedition to express their gratitude to those who, through friendly interest and appreciation of the objects of the expedition, contributed to its success: to Mr. Vernon Shaw-Kennedy, for his untiring energy and loyalty to the best interests of the Museum: to Col. Haves-Sadler, H. M. Commissioner for British East Africa, and Mr. F. J. Jackson, H. M. Deputy Commissioner, for many privileges and concessions which, by virtue of their high offices, they were able to grant; to Mr. S. L. Hinde, H. M. Sub-Commissioner for Kenva Province, the expedition was indebted for more than official assistance; and to Mr. A. Blavney Percival, Game Ranger, whose fund of information relative to the game districts was always available. Acknowledgment is also made of courtesies and concessions granted by the officials of the Uganda Railway, and for the hospitality and good-will accorded the expedition by all government officials with whom the members of the party were brought in contact.

The following list indicates the gentlemen who had charge of the different Museum expeditions during the year: the localities they visited and the material they obtained:

Locality.	Collector.	Material.
Illinois	J. F. Ferry,	Bird Skins.
Bahamas :	L. J. K. Brace,	Herbarium Material.
Andaman and Nicobar Is-		
lands	Alfred R. Brown,	Ethnological Specimens.
Philippine Islands, (R. F.		
Cummings Expedition) .	F. C. Cole,	Luzon Ethnology.
Little Traverse Bay, Michi-		
gan	A. W. Slocom,	Invertebrate Fossils.
Wisconsin and Illinois	E. Heller,	Mammals.

Locality.	Callector.	Material.
Illinois	C. M. Barber,	Fishes and Reptiles.
Bahamian Archipelago	C. F. Millspaugh,	Herbarium and Economic Material.
Sauk and Fox Indians,		
Tama, Iowa	William Jones,	Ethnological Specimens.
Illinois	H. W. Menke,	Material for Bird Groups.
North West Coast	C. F. Newcombe,	Ethnological Specimens.
South East Missouri	H. H. Smith,	Timbers.
Bahamas	N. L. Britton,	Herbarium Material.
Lake Superior	O. C. Farrington,	Ores and Minerals.
English Lake, Indiana	C. B. Cory,	Birds Eggs.
Illinois	E. B. Chope,	Insects.
Philippine Islands (R. F.	A .	
Cummings Expedition),	William Jones,	Negrito Ethnology.

INSTALLATION, REARRANGEMENT AND PERMANENT IMPROVEMENT. --- At the end of last year the Department of Anthropology reported that more material awaited installation than at any previous time for ten years. This condition was due to the fact that the accessions for two years had been extremely large and numerous. The necessity for resorting to various makeshifts in order to store this great body of material has existed during part of the present year. Late in the year, however, 40 new cases became available, which, at once, made possible a general rearrangement of certain collections of the department. Since the arrival of the new cases, the following collections have been installed: Arapaho, Wasco, Pawnee and Javanese. The extensive collection from Borneo has also been installed, as well as a large part of the collections from Africa. For these collections, however, old cases have been utilized; those from Africa in cases that had been abandoned by the Departments of Geology and Botany. The material from the first Cummings' Philippine Expedition has been installed in Halls 40 and 55, and occupies 28 cases. The new cases have made it possible to remove many collections which have been temporarily installed in Hall 8, and that hall has now been restored to its former condition, and is again devoted exclusively to the archæology of the Southwest. Hall 7 is temporarily occupied by Taxidermy, but it will ultimately receive the overflow collections, both archæological and ethnological, of the Southwest. A portion of the East Annex has been transferred to the Department of Anthropology, and this additional space has made possible an extremely desirable change. There has been transferred to the Annex all collections from regions outside of America, and the provisional

assignment of space at the present time is as follows: Halls 38, 39, 40, 41 and 55, Indonesia; Hall 54, Polynesia and Micronesia; Hall 53, Melanesia; Halls 50-52, Africa; Halls 56-58, Asia. This installation of the collections from the South Pacific and Asia, has made possible the rearrangement of Halls 2, 5, and 6, which are now devoted, as are Halls 1, 3 and 4, to North American ethnology. Mr. J. A. Burt, aside from assisting in the installation of several collections during the year, has carried to completion two interesting and important groups in miniature of the Pawnee, and is well advanced on three additional groups, one being Pawnee, and two Sauk and Fox. The two latter groups have been prepared under the direction of Dr. William Jones.

The collection of ceramics having been removed from Hall 33, the Paleozoic fossils, heretofore exhibited in Hall 35, were transferred thereto. This necessitated the removal of the specimens from ten floor and eight wall cases, moving of the cases, and reinstallation of the specimens. Advantage was taken of the opportunity, also, to thoroughly rearrange the collection. The vacated hall, Hall 35, has been cleared for the exhibition of Dinosaurs, a large amount of this material now being ready for exhibition. In the center of the hall the great Dinosaur torso collected in Colorado by the Museum expedition of 1901, is being erected. This work is of such magnitude that it has occupied nearly the entire time of Assistant Curator Riggs and assistants during the year and is not yet complete. The torso consists of a nearly complete skeleton posterior to the last cervical vertebra, and is of interest as containing the largest number of bones of an individual Dinosaur of such a size ever mounted. The aggregate weight of the bones is about five tons and when mounted they stand fifteen feet above the floor at their highest point. In order to support this great weight and prevent swaying, it was necessary to construct a special framework of structural steel. This consists of a base surmounted by a superstructure, to support the specimen proper. The base has the form of a rectangle, measuring eight by thirty feet. It is made up of two longitudinal channel beams joined together at the ends by transverse beams of the same. Four transverse I-beams, intersected by a single line of longitudinal I-beams act as girders and form a series of four crosses in the median line for the support of the vertical columns. All are firmly bolted together at the intersections by means of angles, as in ordinary structural iron work. Four vertical columns support the weight of the specimen.

These columns are each made up of four angle-beams joined together by means of solid "fillers," and all firmly riveted with flush-head rivets. They vary in size according to the load which they are designed to carry. Each column is braced at its base by four gussets, which are bolted respectively to the four intersecting I-beams, and riveted between the angle-irons of the column in place of the "filler." The four vertical columns support a longitudinal T-beam, firmly bolted to their upper ends. The angles formed by the two are tied by short diagonal braces. The T-beam forms the support of the vertebral column, and is bent so as to conform closely to its inferior outline. It is tapered towards the rear end, so that its size is reduced in proportion to the load it is intended to receive. The individual bones are fastened to this framework by forgings of wrought iron. These supports are bent to conform closely to the surface of the bone in order to be as inconspicuous as possible. They attach to the bones, in most instances, by being bent so as to clasp them firmly. Work on the mount has progressed so that the greater part of the vertebral column is now in place. Many of the bones were so distorted as to require considerable modification before they could be fitted into their respective positions in the skeleton. A missing femur and ilium have been supplied by modeling them in plaster from the corresponding bones of the opposite side, and several ribs and chevrons have been restored as a whole or in part. As it was found necessary to perform a large part of the shaping of the steel contiguous to the skeleton, a gas forge was placed upon the west porch of Hall 35, so as to provide facilities for heating the individual steel pieces. A temporary sheet-iron shed erected over this permits continuance of the work during the winter months. In the cases left vacant in Hall 36 by removal of portions of the dinosaur skeleton for mounting, there have been installed a sacrum and seven dorsal vertebræ of Brachiosaurus, and some minor specimens. To the series on exhibition in Hall 59, have been added during the year two skulls of Promerycochærus and single skulls of Merycochærus, Hyænodon, Hyracodon, Procamelus and Amphicyon. In Hall 61 a superb complete skeleton of Promerycochœrus, worked out during the year, has been placed upon exhibition. Some minor rearrangements of exhibited series have been made in connection with these additions. To the hall of meteorites, Hall 62, a wall case has been added, to provide for increase in the collection; and new specimens received have been installed. Additions to the systematic mineral collection,

Halls 63 and 64, have also been installed as received. A total of 5,469 specimens is now on exhibition in this collection. The remainder of the collection, classified and arranged for study purposes, occupies drawers below the corresponding exhibition cases. The work of providing additional permanent cases for the collections has been continued by furnishing such cases for the systematic rock, marble, and building stone collections. These occupy Halls 66 and 67. The specimens and old cases were entirely removed from these halls, and the walls of Hall 66 renovated and calcimined. Part of the cases removed were transferred to another department, while others were, with some alterations, placed in the departmental library. The new cases provided for the lithological collection are, in general, of the pattern employed for the systematic collection of minerals. The wall cases are, however, one foot instead of two feet deep, and the floor cases are fitted with glass at the ends as well as at the sides. The lights of the wall cases are 68 by 70 inches in dimension, and swing outward by means of hinges at the top. The specimens are installed on four series of six-inch shelves, supported by L-shaped brackets screwed to narrow iron strips bolted to the backs of the cases. The lights in the floor cases are 34 by 56 inches in dimension, and swing outward from the top. The specimens are installed on individual wooden blocks screwed to pyramidal screens which occupy the case interiors. The blocks are distributed so as to avoid a monotonous appearance, and allow for the exhibition of about one hundred specimens in each case. Drawers in the bases of the cases provide space for study collections. Sixteen cases in all have been provided for this hall, eight of which are floor cases, and eight wall cases. For the marble collection, the type of cases employed is like that already in use in Skiff Hall. In place of shelves, however, screens are provided to which the slabs of marble are fastened. The slabs are thus brought in uniform position and close to the eye, while the background enhances the appearance of the whole. Moreover, as in the meteorite cases, the sashes are secured by locks, and felted tongues and grooves, along all unjoined surfaces prevent the entrance of dust. For the installation of objects other than slabs, such as cubes, spheres, and other irregularly shaped specimens, flat cases have been provided. These cases are 44 inches high and 4 by 6 feet in area. The height of the case portion proper is 12 inches. This portion is framed together, with the end lights removable. It rests upon four stout legs, tapering to the floor, all being capable of

sustaining a weight of one ton. The top light in each case, which is that intended to provide the chief area of display, is 44 by 68 inches in dimensions. Nine of these cases have been provided for the hall. Considerable additions have been made to the clay collections, Hall 68, so that it has been necessary to add four cases to the hall, and to consign to storage some of the material previously exhibited there. The cases needed were obtained by moving some from Hall 67. These additions necessitated an entire reinstallation, which has been completed with very satisfactory results. The collection now includes: Two synoptic cases, three cases of brick clays, two cases of fire and potters' clays, and one case of china clays. So far as possible, burned briquettes have been prepared of each clay exhibited, so that the properties of the burned and raw product may be seen together. In addition, a series of type briquettes has been prepared, showing the effect on appearance, and other properties of the clay, of different contents of lime, iron, etc. About five hundred briquettes have been so prepared during the year for exhibition with the collection. The series of diamond-bearing rocks of Arkansas received from Mr. Millar has been installed in Hall 70. This completes this collection quite satisfactorily, as the South African and Brazilian series were already shown here. In Hall 71, the case exteriors have been painted and some needed cleaning and reinstallation performed. The collections in Hall 72 of ores of the precious metals and lead have been rearranged so as to conform to a geographical classification, rather than one depending upon the metal in the ore, as heretofore. This seemed desirable for several reasons, one being that many districts have several metals combined in one ore, so that it has been necessary, in order to represent the different metals fully, to multiply the series more than was desirable. Again it has been found that mining districts are better known, as a rule, than their ores, so that ore is most easily looked for by the visitor under the name of the district. Moreover, the relations of ores and ore deposits to each other can generally be most clearly shown by an arrangement according to districts. Accordingly the collections were rearranged, and the following series are now shown in this hall: One case typical gold ores and placer ores; one case ores from Alaska and British Columbia; one case Washington ores; one case Oregon ores; one case ores from California; three cases ores from Nevada; one case ores from the Black Hills; one case ores from Utah; eleven cases ores from Colorado; two cases of Arizona ores; three cases of New Mexico

ores; one case ores of the Appalachians; three cases ores from Mexico; four cases ores from Colombia; one case ores from other South American localities; one case ores of Australia: two cases ores of Great Britain; and three cases of European ores. The platinum ores, the metallurgical collections, and the large specimens occupying centre and special wall cases, have not been essentially changed. One case, transferred from Hall 67, has been added to those of the hall, and a number of the cases have been repainted. Of the relief maps, Halls 76 and 77, thirteen additional ones have been encased in glass, making twenty-eight in all which are now thus protected. One map has been repainted and several retouched. A series of photographic enlargements, twenty in number, 17 by 20 inches in size, illustrating typical geological or geographical features, has also been mounted upon a swinging stand in Hall 76. Including these, a total of sixty-seven relief maps, seven ordinary maps, and twenty-five framed photographs is at present exhibited in these halls, making an exhibit which, besides attracting the attention of visitors in general, is used extensively for detailed study by classes from the public schools and other institutions. The collections in Hall 78 have been somewhat rearranged, and completely labeled. At present they number as follows: Three cases of abrasives, two cases of phosphates, two cases of mica, two cases of asbestos, one case of sulphur, one case of gypsum, one case of borax, four cases of salts of the alkalies and alkaline earths, two cases of processes and two miscellaneous cases. For the present, only temporary cases, collected from various sources, are available for exhibiting these collections, but it is hoped shortly to replace them with more attractive ones. To the Departmental office and library, as already noted, several of the wall cases formerly in use in Hall 66 were transferred. These cases, with some alterations, have been made to serve as book cases. The additional space thus provided has been filled by the transference of a considerable number of books of a geological nature from the general library stack room, thus relieving the pressure on the latter. About 230 lineal feet of shelving, all under glass, have thus been added to the Departmental library during the year, and the total amount of shelving now available for books in this library is 650 lineal feet. A total of 4,500 books and pamphlets is at present kept in this library. The works are chiefly serials, reports of Government and State surveys obtained by exchange, the private library donated by Director Skiff, and a series of separates and mineralogical books purchased from Mr. Kunz. Provision

of suitable accommodations for an increasing number of maps and atlases was obtained by constructing a map case 2 by 2 by 5 feet in dimension, with 10 sliding shelves. This has also been placed in the Department library. A case of drawers, also constructed for the office, provides storage for labels, minor supplies, etc. The capacity of the storage room proper was increased by the provision of about 120 feet of plank shelving. In the paleontological laboratory, a gratifying amount of material was cleaned from the matrix and made ready for installation. The material so prepared was as follows: A complete skeleton of Promerycochærus, two complete skulls and a number of partial skeletons of individuals of the same genus; complete skulls of Merycochærus, Hyracodon and Leptauchenia; incomplete skulls of Amphicyon, Procamelus and Hyænondon and an almost complete skeleton of an undetermined carnivore. In addition, the material in storage was carefully gone over, and all field packages which showed signs of having become loosened were replastered. This was especially necessary for packages which had been shipped from the field encased only in paste, as had sometimes been required by the exigencies of field work.

The work on the Illinois birds and eggs has been pushed and with the exception of several special groups, is almost completed. Over 200 birds have been prepared for exhibition, and the mounted collections in Halls 25 and 26 have been rearranged. A new idea in exhibiting fishes has been developed, a case designed, and the glass tanks to be utilized therein ordered from abroad, and which are expected within a short time. This installation is looked forward to with much interest, being somewhat of a change from previous methods. One of the illustrations of this report presents the latest experimental stage of this departure. In the Division of Entomology, the butterflies have been transferred and relabeled. During the year 680 skulls have been cleaned and returned to the study collection, and 16 ligamentary skeletons have been cleaned and mounted.

In the Department of Botany, during the year, all of the original exposed installation in the galleries of the South Court, and a part of that in those of the West Court, have been taken down, and the specimens cleaned and readjusted for installation in new cases. New case installation has been accomplished as follows: To the Grass Family has been added a half case illustrating the use of a large number of gramineous roots and fibers; a full case illustrating the Oats of the world, and another the Sorghums, Millets, and various odd

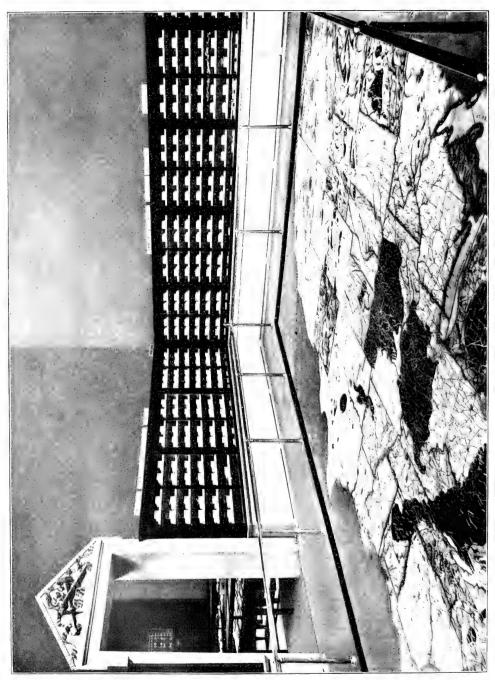
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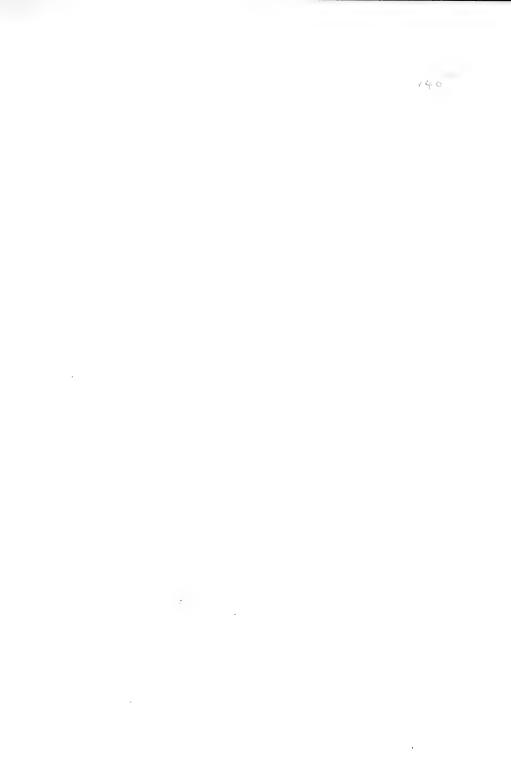
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HALL 69. COALS OF THE UNITED STATES.



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#### HALL 69. COALS OF THE UNITED STATES.

The coal measures are indicated by the black areas on the map, and numbers on the maps corresponding with similar numbers on the specimen distinguish the mines or localities from whence the specimens were obtained. A label attached to each specimen gives analysis and economic and technical data.

food grains; another the Ryes and Barleys, and several of the cases formerly installed have been substantially augmented in species and in interest. To the cases representing the Palm Family, a half case has been added, exemplifying further utilizations of the Cocoanut Palm. and a half case of further specimens of various fruits, including an interesting Date series. A case comprising the Hat Palm, Pondweed, Rush, Calla, and Pineapple families is now in its systematic place. To the Banana family has been added a half case, illustrating by "hands" and ropes, the principal Manila fibers. Another case, including the Yam, Iris, Pepper, Orchid, Canna and Arrowroot families, has been installed in association with the related Ginger family. An interesting series, exemplying the uses of plants of the Willow, the Australian Oak, the Myrtle and the Birch families, has been added, together with a half case in further exemplification of the Oaks. A case of plants and products of the Poppy and Mustard families, the Smartweeds and the Wormseeds is now installed. Further material has been added to the Nettle family, and the Elms and Proteads have been installed in this relationship. The Clove family is now initiated by a very complete series of the various woods, oils and kinos of Eucalyptus, occupying an entire case. Another case and a half have been included with those illustrating the Bean family. The Laurel family has been augmented to comprise a complete case, and the Sumach family extended with the Cyrillas, the Bittersweets and the Maples, to fill another. The Chocolate and Silk Cotton families are now well exemplified in an interesting complete case devoted to their products. The Olive, Gentian, Strychnine, and Milkweed families are now well represented, and various other natural families, already installed, have received notable and instructive additional material.

PRINTING.— During the year the following work has been performed by this important section:

ned by this important section.	Labels.	Impressions.	
Department of Anthropology	1,790	12,475	
Department of Botany	5,008	21,598	
Department of Geology	5,098	286	
Department of Zoology	785	72,325	
Director's Office		61,082	
Higinbotham Hall	I 3 4		
The Library		9,003	

**PHOTOGRAPHY.**— The following table shows the actual results only of a large number of photographic operations, many of which required hours of preparation:

	Negatives.	Prints.	Lantern Slides.	Enlarge- ments.
Director's Office	. 15	32		
Department of Anthropology .	. 3,554	3,762	78	45
Department of Botany	. IOI	237	I42	I5
Department of Geology	. 38	I22	6	25
Department of Zoology	. 69	1,591	363	
General Distribution		74	142	
Totals	. 3,777	5,818	731	85
Total number of inventory e Entries from December 31, 3 Negatives developed for				. 59,523 . 10,600
				180
Negatives developed for				
Department of Geology				I 2
Negatives developed for				
Department of Zoology				8 2
Total				274

ATTENDANCE.— The total attendance for the year is 215,422, which is a slight increase over the previous year. An analysis of the admissions is made elsewhere in this report. Among the classes that have visited the Museum in a body during the year, the following may be mentioned :

Schools and Locations.		Teachers.	Pupils.
University of Illinois, Champaign, Illinois		I	41
Lake High - Union Avenue and West Forty-seventh Place		2	82
Yale — Seventieth and Yale Avenue		2	36
Hyde Park High — Fifty-seventh and Kimbark Avenue .		I	59
Hyde Park High - Fifty-seventh and Kimbark Avenue .		2	41
Normal Practise - Stewart Avenue and Sixty-eighth Street		3	37
University of Chicago — Chicago, Illinois		4	46
Forestville — Forty-fifth and St. Lawrence Avenue		2	4 I
Joliet, Ill., High — Joliet, Illinois		I	31
Hyde Park High - Fifty-seventh and Kimbark Avenue .		I	36
Hyde Park High - Fifty-seventh and Kimbark Avenue .		I	37
Yale — Seventieth and Yale Avenue.		4	39
Hyde Park High — Fifty-seventh and Kimbark Avenue .		I	33
Yale Practice — Seventieth and Yale Avenue		3	36
Hvde Park High — Fifty-seventh and Kimbark Avenue .		2	36
Lake High — Union Avenue and Forty-seventh Place		I	48
Parkside — Seventieth Street and Seipp Avenue		I	40
Hyde Park High Fifty-seventh and Kimbark Avenue .		2	43
St. Xavier Academy — 4928 Evans Avenue		2	46
Jewish Training School — 199 West Twelfth Place		I	31
Wendell Phillips High Thirty-ninth Street and Prairi	е		
Avenue		1	30

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Schools and Locations. Parkside — Seventieth and Seipp Avenue	Teachers.	
70 1 1 1 1 D 1	I I	39
Parkside — Ditto		32
John H. Hamline — Bishop and West Forty-eighth streets		41
Wells — Ashland and Cornelia Avenue		35 68
Englewood High — West Sixty-second and Stewart Avenue	0	148
Prescott — Wrightwood Avenue and North Ashland Avenue		67
John H. Hamline — Bishop and West Forty-eighth streets		
		32 60
Jewish Training School — 199 West Twelfth Street Frances E. Willard — Forty-ninth and St. Lawrence Avenue		
		43
	• –	33
Frances E. Willard — Forty-ninth and St. Lawrence Avenue		43
John H. Hamline — Bishop and West Forty-eighth streets		33
Lake High — Union Avenue and West Forty-seventh Place		50
Jewish Training School — 199 West Twelfth Street		114
Wendell Phillips High - Thirty-ninth Street and Prairie Av		
	, I	32
Bryant — Riverside, Illinois		37
Blue Island — Blue Island, Illinois	. 2	35
John H. Hamline — Bishop and West Forty-eighth streets		30
Frances E. Willard — Forty-ninth and St. Lawrence Avenue		30
Washburn — West Fourteenth and Union Street	. 2	62
Prescott — Wrightwood and N. Ashland Avenue	. 2	62
5	. I	32
Auburn Park — Normal Avenue and Eightieth Street.	. 2	46
<b>J</b>	. 2	40
Foster — South Union and O'Brien Street	. 2	I 2 2
Blue Island — Blue Island, Illinois	. 2	135
Walsh — Johnson and West Twentieth Street	• 3	91
Goodrich — West Taylor and South Sangamon Street	. I	42
William K. Sullivan — Eighty-third and Houston Avenue	• 4	80
John III III III Dienop und Hebr I orty organistic	. 3	5.2
	. I	56
University of Chicago —	. 2	82
John H. Hamline — Bishop and West Forty-eighth streets	. 2	30
Mt. Greenwood — Mt. Greenwood, Illinois	. I	33
	. I	36
Morgan Park — Morgan Park, Illinois	. I	46
Ray - Fifty-seventh and Monroe streets	. I	42
West Hammond — Hammond, Indiana	. 2	43
Von Humboldt - Rockwell and Hirsch Street	. 4	47
Victor F. Lawson - South Homan and West Thirteenth	1	
Street	I	49
Whitney — West Twenty-eighth Street	I	36
Joliet Training School — Joliet, Illinois	69	
Dore — 207 West Harrison Street	2	72
Hyde Park High - Fifty-seventh Street and Kimbark Avenu		36

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Schools and Locations. Hyde Park High — Fifty-seventh Street and Kimbark Avenue	Teachers. I	Pupils. 48
Hyde Park High — Fifty-seventh Street and Kimbark Avenue		57
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	I	39
Marquette — South Wood and West Harrison Streets	2	39 46
Bryant — Forty-first Avenue and West Thirteenth Street	I	38
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	I	30 80
Wendell Phillips High — Thirty-ninth and Prairie Avenue	I	33
Wendell Phillips High — Thirty-ninth and Prairie Avenue	I	30 30
Normal Practice — Sixty-seventh and Stewart Avenue	3	31
Gladstone — South Robey and Washburne avenue	2	61
Hoyne High — Illinois and Cass streets	ĩ	30
Englewood High — Sixty-second and Stewart Avenue	I	83
Hyde Park High — Fifty-seventh and Kimbark Avenue	ī	46
Hyde Park High.— Fifty-seventh and Kimbark Avenue	I	49
Hoyne High — Illinois and Cass streets	I	90
Hyde Park High — Fifty-seventh and Kimbark Avenue	I	55
Hyde Park High - Fifty-seventh and Kimbark Avenue	I	49
Joliet — Joliet, Illinois	2	36
Joliet — Joliet, Illinois	I	30
Hyde Park High - Fifty-seventh and Kimbark Avenue	I	55
Chicago Kindergarten College		38
Hyde Park High — Fifty-seventh and Kimbark Avenue	I	52
Harrison — Twenty-third Place and Wentworth Avenue	2	30
Normal Practice — Sixty-seventh and Stewart Avenue	3	37
Normal Practice — Sixty-seventh and Stewart Avenue	I	40
Hyde Park High — Fifty-seventh and Kimbark Avenue	I	49
Hyde Park High - Fifty-seventh and Kimbark Avenue	I	45
Hyde Park High - Fifty-seventh and Kimbark Avenue		30
Hyde Park High - Fifty-seventh and Kimbark Avenue	I	98
Yale — Seventieth and Yale Avenue	I	31
Hyde Park High Fifty-seventh and Kimbark Avenue	I	30
Gladstone — South Robey and Washburne Avenue	4	105
University of Chicago Chicago, Illinois		43
Wendell Phillips High - Thirty-ninth and Prairie Avenue .	I	40
Hyde Park High — Fifty-seventh and Kimbark Avenue	I	35

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Herewith are also submitted financial statements, list of accessions, names of members, etc.

Frederick J. V. Skiff, Director. .

FIELD MUSEUM OF NATURAL HISTORY.

REPORTS, PL. XXIV.



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#### RUSSIAN WOODS. (ROYAL APPENAGES COLLECTION.)

An alcove case containing Ash, Alder, and Oak. The specimens in the upper row show the trunk in cross and longitudinal sections, illustrating the well-marked annual rings and the grain of the wood on a natural and a finished surface in the same plane. The lower row of specimens shows radial, tangential, and oblique surfaces, and also a distinct view of the bark.

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# FINANCIAL STATEMENT.

# GENERAL ACCOUNT.

## RECEIPTS AND DISBURSEMENTS

# From January 1, 1907, to December 31, 1907.

Receipts.	
Cash in Treasurer's hands, December 31, 1906.	\$ 39,741.48
Petty Cash on hand, December 31, 1906.	739.95
Dues of Members —	
Corporate	
Annual 1,900.00	1,920.00
Admissions and Check Rooms	5,695.90
Sale of Guides	145.75
South Park Commissioners	15,000.00
Huntington W. Jackson Library Fund	40.00
Interest on Temple Bonds	37,795.77
Field Endowment Income	107,333.33
Dividend Illinois Trust & Savings Bank Stock	7,932.00
Interest on Calumet Club Bonds	360.00
Interest on Daily Balances	587.98
Sundry Receipts	73.60
R. F. Cummings Philippine Fund	4,000.00
Donations — United States Gypsum Company,	25.00
	\$221,390.76

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DISBURSEMENTS.	
Salaries	\$ 75,364.37
Guard Service	12,524.12
Janitor Service	7,286.94
Fire Protection	3,281.20
Heat and Light —	3,202.20
Wages \$3,588.87	
Fuel	
	8-0
Supplies	11,852.75
Repairs and Alterations —	
Wages of Carpenters, Painters, Roofers,	
etc	
Material used — paints, oils, glass, lumber,	
plaster, etc	14,951.93
Furniture and Fixtures —	- +195 - 195
	966
Office Furniture,	13,866.19
The Library —	
Books and Periodicals 1,436.16	
Binding	
Sundries	0 175 56
	2,175.56
Sections of Printing and Photography	1,203.43
Collections, etc., Purchased	7,227.84
Departmental Expenses	4,853.23
Guide Account, Eighth Edition	499.10
General Expense Account —	
Freight, Expressage and Teaming 1,737.21	
Stationery, Postage, Telephone	
Publications	
Lecture Course Expenses	
Liability Insurance	
Northern Trust Company, Custodian . 245.59	
Sundries	15,026.81
Mrs. Timothy B. Blackstone Fund	66.74
R. F. Cummings Philippine Fund	3,999.18
	\$174,179.39
Illinois Trust & Savings Bank Stock \$ 3,647.00	
\$30,000 Union Pacific 1st Mortgage Bonds 4% 28,752.14	
Petty Cash	
In Treasurer's hands, December 31, 1907 14,072.28	47,211.37
	\$221,390.76

## DISBURSEMENTS.

# ATTENDANCE AND RECEIPTS FROM JANUARY 1, 1907, TO DECEMBER 31, 1907.

Attendance.

ALL EMPARION.	
Paid Attendance —	
Adults 19,513	
Children	20,913
Free Admission on Pay Days	
School Children	
Students	
Teachers	
Members: Corporate	
Annual 69	
Life	
Officers' Families	
Special	
Press	
Admission on Free Days —	
Saturdays	
Sundays	194,509
Total Attendance,	215,422
Highest Attendance on any one day (August 23, 1907).	7,375
Highest Paid Attendance on any day (July 4, 1907)	407
Average Daily Admissions (365 days)	618
Average Paid Admissions (261 days)	80
D	
Receipts.	
Guides Sold — 583 at 25 cents each	\$ 145.75
Articles Checked — 13,551 at 5 cents each	677.55
Admissions	5,018.35
	\$5,841.65

# ACCESSIONS.

# DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AYER, EDWARD E., Chicago.

1 string of very small colored beads — Egypt.

BROOKLYN INSTITUTE MUSEUM, Brooklyn, New York.

1 Navaho skeleton — New Mexico (exchange).

450 specimens Cliff Dweller objects from Cañon del Muerto and Cañon de Chelly; also Zuni ethnology (exchange).

CAMERON, MRS. W. H.,

1 pair Klamath Indian tule moccasins.

CORY, CHARLES B., Chicago.

1 stone pestle — Brookline, Mass.

FAN, TUAN, Viceroy of the Liang Kiang Provinces, Nanking, China. I stone image of the Yuen Chi Tin Chun (God of the Tang Dynasty) — China

FIELD MUSEUM OF NATURAL HISTORY.

Collected by C. E. Akeley:

816 ethnological specimens — British East Africa.

Collected by William Jones:

317 ethnological specimens from Fox Indians — Tama, Iowa. Purchases:

1 wooden pipe bowl carved face.

1 stone image Beaver Mound — Bennington, Michigan.

2 belts, 1 lance, 2 drums, 2 drums for hand-game, 1 javelin game, 1 warrior bundle, 1 shirt — Pawnee, Oklahoma.

53 ethnological specimens from the Chilcotin.

180 ethnological specimens — Polynesian Islands andAfrica.

1 Solomon Island skull, 7 New Guinea skulls, 1 Chinese skull.

279 ethnological specimens - Micronesian Islands.

77 skulls - New Britain.

1 copper lance point — Dubuque, Iowa.

HANSEN, DR. OSCAR A., Chicago.

I water vessel of clay, I chipped stone blade.

KENNEDY, VERNON SHAW, Chicago.

37 specimens ethnological material — British East Africa.

PUTNAM, JAMES R., Chicago.

I suit Japanese armor and case for same.

RYERSON, MARTIN A., Chicago.

4 blankets (Navaho), 4 tray baskets and 1 burden basket (Seminole Indians, Florida), 1 bow, 9 arrows (East India).

SCHAPPER, FERDINAND, Blue Island, Illinois.

1 shoulder blade — Blue Island, Illinois.

SHADWELL, BERTRAND, Chicago.

1 earthenware vessel — Arizona.

SKIFF, FREDERICK J. V., Chicago.

1 Navaho blanket (exchange).

WILSON, J. M., Chicago.

1 small stone axe head — Chicago.

#### DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AYER, EDWARD E., Chicago, 14 specimens manila hemp — Philippine Islands. BAKER, EDMUND, London, England. I tracing of plant. BAKER MOSS COMPANY, Garrett, Indiana. 6 specimens peat products - Garrett, Indiana. BARBER, C. M., Chicago. 1 herbarium specimen - Illinois. BARTLETT, H. H., Cambridge, Massachusetts. I tracing of plant. BEBB, ROBERT, Chicago. 1 herbarium specimen — Texas. BERLIN ANALIN WORKS, Chicago. 4 specimens economic products. BOTANIC GARDEN, Sydney, Australia. 69 carpologic specimens - Australia. BOUTLOU, REV. A., Fairmont, West Virginia. 1 herbarium specimen — West Virginia. 12 herbarium specimens - West Virginia. BOUTONNET, E., Kerba, Algeria. 13 specimens economic products. BRANDEGEE, PROF. T. S., Berkeley, California. 1 herbarium specimen — Mexico. 1 herbarium specimen — Mexico. BRITISH GUIANA COMMISSION, W. C. E., 1893, Chicago. r gourd of arrow poison — British Guiana. BUREAU OF SCIENCE, Manila, P. I. 94 herbarium specimens — Philippine Islands (exchange). CALDWELL, PROF. OTIS W., Chicago. 82 herbarium specimens - Cuba. 18 photographs of Cuban Cycadaceæ, 1 economic specimen - Cuba. CALKINS, W. W., Berwyn, Illinois.

1 herbarium specimen - Berwyn, Illinois.

88 herbarium specimens - Berwyn, Illinois. 1 herbarium specimen — Illinois. 126 herbarium specimens- Illinois. 1 herbarium specimen — California. 5 herbarium specimens - Illinois. CANDOLLE, DR. CASIMIR DE, Geneva, Switzerland. 1 tracing of plant. CHAMBERLAIN, PROF. C. J., Chicago. 1 herbarium specimen — Indiana. 1 herbarium specimen. CHASE, MRS. AGNES, Washington, D. C. 1 herbarium specimen — Illinois. CONZATTI, PROF. CASSIANO, Oaxaca de Juarez, Mexico. 362 herbarium specimens - Oaxaca, Mexico. COULTER, PROF. J. M., Chicago. 2 economic specimens — United States and Australia. 158 herbarium specimens — various localities. DEAM, CHAS. C., Bluffton, Indiana. 207 herbarium specimens — Guatemala (exchange). 1 herbarium specimen — Guatemala. 2 herbarium specimens — Indiana. ESTACION CENTRAL AGRONOMICA, Santiago de las Vegas, Cuba. 156 herbarium specimens — Cuba. FERRY, JOHN F., Chicago. 30 herbarium specimens - Mound City, Illinois. FIELD MUSEUM OF NATURAL HISTORY. Collated by J. M. Greenman: 49 plant descriptions. I tracing of plant. 3 photographs of plants. Collated by C. F. Millspaugh: 1 specimen teak wood - Siam. Collected by L. J. K. Brace: 1243 herbarium specimens - Bahamas. Collected by N. L. Britton and L. J. K. Brace: 664 herbarium specimens — Bahamas. Collected by C. F. Millspaugh and N. L. Britton: 022 herbarium specimens, 45 economic specimens — Bahamas. Collected by E. S. Riggs and J. B. Abbott: 10 herbarium specimens - Wyoming. Purchases: 1810 herbarium specimens - Mexico. 448 herbarium specimens — California, Lower California and Colorado. 15000 herbarium specimens — various localities. 100 drugs. 698 herbarium specimens - various localities in the United States. 17 reproductions of fruits. 3 economic specimens — Illinois.

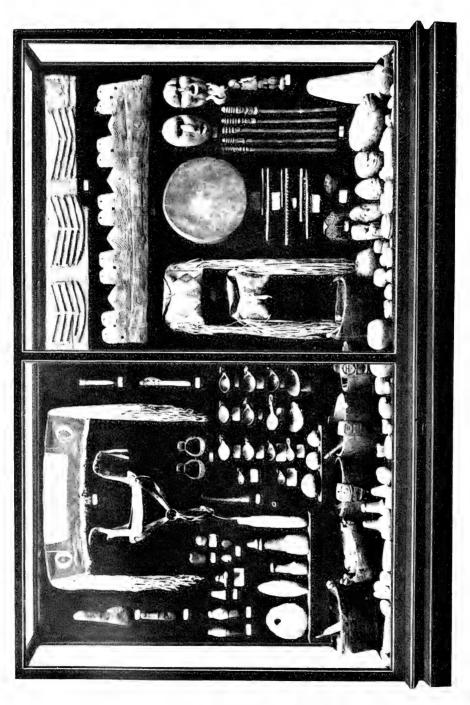
1107 herbarium specimens — Guadeloupe and Martinique 151 herbarium specimens, 21 economic specimens - Palestine 423 herbarium specimens - Guadeloupe and Martinique. 581 herbarium specimens — various localities. 630 herbarium specimens - California, Oregon and Washington. FRYE, PROF. T. C., Seattle, Washington. 5 economic specimens - Washington. FULLER, GEORGE D., Chicago. o herbarium specimens — Alberta. GATES, FRANK C., Ravenswood, Illinois, 137 herbarium specimens — Illinois (exchange). GAUMER, DR. GEO. F., Izamal, Mexico. 1 herbarium specimen - Yucatan. GRAY HERBARIUM, Harvard University, Cambridge, Massachusetts. I herbarium specimen — Mexico. GREENMAN, J. M., Chicago. 2 herbarium specimens - California. I photograph of specimen. HALL, MRS. HERMAN J., Chicago. r photo Cyperus papyrus, r paper Cyperus papyrus — Palermo, Sicily. HILL, PROF. E. J., Chicago. 67 herbarium specimens - United States. INDIAN MUSEUM, THE, Calcutta, British India. 28 economic products - British India (exchange). JORDAN, PROF. EDWIN OAKES, Chicago. 2 herbarium specimens - Arizona. KELLERMAN, PROF. W. A., Columbus, Ohio. 207 herbarium specimens — Guatemala. KLIPSTEIN & CO., A., Chicago. o economic specimens. LAND, DR. W. J. G., Chicago. 1 herbarium specimen --- Indiana. LANSING, O. E. JR., Chicago. 2 economic specimens --- Indiana. 27 herbarium specimens — Illinois and Indiana. 1 tracing of Coreopsis incisa. MILLSPAUGH, BASIL S., Chicago. 1 specimen Saccharum officinale "Piloncillo" - Mexico. MILLSPAUGH, C. F., Chicago. I specimen nut. 1 specimen slippery elm bark - Illinois. 4 specimens of fruits - Ephraim, Wisconsin. 2 herbarium specimens - Porto Rico. I economic specimen. MILLSPAUGH, MRS. C. F., Chicago. 10 economic specimens - Harbor Islands, Bahamas 1 specimen nut.

MISSOURI BOTANICAL GARDEN, St. Louis, Missouri. 623 herbarium specimens — Texas (exchange). 1 specimen pod corn. 2 specimens fruits - Dominica and St. Croix. NATIONAL COMPANY, THE, Chicago. 1 specimen corn oil rubber. NEWCOMBE; DR. C. F., Victoria, B. C. 3 herbarium specimens - Queen Charlotte Islands. NEW YORK BOTANICAL GARDEN, New York City. 296 herbarium specimens — Porto Rico (exchange). 331 herbarium specimens — Jamaica (exchange). 735 herbarium specimens — various localities (exchange). 1 herbarium specimen — Antigua, West Indies. NEW YORK TANNING EXTRACT CO., New York City. 4 specimens products - Argentine Republic. PIPER, PROF. C. V., Washington, D. C. 1 herbarium specimen - Oregon. ROYAL GARDENS, Kew, England. 37 economic specimens, 1 herbarium specimen - various localities (exchange). SLOCOM, A. W., Chicago. 2 economic specimens - Michigan. SMITH, HURON H., Chicago. 4 economic specimens - Winchester, Indiana. 2 economic specimens. 1 specimen fruit — Illinois. SPARKS, MISS ETHEL C., Chicago. 1 rosary - Ephraim, Wisconsin. TECHNOLOGICAL MUSEUM, Sydney, New South Wales. 160 economic specimens, 114 herbarium specimens - Australia (exchange). TRACY, S. M., Biloxi, Mississippi. 20 herbarium specimens - Alabama, Florida and Texas. TRELEASE, DR. WILLIAM, St. Louis, Missouri. I plant description. 2 plant descriptions and photograph. TUTTLE, MRS. M., Chicago. 53 marine algæ — Santa Cruz, California. UNITED STATES NATIONAL MUSEUM, Washington, D. C. 16 fragments of type specimens - Mexico. 47 herbarium specimens - Mexico (exchange). 186 herbarium specimens — various localities. 3 herbarium specimens - Mexico. UNIVERSITY OF CHICAGO, Chicago. 51,606 specimens (Herbarium of University of Chicago (deposit). WARNER, MOORE & CO., Richmond, Virginia.

2 specimens of leaves - Virginia.

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# DEPARTMENT OF GEOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) AMERICAN VANADIUM COMPANY, Pittsburgh, Pennsylvania. 5 specimens vanadium ores — Minasragra, Peru. ATLAS SCHOOL SUPPLY COMPANY, Chicago. 7 relief maps 3' x 4' - various countries. AYER, EDWARD E., Chicago, I large sheet crystallized copper - Cananea. Mexico. BARTON, S. W., Chicago. 1 specimen crystallized calcite, 2 specimens analcite — Lake Superior. CHICAGO COPPER REFINING CO., Blue Island, Illinois. 7 specimens ores and concretions -- United States and Canada. COHEN. M., Assuan, Egypt. 1 specimen bloodstone, 1 specimen peridot - Mt. Sinai, Egypt. DAVIN, JAMES P., Chicago. 1 specimen calcareous tufa — Chicago. DIVER, DANIEL, Deerfield, Wisconsin. 1 specimen fire clay — Canada. DUNHAM, N. W., Somerville, Texas. a specimens fuller's earth — United States. EMPIRE MINING COMPANY, Platteville, Wisconsin. 2 specimens lead and zinc ores - Platteville, Wisconsin. ESSIG & CO., F. J., Chicago. 4 specimens cut sodalite - Canada, 2 specimens cut azurite and malachite - Lyon County, Nevada (exchange). FIELD MUSEUM OF NATURAL HISTORY. Collected by O. C. Farrington: 37 specimens copper and iron ores, pitchstone, agate and thomsonite - Lake Superior. 2 specimens concretions, 4 specimens rocks - Montana. Collected by C. F. Millspaugh: 30 specimens beach pebbles illustrating attrition - Little Sister Bay, Wisconsin. Collected by H. W. Nichols: 4 specimens worm borings in Potsdam sandstone, I specimen Potsdam sandstone - Crevitz, Wisconsin. Collected by A. W. Slocom: 25 fossil crinoids - Burlington, Iowa. 3283 fossil shells (representing 36 species) Pleistocene marls of Little Traverse Bay, Michigan. 29 specimens concretions and pebbles, 860 specimens Devonian invertebrate fossils - Little Traverse Bay, Michigan. Purchases: I relief map of United States. 1 seventeen pound individual Admire meteorite - Admire, Kansas. 1369 specimens fossil crinoids and blastoids — Burlington, Iowa: 4231 specimens invertebrate fossils — Mississippi Valley; 62 specimens

fossil plants — Pennsylvania and Ohio.

2 specimens topaz and phenacite, 1 specimen phenacite on quartz — North Chatham, New Hampshire.

258 specimens invertebrate fossils, 17 specimens clay stones — New York and Vermont.

50 specimens rocks of the iron and copper districts of Lake Superior. 1 specimen vanadinite — Magdalena, New Mexico.

GAMBA, F. PEREIRA, Pasto, U. S. of Colombia.

4 specimens emerald and aquamarine, 1 specimen parisite, 8 specimens gold ore — U. S. of Colombia.

GEOLOGICAL SURVEY OF CANADA, Ottawa, Canada.

I cast of Iron Creek meteorite (exchange).

GEOLOGICAL SURVEY OF INDIA, Calcutta, India.

1 specimen, 6.6 grams, Goalpara meteorite (exchange).

HENDERSON, JUNIUS, Boulder, Colorado.

29 specimens fossil shells — Colorado (exchange).

JOHNSTON, W. M., Chicago.

9 specimens ores and minerals.

4 specimens native copper - Copper River District, Alaska.

KUNSTMAN, ROBERT, Little Rock, Arkansas.

1 specimen soapstone, 1 specimen talc, 1 specimen pulverized tale — Saline County, Arkansas.

MILLAR, AUSTIN Q., Minneapolis, Minnesota.

1 specimen kimberlite — Elliott County, Kentucky.

7 specimens diamond-bearing sand and associated materials-Pike County, Arkansas.

MORONEY, JOHN J., Chicago.

19 specimens ores, clays and briquettes - United States.

1 specimen tripoli — The Dalles, Oregon.

NARRAWAY, J. E., Ottawa, Canada.

32 specimens fossils — Canada (exchange).

PEARSE, A. S., Chicago.

r fossil bryozoan, 6 fossil shells — Chicago and Dresden, New York. POHNDORF, A. P., Butte, Montana.

11 specimens smoky quartz — Silver Star Mine, Butte, Montana.

RING, H. A., Nome, Alaska.

25 specimens garnets, 1 specimen black sand — Nome, Alaska.

TRISTAN, PROF. J. FID, San Jose, Costa Rica.

8 specimens minerals — Costa Rica.

WARD, MRS. L. A. C., Chicago.

1 specimen Santa Rosa meteorite (1933 grams) (exchange).

WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, New York.

1 specimen Elm Creek meteorite (382 grams) (exchange).

WERNER, ALEX., Chicago.

19 specimens fossil shells — Nome, Alaska.

WILEY, E. N., Chicago.

1 specimen fossil coral — Charlevoix, Michigan.

WOOLF, R. H., Chicago.

1 specimen rottenstone, 1 specimen paint clay - Fayette County, Iowa.

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# DEPARTMENT OF ZOOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) AUTOMATIC BUTTON COMPANY, Muskatine, Iowa, I series of shells showing the various stages in the manufacture of pearl buttons. ABBEY, E. S., Chicago. 1 moth - Chicago. BARBER, C. M., Chicago. 1 garter snake --- Oak Park, Illinois. 3 water bugs - Laporte, Indiana. BEAN, DR. TARLETON H., New York City. 1 frog, 3 salamanders - Smithtown, Long Island. BEER, EMIL, Chicago. 2 butterflies - Palos Park, Illinois. BUCHANAN, W. P., Chicago. r tarantula. BUREAU OF FISHERIES, Washington, D. C. 33 fishes — Alaska. BURLEIGH, N. A., Chicago. 6 beetles --- Chicago. CALVIN, DAVID, Chicago. I Carolina rail — Chicago. CARPENTER, C. H., Chicago. 3 dragon flies - Chicago. CARR, MALEN K., Chicago. 1 tarantula - San Antonio, Texas. CHAVES, DIOCLESIANA, Managua, Nicaragua. 21 toads, 3 frogs, 30 lizards, 3 snakes - Nicaragua. 70 fishes — Nicaragua. CHATHAM, DR., Olive Branch, Illinois, ı beetle. CHOPE, E. B., Chicago. 16 beetles - New York and New Jersey. COALE, H. K., Highland Park, Illinois. o bird skins - Australia (exchange). 1 hawk, 1 plover — Hungary. DEARBORN, N., Chicago. 1 moth — Chicago. DERBY, WILLIAM M., Chicago. 1 hybrid duck - English Lake, Indiana. 2 shoveller ducks, 1 wood duck - English Lake, Indiana. DEWEY, C. L., Chicago. 1 bull snake — Joliet, Illinois. DITZEL, H, F., Chicago. 1 water beetle. DOHMEN, U. A., Chicago. 1 bumblebee — Chicago.

DUNLAP, C. R., Goldfield, Nevada. 1 shield-back grasshopper - Goldfield, Nevada. FERRY, J. F., Chicago. 1 gray squirrel — Lake Forest, Illinois. 1 fox squirrel, 1 woodchuck, 1 hoary bat - Lake Forest, Illinois. 1 grasshopper - Beach, Illinois. FIELD MUSEUM OF NATURAL HISTORY. Collected by C. E. Akeley: 1 snake — Joliet, Illinois. Collected by C. M. Barber: 100 fishes - South Chicago, Illinois. 04 specimens beetles, bugs, centipedes, etc.,-Olive Branch and Cairo, Illinois. 1 frog — Chicago. 28 salamanders, 52 toads, 25 frogs, 44 snakes, 9 lizards, I turtle - Olive Branch, Illinois. 1 large alligator snapping turtle — Cairo, Illinois. 11 turtles, 4 lizards, 29 snakes, 47 frogs, 128 toads, 21 salamanders - Olive Branch, Illinois. 1 white footed mouse - Olive Branch, Illinois. turtle, 5 toads, 7 snakes, 6 frogs, 1 salamander - Waukegan, Illinois. Collected by E. B. Chope: 1227 millipedes, centipedes, spiders, larvæ, bugs, grasshoppers, flies, bees, wasps and beetles - Chicago. Collected by N. Dearborn: 2 salamanders and young embryos - Tilton, New Hampshire. 10 snakes - Longwood, Illinois. Collected by C. L. Dewey: 10 fishes — Joliet, Illinois. Collected by J M. Ferry: 1 gray squirrel - Olive Branch, Illinois. 169 bird skins - Illinois and Indiana. 3 ducks, 7 quails, 4 blackbirds, 12 woodpeckers, 10 sparrows, 43 warblers, 12 flycatchers, 15 wrens and chickadees, 17 vireos, 11 others -- Southern Illinois. 1 duck, 1 heron, 2 hawks, 6 snipes, 2 cuckoos, 5 flycatchers, 2 canager and vireo, 6 sparrows, 12 warblers, I chickadee, 3 thrushes - Lake County, Illinois. Collected by William J. Gerhard: 454 dragonflies, grasshoppers, roaches, bugs, butterflies, moths, beetles, flies, bees, wasps and parasites, etc.,- Illinois and Indiana. 614 dragon flies, nerve-wings, grasshoppers, bugs, butterflies, moths, beetles, flies, bees, wasps, parasites, etc.-Illinois and Indiana. 1 gopher snake - Palos Park, Illinois. Collected by E. Heller: 128 mammal skins, 23 mammals in formalin - Southern Illinois.

# JAN., 1908. ANNUAL REPORT OF THE DIRECTOR.

r water beetle, o fleas, 24 ticks - Illinois. r blind fish - Golconda, Illinois. 16 lizards, 3 snakes, 1 toad, 1 frog - Southern Illinois. 40 turtles - Golconda, Illinois. tto specimens of mammals - Illinois. 36 turtles - Riverside, California. 40 rodent skins - California. I lizard - Riverside, California, 125 rodent skins, 25 alcoholic rodents - Northern Wisconsin. I pileated woodpecker - Ozark, Illinois. I ruffed grouse, I pileated woodpecker, 5 hairy woodpeckers - Wisconsin. Collected by S. E. Meek: 200 fishes - Wolf Lake and Lake George, Indiana. Collected by C. F. Millspaugh: 314 shells, 1 tree toad — Bahamas. 50 weevils. Collected by H. S. Swarth: 4 beetles - Joliet, Illinois. Collected by British East African Expedition, 1005-1007: 6 specimens Cape buffalo - Kenya Province and Kijabe. 8 specimens lion - Molo and Athi Plains. 6 specimens eland - Kenva Province and Athi Plains. 6 specimens topi - Molo. 7 specimens wildebeste - Athi Plains. 10 specimens and skull Jackson's hartebeste - Molo. 10 specimens Coke's hartebeste — Athi Plains. 2 specimens hartebeste - Naivasha and Kijabe. 4 specimens Neuman's hartebeste - Näkuro and Elementeita. 6 specimens and skull Dafassa's waterbuck — Elementeita. 7 specimens waterbuck - Kenya Province and Athi Plains. 13 specimens impalla - Athi Plains and Elementeita. 16 specimens Grant's gazelle — Athi Plains. 16 specimens Thompson's gazelle — Athi Plains. 11 specimens bushbuck - Elementeita, Aberdare Mountains and Nairobi. 13 specimens klipspringer — Athi Plains. o specimens reedbuck - Molo and Elementeita. 12 specimens Chanler's reedbuck - Athi Plains. 10 specimens duiker - Aberdare Mountains, Elementeita, Kenya Province and Molo. o specimens Zanzibar antelope - Mt. Kenya and Kijabe. 10 specimens steinbok - Athi Plains, Molo and Kenya Province. 8 specimens dik dik - Elementeita and Kijabe. 7 specimens baboon - Athi Plains, Gil Gil, Aberdare Mountains and Kijabe. 24 specimens monkeys - Kijabe, Athi Plains, Tana River. 5 specimens zebra - Athi Plains.

- 3 specimens chetah Athi Plains.
- 2 specimens leopard Aberdare Mountains and Athi Plains.
- 5 specimens serval Aberdare Mountains, Molo, Athi Plains and Elementeita.
- o specimens springhaas Elementeita and Athi Plains.
- 14 specimens jackal Athi Plains, Kijabe and Elementeita.
- 26 specimens genet Mt. Kenya, Voi, Molo, Athi Plains, Kijabe and Elementeita.
- 18 specimens mongoose.— Athi Plains, Kijabe, Molo, Naivasha, Mt. Kenya, and Aberdare Mountains.
- 41 specimens hyrax Athi Plains, Kijabe, Naivasha, Gil Gil, Elementeita, Molo and Mt. Kenya.
- 3 specimens wild dog Athi Plains and Voi.
- 6 specimens wart hog Elementeita, Athi Plains and Kenya Province.
- 1 specimen rhinosceros Kijabe.
- 2 specimens hippopotamus --- Elementeita.
- 1 specimen porcupine Athi Plains.
- 1 specimen ratel Elementeita.
- 1 specimen striped hyena- Voi.
- 8 specimens Shamba rat Mt. Kenya.
- 1 specimen and 1 neck and head giraffe Athi Plains and Voi.
- 2 specimens and 1 skull elephant Mt. Kenya and Aberdare Mountains.
- 1 specimen galago Voi.
- 2 specimens snakes Elementeita and Voi.
- 693 specimens bird skins.
- I specimen ostrich.
- 252 specimens fish.
- 265 specimens toads, frogs, lizards, chameleons, snakes and turtles.
- 720 specimens small mammals.
- 353 specimens insects.
- 1 rhinosceros horn, 1 set eggs Secretary bird.
- I skeleton Cape buffalo, I skeleton lion, I skeleton giraffe, I skeleton Jackson's hartebeste, I skeleton topi, I skeleton Grant's gazelle, I skeleton Chanler's reedbuck, 2 skeletons klipspringer, I skeleton Zanzibar antelope, I skeleton baboon, 2 skeletons monkey, I skeleton springhaas, I skeleton serval, I skeleton genet, I skeleton ton mongoose, 2 skeletons hyrax, puff adder, 4 specimens flamingo.
- I death mask of buffalo, zebra, Jackson's hartebeste, Coke's hartebeste, eland, impalla, steinbok, duiker, baboon, hyrax, 2 of topi, 3 of gazelle, 2 of bushbuck, 2 of klipspringer, 2 of monkey, I entire chetah.

Purchases:

37 birdskins — various localities.

- 2 wildcats, 1 skunk.
- 18 bird skins Philippine Islands.

I female passenger pigeon.

125 bird skins — Central and South America.

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5 bird skins - California.

2 bird skins - Philippine Islands.

1 alligator — Florida.

31 bird skins — Costa Rica.

1 egg of brant goose - McGary Island, Greenland.

7 bird skins - various localities.

I gorilla skin and skeleton — West Africa.

4000 shells — various localities.

1 Martha's Vineyard prairie hen — Massachusetts.

I goose, I duck, 3 night-hawks, I sparrow - various localities.

FISCHER, E. J., Chicago.

10 mammal skins, 5 mammal skeletons - Luxemburg, Iowa.

2 varying hares, 5 meadow mice, 1 spermophile — Luxemburg, Iowa.

FIX, WILLIAM J., Philadelphia, Pa.

ı beetle.

GARDNER, C. A., Chicago.

1 saw fly — Chicago.

GOODRICH, A. W., Chicago.

1 water dog - Little Traverse Bay, Michigan.

GOOS, MISS EMMA, Davenport, Iowa.

I series shells illustrating the manufacture of pearl buttons.

#### GRINNELL, J., Pasadena, California.

5 chipmunks, I golden-headed spermophile, 5 pocket gophers, 2 meadow voles, I wood rat — California (exchange).

#### GUERET, E. N., Chicago.

2 garter snakes, 2 water snakes - Hamlin Lake, Michigan.

HENDERSON, J., Boulder, Colorado.

11 shells — Colorado.

HILL, C., Chicago.

2 snakes, 1 salamander — Clark Junction, Indiana.

HOWELL, W., Chicago.

1 striped gopher - Marquette Park, Chicago.

LANSING, O. E. Jr., Chicago.

1 beetle — Chicago.

MARSH, DWIGHT, Hugo, Colorado.

4 rattlesnakes — Colorado.

McINTYRE, G., Walworth, Wisconsin.

68 moths — Walworth, Wisconsin.

MEEK, S. E., Chicago.

ı bug — Chicago.

MILLSPAUGH, C. F., Chicago.

36 spiders - Ephraim, Wisconsin.

MUNZNER, H., Chicago.

27 spiders, grasshoppers, moths, beetles, flies, bees and parasites — Illinois.

NATIONAL MUSEUM OF COSTA RICA, San Jose, Costa Rica.

26 fishes — Costa Rica.

9 fishes — Costa Rica.

42 fishes — Costa Rica.

16 fishes — Costa Rica.

7 lizards — Costa Rica. 30 fishes — Costa Rica.

39 fishes Costa Rica

19 fishes — Costa Rica.

NATIONAL MUSEUM, PARIS, FRANCE.

131 fishes — Costa Rica (exchange).

O'SHAUGHNESSY, J. P., Chicago.

1 hair worm — Chicago.

PRICE, MRS. ABNER, Chicago.

41 mounted birds — Illinois and Indiana.

REED, MISS, Honolulu.

160 shells — Honolulu.

RING, H. A., Chicago.

2 sponges, 2 hydroids — Cape Nome, Alaska.

ROSENBAUM, W. M., Chicago.

I humming bird moth — Chicago.

SMITH, CASSIUS, Chicago.

3 beetles — Mexico.

SWARTH, H. S., Chicago.

1 moth — Chicago.

TIEMAN, B., Chicago.

1 beetle, 3 flies — Chicago.

UNITED STATES NATIONAL MUSEUM, Washington, D. C. 90 fishes — Philippine Islands.

WARKE, MARGARET, Chicago.

1 salamander — Chicago.

WISCONSIN NATURAL HISTORY SURVEY, Madison, Wisconsin. 9 fishes — Lake Pekin, Wisconsin.

WOLCOTT, A. B., Chicago.

1 grasshopper, 7 bees and parasites, 3 flies — Palos Park, Illinois. WOODRUFF, F. M., Chicago.

ı lizard.

### SECTION OF PHOTOGRAPHY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) DORSEY, GEORGE A., Chicago.

15 negatives of landscapes and general views — Peru.

FIELD MUSEUM OF NATURAL HISTORY.

Made by C. E. Akeley:

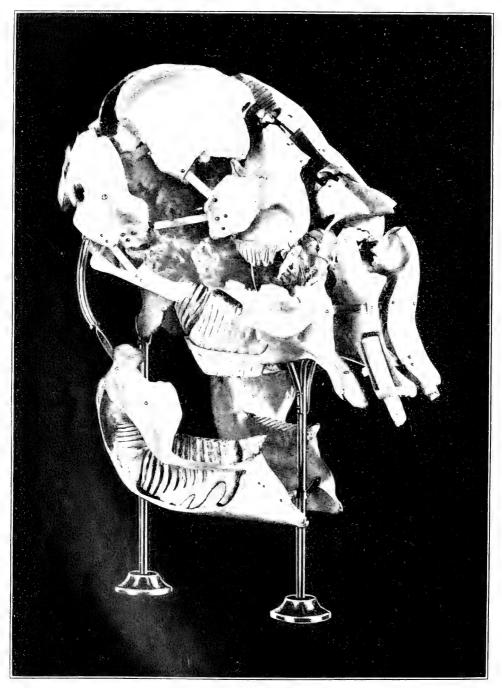
623 negatives of general views, portraits, etc.— British East Africa. Made by C. H. Carpenter:

3,777 negatives, 5,818 prints, 731 lantern slides, 85 enlargements, 274 negatives developed.

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FIELD MUSEUM OF NATURAL HISTORY.

REPORTS, PL. XXVI.





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#### SKULL OF INDIAN ELEPHANT (Elephas maximus) ABOUT 41/2 YEARS OF AGE.

The cranial bones are entirely disarticulated, spaced, and mounted in their relative positions for study purposes. The cranium is hinged, and may be tipped back to facilitate the study of the sphenoid and basioccipital bones. The two superior maxillary bones rotate, exposing the palatine and dental surface.

The superior and inferior maxillary on the right side are cut away, exposing the roots of the teeth, displaying their character, development, and succession.

# JAN., 1908. ANNUAL REPORT OF THE DIRECTOR.

Made by O. C. Farrington:

24 negatives of landscapes.

Made by J. F. Ferry:

74 negatives of general views and bird nests.

Made by E. Heller:

8 negatives, general views.

Made by C. F. Millspaugh:

54 negatives of landscapes and general views — Bahamas.

Made by H. H. Smith:

12 negatives of trees — Chicago.

Purchases:

98 prints of Sun Dance at Fort Belknap, Montana.

19 prints of Hupa Indians — Arcata, California.

# THE LIBRARY.

### BOOKS, PAMPHLETS, AND SERIALS.

(ACCESSIONS ARE BY EXCHANGE UNLESS OTHERWISE DESIGNATED.)

ACIREALE REALE ACCADEMIA DI SCIENZE, Acireale, Italy.

Rendiconti e memorie, ser. 3a, v. 1-4, 1901-1904.

ADAMS, FRANK D., Montreal, Canada.

3 pamphlets.

ALABAMA AGRICULTURAL EXPERIMENT STATION, Auburn, Alabama. Bulletin, current numbers (gift).

ALABAMA GEOLOGICAL SURVEY, Montgomery, Alabama. Bulletin, no. 9.

ALASKA AGRICULTURAL EXPERIMENT STATION, Sitka, Alaska. Annual report, 1906.

Bulletin, current numbers (gift).

ALBANY MUSEUM, Grahamstown, South Africa. Records, v. 2, pt. 1.

ALLEN, GLOVER M., Cambridge, Massachusetts. 2 pamphlets.

AMBROSETTI, JUAN B., Buenos Aires, Argentina. I pamphlet.

AMERICAN ACADEMY OF ARTS AND SCIENCES, Boston, Massachusetts. Proceedings, current numbers.

AMERICAN ANTIQUARIAN SOCIETY, Boston, Massachusetts. Proceedings, v. 18, pts. 1-2.

AMERICAN CHEMICAL JOURNAL PUBLISHING COMPANY, Baltimore, Maryland.

Journal, current numbers.

AMERICAN FOLK-LORE SOCIETY, Cambridge, Massachusetts. Journal, current numbers.

AMERICAN FORESTRY ASSOCIATION, Washington, D. C. Forestry and irrigation, current numbers.

AMERICAN GEOGRAPHICAL SOCIETY, New York City. Bulletin, current numbers.

FIELD MUSEUM OF NATURAL HISTORY - REPORTS, VOL. III. 162 AMERICAN INSTITUTE OF HOMEOPATHY, New York City. Transactions, vs. 1-2, 1906 (gift). AMERICAN INSTITUTE OF MINING ENGINEERS, New York City. Officers, members, rules, etc., 1907. Transactions, v. 37. 2 pamphlets. AMERICAN INVENTOR, New York City. Journal, v. 16, nos. 1-2. AMERICAN LUMBERMAN, Chicago. Annual statistics, no. 34, 1906 (gift). AMERICAN MEDICAL ASSOCIATION, Chicago. Third annual conference, 1907 (gift). AMERICAN MINING CONGRESS, Denver, Colorado. Papers and addresses, annual meeting, 1906. AMERICAN MUSEUM OF NATURAL HISTORY, New York City. Annual report, 1906. Anthropological papers, v. 1, pt. 3. Bulletin, v. 18, pt. 4; v. 22. Journal, current numbers. Memoirs, v. 11, pt. 2. 63 pamphlets. AMERICAN ORIENTAL SOCIETY, New Haven, Connecticut. Journal, v. 27, pt. 2; v. 28, pt. 1. AMERICAN PHILOSOPHICAL SOCIETY, Philadelphia. Proceedings, current numbers. AMERICAN VANADIUM COMPANY, Pittsburg, Pennsylvania. 3 blue prints. 6 pamphlets (gift). AMES BOTANICAL LABORATORY, Easton, Massachusetts. Contributions, nos. 4, 6. 7 separates. AMSTERDAM, K. AKADEMIE VAN WETENSCHAPPEN, Amsterdam, Netherlands. Proceedings, v. 9. Verhandlingen, v. 13, nos. 1-3. Verslagen, v. 15. AMSTERDAM UNIVERSITEIT BIBLIOTHEEK, Amsterdam, Netherlands. Aanwinsten. ANGERS. SOCIÉTÉ NATURELLE D'AGRICULTURE, SCIENCES ET ARTS, Angers, France. Mémoires, ser. 5, v. 9, 1906. ANNALES DES MINES, Paris, France. Annales, current numbers. ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND, London. Journal, current numbers. ARCHITECTS' AND BUILDERS' MAGAZINE COMPANY, New York City. Magazine, current numbers.

ARCHIV FÜR RELIGIONSWISSENSCHAFT, Leipzig, Germany.
Archiv, v. 10.
ARIZONA AGRICULTURAL EXPERIMENT STATION, Tucson, Arizona.
Annual report, no. 17, 1906.
Bulletin, current numbers.
ARKANSAS AGRICULTURAL EXPERIMENT STATION, Fayetteville,
Arkansas.
Bulletin, current numbers (gift).
ASIATIC SOCIETY OF BENGAL, Calcutta, India.
Memoirs, v. 2, nos. 1-4.
Proceedings, current numbers.
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Journal, current numbers.
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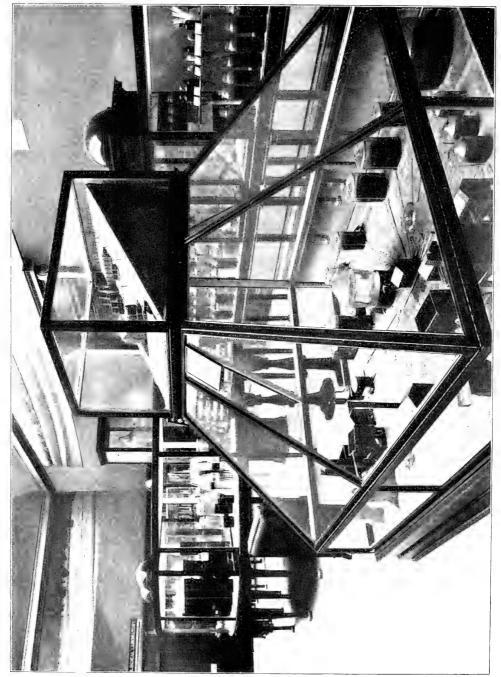
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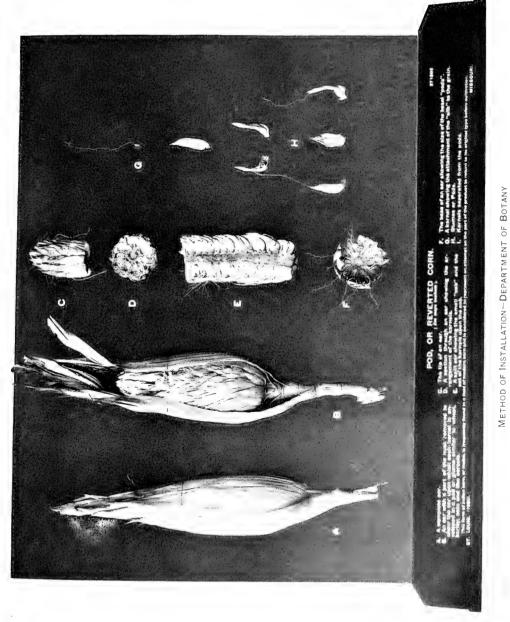
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# ARTICLES OF INCORPORATION.

# STATE OF ILLINOIS.

DEPARTMENT OF STATE. WILLIAM H. HINRICHSEN, Secretary of State.

To All to Whom These Presents Shall Come, Greeting:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D., 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

*Now, therefore,* I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSEN, Secretary of State.

[SEAL.]

### TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned, citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

 $\tau_{\rm c}$  . The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archæology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

#### TAN., 1008. ANNUAL REPORT OF THE DIRECTOR

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Aver, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

<. The location of the Museum is in the City of Chicago, County of Cook. and State of Illinois.

(Signed).

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Aver, John M. Clark, Herman H. Kohlsaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers. Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, Tames W. Scott, Geo. F. Bissell, John R. Walsh, Chas. Fitzsimons, John A. Roche. E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole. Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black. Ino. I. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis. James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Rverson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour, STATE OF ILLINOIS, { ss.

COOK COUNTY.

I. G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1803.

G. R. MITCHELL.

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November, 10, 1905, in the office of the Secretary of State for Illinois.

# AMENDED BY-LAWS.

(JANUARY 28, 1907).

#### ARTICLE I.

#### MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons, and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

First.— Free admittance for the member and family, to the Museum on any day.

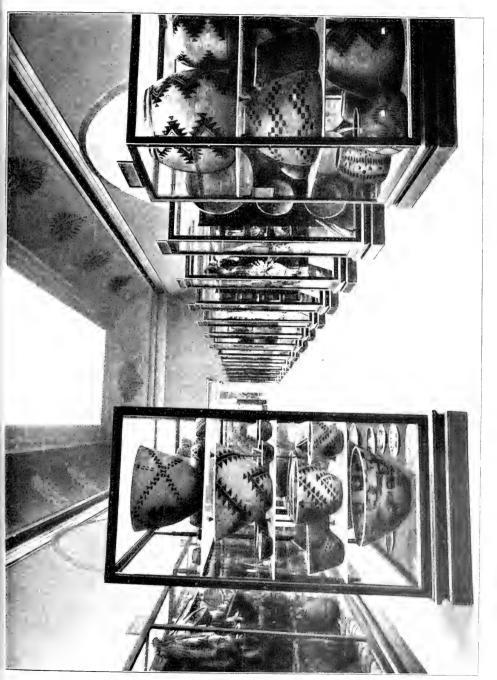
Second.— Ten tickets every year, admitting the bearer to the Museum on pay days.

Third.- A copy of all publications of the Museum, when requested.

Fourth.— Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time, shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons, or Honorary Members, shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars, at any one time, shall, upon the unanimous vote of the Board of Trustees, become a Life Member. Life Members shall be exempt from all dues.



HALL 34. ETHNOLOGY OF THE INDIANS OF CALIFORNIA.



SEC. 5. Patrons shall be chosen by the Board of Trustees upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SEC. 6. Honorary Members shall be chosen by the Board of Trustees from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

#### ARTICLE II.

#### BOARD OF TRUSTEES.

SECTION 1. The Board of Trustees shall consist of fifteen members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled by a majority vote of the remaining members of the Board, and the election may be held at any regular meeting.

SEC. 2. Regular meetings of the Board shall be held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

#### ARTICLE III.

#### OFFICERS.

SECTION 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary, and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

#### ARTICLE IV.

#### THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation. He shall make disbursements only upon warrants drawn by the Director

and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed.

SEC. 2. The securities and muniments of title belonging to the Corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SEC. 3. The Treasurer shall give bond in such amount, and with such sureties, as shall be approved by the Board of Trustees.

SEC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director. All vouchers executed for expenditures for the construction and maintenance of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

#### ARTICLE V.

#### THE DIRECTOR.

SECTION I. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of all of the property and affairs of the Museum, and shall control the operations of the institution, subject to the authority of the Board of Trustees and the Executive Committee. The Director shall be the official medium of communication between the Board, or its committees, and the scientific staff and maintenance force.

SEC. 2. There shall be four scientific departments of the Museum — Anthropology, Botany, Geology, and Zoölogy, each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board, upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director, upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SEC. 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month. At

the Annual Meeting, the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the board may direct.

#### ARTICLE VI.

#### AUDITOR.

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board.

#### ARTICLE VII.

#### COMMITTEES.

SECTION 1. There shall be four Committees, as follows: Finance, Building, Auditing and Executive.

SEC. 2. The three Committees first above named shall each consist of three members, who shall be elected by ballot by the Board at the Annual Meeting, and who shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairmen by the order in which the members are named in the respective Committee; the first member named shall be chairman; the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession to the chairmanship being in this order in the event of the absence or disability of the Chairman.

SEC. 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Auditing Committee, and three other members of the Board to be elected by ballot at the Annual Meeting.

SEC. 4. Four members of the Executive Committee shall constitute a quorum, and in all other standing committees, two members shall constitute a quorum. In the event that, owing to the absence or inability of members, a quorum cannot be present at any meeting of any committee, then the Chairman thereof, or his successor, as herein provided, may summon any member of the Board of Trustees to act in place of the absentee.

SEC. 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest, funds, subject to the approval of the Board.

SEC. 6. The Building Committee shall have supervision of the construction, reconstruction, extension, and maintenance of any kind and all buildings used for Museum purposes.

SEC. 7. The Executive Committee shall have supervision over all matters pertaining to the Museum. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommen-

dations as to expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the respective Committees shall be considered as authorized to make the expenditures detailed therein. No increase in the expenditures under any items of the Budget shall be made, except by authority of the Board of Trustees, but the Executive Committee shall have authority, in cases of emergency, to expend a further total sum not exceeding two thousand dollars in any one month.

SEC. 8. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SEC. 9. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 10. The President shall be ex-officio a member of all Committees, and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

### ARTICLE VIII.

#### NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board, each year, a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, and the Auditing Committee, and for three members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting, and voted upon at the following Annual Meeting in January.

### ARTICLE IX.

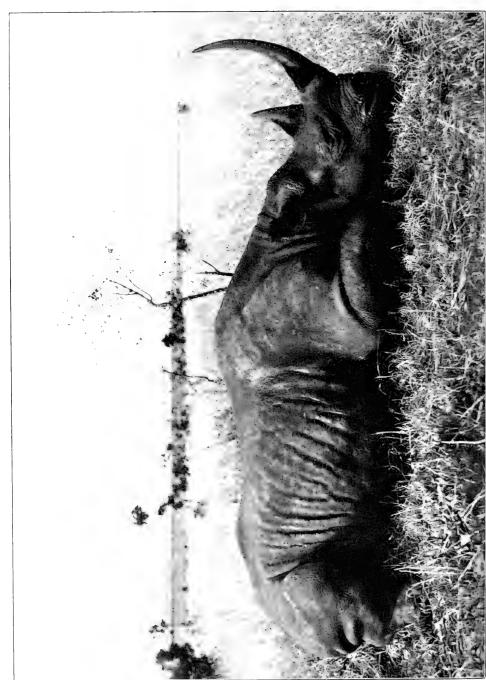
#### AMENDMENTS.

SECTION 1. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.



REPORTS, PL. XXXI.

FIELD MUSEUM OF NATURAL HISTORY.



# HONORARY MEMBERS

EDWARD E. AYER CHARLES B. CORV HARLOW N. HIGINBOTHAM STANLEY McCORMICK ROBERT F. CUMMINGS

DECEASED.

MARY D. STURGES

PATRONS.

ALLISON V. ARMOUR WILLIAM I. BUCHANAN VERNON SHAW KENNEDY

FREDERICK W. PUTNAM FREDERICK J. V. SKIFF WILLARD A. SMITH

# CORPORATE MEMBERS.

ADAMS, GEORGE E. ALDIS, OWEN F. ARMOUR, ALLISON V. AYER, EDWARD E.

BARTLETT, A. C. BLACK, JOHN C. BLAIR, WATSON F. BLATCHFORD, ELIPHALET W. BUCHANAN, W. I. BUCKINGHAM, EBENEZER BURNHAM, DANIEL H. BUTLER, EDWARD B.

CHALMERS, W. J. CHATFIELD-TAYLOR, H. C. CLARK, JOHN M. CURTIS, WILLIAM E.

EASTMAN, SIDNEY C. ELLSWORTH, JAMES W.

FIELD, STANLEY

GAGE, LYMAN J. GETTY, HENRY H. GUNSAULUS, FRANK W. GUNTHER, C. F.

HEAD, FRANKLIN H.

HIGINBOTHAM, H. N. HUTCHINSON, CHARLES L.

JONES ARTHUR B.

KENNEDY, VERNON SHAW KOHLSAAT, HERMAN H.

LATHROP, BRYAN

McCAGG, E. B. McCORMICK, CYRUS H. MANIERRE, GEORGE MITCHELL, JOHN J.

PATTERSON, ROBERT W. PECK, FERD. W. PUTNAM, FREDERICK W.

REAM, NORMAN B. RYERSON, MARTIN A.

SKIFF, FREDERICK J. V. SMITH, BYRON L. SMITH, WILLARD A. SPRAGUE, A. A. STONE, MELVILLE E.

WALKER, EDWIN WALSH, JOHN R.

#### DECEASED.

ARMOUR, PHILIP D. BAKER, WILLIAM T. BISSEL, GEORGE F. CRAWFORD, ANDREW DAVIS, GEORGE R. FITZSIMONS, CHARLES HALE, WILLIAM E. HARPER, WILLIAM R. HATCH, AZEL F. JACKSON, HUNTINGTON W. LEITER, L. Z. McCLURG, A. C. McNALLY, ANDREW PEARCE, J. IRVING PETERSON, ANDREW PULLMAN, GEORGE M. SCHNEIDER, GEORGE SCOTT, JAMES W. STOCKTON, JOSEPH WALLER, R. A. WILLIAMS, NORMAN

# LIFE MEMBERS

ADAMS, GEORGE E. ALDIS, OWEN F.

BARRETT, MRS. A. D. BARRETT, ROBERT L. BARRETT, S. E. BARTLETT. A. C. BLAIR, CHAUNCEY J. BLAIR. WATSON F. BOOTH, W. VERNON BURNHAM. D. H. BUTLER, EDWARD B.

CARTER, JAMES S. CARTON, L. A. CHALMERS, WILLIAM J. CRANE, R. T.

DEERING, CHARLES DRAKE, TRACY C.

FARWELL, WALTER FAY. C. N. FIELD. STANLEY FULLER, WILLIAM A.

GARTZ. A. F. GRISCOM, CLEMENT A. GROMMES, JOHN B.

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INGALLS, M. E. ISHAM, MRS. KATHERINE PORTER

JOHNSON, FRANK S. JOHNSON, MRS. ELIZABETH AYER JONES, ARTHUR B.

KING. FRANCIS KING, JAMES C.

### KIRK, WALTER RADCLIFFE

LAWSON, VICTOR F.

McCORMICK, MRS. McCORMICK, CYRUS H. McCORMICK, HAROLD F. MACVEAGH, FRANKLIN MITCHELL, I. I. MURDOCH, THOMAS

NEWELL, A. B.

ORR. ROBERT M.

PEARSONS, D. K. PIKE. EUGENE S. PORTER, GEORGE F. PORTER, H. H. PORTER, H. H. Jr.

REAM, MRS. CAROLINE P. REAM. NORMAN B. REVELL. ALEX H. RUSSELL, EDMUND A. RYERSON, MRS. CARRIE H. RYERSON, MARTIN A.

SCHLESINGER. LEOPOLD SCOTT, ROBERT S. SINGER, C. G. SMITH, BYRON L. SMITH, ORSON SPRAGUE, A. A. SPRAGUE, OTHO S. A. STURGES, GEORGE

THORNE, GEORGE R. TREE, LAMBERT

WELLS, M. D. WILLARD, ALONZO J. WOLFF, LUDWIG

# ANNUAL MEMBERS.

ADAMS, CYRUS H. ADAMS, MILWARD ALLERTON, ROBERT H. AMBERG, WILLIAM A. ARMOUR, GEORGE A.

BAILEY, EDWARD P. BAKER, SAMUEL BANGA, DR. HENRY BARNES, CHARLES J. BARRELL, JAMES BECKER, A. G. BELDEN, J. S. BILLINGS, C. K. G. BILLINGS, DR. FRANK BIRKHOFF, GEORGE, Jr. BLAINE, MRS. EMMONS BLAIR, HENRY A. BOAL, CHARLES T. BOTSFORD, HENRY BOUTON, C. B. BOUTON, N. S. BREMNER, DAVID F. BROOKS, JAMES C. BROWN, GEORGE F. BROWN, WILLIAM L. BURLEY, CLARENCE A.

CABLE, R. R. CARPENTER, A. A. CARPENTER, MYRON J. COMSTOCK, WILLIAM C. CONKLING, ALLEN CONOVER, CHARLES'H. COOLBAUGH, MRS. ADDIE R. COONLEY-WARD, MRS. L. A. CORWITH, CHARLES R. COWAN, W. P. COX, ALFRED J. CRANE, CHARLES R. CUDAHY, JOHN CUMMINGS, E. A. CURTIS, D. H. DAL, DR. JOHN W. DAY, A. M. DAY, CHAPIN A. DEERING, JAMES DEERING, WILLIAM DELANO, F. A. DILLMAN, L. M. DUNHAM, MISS M. V. DURAND, ELLIOTT

EISENDRATH, W. N. EMMERICH, EDWARD E.

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GAYLORD, FREDERIC GLESSNER, J. J. GOODRICH, A. W. GORDON, EDWARD K. GRAHAM, E. R. GREEN, E. H. R. GREEY, CHARLES F. GREY, WILLIAM L. GURLEY, W. W.

HAMILTON, I. K. HARDING, AMOS J. HARRIS, GEORGE B. HARRIS, JOHN F. HARRIS, N. W. HASKELL, FREDERICK T. HERTLE, LOUIS HITCHCOCK, R. M. HOLDOM, JESSE HOLT, GEORGE H. HOPKINS, JOHN P. HORNER, ISAAC



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HOSKINS. WILLIAM HOUGHTELING, JAMES L.

INSULL, SAMUEL

JEFFERY, THOMAS B. JENKINS, GEORGE H. JONES, J. S.

KEEFER, LOUIS KEENE, JOSEPH KEITH, W. SCOTT KELLEY, WILLIAM E. KENT, WILLIAM KIMBALL, EUGENE S. KIMBALL, MRS. MARK

LAMB, FRANK H. LAWSON, VICTOR F. LAY, A. TRACY LEFENS, THIES J. LEIGH, EDWARD B. LINCOLN, ROBERT T. LINN, W. R. LOGAN, F. G. LORD, J. B. LOWDEN, FRANK O. LYTTON. HENRY C.

McCREA, W. S. McGUIRE, REV. H. McLENNAN, J. A. MCWILLIAMS, LAFAYETTE MACFARLAND, HENRY J. MAGEE, HENRY W. MANSON, WILLIAM MANSURE, E. L. MARKWALD, LIEUT. ERNST MAY, FRANK E. MAYER, DAVID MAYER, LEVY MERRYWEATHER, GEORGE MEYER, MRS. M. A. MILLER, CHARLES P. MILLER, JOHN S. MIXER, C. H. S. MOORE, L. T. MOORE, N. G.

MORRIS, EDWARD MORRIS, MRS. NELSON MULLIKEN, A. H. MULLIKEN, CHARLES H.

NATHAN, ADOLPH NOLAN, JOHN H. NORTON, O. W. NOYES, LA VERNE W.

OEHNE. THEODORE ORB, JOHN A. OSBORN, HENRY A.

PALMER, PERCIVAL B. PARKER, FRANCIS W. PATTERSON, W. R. PEARSON, EUGENE H. PECK, CLARENCE I. PETERS, HOMER H. PETERSON, WM. A. PINKERTON, W. A. PORTER, WASHINGTON

RANDALL, THOMAS D. RAYNER, JAMES B. REHM, JACOB RIPLEY, E. P. ROSENBAUM, JOSEPH ROSENFELD, MAURICE ROSENTHAL, MRS. OSCAR RUMSEY, GEO. D. RUNNELLS, J. S.

SCHAFFNER, JOSEPH SCHMIDT, DR. O. L. SCHMITT, ANTHONY SCHWARTZ, G. A. SEARS, JOSEPH SEIPP, MRS. C. SEIPP, W. C. SELZ, MORRIS SHEDD, JOHN G. SKINNER, THE MISSES SMITH, F. B. SNOW, MISS HELEN E. SOPER, JAMES P. SOUTHWELL, H. E.

SPENCE, MRS. ELIZABETH E. SPOOR, J. A. STEELE, HENRY B. STOCKTON, JOHN T. STUART, ROBERT

TEMPLETON, THOMAS TOBEY, FRANK B.

UIHLEIN, EDWARD G.

WACKER, CHARLES H.

WALKER, JAMES R. WALKER, WILLIAM B. WALLER, EDWARD C. WARNER, EZRA J. WEBSTER, GEORGE H. WHITE, A. STAMFORD WHITEHEAD, W. M. WILSON, MRS. E. C. WILSON, M. H. WOOD, S. E. WOODCOCK, LINDSAY T.

#### DECEASED.

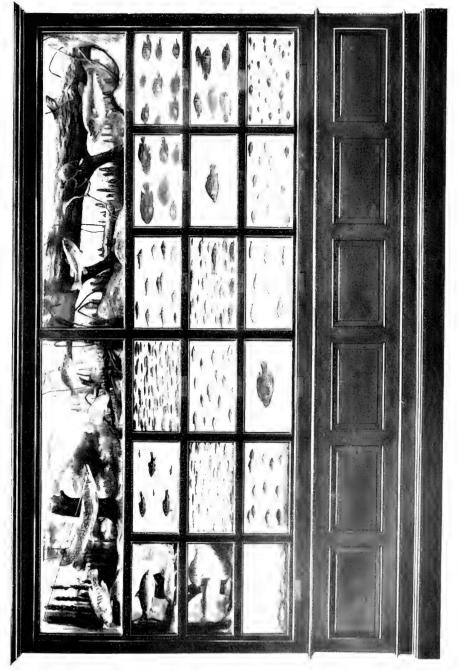
DWIGHT, JOHN H KEEP, ALBERT LAFLIN, ALBERT S.

#### EXHIBITION CASE CONTAINING FISHES MOUNTED AND IN ALCOHOL.

The two large divisions and the two smaller in the upper left-hand corner contain mounted specimens, the others alcoholic, and all, so far as possible, are given their life colors. The alcoholic specimens are fastened to glass plates set edgewise in their respective boxes. The back of each division, whether it contains mounted or alcoholic material, is a transparency to which light is furnished through the top of the case, and which, with the addition of accessories, gives to each division an aquarium effect. This is considered simply a somewhat advanced experimentation.



REPORTS, PL. XXXII.



FIELU MUSEUM OF NAIURAL HISIORY.

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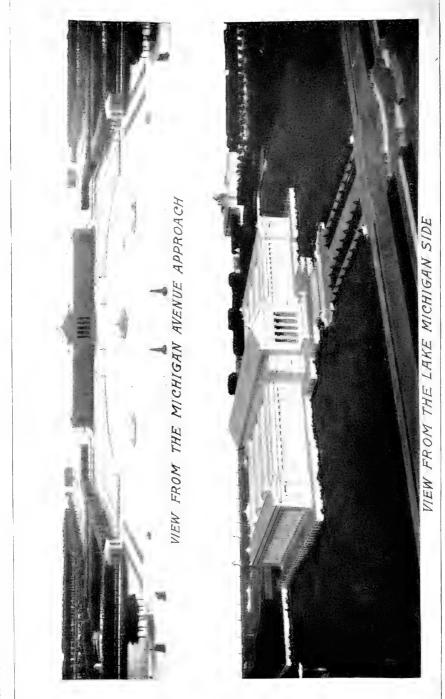
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REPORTS, PL. XXXIII.



By courtesy of the Board of South Park Commissioners.

VIEWS OF THE PROPOSED MAIN BUILDING OF THE MUSEUM IN GRANT PARK.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATON 133.

REPORT SERIES.

Vol. III, No. 3.

# ANNUAL REPORT OF THE DIRECTOR

#### TO THE

## BOARD OF TRUSTEES

FOR THE YEAR 1908.



CHICAGO, U. S. A. January, 1909.



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#### THE BOARD OF TRUSTEES.

George E. Adams. Edward E. Ayer. WATSON F. BLAIR. WILLIAM J. CHALMERS. RICHARD T. CRANE, JR. STANLEY FIELD. HARLOW N. HIGINBOTHAM. FREDERICK J. V. SKIFF. Edwin Walker.

ARTHUR B. JONES. George Manierre. CYRUS H. MCCORMICK. GEORGE F. PORTER. Norman B. Ream. MARTIN A. RYERSON.

#### DECEASED.

NORMAN WILLIAMS.

GEORGE R. DAVIS. Marshall Field, Jr. Huntington W. Jackson.

#### OFFICERS

HARLOW N. HIGINBOTHAM, President, MARTIN A. RYERSON, First Vice-President. STANLEY FIELD, Second Vice-President. FREDERICK J. V. SKIFF. Secretary. Byron L. Smith, Treasurer. D. C. DAVIES, Auditor and Assistant Secretary.

#### COMMITTEES.

EXECUTIVE COMMITTEE. HARLOW N. HIGINBOTHAN

Edward E. Ayer.	W. J. CHALMERS.	George Manierre.
WATSON F. BLAIR.	STANLEY FIELD.	MARTIN A. RYERSON.
Watson F. Blair.	finance committee. Arthur B. Jones.	Martin A. Ryerson.
W. J. CHALMERS.	committee on building. Cyrus H. McCormic	CK. STANLEY FIELD.
	AUDITING COMMITTEE.	
George Manierre.	George E. Adams	. ARTHUR B. JONES.

#### STAFF OF THE MUSEUM.

director. Frederick J. V. Skiff.

DEPARTMENT OF ANTHROPOLOGY.

GEORGE A. DORSEY, Curator.

S. C. SIMMS, Assistant Curator Division of Ethnology. CHARLES L. OWEN, Assistant Curator Division of Archæology. BERTHOLD LAUFER, Assistant Curator of Asiatic Ethnology. ALBERT B. LEWIS, Assistant Curator of African and Melanesian Ethnology.

DEPARTMENT OF BOTANY.

CHARLES F. MILLSPAUGH, Curator. JESSE M. GREENMAN, Assistant Curator.

DEPARTMENT OF GEOLOGY.

OLIVER C. FARRINGTON, Curator. H. W. NICHOLS, Assistant Curator. ELMER S. RIGGS, Assistant Curator Paleontology. ARTHUR W. SLOCOM, Assistant Curator Section of Invertebrate Paleontology.

DEPARTMENT OF ZOOLOGY.

CHARLES B. CORY, Curator. SETH E. MEEK, Assistant Curator. WILLIAM J. GERHARD, Assistant Curator Division of Entomology. EDWARD N. GUERET, Assistant Curator Division of Osteology. N. DEARBORN, Assistant Curator Division of Ornithology.

> RECORDER. D. C. DAVIES.

THE LIBRARY. Elsie Lippincott, *Librarian*.

> TAXIDERMIST-IN-CHIEF. CARL E. AKELEY.

# ANNUAL REPORT OF THE DIRECTOR. 1908.

To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1908.

From a physical point of view the condition of the Museum, while in detail showing a continued advance along those lines involving the better protection and more careful arrangement of the material on exhibition and in storage within the building, denotes little alteration except in two particulars: the increased number of new exhibition cases in all Departments, and the extension of the exhibition area into the East Annex. The new cases, approximating \$26,000 in cost. make their best impression in the Botanical Gallery, and the very capable work that has been performed in transferring and rearranging the exhibition material gives an entirely new value to it. The East Annex contained for several years the Transportation collection received from exhibitors at the Columbian Exposition. The reduction of the scope of the Institution and the removal of these, therefore, inappropriate exhibits, vacated about twenty halls and courts, and until this year that section of the building has been closed to the public and used for storage and assembling purposes. The pressure for floor space became so acute, however, that at the beginning of this year a large part of the Annex was refloored and repaired, and turned over to the Department of Anthropology, and this area now contains Philippine, South Pacific, and African collections.

A serious, and it may be said rather expensive effort has been made during the year to improve the appearance of the exterior of the building, but at this date it is a regrettable fact that the North side of the building — the "weather" side — gives little evidence of the undertaking. Mr. Akeley of the Museum staff devised a machine which, with compressed air, applied liquid stucco to the exterior surface. At first, and for several months, the result seemed undeniably successful both in holding to the plaster and in preserving a uniform color, but the lifeless plaster, the decayed fibre of the staff, would not hold the hardened liquid, and while the general appearance of the

building is much improved, it now seems that nothing can be done to protect or conceal the decomposing plaster and staff with which the brick walls of the building are covered.

During the year the Curator of the Department of Anthropology concluded an extended survey of the Far East and the Southern Pacific in furtherance of the plans of the Museum to extend the active operations of that Department into those fields. Further reference to this tour, and to the movements of the other Curators and other field work will be made elsewhere.

While the general subject of accessions will be considered in a subsequent part of the report, reference should specially be made of the acquisition by purchase of the well-known Strecker butterfly and moth collection, numbering 50,000 specimens, and including the notes and working library of the collector.

There has been but one change in the scientific staff. Dr. Arthur B. Lewis has been appointed Assistant Curator of African and Melanesian Ethnology during the year. The faithful performance of the forces of the Museum will be found reflected in the more detailed report following.

MAINTENANCE.— The Budget authorized by the Board of Trustees provided the sum of \$171,640 for the maintenance of the Museum for the year. The amount expended was \$147,510, leaving a satisfactory margin of \$24,130. In addition to this amount \$43,000 was expended by special authority of the Board of Trustees for collections, expeditions, and exhibition cases, bringing the total expenditure for the year to approximately \$200,000. The amount allowed for maintenance for the year shows an increase over the previous year. This is accounted for by the addition of several new members to the working force and extraordinary repairs to the Museum building.

LECTURE COURSE.— The usual two series of lectures have been given during the year, illustrated in each case and covering an unusual range of interesting subjects. The seating capacity of the hall in which the lectures are given has been taxed to its utmost on every occasion, in several instances the hall being filled and the doors closed thirty minutes before the announced time of the lecture.

Following is the twenty-eighth Lecture Course, with the subjects and lectures delivered during the months of March and April, 1908:

March 7.—"The Wilderness of Florida." Prof. C. B. Cory, Curator of Zoölogy.

- March 14.—"Mt. Pelé and the Destruction of St. Pierre, Martinique." Dr. Edmund Otis Hovey, American Museum of Natural History.
- March 21.—"Mosquitoes of Chicago and Vicinity." Mr. Wm. I. Gerhard, Assistant Curator of Entomology.
- March 28.—"Holland's War with the Sea." Prof. James H. Gore, The George Washington University.
- April 4.—"Treasures of the Mexican Mountains." Prof. Rufus M. Bagg, Ir., University of Illinois.
- April 11.—"The Dominant Geographic Features of Wisconsin." Dr. S. Weidman, Geological and Natural History Survey, Madison, Wisconsin.
- April 18.—"The Pacific Salmons' Struggle for Existence." Dr. S. E. Meek, Assistant Curator of Zoölogy.
- April 25.—"Archæological Studies on the Coast of Ecuador." Prof. Marshall H. Saville, American Museum of Natural History.

The following is the Twenty-ninth Lecture Course, delivered during the months of October and November, 1908:

- 3.—"Through the Cataracts of the Nile." Oct. Prof. James H. Breasted, The University of Chicago. 10.—"A Naturalist in Venezuela." Oct. Dr. N. Dearborn, Assistant Curator of Ornithology. 17.—"The Great American Deserts as Seen in New Mexico Oct. and Sonora." Prof. Thomas H. Macbride, The State University of Iowa. 24.—"The Geology and Scenery of the Pipestone Region." Oct. Prof. Samuel Calvin, The State University of Iowa. 31.--"Among the Birds in Costa Rica and Panama." Oct. Mr. J. F. Ferry, Assistant, Division of Ornithology. 7.—"Life of a Lake in Summer." Nov. Dr. Edward A. Birge, University of Wisconsin.
  - Nov. 14.—"The Heraldry of the Indians."
    - Mr. James Mooney, United States Bureau of Ethnology.

Nov. 21.—"The Glaciers of the St. Elias Region, Alaska." Prof. R. S. Tarr, Cornell University.

Nov. 28.—"Holland."

Prof. James Howard Gore, The George Washington University.

• PUBLICATIONS.— The unusual amount of field work conducted by the Curators during the year and their consequent absence from the Museum, accounts for the small number of publications. The list includes three numbers of the established series:

- Pub. 127.—Zoölogical Series, Vol. VII, No. 6. "The Zoölogy of Lake Amititlan and Atatlan, Guatemala, with special reference to Ichthyology." By S. E. Meek. 47 pp., 19 illustrations (half-tones), edition 1,500.
- Pub. 128.—Report Series, Vol. III, No. 2. Annual Report of the Director to the Board of Trustees, for the year 1907.
  102 pp., 16 illustrations (half-tones), edition 2,500.
  Pub. 131.—Zoölogical Series. Vol. IX. "The Birds of Illinois and

Wisconsin." By C. B. Cory. (In press).

The Museum exchange list now numbers 1,264 names, of which 618 are in foreign countries and 646 in the United States and its possessions.

The following table shows the number of exchanges with each of the foreign countries:

Argentine Republic .	 II	Japan				7
Australia	 20	Liberia				
Austria	 20	Mexico				
Belgium	 17	Malta				
Borneo		Netherlands .				15
Brazil		New Brunswick				ĩ
British Guiana	 I	New Zealand .				
Canada	 28	Norway				
Central America	 6	Peru				
Ceylon	 2	Portugal				5
Chile	 2	Roumania				
China	 I	Russia				19
Cuba	 5	Spain	1.			5
Denmark.	 4	Sweden				12
East Africa	 I	Switzerland .				14
Egypt	 I	South Africa .				II
France	 55	Tasmania				2
Fiji Islands	 I	Trindad				I
Germany	 127	U. S. Colombia				2
Great Britain	 100					
Greece	 2	West Indies .			-	2
Italy	 32	Yucatan			•	2
India	17	Total .			. 1	618

JAN., 1909.

The following table shows the number of foreign exchanges receiving the different publications:

Anthropological											29
Botanical											. 31
Geological											. 33
Ornithological .											. 18
Zoölogical											. 28
Report	•	•	•	•	•	•	•	•	•		. 61

The publications are distributed to the different States and Insular Possessions as follows:

Alabama					2	Nevada
Arizona .					I	New Hampshire 5
Arkansas					I	New Jersey 16
California						New York
						North Carolina 5
Connecticut						New Mexico
					2	Ohio
District of C	mh	ia	·	•	79	Oregon
Florida .						
Georgia						Rhode Island 5
Illinois .					75	South Carolina
Indiana .					I 2	South Dakota 2
Iowa					13	Tennessee 2
Kansas .					, 9	Texas
Kentucky						Utah
Louisiana					4	Vermont 3
Maine .						Virginia
Maryland						Washington
Massachuset						
						West Virginia
Michigan					12	Wisconsin 17
Minnesota					II	Wyoming 2
Mississippi					2	Philippine Islands 2
Missouri					15	Porto Rico
Montana .					3	Hawaii 5
Nebraska					7	Total
						10001

The following table shows the number of domestic exchanges receiving the different publications:

Anthropologic	al								268
Botanical .									329
Geological .									347
Ornithological									182
Zoölogical .									287
Report									646

LIBRARY.— Accessions during the year aggregate in volumes and pamphlets 2,973; by purchase 661, by gift and exchange 2,312, making the total number of books and pamphlets 47,487 among the libraries as follows:

General Library								34,211
Anthropological Library								<b>1</b> ,861
								4,069
Geological Library .								5,552
Zoölogical Library.								
Library of Exposition Li	ter	atu	re	•			•	690

It is gratifying to report excellent progress in the Library; more books purchased, a larger exchange list, better conditions for work, and consequent better service to the Museum staff and to the public generally. The effort to secure some of the older literature of anthropology and botany is being continued and important works, difficult to obtain, have been added. For the Department of Anthropology there has been purchased a number of works on Africa and the Pacific Islands. On account of changes in the map it was necessary to reclassify the literature already in the library relating to these localities. For the Department of Botany a number of out of print works have been secured. Among the more valuable additions are the following works: Boott, Illustrations of the genus Carex: Hooker, Exotic Flora: Humboldt & Bonpland, Voyage - sixieme partie, botanique; Seeman, The botany of the voyage of H. M. S. Herald; Sloane, Catalogue plantarum quas in insula Jamaica sponte provenient; Vahl, Eclogiæ Americanæ. The largest single acquisition received during the year was that obtained with the Strecker collection of moths and butterflies, which was received, however, too late to be catalogued. This accession consists of 318 volumes and 947 pamphlets, and contains a number of rare entomological works which are valuable both historically and scientifically. A preliminary examination shows that there are a number of duplicates, which will be valuable for exchange material. With the purchase of the Proceedings and Transactions of the important entomological societies of this country the entomological library has been considerably strengthened. Through the courtesy of Mr. Kiralfy, Commissioner-General of the Franco-British Exhibition, London, the library received a collection of 80 catalogues and reports of the Franco-British Exhibition. The Superintendent of Documents, Washington, D. C., forwarded 195 publications of the U. S. Geological Survey that fill many gaps in the files of its publications in the general library. From the Board of Education, South Kensington, London, was received 29 volumes of miscellaneous publications. The Botanical Garden of Buitenzorg, Java, sent 57 volumes. Dr. John Coulter of the University of Chicago presented 25 botanical manuscripts; and Miss Alice Bache Gould of Boston an original edition of the Flora de Filipinas. The list of periodicals and serials received by gift and exchange from contemporary institutions, both domestic and foreign, increases in number and value from year to year. During the year 984 volumes and pamphlets were bound. The binding in plain black cloth of many back numbers of periodicals and serials .

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#### FIELD MUSEUM OF NATURAL HISTORY.

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PALESTINE.

# SYCAMORE.

#### ( Ficus sycamorus ).

The sycamore tree, or Egyptian Fig, bears little resemblance to our own tree of that name except somewhat in the shape and gloss of the leaves. It is a true fig though the fruits are small. Sycamore figs require to be cut open at the free end to allow of the escape of small files, born within, before the fruits can become sweat and edible; even then they are only eaten, in Egypt, by the poor who capitfy them for the purpose. The sycamore was symbolical of the "tree of life" in Egyptian cuit.

"Zacchaeus .... he ran before, and climbed up into a sycamore tree to see him". Luke xix, 4.

"But it was a herdman, and gatherer of sycamore fruit". Amos vil, 14. "He destroyed their vines with hall, and their sycamore trees with frost". Ps. ixxviil, 47.

"As the sycamore trees that are in the vale, for abundance". 1 Kings x, 27.

(1808).

TYPE OF TABLE CASE LABELS. DEPARTMENT OF BOTANY. One of a series of labels illustrating Plants of the Bible.

#### JAN., 1909. ANNUAL REPORT OF THE DIRECTOR.

has added greatly to the convenience of the staff, also the purchase of substantial, practically dust-proof pamphlet boxes that preserve material that is valuable for reference but not sufficiently so to warrant individual binding. By miscellaneous gifts and exchange a number of duplicates have accumulated. An attempt is being made to systematize their disposal by sale or exchange. The progress of the work is necessarily slow as the regular work of the office consumes the time of the staff almost entirely. During the year two duplicate sets of World's Fair, 1893, literature were presented, one to St. Louis Public Library and one to the John Crerar Library. Monthly installments of the John Crerar Library card catalogue have been received, alphabetically arranged, and filed. 11,600 cards have been written and distributed in the various catalogues.

DEPARTMENTAL CATALOGUING, INVENTORYING, AND LABELLING. --- Owing to the absence of certain members of the staff of the Department of Anthropology less cataloguing has been done during the year than usually. Several important collections, however, have been catalogued, notably the collections acquired last year from certain islands of the South Pacific Ocean. About 1,200 catalogue cards were written during the year and entered in the inventory books, which now number 31. In addition there has been prepared certain classified tribal lists and a card catalogue has been prepared for the same. Individual labels have been written for specimens collected among the tribes of Northern Luzon on the first Robert F. Cummings' Philippine Expedition. A large number of specimens of the Higinbotham Corean Collection have also been labeled. Labels, copy of which was prepared by Dr. Newcombe during his connection with the Museum, have been printed, and added to the collections from the North Pacific coast, as rapidly as they were received from the printer. Over 50 cases have been provided with case labels and numbers.

The cataloguing of incoming material in the Department of Botany has been kept up to date, all specimens entering into the organized collections having been properly and completely recorded. The total number of entries for the year in the 49 volumes of the Department is 17,980, making the total number of entries in the Department 237,780. A card catalogue of the lay names of plants and their economics has been commenced; this catalogue now contains about 10,500 references. In addition to this a card catalogue of the Department Library has been completed to date; this catalogue now contains some 4,100 cards.

The Curator of Geology reports, the most important work of labelling has been that of the systematic rock collection, Hall 66, the relief maps, Halls 76 and 77, and the gem collection in Higinbotham Hall. For the rock collection two kinds of labels were prepared, one showing for each specimen the kind of rock and locality, and the other descriptive labels of rock varieties. Eight hundred and seventy individual labels and seventy-four descriptive labels were thus prepared for these collections and installed. The labels made for the relief maps were descriptive in character and designed to indicate the most important geographic and topographic features illustrated by the maps. Sixteen such labels were prepared and installed. For the gem collection in Higinbotham Hall, labels were prepared which are uniform in tone with the mounting of the collection and avoid the scattered effect and loss of exhibition space which the loose labels hitherto employed involved. These individual labels correspond in size with the tablets upon which the specimens are mounted, and are printed on transparent paper. Each is fastened firmly over and upon the corresponding tablet. These labels show the name. locality, and in many cases the weight of the specimens exhibited. Six hundred and six such labels were prepared and affixed. In addition twenty-three labels descriptive of the different important varieties of gems were printed on transparent paper and mounted on white cardboard. In size they are 4 x 6 or 6 x 6 inches. They are placed in the cases adjacent to the corresponding gems. Five hundred and seven labels have been made and installed for new or hitherto unlabelled specimens in the systematic mineral collection; three hundred and fourteen labels have been similarly made and placed for economic specimens and one hundred and thirty-eight for paleontological specimens. In addition copy has been prepared for four hundred and eighty-one individual and fourteen descriptive labels for the marble and building-stone collections, and one hundred and twenty labels for the paleontological collections. All specimens received have been numbered and catalogued, with the exception of such vertebrate fossils as have not been removed from the matrix. These are given field numbers only until cleaned, when permanent numbers are assigned them. In addition about fifty cards have been written for the catalogue of vertebrate fossils. The inventory books show the largest number of specimens for the year to have been recorded in invertebrate paleontology, the number in this section being 5,624. The total number of entries in all divisions is 6,074.

In order that the total number of entries may show the total number of specimens rather than as heretofore the total of the serial numbers of the inventory books, the number of specimens has been computed. The enumeration gives 98,979 as the total number of entries to date.

In the Department of Zoölogy the cataloguing of specimens has continued as usual, and the various collections received during the year have been properly inventoried and labelled, with the exception of the Entomological collections, to which more than 5,000 specimens have been added. Printed labels have been prepared and installed from time to time as new groups of animals have been completed and placed on exhibition.

The year's work on catalogues and inventorying is shown in detail as follows:

	No. of Record Books	Total No. of Entries to Dec. 31, 1908	Entries during 1908	Total No. of Cards Written
Department of Anthropology	32	94,140	1,120	98,530
Department of Botany	54	244,742	24,179	
Department of Geology	20	98,979	6,074	6,680
Department of Zoölogy	40	73,129	5,570	28,618
. The Library	12	64,921	7,791	76,085
Section of Photography	6	69,418	9,895	

ACCESSIONS.— Practically all the accessions in the Department of Anthropology for the year have been derived from field expeditions, consequently they are of unusual interest and of great scientific importance. The collections secured by Dr. Berthold Laufer are especially noteworthy. Of great interest also are the collections made by Mr. Cole in the Philippine Islands of Luzon and Palawan, as a result of the second Robert F. Cummings' Philippine Expedition. Mr. Ayer placed the Museum under further obligations by securing interesting archæological material of great value and importance from Egypt and Italy. Of especial interest are the two Mastaba tombs of the Fifth Dynasty, several Etruscan sarcophagi, and objects of bronze from Bosco Reali.

The Department of Botany has been fortunate in securing during the past year the Florida herbarium of Professor A. S. Hitchcock, consisting of a little over 7,000 specimens, most of which are from Florida, but containing also a few important individual sets of plants from the Bahamas and the West Indies. The principal collectors represented are: J. H. Barnhardt, A. C. Bedorsha, A. W. Bitting, A. A. Eaton, H. F. Henshall, A. S. Hitchcock, C. G. Lloyd, L. B.

Ohlinger, F. W. Pickell, A. L. Quaintance, P. H. Rolfs, P. H. Rolfs, and A. W. Bitting, J. H. Simpson, W. T. Swingle, H. J. Webber, and J. M. Westgate. The entire collection has been rearranged and incorporated in the organized part of the general herbarium. Further notable accessions to the herbarium during the year are the following: American Colony, Palestine, 261; W. H. Blanchard, Vermont, 163; J. W. Blankinship, Montana, 170; W. W. Calkins, Illinois, 115; C. Conzatti, Mexico, 256; Botanical Museum of Copenhagen: Iceland, Greenland, Mexico, etc., 150; R. A. Dixon, Texas, 324; Miss Alice Eastwood, California, 142; W. Garvens, Florida, 70, and New York, 109; Geological Survey of Canada: Dominion of Canada, Alaska, and Labrador, 1,552; Gray Herbarium, Bahamas, 285; J. Grinnell, California, 63; A. A. Heller, California chiefly, 2,249; E. J. Hill, Central States, 65; Iowa State College of Agriculture and Mechanic Arts, China, 118; W. A. Kellerman, Guatemala, 1,046; O. E. Lansing Jr., Illinois and Indiana, 92; New Mexico Agricultural Experiment Station, New Mexico, 204; New York Botanical Garden, Bahamas and West Indies, 1005; E. Palmer, Mexico, 244; R. Pilger, Paraguay, 176; H. H. Smith, Missouri, 626, and West Virginia, 339; W. N. Suksdorf, Washington, 296; U. S. National Museum, Mexico, 251. The most important herbarium additions are as follows:

Locality										Additions to Herbarium 1908	Total in Organ- ized Herbarium to Dec. 9, 1908
NORTH AMERIC	CA .										
Alaska										23	342
Canada (in general) .										69	1,909
Alberta										268	284
British Columbia										414	690
Labrador										9	161
Manitoba										156	159
New Brunswick .										6	564
Nova Scotia										43	145
Ontario										I	198
United States											
Alabama										2	734
American Plains .										3	92
Arizona	•	·			·	·	-			18	3,540
California	•	•	•	•	•	•		•	•	2,150	13,598
Colorado	•	•	•	•	•	•	•	•	•	10	5,364
	•	•	•	•	•	•	•	•	•	64	281
Connecticut .	•	•	•	•	•	•	•	•	•		
District of Columbi	а.	•	•		•	•	•	•	+	6	1,814
Florida										5,752	15,681
Florida Keys .							•		•	306	529

•									Additions to	Total in Organ-
United States									Herbarium 1908	ized Herbarium to Dec. 9, 1908
Georgia									608	3,633
Idaho				·	·				I	719
		•		•					217	15,782
Indiana									56	3,300
Iowa									8	1,277
Kansas									45	2 2 I
Louisiana									2	943
Maine									ΙI	864
Massachusetts									ΙI	2,040
Michigan									2	1,001
Minnesota									I	588
Missouri									16	642
Montana									173	2,945
Nevada									218	357
New Hampshire					•			•	4	937
New Jersey		•	•					•	23	1,420
New Mexico	•	•		•	•	·	•	•		1,420
New York			•	•	•	•	•	•	227	0
North Carolina	•	•	•	•	•	•	•	•	76	4,637
	•		•	•	·	•	·	•	2	865
North Dakota	•		·	•	·	•		•	32	43
Oregon	•	•	•	·	·	·	·	•	5 5	4,100
Rhode Island		•		•		·			4	470
Rocky Mountains			·	·	·				27	727
South Dakota			•						I	84
Tennessee									2	663
Texas									338	3,959
Utah									-1	543
Vermont									67	1,096
Washington									295	3,408
West Virginia.									8	1,218
Wisconsin .									7	741
Mexico (in general)									755	10,006
Lower California									5	1,385
Yucatan									175	4,794
Central America						•	•	•	- 7.3	
Costa Rica									5	371
Guatemala	•	•	•	•	•	•	•	•	1,136	1,884
Honduras	•	•	•	•	•			•	20	200
West Indies	•		•	•	•	•	•	•	20	200
Bahamas										
Andros		•	•	•	•	·	•	•		1,260
	•	•	•	•	•	•			44	
Atwood Cay			•	•	•		,		67	67
Caicos Islands (Provid	end	ciale	es)	•		•	•		-1	-1
INOICH	•	• D'	• ~	• 、					51	5.1
South (includi	ng	Pin	e C	ay)					III	111
" West									11	1 1

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West Indies: Bahamas	Additions to Herbarium	Total in Organ- ized Herbarium
Castle Island	1908 2 I	to Dec. 9, 1908
	21 61	21
		428
Eleuthera	17	311
	17	593
Exuma (Harvest Cay)	16	16
Fortune Island	15	323
Grand Turk	3	60
Great Bahama	4	619
Great Ragged Island	68	68
Great Ragged Island (Hog Cay)	12	I 2
Hog Island	r 8	69
Inaugua	26	420
Little Inaugua	20	51
Mariguana	168	168
New Providence	274	I,944
Rose Island	4	65
Watling's Island	164	349
Barbados	18	323
Bermudas	3	476
Cuba	644	4,887
Dutch West Indies	7	7
Jamaica	194	4,283
Martinique	I	602
SOUTH AMERICA		
Paraguay	176	1,237
	170	1,237
EUROPE		
Austro-Hungary	108	4,209
France	II	1,464
Germany	4	4,050
Italy	I	914
Russia	3	1,220
Spain	5	46
Switzerland	10	1,015
Africa	2	3,833
China	118	168
Palestine	279	1,106
	279	1,100
Philippine Islands	10	1,070

The above tabulation does not represent the whole herbarium, only this year's additions thereto.

Important accessions by gift in the Department of Geology include casts of limb bones and feet of Apatosaurus from the Carnegie Museum of Pittsburg; Mammoth teeth and bones from Texas from W. L. Albright; a jaw of Smilodon and remains of Mammoth also from Texas from W. L. Crawford, Ir.: six large slabs of marble from the Alabama White Marble Company: a relief map of Palestine from the Atlas School Supply Company; and a specimen of moss agate from Wyoming from B. Bridge. Exchanges made with several institutions and individuals afforded considerable new material, among which may be mentioned twenty-two specimens of Colorado rocks and minerals from the Colorado School of Mines: fifty-four specimens of the minerals of Pennsylvania from the Philadelphia Mineralogical Club: thirty-three large crystals of selenite from the Deseret Museum, Salt Lake City, Utah, through Dr. J. E. Talmage; and one hundred and eighteen specimens of fossils, minerals, and rocks from E. L. Moselev of Sandusky, Ohio. The Colorado accessions included especially fine specimens of fluorite, covellite, molybdenite, geyserite, lithophysæ and spherulites: that from the Philadelphia Mineralogical Club noteworthy specimens of cyanite, anthophyllite, and alusite, and orthoclase, and that from E. L. Moselev representatives of Macropetalicthys, Onychodus, and other Devonian fishes, and specimens of Zaphrentis. Cvathophyllum and other Devonian corals. Among material purchased may be mentioned the Leighton meteorite. all of which was obtained, and sections of the Ainsworth and Williamstown meteorites: relief maps of Nebraska, the Catskill Mountains, Ottawa, Illinois, and Marshall, Missouri: two hundred and twentyfive specimens of vertebrate and invertebrate, chiefly Miocene, fossils from Patagonia; two hundred and thirty-seven specimens, representing sixty-eight species, of Devonian corals from the Falls of the Ohio; thirteen specimens of minerals and eight specimens of gold ores from the Raw Hide District, Nevada. The relief maps purchased, besides other features afford illustrations of stream robbing, old and young valleys, and a graded river. Especially important among the Patagonian fossils purchased are two skulls of the rare extinct ungulates, Protypotherium and Icochilus, lower jaws and part of a carapace of an extinct armadillo, and about twenty-five unusually well-preserved specimens of Terebratella. The series of Devonian corals purchased was selected from several thousand specimens of a collection made by G. K. Greene. Especially notable specimens are those of Blothrophyllum decorticatum, a cup coral about one foot in height; Chonophyllum magnificum, a large cup coral; the largest known frond of Cladopora pinguis; a large group of cups 18 inches in diameter and excellent single cups of Cystiphyllum

gemmatum; large single cups of Cystiphyllum invaginatum; two large groups of Diphyphyllum and Haimeophyllum, the latter 20 inches in diameter; perfect cups of Heliophyllum convergens, superior specimens of Thecia ramosa; and representatives of thirteen species of Zaphrentis unusually well preserved. By collection were obtained twenty-five specimens of the diamond-bearing peridotite of Arkansas; six specimens of gypsum and asphalt from Arkansas; about five thousand specimens of Cretaceous and Tertiary invertebrate fossils from Mississippi; one hundred and seventy-five specimens Devonian fossils and concretions from Michigan; and thirty specimens of vertebrate fossils from Wyoming.

In the Department of Zoölogy two hundred and twenty-six specimens of mammals have been added to the collection during the last year. Nearly all of these were secured by members of the staff while in the field. One hundred and nineteen were taken in Venezuela and adjacent islands and were either new or imperfectly represented in the collections. Valuable additions have been made in the Department of Ornithology, 3,643 skins and 2,717 eggs having been accessioned. Undoubtedly the most important acquisition to the Department of Zoölogy was the purchase of the butterfly and moth collection of the late Dr. Herman Strecker of Reading, Pennsylvania. The collection is probably unequalled in America and unsurpassed in importance by almost any other collection in any part of the world. It is contained in over eight hundred glass-topped drawers, which in turn are arranged in twelve large cabinets. Over fifty thousand specimens are represented, among them being three or four hundred types, co-types, etc. Besides the species described as new by Dr. Strecker himself, there are also all of Rearkirt's types, likewise types and co-types of species described by Grote, Behr, Staudinger, Skinner, Chapman, and Mengel. In addition to the above priceless specimens, there are many rarities found in but few collections, and in no other are there so many aberrations or monstrosities as well as remarkable examples of dimorphism, phrases of insect development in which Dr. Strecker was deeply interested. The purchase included the arranged collection, all of the duplicates, the entire entomological library, and all correspondence relating thereto. The material was prepared for shipment under Assistant Curator Gerhard's directions and transported without loss or mishap to the Museum, where it has been arranged in the same order as it was at the time of Dr. Strecker's death seven years ago.

#### JAN., 1909. ANNUAL REPORT OF THE DIRECTOR.

EXPEDITIONS AND FIELD WORK .- Mention was made in the report of last year of the work being done by Mr. Cole in the Philippine Islands in connection with the Robert F. Cummings' Philippine Expedition. Mr. Cole returned to the Museum in December after two years of research. The greater portion of his time was spent among the Tinguians, a pagan mountain tribe of Northwestern Luzon, numbering about twenty thousand persons. They possess domestic animals. have extensive rice fields, and live in compact villages. Until recently the custom of head-hunting made loose federations among groups of villages necessary, and thus a number of dialect groups have sprung up, but the general culture is quite uniform. A peculiar but highly developed form of spiritualism, combined with an elaborate ceremonial life is found throughout the territory. Along the northern border of this section the people are excellent iron workers, turning out the greater portion of the spears and headaxes found in Northern Luzon. The most famous forge - that of Balbalasang - was secured and is now in the Museum. Mr. Cole visited nearly every village of this tribe in the provinces of Ilocos Sur, Ilocos Norte, and Abra, and also made extensive trips through the subprovinces of Kalinga and Apoyoa. The people along the Apayao river are one of the wildest and least known of the Islands. They have made numerous raids on the villages of the lowlands and have, until recently, refused all intercourse with the Spaniards and Americans. The collection from this section is the only one ever secured from this people. In each locality Mr. Cole spent sufficient time to make a study of the social and religious life of the people; their mythology, folklore, and language. There was also secured about seven hundred photographs showing the people in portraits and at their industries, their ceremonies and places associated with their religion; dwelling and other buildings and the country in which they are located. The views are supplemented by field maps covering the entire region visited. About five hundred physical measurements were secured, a series of life masks, and phonograph records of the various songs and instruments. Before leaving the Islands Mr. Cole spent a month among the Bataks, an almost unknown pigmy tribe found on the island of Palawan. These people live in groups of two or three families; they build only the rudest shelters, which are abandoned at pleasure. Little is attempted in agriculture as they live on roots and herbs and animals secured in the chase. Their weapons are the bow and arrow and the blow gun. A poison dart is shot from the

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latter and because of their proficiency with the weapon the Batacs are greatly feared by the "civilized" natives of the coast. In company with Governor Miller, Mr. Cole visited parts of the island hitherto unknown to white men. Many photographs, phonograph recordmeasurements, and a typical collection, were secured. The collection from the sections visited by Mr. Cole numbers two thousand specimens and includes all the articles used in daily life and religious ceremonies. Dr. Wm. Jones has devoted the entire year to the investigations of the unknown tribes in the upper headwaters of the Cagayan Valley. Previous to his entry into this territory he had investigated certain tribes on the Lower Cagayan. Dr. Jones' investigations are in connection with the Robert F. Cummings' Philippine Expedition. For certain reasons it does not seem advisable at this time to comment at any length on the investigations of Dr. Berthold Laufer. Suffice it to say that at the present writing he is in China and that he is meeting with very great success. It may be noted in this connection that in addition to the work which he is performing for the Museum he is engaged in the purchase of Chinese and Tibetan literature on behalf of the Crerar and Newberry Libraries. It is Dr. Laufer's belief that Chicago at the present time possesses a Manchu Library more valuable than any to be found in Europe, not even excepting the one in St. Petersburg, which has great treasures from this field. The extensive collection of Chinese books, which Dr. Laufer has collected, is very rich in fine old editions of the Ming Dynasty and affords a perfect exhibit of the development of Chinese printing. The Curator of the Department spent the year in a hurried journey around the world. Leaving New York January 11th, he visited Cambridge, London, Berlin, and Rome, and proceeded direct to Cairo where he joined Mr. Edward E. Ayer and remained in Egypt five weeks; then he spent seven weeks in India, two in Ceylon, and next visited Java where an extensive collection was made. After visiting the Australian museums of Perth, Adelaide, Melbourne, and Sydney, he proceeded to Simpson Hafen, Bismarck Archipelago, from which port he sailed on a month's cruise with the Governor of German New Guinea, Dr. Hahl, visiting many villages in New Ireland and adjacent islands and the two German islands of the Solomon group-Buka and Bougainville. Returning to Simpson Hafen from the Solomon Islands, a month was spent along the coast of German New Guinea, ascending the Kaiserin Augusta River. He then proceeded to Manila, via Yap, the chief



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FIELD MUSEUM OF NATURAL HISTORY.

of the Caroline Islands, and devoted a month in Luzon in connection with the Robert F. Cummings' Philippine Expedition. Returning home from the Philippines via China and Japan and the Hawaiian Islands, he visited on the way Canton and Peking. As a result of this expedition the Museum has received about 80 cases of material and several hundred photographs.

The Assistant in Dendrology has completed two periods of field work on North American Forest Trees, during the past year, his Spring work being completed in southern Missouri and begun in West Virginia, and his Autumn work completed in West Virginia. As a result a large amount of valuable material has been added to last season's accumulation which is now curing in preparation for installation. There was also secured, in addition to the timber specimens. a valuable series of tree photographs, fruit and herbarium specimens, as well as accessory material for the systematic collections of the Department in general. The Curator has made two extended trips to the museums of Europe, visiting Ireland, Scotland, England, Holland, Germany, Austria, Italy, Sicily, Switzerland, France, and Belgium. Resulting from this work is an extensive series of photographs, exhaustive notes on museum technique, and valuable comparisons and studies made of type species. Mr. O. E. Lansing, Jr. has continued his field work in the Lake Chicago Basin during the past season, adding largely to the series of plants already secured to represent this vanishing flora.

Early in June about ten days were spent by the Curator of Geology in the newly discovered diamond fields in Pike county, Arkansas. All the important outcrops of the diamond-bearing peridotite were visited and specimens obtained. In addition the gypsum and asphalt beds in the vicinity were visited and specimens of their products collected. The Assistant Curator of Paleontology in the latter part of the season, with two assistants, spent about two months continuing in eastern Wyoming the collection of Loup Fork Miocene fossils. Most of the work was done in the vicinity of Raw Hide Buttes, Wyoming, and a considerable amount of important material was obtained. Among this were some excellent skulls of the rare form Moropus, a nearly complete skeleton of Procamelus, some rhinoceros skulls, and specimens of Miocene horses. Collecting of Cretaceous and Tertiary invertebrate fossils was carried on by the Assistant Curator of Invertebrate Paleontology in Mississippi during April and May. The principal Cretaceous collections were made

in the vicinity of Ripley, Mississippi, where several hundred specimens were obtained. Collecting in this locality has hitherto been very unsatisfactory, owing to the rapidity with which the specimens decomposed after removal from the soil. In order to obviate this difficulty the Curator employed a device which permitted covering the specimens with paraffin, immediately upon their removal. In this way the specimens obtained were well preserved and the collection is probably the first large one of permanent value that has ever been secured of these fossils. At Pontotoc a fine series of fossil ovsters, echinoids, and shark's teeth was collected, numbering six hundred and twenty-two specimens. Of these the echinoids were exceptionally fine and at least four of the species are new. The Selma beds of Houston yielded four hundred and eighty-six specimens of invertebrates representing sixty-five species, and a sandy limestone in the vicinity two hundred and thirty-one specimens representing twenty-five species. The collecting of Tertiary fossils was carried on chiefly in the vicinity of Vicksburg and about thirty-two hundred specimens representing one hundred and fifty species were secured. While the work of collecting here was considerably interfered with by excessive rains and high water, the amount of material obtained was on the whole very satisfactory. The assistance of Dr. Crider, State Geologist of Mississippi, Professor Sullivan of Millsaps College, and Professors Lowe and Brown of the State University, is gratefully acknowledged in connection with the work. About twenty photographs illustrating the formations were made and a considerable amount of modern molluscan material was secured and transferred to the Department of Zoölogy. At Traverse Bay, Michigan, the Assistant Curator of Invertebrate Paleontology also collected one hundred and twenty-eight specimens of Devonian corals, sponges, etc., which on polishing exhibit especially well-marked structure. A series of peculiarly eroded pebbles was also secured at this locality.

The results of the expeditions in the interest of the Department of Zoölogy to Central America, and Venezuela, South America, including adjacent Islands, during the early part of 1908 by Messrs. Dearborn and Ferry, proved most satisfactory. Their combined collections contained 3,215 bird skins of which Mr. Ferry secured 2,100. A fine series from the Dutch islands of Curaçao, Oruba, and Bonaire were nearly all new to the collections. During the summer Mr. Ferry made several short collecting trips to local points in Illinois and one to northern Wisconsin, the results of which added 90 specimens,

many of which were missing from those localities. Much attention has been given to securing a series of fresh water fishes for exhibition purposes, and in this connection the Assistant Curator, Dr. Meek. made visits to desirable localities in Illinois and adjacent states, usually in company with Mr. Heim, taxidermist, with the result that valuable material was procured and added to the collection. During the months of May. June, and July frequent visits were made by Dr. Meek and Mr. Heim to Pine and Millers, Indiana, to secure specimens of the large commercial fishes taken at these places by the fishermen. These visits and some collecting done in streams and small lakes near by resulted in securing 76 skins. Of these o are mounted and finished, 25 are mounted but not finished, and the remainder is unmounted. The skins include 18 species. During the first three weeks of September several places along the Illinois River were visited where considerable commercial fishing was being done. At these points 98 fish skins of 25 species were secured. Dr. Meek, Mr. Freisser, and Mr. Hildebrand spent two days collecting in the Fox River at McHenry, Illinois, securing 12 skins representing 6 species. During his vacation in October Dr. Meek spent two days on Lake of the Woods in northern Minnesota and prepared and shipped from there to the Museum 32 specimens of large fishes representing 7 species. On the same trip he spent two days on Lake Superior at Marquette, Michigan. One lake trout weighing 25 pounds and one weighing 10 pounds, and a ling of 12 pounds were sent to the Museum. No extended field trips were made during the year for the Division of Entomology but, as usual, a fair amount of local collecting was done both by the Assistant Curator and his assistant, special attention having been given to the species of Illinois. As a result of similar collecting during previous years, the insect fauna of northern Illinois is now fairly well reppresented in the Museum's cabinets. From the middle and southern portions of the State, however, little material has as yet been obtained. Several acquisitions were made by means of three non-entomological Museum expeditions. The most noteworthy material received in this manner was that collected by Dr. Dearborn in Venezuela. Mr. Slocum of the Department of Geology also took some insects in Misissippi, and Mr. Ferry likewise brought with him a few interesting forms gathered in Costa Rica, Panama, and Venezuela. The following is a list of the expeditions:

Locality.	Collector.	Material.
Costa Rica, Panama, Islands of Curaçao, Oruba and Bonaire	} J. F. Ferry,	Bird and Mammal Skins.

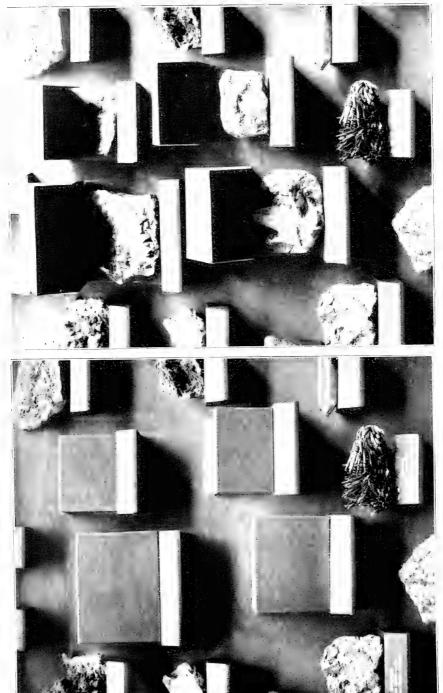
Locality.	Collector.	Material.
Egypt, India Assam, Ceylon Java, Australia Bismarck Archipelago . Solomon Islands New Guinea Philippine Islands China and Japan		Archæological material from Egypt, Ethnological material from India, Cey- lon, Java, Australia, New Ireland, Buka, Bougain- ville, New Guinea, and the Philippine Islands.
Venezuela and Curaçao	. N. Dearborn,	Bird and Mammal Skins.
	. A. W. Slocom,	Invertebrate Fossils.
	. H. H. Smith,	Timbers.
Illinois River	. S. E. Meek,	Fishes.
Woodruff, Wisconsin, and		
Cook Co., Illinois	. C. B. Cory,	Bird migration and studies for groups.
	. O. C. Farrington,	Ores and Minerals.
0	. H. H. Smith,	Timbers.
Fox Lake, Illinois	. C. L. Dewey,	Material for groups, birds, and nests.
Fox Lake, Illinois	. L. L. Pray,	Birds and eggs.
Woodruff, Wisconsin .	. J. F. Ferry,	Birds and eggs.
Wyoming	. E. S. Riggs,	Vertebrate Fossils.
Lake of the Woods, near		
Lake Ontario		Fishes.
Local and Northern Illinois .	<b>v</b>	Birds.
	B. Laufer,	Thibetan Ethnology.
Philippine Islands (R. F.		
Cummings' Expedition),	F. C. Cole.	Ethnological material from Tinguians, Apayaas, Kal- ingas, Amurayans, Bataks. Tagbanaus.
Andaman Islands Philippine Islands (R. F.	Alfred R. Brown,	Ethnological Material.
Cummings' Expedition) .	William Jones,	Mayayo, Igorot, and Ibalaas.

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT.— The acquisition during the last few years of varying amounts of material from several tribes of North America rendered it necessary that the collections from these tribes be reinstalled, thus there has been placed on permanent installation during the year collections from the following tribes: Kiowa, Blackfoot, Sauk and Fox, Iroquois, Micmac, Ottawa, Menominee, Chippewa, Sioux, Seminole, Cheyenne, Arapaho, Zuni, and a few California tribes. For the first time in the history of the



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The minerals are covered by boxes which may be raised by pressing a button placed on the outside of the case. The left-hand view shows

METHOD OF EXHIBITING FADABLE MINERALS.

the minerals covered; the right-hand view shows the covers raised by pressing the button. On releasing the button the covers return to place. The minerals are thus protected from the fading effects of light.

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Department of Anthropology the collections from Africa have been thoroughly overhauled and have been entirely installed. They now completely occupy Halls 50, 51, 52, and part of 53. Owing to the acquisition of additional material from Egypt, changes have been made necessary in the Egyptian Hall. New cases have been provided and much of the material has been reinstalled. The ancient mortuary boat has also been provided with a suitable case. The lack of floor space has made impossible certain rearrangements and the installation of certain collections which were designed, and as a consequence a certain amount of confusion prevails in the corridors leading to the East Annex. With the addition of the collections brought from the Philippine Islands by Mr. Cole and the probable receipt of additional material from Dr. Jones, it becomes necessary to secure additional space for the exhibition of these collections. During the year several miniature groups have been prepared and placed on exhibition. Two of these represent important ceremonies among the Pawnee, while two depict the summer and winter habitations and indoor and outdoor life of the Sauk and Fox Indians of Iowa.

Two of the cases containing gems in Higinbotham Hall have been relined with silk and the specimens reinstalled. In Hall 35 installation of the great dinosaur torso has been completed, the hall having been opened to the public about the first of August. The torso has been mounted so as to stand upon a base 12 x 30 feet, with a rail surrounding the base at a distance of two feet. Above the base the mount rises to a height of 15 feet. The skeleton is shown from the shoulders backward to the middle of the tail. It includes more bones of an individual dinosaur of this size than is known at present to be exhibited in any other museum. The contiguity of the bones as found also makes this skeleton important in giving positive evidence regarding the structure of these animals. A large descriptive label, drawings of a complete skeleton and restored forms, and a photograph showing method of quarrying the bones are exhibited in connection with the skeleton. The courtesy of the Carnegie Museum of Pittsburgh, through Director W. J. Holland, is acknowledged in providing casts of foot and limb bones for use in the mount. In addition to the dinosaur mount five new wall cases 7x12 feet in size have been added to the hall and in these the Jurassic dinosaur material formerly exhibited in other halls has been placed. This material includes vertebræ, sacrum, and limb bones of Brachiosaurus, scapulæ, vertebræ, foot, limb, and pelvic bones of Morosaurus, and vertebræ, scapula, and femur of Dip-

lodocus. The exhibits of the Hall are for the most part, therefore, illustrative of dinosaurs. The collection illustrating modes of petrifaction and comparisons of living and extinct forms has also been installed in this hall. It occupies three wall cases. The transference of the dinosaur and other material gave opportunity for rearrangement of the paleontologic collections as a whole, which was improved. Three new wall cases were added to Hall 33 and the collection there completely rearranged. About one hundred large specimens of cystoids, crinoids, trilobites, etc., were added to the Silurian series on exhibition, and about two hundred specimens of corals, brachiopods, palecypods, etc., to the Devonian. To the Carboniferous series about three hundred and fifteen specimens of crinoids mounted on tablets were added, filling one floor case. This material was obtained for the most part from the collection purchased from Mr. Fultz. The Triassic fossils were also moved from Hall 36 to Hall 33 and installed. By this rearrangement it was made possible to devote Hall 36 almost wholly to Jurassic fossils. Two cases of Jurassic plants and invertebrates were reinstalled in this hall and two cases of Jurassic ichthvosaurs and one of Jurassic fishes transferred from Hall 50 to Hall 36. The Cretaceous collections were moved to the east end of Hall 50 and new Tertiary vertebrates and invertebrates thus afforded room in their proper sequence. Among new specimens of Tertiary vertebrates installed in Hall 50 may be mentioned two large nodules from the Loup Fork of Wyoming showing remains of the fossil horse Hypohippus in the matrix, and several skulls of recently purchased Patagonian fossils. Two of the two-foot wall cases in Hall 61 were replaced by three-foot cases and in them were installed the series of Titanotheres and some other large skulls. Some rearrangements were also made of the floor exhibits in Halls 59, 60, and 61. In Hall 63 devices have been provided to permit exhibition of minerals that would fade on exposure to light. These, although they include some of the most showy and interesting specimens, had hitherto been necessarily kept in drawers away from public observation. The device provided for each specimen consists of a box of black cardboard, which is hinged and placed over the specimen so as to entirely exclude the light except when it is desired to examine it. A series of levers connected with a button placed on the outside of the case permits raising of the box by pressing the button. On releasing the button the box drops back into place and covers the specimen again. The specimens are thus protected from light except for the moment when the visitor wishes

to examine them. When several specimens which it is desired to protect occur in one case the levers on the different boxes are connected with a rod so that a single button connects with all the boxes in the A single pressure of the button thus permits examination of all case the specimens at one time. Protective devices of this kind were provided for all the important specimens of orpiment, realgar, topaz, rhodonite, proustite, and lorandite, and it is proposed to add others. New specimens have been installed in the mineral collection as received and individual pasteboard trays have been provided for a number of fragmental specimens. Twenty storage drawers have been added to the cases in Hall 64. Studies made of specimens of the mineral collection during the summer by the Curator and Mr. E. W. Tillotson. Ir., resulted in finding a number of new crystal forms and habits. These include one new form of bertrandite, two of calcite, three of linarite, two of olivenite, one of octahedrite and three of orpiment. A new axial ratio was found for olivenite and new habits observed for anglesite, barite, bertrandite, calcite, leadhillite, linarite, mimetite, octahedrite, olivenite, orpiment, realgar, rutile, and sphalerite. In Hall 65 a wall case of stalagmites has been installed, esespecially notable specimens being a series of marcasite stalactites from Galena, Illinois, which were collected a number of years ago and presented to the Museum by Elizabeth E. T. Sawyer, two large stalagmites from Missouri, and a series of cave formations from Crystal Cave. South Dakota. The stalactites installed in this case had been mounted in normal position, being hung from shelves by hooks inserted in the base of each stalactite. A number of fulgurites have also been installed in this case. Other specimens newly placed on exhibition in this hall include a number of groups of concretions, various erosion forms, and two large slabs of orbicular gabbro and granite. A cave exhibit illustrating the occurrence of a large selenite deposit in Utah is also being constructed in this hall. The installation of the systematic rock collection in Hall 66 has been completed, about fifteen hundred specimens having been placed on exhibition. The specimens are installed on individual blocks and fill eight floor cases. Of these the igneous rocks occupy four cases, sedimentary rocks two cases, and metamorphic rocks two cases. Descriptive labels have been placed in the cases in addition to the individual labels with a view to making the collection as instructive as possible. Eight wall cases in the hall have also been installed in part. These contain the series of rocks of Manhattan Island and the iron-

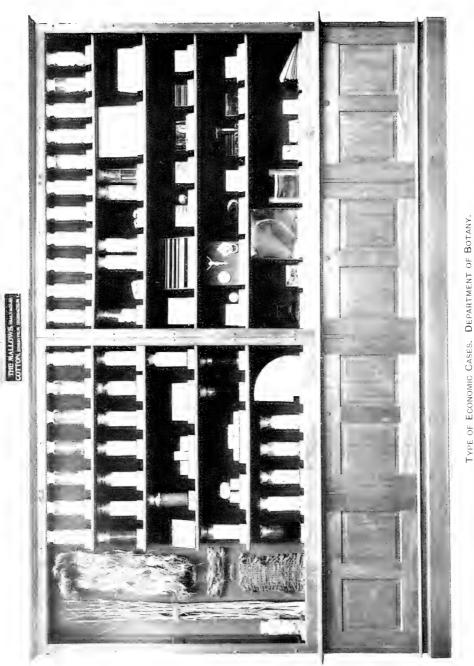
bearing regions of Lake Superior, large specimens of basalts, lavas, slates, etc., and several series of structural specimens illustrating dendrites, jointing, faulting, folding, cementation, etc. In Hall 67 in addition to the specimens of marbles and building stones previously reported as installed, about one hundred specimens which had been obtained from various sources and not hitherto exhibited on account of being of unsuitable size have been reduced to standard sizes, polished, and placed on exhibition. Six Alabama marbles in polished slabs 9 x 16 inches received by gift form another valuable addition to the collection. At present the collections exhibited in this hall include over seven hundred specimens installed in eight wall cases, four center cases of the type of the wall cases, and nine table cases. Of these specimens four hundred and seventy-one are polished marbles and decorative stones. These consist chiefly of polished slabs either 9 x 16 inches or 12 x 18 inches in size, although material both larger and smaller is included. This collection occupies four of the wall and center cases and four of the table cases. American marbles fill three cases. Norwegian one-half case. English and Irish one and one-half cases, Greek and Italian one case, and French two cases. Of other decorative stones verte antique occupies one wall case, and Mexican onyx and alabaster two cases. The four table cases are occupied by miscellaneous polished marbles, verte antique, Mexican onyx and other decorative stones in various ornamental forms. The remaining five table cases are occupied by the collection of building stones consisting of two hundred and forty four-inch cubes. Of these, granites, limestones, and marbles each occupy one case, and sandstones, including lavas, occupy two cases. Hall 68, containing the collection of clays, soils, etc., has also been completely recased and reinstalled. The cases consist of four wall cases and sixteen table cases. Of these the clay collection occupies twelve table cases and half a wall case, the soil collection four table cases and one wall case, sands and cements one wall case, clav-like minerals half a wall case, and mineral pigments one case. The clay collection is divided into two parts, a synoptic and a general collection. Of these the synoptic collection is installed in four table cases, upon the floors of which diagrams show the derivation and relationships of the various classes of clays. In proper position upon the diagrams are placed specimens of each group of clays. This classification separates the clays into twenty-eight groups, the numbers of which are similar in origin and industrial application. The general collection of clays, numbering at present five hundred and fifty specimens from different localities, is also arranged to correspond with this classification. In addition a small collection shows the influence of various foreign matters upon the plasticity, shrinkage, color, and other properties of clay. The collection of soils numbers at present one hundred and fifty-five specimens. Of these a collection illustrating the derivation of soils from several kinds of rocks, and a collection of the essential and incidental components of soil fill two table cases In these cases is also placed a collection of plant foods as found in soils and one illustrating the characteristics of the wider and well-recognized groups of soils. A collection of fifty-four soils and subsoils arranged according to the special classification adopted by the U.S. Department of Agriculture occupies one wall case, and a collection of soils from all parts of the world arranged according to the familiar groupings of loams, marls, etc., occupies two table cases. The sands and cements which occupy a wall case are arranged according to their industrial applications, being grouped as glass sands, molding sands, etc. Travs or jars are employed for the installation of the specimens in this hall. according as a vertical or horizontal position is desired. A number of additions were made to the collection of relief maps in Halls 76 and 77 and the collection rearranged. The work of framing the maps of the collection was also continued and is now nearly completed, fortytwo large maps being at present framed. Smaller maps, which could not readily be framed, were placed in floor cases, three of which were provided for the purpose. Photographs of typical ancient shore lines of Lake Chicago and other topographic features in the vicinity of Chicago, made by the Curator, have been installed adjacent to the relief maps of the region. Complete descriptive labels have been made for a number of maps and have been attached to them in such a way as to be conveniently read while examining the map. This has been accomplished by mounting them over the map in many instances and hinging them so that any portion of the map covered by the label can be seen by swinging the label. In Hall 78 the old cases and platforms have been replaced by new cases throughout, so that all the exhibits are now under glass. The large specimens formerly exhibited near the walls have been brought forward to the center of the hall and prominently displayed in three upright cases. These cases are 40 inches square and 69 inches high. They have glass on all four sides and the top, so that their contents are visible from all parts of the room. The central case of these is occupied by large blocks of brightcolored rubellite, and those on either side contain monoliths

of fluor-spar and apatite. About these are grouped seven table cases. Three of these cases contain groups of specimens showing stages of the manufacture of soda from salt by the Le Blanc and ammonia processes. The specimens of these collections are arranged with guide lines to assist in following the process. Two table cases contain a collection illustrating the uses of asbestos, which was formerly displayed in a large upright case in the center of the hall. Another table case contains a collection of barytes and another a similar collection of fluor-spar. About the walls of the hall eight wall cases similar in design to those employed for the mineral collection have been placed. As the lighting and capacity of these differ from those discarded, appropriate changes in the order of arrangement of the collections were made. Two wall cases eighteen inches deep upon the south wall contain potash compounds, including a large collection of the salts mined at Stassfurt, Prussia. In these cases have also been placed such other specimens as were too large for the shallower cases. These larger specimens include blocks of gypsum, epsom salt, rock salt, and phosphate rock. The remaining wall cases are twelve inches deep. Of these the borate and nitrate collection occupies half of the case and the other half is occupied by the salt collection. Magnesian and similar minerals of economic value occupy about a quarter of a wall case and the remaining three-quarters contain the sulphurs. Abrasives arranged according to their uses occupy a wall case and a half, and half a wall case contains the collections of crude asbestos. Mica occupies half a case and the phosphates, grouped according to a mineral and commercial classification, occupy one wall case and nearly half of another. Among minor details of installation in this hall it may be noted that flat black trays have been employed for powdered and granular exhibits in place of the buff trays formerly used. An increased number of black wood specimen supports have been employed and a new pattern of label holder is employed for all labels in the wall cases. Hall 80 has been thoroughly repainted and calcimined and Halls 70 and 72 have been dismantled and calcimined in preparation for a recasing of the collections. As soon as the installation of these halls and that of a single additional hall, Hall 71, is completed, permanent cases will have been provided for all of the collections of the Department. Comparing the distribution of the collections at present with that existing at the time of the opening of the Museum, it appears that six halls are now devoted to the paleontological collections instead of three, as at that time.



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REPORTS, PL. XXXVII.



One of a series of four illustrating the *Malvateae*. This case presents various products of the cotton plant (Gossyhium s/s.).

Marbles and building stones now occupy one hall instead of two. and the metallurgical collections previously occupying one hall have been discontinued as a group. In connection with this change in the distribution of the specimens a large increase in their number has been effected. Thus the paleontological collections now number about 60.000 specimens instead of 20.000, the number of meteoric falls represented has been increased from 180 to 300, the number of minerals in the systematic collection from 5,000 to 15,000 and the economic collections show a net increase of about 5,000 and a total of over 15.000 specimens. Two hundred and five prints have been added to the Department photograph albums since the last report, making a total of 2.103 prints now in these albums. In the chemical laboratory a case has been built for keeping additional apparatus and in the office of the Department one for some of the larger pieces of physical apparatus. Two storage cases have been added to the paleontological laboratory and fitted with wooden travs. Owing to work upon the dinosaur mount less opportunity than usual was afforded for cleaning material from the matrix in the paleontological laboratory. The principal work of this kind accomplished during the year was the preparation of skulls and parts of skeletons of Moropus and Hypohippus.

The crowded condition in the herbarium has necessitated certain alterations whereby more space could be obtained to accommodate the collections. The congestion has been temporarily alleviated by transferring the mounting room from the second to the first gallery of the north Court, thus freeing the west room of the second gallery for herbarium extension. By this change sufficient space has been gained to accommodate the herbarium for about two years: moreover, some additional room for temporary storage purposes was secured in connection with the newly appointed mounting room. A combination steel table and bookcase has been installed in the library of the Department, especially designed for the proper shelving and preservation of the heavier and some of the rarer botanical folios, of which several have been acquired during the past year. The case is approximately 9 feet x 31/2 feet x 21/2 feet, with a capacity sufficient to accommodate about 100 ordinary folios; in general style and finish it conforms with the steel herbarium cases already in use in this Department. Notwithstanding the absence of the Curator on two extended European trips during the year, very satisfactory progress has been made in the rehabilitation of the Section of Plant Economics. The entire south

galleries have been recased; and the cases installed and labeled, the old installation removed from the west galleries, properly reclassified and distributed into systematic storage preparatory to installation; and the entire west galleries recased with the exception of a small space reserved for the work of present installation. The large collections of heterogeneous timber specimens of Australia, British Guiana, Venezuela, Paraguay, and Brazil (Amazonas and Parana) have been resawed, re-dressed, and rendered homogeneous, and the following new installations accomplished: One case showing log. plank, and tree growth sections of the Russian Oak and Ash; a similar case representing six other species of the hard woods of the Empire, and two others detailing the coniferous woods; the specimens comprising this installation are ample and highly representative and were received from the Imperial Forestry Bureau. One case comprising the principal and most interesting timbers of Formosa, showing the bark, grain of the wood, and its susceptibility of finish. Seven cases have been installed with Japanese dendrologic material, making a total of nine cases devoted to the timbers of that country. The new installation comprises in three cases an excellent and unique series of the major construction timbers in fine and representative examples, one case of the cabinet timbers in ample size to show their markings and susceptibility to polish, another of other species showing the rarer forms and specialized marking; another case illustrating the special timbers utilized for "toko posts"; a case illustrating the growth by decades of seven species of conifers, and one case detailing the use of the bamboo as construction material. Three cases exemplifying the timbers of British India, in one of which is placed a round table top of padouk (Pterocarpus indicus) over 6 feet in diameter, cut from a single board, and specimens of blackwood (Dalbergia nigra) illustrating its adaptability for large carvings and sculptures; and in two others a long series of the principal woods of the country in ample examples. Three cases illustrating, by large specimens, the principally utilized construction timbers of Australia. These are doubtless the finest examples of these timbers ever brought to this country and adequately represent the size to which the trees yielding them grow as well as the grain and the other characters of each species. Three cases devoted to the more valuable and most frequently exported timbers of Brazil; one of these illustrates the species in plank form and two, the bark and wood characters in apposition. All the specimens in the above cases have been fully and descriptively labeled and present an appear-

ance rendering them highly attractive and educational to the public. In the general systematic series, representing plant economics, the following additional cases have been installed: one case illustrating the Sedges including the Egyptian papyrus and its utilization in the ancient manufacture of scrolls for writing the "books of the dead." A case has been added to the Palms in which is represented a long series illustrative of the double or Sevchelles coconut, the largest tree fruit known. The maize series has received the addition of a case of further utilizations to the four cases already in the suite. In order to avoid constant shifting of the cases to keep up the consecutiveness of the systematic installation while occupying the illy adapted quarters of the Department in the present rambling building, a second series has been begun in the west galleries and transept. For this series these galleries are now fully occupied by new cases placed in position during the late Summer. The installation of these cases has proceeded thus far as follows: One case devoted to utilized fossil plants exemplified by fossil woods, peat, and gums, with articles and fabrics made from each. One case illustrating various utilizations of plants belonging to the Potato Family; principally, in this case, tobacco from various parts of the world; and another case comprising the plant economics of the Trumpet Creeper family, which yields among other products the highly valuable calabash (Crescentia Curete). The installation of this entire section is anticipated to be finished by June next. In addition to the installation work many of the previously installed cases have been fully and descriptively labeled and "copy" has been written for all cases so far installed.

During the year the exhibition collection of mounted mammals has been rearranged and seven new cases added. Eleven new specimens of mammals have been mounted by Mr. Freisser which have been installed in Hall 20. Among these were a fine male gorilla, a chimpanzee, and a jaguar. Several other specimens of the larger mammalia are being mounted, including wolves and bears, and these will be added to the exhibition collection at an early date. Two new groups of mammals, one of woodchucks and one of muskrats, have been completed by Mr. Pray. For the exhibition collection of birds 40 specimens have been mounted and installed, and a case illustrating albinism in animals, which includes a number of birds, has been placed on exhibition. The collection of Illinois birds contained in Hall 27 is practically completed, several nests having been added during the past year as well as descriptive labels in addition to those

already placed. Four larger and two smaller fish groups have been mounted during the year. The larger groups are in cases 6 feet long by 20 inches high and about 20 inches wide. The groups are mounted to give the effect, as far as possible, of live fishes under natural conditions. An important work in the Division of Entomology was the installation of an exhibition series of butterflies and moths of the United States and Canada. So far there has been arranged for the purpose a fair representation of butterflies and two families of moths, the Sphingidæ and Saturnidæ. Most of the specimens thus displayed were respread before placing them in the cases, which work was done in a satisfactory manner. During the latter part of the year Mr. Gerhard spent six weeks in Reading, Pennsylvania, preparing for shipment the Strecker collection containing some 50,000 specimens, mention of which is made elsewhere.

PRINTING.—The following work has been accomplished in this section:

						Labels.	Other Impressions.
Department of Anthropo	olog	gу				1,665	5,300
Department of Botany						1,866	18,150
Department of Geology						3,839	1,505
Department of Zoölogy						1,407	12,602
Director's Office							74,229
Higinbotham Hall .						1,258	
The Library					•		11,746

PHOTOGRAPHY AND ILLUSTRATION.— The following table gives the result of the operations performed:

					Negatives	. Prints.	Lantern Slides.	Enlarge- ments.
Director's Office					64	84		I 2
Department of Anthrope	olog	у			2,178	3,176	100	14
Department of Botany					51	878		18
Department of Geology					22	245	60	2
Department of Zoölogy					352	1,463	491	
General						I 7	59	
Totals					2,667	5,863	710	46
Total number of inv	rent	ory	ent	ries	to Decer	nber 31,	1908 .	69,418
Entries from Decem	ber	31,	19	07,	to Decem	ber 31, 1	908	9,895
Negatives developed for								
Department of Botany								391
Negatives developed for								
Department of Geology								49
Negatives developed for								
Department of Zoölogy						• •	• • •	169
Total								609

ATTENDANCE.— The attendance for the year shows a slight increase over the previous year. The following is a list of the school classes (thirty pupils or more) that visited the Museum during the year just closed:

Schools and Location.	Teachers.	Punile
University High — Fifty-ninth Street and Monroe Avenue	I cucificito.	30
Carter — Sixteenth Street and Wabash Avenue	I	33
Hyde Park — Fifty-seventh Street and Kimbark Avenue	2	45
Thornton Township - Harvey, Illinois	I	35
University Elementary - Fifty-ninth Street and Monroe Ave-		00
nue	2	33
University of Chicago - Chicago, Illinois.		34
Hyde Park High - Fifty-seventh Street and Kimbark Ave-		
nue	2	51
James Shields South Rockwell, corner West Forty-third		
Street	I	45
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	2	35
University of Chicago — Chicago, Illinois.	I	48
Hyde Park High - Fifty-seventh Street and Kimbark Ave-		
nue	I	54
Hoyne High — Illinois Street, corner Cass Street	I	45
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	50
Forest Park — Forest Park, Illinois	I	44
Hyde Park High Fifty-seventh Street and Kimbark Avenue	I	40
Joliet High — Joliet, Illinois	2	105
Jackson Park — Fifty-sixth Street and Stony Island Avenue .	2	35
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	I	55
Frances E. Willard - Forty-ninth Street and St. Lawrence		
Avenue	I	39
University Elementary — Fifty-ninth Street and Monroe Ave-		
nue	I	30
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	.48
Chicago Kindergarten College — 1200 Michigan Avenue		35
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	30
Parkman — Fifty-first Street and Princeton Avenue	I	38
Goldsmith — 210 Maxwell Street	1	3.5
Englewood High - West Sixty-second Street and Stewart		
Avenue	I	I75
Frances E. Willard - Forty-ninth Street and St. Lawrence		
Avenue	I	40
Harrison Practice - Twenty-third Place and Wentworth Ave-		
	3	36
Thomas Brenan — Lime Street and Archer Avenue	2	60
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	30
Morgan Park — Morgan Park, Illinois.	2	71
John H. Hamline — West Forty-eighth and Bishop Streets .	2	38

Schools and Location.       Teachers.       Pupilit.         Saunders — Blue Island, Illinois       3       34         Prescott — Wrightwood Avenue, corner North Ashland Avenue       1       36         parkside — Seventieth Street and East End Avenue       1       36         John H. Hamline — West Forty-eighth and Bishop Streets       2       38         John H. Hamline — West Forty-eighth and Bishop Streets       2       38         John H. Hamline — West Forty-eighth and Bishop Streets       2       36         Swendell Phillips High — Thirty-ninth Street and Prairie Avenue       1       40         J. N. Thorpe — Superior Avenue and Eighty-ninth Street       1       105         Blue Island — Blue Island, Illinois       8       126         Burr — Ashland Avenue and Wabansia Avenue       2       30         John H. Hamline — West Forty-eight and Bishop Streets       1       40         Whittier — Blue Island, Illinois       2       75         Esymour — Blue Island, Illinois       2       75         Esymour — Blue Island, Illinois       2       80         Washington — Racine, Wisconsin       4       36         Frances E. Willard — Forty-ninth Street and St. Lawrence       33         Avenue       1       43         McCo			
Prescott — Wrightwood Avenue, corner North Ashland Avenue       2       58         nue			-
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Blue Island — Blue Island, Illinois       1       30         Kenwood — Lake Avenue and Fiftieth Street       2       35         Wendell Phillips High — Thirty-ninth Street and Prairie Avenne       1       35         nue        1       40         J. N. Thorpe — Superior Avenue and Eighty-ninth Street       1       105         Blue Island — Blue Island, Illinois        8       126         Burr — Ashland Avenue and Wabansia Avenue       2       30         John H. Hamline — West Forty-eight and Bishop Streets       1       36         Seymour — Blue Island, Illinois        2       75         Esmond Street — Morgan Park, Illinois       2       75         Seymour — Bue Island, Illinois        40         Frances E. Willard — Forty-ninth Street and St. Lawrence       38         Avenue         38         Mark Sheridan — Twenty-seventh Street and Wallace Street       1       62         John H. Hamline — West Forty-eight and Bishop Streets       2       33         Mark Sheridan — Twenty-seventh Street and Sawyer Avenue       1       31         WcCormick — Twenty-seventh Street and Maulace Street       1       62         John H. Hamline — West Forty-eight and Bishop Streets			
Kenwood — Lake Avenue and Fiftieth Street235Wendell Phillips High — Thirty-ninth Street and Prairie Avenue1nue			•
Wendell Phillips High — Thirty-ninth Street and Prairie Avenue       1         nue       .       .       1         J. N. Thorpe — Superior Avenue and Eighty-ninth Street       1       105         Blue Island — Blue Island, Illinois       .       2       30         John H. Hamline — West Forty-eight and Bishop Streets       1       36         Blue Island — Blue Island, Illinois       .       2       30         Seymour — Blue Island, Illinois       .       2       87         Seymour — Blue Island, Illinois       .       2       87         Seymour — Blue Island, Illinois       .       2       87         Seymour — Blue Island, Illinois       .       .       40         Whittier — Bue Island, Illinois       .       .       43         Frances E. Willard — Forty-ninth Street and St. Lawrence       .       .       .         Avenue       . <td>Verwood Lake Averue and Efficient Street</td> <td></td> <td>-</td>	Verwood Lake Averue and Efficient Street		-
J. N. Thorpe — Superior Avenue and Eighty-ninth Street .       I       105         Blue Island — Blue Island, Illinois .       8       126         Burr — Ashland Avenue and Wabansia Avenue .       2       30         John H. Hamline — West Forty-eight and Bishop Streets .       I       36         Blue Island — Blue Island, Illinois .       2       82         Seymour — Blue Island, Illinois .       2       83         Mark Sheridan — Twenty-seventh Street and St. Lawrence       4       36         John H. Hamline — West Forty-eight and Bishop Streets .       2       68         Fiske — Sixty-second Street and Ingleside Avenue .       1       43         McCormick — Twenty-seventh Street and Houston Avenue .       1       133         Raymond — Thirty-sixth Place and Johnson Street .       2       33 <t< td=""><td>Wendell Phillips High - Thirty-ninth Street and Prairie Ave-</td><td>2</td><td>35</td></t<>	Wendell Phillips High - Thirty-ninth Street and Prairie Ave-	2	35
Blue Island — Blue Island, Illinois8126Burr — Ashland Avenue and Wabansia Avenue230John H. Hamline — West Forty-eight and Bishop Streets136Blue Island — Blue Island, Illinois140Whittier — Blue Island, Illinois282Seymour — Blue Island, Illinois275Esmond Street — Morgan Park, Illinois275Esmond Street — Morgan Park, Illinois38Washington — Racine, Wisconsin436Frances E. Willard — Forty-ninth Street and St. Lawrence3Avenue436Fiske — Sixty-second Street and Ingleside Avenue1John H. Hamline — West Forty-eighth and Bishop Streets2Shidds — Twenty-seventh Street and Kawyer Avenue1W. K. Sullivan — Eighty-third Street and Houston Avenue1Shidds — Forty-third Street and Rockwell Avenue1Raymond — Thirty-sixth Place and Wabash Avenue2Jashburne — West Fourteenth and Union Street2Yashburne — West Fourteenth and Union Street2Yashburne — West Fourteenth and Lemerald Avenue2Yashburne — Dene hundred and Eighth Place and Wentworth Avenue2Worth Avenue535John Foster — Union and O'Brien Streets2Yan Vlissengen — One hundred and Eighth Place and Wentworth Avenue35John Foster — Union and O'Brien Streets35John Foster — Union and O'Brien Streets35John Foster — Union and O'Brien Streets35John Foster — Union and O'B		I	40
Burr — Ashland Avenue and Wabansia Avenue230John H. Hamline — West Forty-eight and Bishop Streets136Blue Island — Blue Island, Illinois140Whittier — Blue Island, Illinois282Seymour — Blue Island, Illinois275Esmond Street — Morgan Park, Illinois380Washington — Racine, Wisconsin436Frances E. Willard — Forty-ninth Street and St. Lawrence2Avenue238Mark Sheridan — Twenty-seventh Street and Wallace Street1Goldn H. Hamline — West Forty-eighth and Bishop Streets2John H. Hamline — West Forty-eighth and Bishop Streets2John H. Hamline — West Forty-eighth and Bishop Streets2McCormick — Twenty-seventh Street and Houston Avenue1McCormick — Twenty-seventh Street and Houston Avenue1Mices — Forty-third Street and Rockwell Avenue1Maymond — Thirty-sixth Place and Wabash Avenue2Street — W. Ohio Street, corner Lincoln Street2Washbure — West Fourteenth and Union Streets2Stalcott — W. Ohio Street, corner Lincoln Street2Oglesby — Seventy-ninth Street and Avenue2Mark Street and High Street2Moras — Belden Avenue and High Street3John Foster — Union and O'Brien Streets3John Foster — Union and O'Brien Streets3 </td <td></td> <td>I</td> <td>105</td>		I	105
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Blue Island — Blue Island, Illinois       r       40         Whittier — Blue Island, Illinois       2       85         Seymour — Blue Island, Illinois       2       75         Esmond Street — Morgan Park, Illinois       2       75         Esmond Street — Morgan Park, Illinois       36         Frances E. Willard — Forty-ninth Street and St. Lawrence       36         Avenue       2       38         Mark Sheridan — Twenty-seventh Street and Wallace Street       1       62         John H. Hamline — West Forty-eighth and Bishop Streets       2       68         Fiske — Sixty-second Street and Ingleside Avenue       1       31         McCormick — Twenty-seventh Street and Sawyer Avenue       1       33         McCormick — Twenty-seventh Street and Houston Avenue       6       198         Shields — Forty-third Street and Rockwell Avenue       1       33         University of Chicago — Chicago, Illinois.       1       35         Garfield — Fourteenth Place and Johnson Street       2       36         William Penn — Sixteenth Street and Avenue       1       35         Thomas — Belden Avenue and High Street       2       36         Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue       35       36         John Foste		2	30
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Seymour — Blue Island, Illinois275Esmond Street — Morgan Park, Illinois8Washington — Racine, Wisconsin4Frances E. Willard — Forty-ninth Street and St. LawrenceAvenue2Avenue2John H. Hamline — West Forty-eighth and Bishop Streets2John H. Hamline — West Forty-eighth and Bishop Streets2Biske — Sixty-second Street and Ingleside Avenue1McCormick — Twenty-seventh Street and Sawyer Avenue1W. K. Sullivan — Eighty-third Street and Houston Avenue1Shields — Forty-third Street and Rockwell Avenue1Shields — Fourty-seventh Place and Wabash Avenue2Juriversity of Chicago — Chicago, Illinois.1Garfield — Fourteenth Place and Johnson Street2Oglesby — Seventy-ninth Street and Avenue1Juliam Penn — Sixteenth Street and Avers Avenue1Matheld — Seventy-first and Loomis Streets2John Foster — Union and O'Brien Streets2John Foster — Union and O'Brien Streets3John Foster — Union and O'Brien Streets3John Foster — Union and O'Brien Streets3John Foster — Union and O'Brien Streets3Johnsen Street3Johnsen Street3John Foster — Union and O'Brien Streets3John Foster — Union and O'Br		I	40
Esmond Street — Morgan Park, Illinois8Washington — Racine, Wisconsin4Frances E. Willard — Forty-ninth Street and St. LawrenceAvenue2Mark Sheridan — Twenty-seventh Street and Wallace Street1John H. Hamline — West Forty-eighth and Bishop Streets2Fiske — Sixty-second Street and Ingleside Avenue1McCormick — Twenty-seventh Street and Sawyer Avenue1W. K. Sullivan — Eighty-third Street and Houston Avenue1Shields — Forty-third Street and Rockwell Avenue1Mark of Chicago — Chicago, Illinois.1University of Chicago — Chicago, Illinois.1Garfield — Fourteenth Place and Johnson Street2Yashurne — West Forty-einth Street and Avenue2Yashurne — West Fourteenth and Union Streets1Yashurne — West Fourteenth and Emerald Avenue2Yashurne — Sixteenth Street and Avers Avenue1Homas — Belden Avenue and High Street2Yan Vlissengen — One hundred and Eighth Place and Wentworth Avenue53Yohn Foster — Union and O'Brien Streets35Immaculate Conception — Thirty-first Street and Bonfield2Avenue232Sacred Heart — Nineteenth and Johnson Streets35John Foster — Union and O'Brien Streets39University of Chicago — Chicago, Illinois. <td< td=""><td>Whittier — Blue Island, Illinois</td><td>2</td><td>83</td></td<>	Whittier — Blue Island, Illinois	2	83
Esmond Street — Morgan Park, Illinois8Washington — Racine, Wisconsin4Frances E. Willard — Forty-ninth Street and St. LawrenceAvenue2Mark Sheridan — Twenty-seventh Street and Wallace Street1John H. Hamline — West Forty-eighth and Bishop Streets2Fiske — Sixty-second Street and Ingleside Avenue1McCormick — Twenty-seventh Street and Sawyer Avenue1W. K. Sullivan — Eighty-third Street and Houston Avenue1Shields — Forty-third Street and Rockwell Avenue1Mark of Chicago — Chicago, Illinois.1University of Chicago — Chicago, Illinois.1Garfield — Fourteenth Place and Johnson Street2Yashurne — West Forty-einth Street and Avenue2Yashurne — West Fourteenth and Union Streets1Yashurne — West Fourteenth and Emerald Avenue2Yashurne — Sixteenth Street and Avers Avenue1Homas — Belden Avenue and High Street2Yan Vlissengen — One hundred and Eighth Place and Wentworth Avenue53Yohn Foster — Union and O'Brien Streets35Immaculate Conception — Thirty-first Street and Bonfield2Avenue232Sacred Heart — Nineteenth and Johnson Streets35John Foster — Union and O'Brien Streets39University of Chicago — Chicago, Illinois. <td< td=""><td>Seymour — Blue Island, Illinois</td><td>2</td><td>75</td></td<>	Seymour — Blue Island, Illinois	2	75
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W. K. Sullivan — Eighty-third Street and Houston Avenue6198Shields — Forty-third Street and Rockwell Avenue133Raymond — Thirty-sixth Place and Wabash Avenue233University of Chicago — Chicago, Illinois.135Garfield — Fourteenth Place and Johnson Street295Washburne — West Fourteenth and Union Streets135Talcott — W. Ohio Street, corner Lincoln Street498Oglesby — Seventy-ninth Street and Emerald Avenue256William Penn — Sixteenth Street and Avers Avenue148Thomas — Belden Avenue and High Street230Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue53John Foster — Union and O'Brien Streets35Immaculate Conception — Thirty-first Street and Bonfield35Avenue232Sacred Heart — Nineteenth and Johnson Streets39University of Chicago — Chicago, Illinois30University of Chicago — Chicago, Illinois30University of Chicago — Chicago, Illinois30	Fiske — Sixty-second Street and Ingleside Avenue	I	43
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Raymond — Thirty-sixth Place and Wabash Avenue       2       33         University of Chicago — Chicago, Illinois,       1       35         Garfield — Fourteenth Place and Johnson Street       2       95         Washburne — West Fourteenth and Union Streets       1       35         Talcott — W. Ohio Street, corner Lincoln Street       4       98         Oglesby — Seventy-ninth Street and Emerald Avenue       2       56         William Penn — Sixteenth Street and Avers Avenue       1       48         Thomas — Belden Avenue and High Street       2       36         Earle — Sixty-first Street and Hermitage Avenue       1       55         Altgeld — Seventy-first and Loomis Streets       2       30         Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue       53       30         Morn Foster — Union and O'Brien Streets       5       32         Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       39       30         University of Chicago — Chicago, Illinois       30       30         University of Chicago — Chicago, Illinois       30       30	W. K. Sullivan - Eighty-third Street and Houston Avenue .	6	198
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Garfield — Fourteenth Place and Johnson Street       2       95         Washburne — West Fourteenth and Union Streets       1       35         Talcott — W. Ohio Street, corner Lincoln Street       4       98         Oglesby — Seventy-ninth Street and Emerald Avenue       2       56         William Penn — Sixteenth Street and Avers Avenue       1       48         Thomas — Belden Avenue and High Street       2       36         Earle — Sixty-first Street and Hermitage Avenue       1       55         Altgeld — Seventy-first and Loomis Streets       2       30         Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue       35       35         Immaculate Conception — Thirty-first Street and Bonfield       35       35         Avenue       .       .       .       39         Goldsmith — 210 Maxwell Street       .       .       .       .       .         University of Chicago — Chicago, Illinois.       .		2	33
Washburne — West Fourteenth and Union Streets135Talcott — W. Ohio Street, corner Lincoln Street498Oglesby — Seventy-ninth Street and Emerald Avenue256William Penn — Sixteenth Street and Avers Avenue148Thomas — Belden Avenue and High Street236Earle — Sixty-first Street and Hermitage Avenue155Altgeld — Seventy-first and Loomis Streets230Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue53John Foster — Union and O'Brien Streets35Immaculate Conception — Thirty-first Street and Bonfield39Avenue239Goldsmith — 210 Maxwell Street39University of Chicago — Chicago, Illinois30University of Chicago — Chicago, Illinois30	University of Chicago - Chicago, Illinois	I	35
Talcott — W. Ohio Street, corner Lincoln Street498Oglesby — Seventy-ninth Street and Emerald Avenue256William Penn — Sixteenth Street and Avers Avenue148Thomas — Belden Avenue and High Street236Earle — Sixty-first Street and Hermitage Avenue155Altgeld — Seventy-first and Loomis Streets230Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue53John Foster — Union and O'Brien Streets535Immaculate Conception — Thirty-first Street and Bonfield35Avenue232Sacred Heart — Nineteenth and Johnson Streets39University of Chicago — Chicago, Illinois30University of Chicago — Chicago, Illinois30	Garfield — Fourteenth Place and Johnson Street	2	95
Oglesby — Seventy-ninth Street and Emerald Avenue256William Penn — Sixteenth Street and Avers Avenue148Thomas — Belden Avenue and High Street236Earle — Sixty-first Street and Hermitage Avenue155Altgeld — Seventy-first and Loomis Streets230Van Vlissengen — One hundred and Eighth Place and Went- worth Avenue53John Foster — Union and O'Brien Streets35Immaculate Conception — Thirty-first Street and Bonfield Avenue39Goldsmith — 210 Maxwell Street39University of Chicago — Chicago, Illinois30University of Chicago — Chicago, Illinois30	Washburne — West Fourteenth and Union Streets	I	35
William Penn — Sixteenth Street and Avers Avenue       I       48         Thomas — Belden Avenue and High Street       2       36         Earle — Sixty-first Street and Hermitage Avenue       I       55         Altgeld — Seventy-first and Loomis Streets       2       30         Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue       53       30         John Foster — Union and O'Brien Streets       53       35         Immaculate Conception — Thirty-first Street and Bonfield Avenue       2       32         Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       30       30         University of Chicago — Chicago, Illinois       30       30		4	98
Thomas — Belden Avenue and High Street	Oglesby — Seventy-ninth Street and Emerald Avenue	2	56
Earle — Sixty-first Street and Hermitage Avenue       1       55         Altgeld — Seventy-first and Loomis Streets       2       30         Van Vlissengen — One hundred and Eighth Place and Went- worth Avenue       1       53         John Foster — Union and O'Brien Streets       2       53         Immaculate Conception — Thirty-first Street and Bonfield Avenue       2       32         Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       30       30         University of Chicago — Chicago, Illinois       30       30         University of Chicago — Chicago, Illinois       60	William Penn — Sixteenth Street and Avers Avenue	1	48
Altgeld — Seventy-first and Loomis Streets       2       30         Van Vlissengen — One hundred and Eighth Place and Went- worth Avenue       4       53         John Foster — Union and O'Brien Streets       5       35         Immaculate Conception — Thirty-first Street and Bonfield Avenue       2       32         Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       30       30         University of Chicago — Chicago, Illinois       30         University of Chicago — Chicago, Illinois       60	0	2	36
Van Vlissengen — One hundred and Eighth Place and Wentworth Avenue       53         John Foster — Union and O'Brien Streets       55         Immaculate Conception — Thirty-first Street and Bonfield       35         Avenue       2       32         Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       30       30         University of Chicago — Chicago, Illinois.       30       30		I	55
worth Avenue	Altgeld — Seventy-first and Loomis Streets	2	30
John Foster — Union and O'Brien Streets       35         Immaculate Conception — Thirty-first Street and Bonfield       32         Avenue       2       32         Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       30       39         University of Chicago — Chicago, Illinois       30         University of Chicago — Chicago, Illinois       60			
Immaculate Conception — Thirty-first Street and Bonfield       2         Avenue	worth Avenue	*	53
Avenue       2       32         Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       39       39         University of Chicago — Chicago, Illinois       30         University of Chicago — Chicago, Illinois       60	5		35
Sacred Heart — Nineteenth and Johnson Streets       5       39         Goldsmith — 210 Maxwell Street       .	Immaculate Conception - Thirty-first Street and Bonfield		
Goldsmith — 210 Maxwell Street       39         University of Chicago — Chicago, Illinois.       30         University of Chicago — Chicago, Illinois.       60		2	32
University of Chicago — Chicago, Illinois		5	39
University of Chicago — Chicago, Illinois			39
University of Chicago — Chicago, Illinois.60University of Chicago — Chicago, Illinois.148			
University of Chicago — Chicago, Illinois	University of Chicago — Chicago, Illinois		
	University of Chicago — Chicago, Illinois	I	48

Schools and Location.	Teachers.	Pupils
John Spry — Twenty-fourth Street and Marshall Boulevard .	16	385
University of Chicago - Chicago, Illinois.		30
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	60
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	52
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	56
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	60
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	92
John H. Hamline West Forty-eighth and Bishop Streets	2	30
Forestville — Forty-fifth Street and Forestville Avenue	I	43
Gladstone - South Robey Street and Washburne Avenue	I	41
Lake High — Forty-seventh Street and Union Avenue	I	35
Gladstone — South Robey Street and Washburne Avenue	3	118
St. Xavier's Academy - Forty-ninth Street and Evans Avenue	2	35
Altgeld — Seventy-first and Loomis Streets	I	36
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	58
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	42
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	70
Henry Clay - One hundred and Thirty-third Street and Su-		
perior Avenue	I	44
Parkside — Seventieth Street and East End Avenue	I	34
John C. Conley — Leavitt Street and Belle Plaine Avenue	I	39
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	2	36
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	40
Morgan Park — Morgan Park, Illinois.	1	38
St. Vincent's High — Webster Avenue, corner Sheffield Avenue	2	35
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	2	45
Minnesota University — Minneapolis, Minnesota	I	42
Hyde Park High - Fifty-Seventh Street and Kimbark Avenue	I	96
University of Chicago — Chicago, Illinois.	ĩ	30
University of Chicago — Chicago, Illinois.	I	30
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	2	54
Thornton Township High — Harvey, Illinois	I	45

Herewith are also submitted financial statements, list of accessions, names of members, etc.

Frederick J. V. Skiff, Director.

## FINANCIAL STATEMENT.

## GENERAL ACCOUNT.

## RECEIPTS AND DISBURSEMENTS

From January 1, 1908, to December 31, 1908.

### Receipts.

Cash in Treasurer's hands, December 31, 1907		\$14,072.28
Petty Cash on hand, December 31, 1907 .		739.95
Dues of Members.		1,770.00
Admissions and Check Rooms		5,354.70
Sale of Guides		406.25
South Park Commissioners	*	15,000.00
Huntington W. Jackson Library Fund		40.00
Field Endowment Income		150,046.93
Interest on Investments.		45,585.19
Interest on Bank Balances		771.80
Sundry Receipts		1,216.83
Mrs. Timothy B. Blackstone, Thibetan Fund		30,000.00
R. F. Cummings Philippine Fund		5,500.00
		070 502 02

\$270,503.93

DISBURSEMENTS.

Salaries					\$76,993.38
Guard Service					12,536.59
5	• •		•		8,920.83
Fire Protection		•	•		3,870.60
Heat and Light —					
	• •			\$3,765.66	
	• •		•	5,497.14	
Gas			•	334.73	
Sundries	• •		•	1,049.69	10,647.22
Repairs and Alterations —					
Wages of Carpenters, Pair	nters	, R	oof-		
ers					
Material used — paints, o	ils, l	lum	ber,		
glass, etc				1,521.27	14,009.38
Furniture and Fixtures —					
Cases and Bases.				29,743.98	
Office Furniture				502.34	30,246.32
The Liberry					0.1-1-0-
The Library —					
Books	•	• •	•	2,923.44	
Binding	• •		•	998.50	
Sundries	• •	• •	•	105.85	4,027.79
Sections of Printing and Photography	· .				1,943.60
Collections, etc., Purchased					18,050.19
Departmental Expenses					4,679.03
Guide, Eighth Edition					128.62
General Expense Account —					
Freight, Expressage and T				3,959.52	
Stationery, Postage and Te				867.85	
Lecture Course Expense	•		•	624.32	
International Audit Co.	• •			250.00	
Publications	• •		•	2,162.65	
Expeditions	• •			8,395.95	
Sundries	• •	• •	•	821.42	17,081.71
Mrs. Timothy B. Blackstone Fund					14,900.00
R. F. Cummings, Philippine Fund					4,380.40
					\$222,415.66
Petty Cash				739.95	
In Treasurer's hands, December 31, 1			•	47,348.32	48,088.27
	900	•	•	471540152	
					\$270,503.93

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# ATTENDANCE AND RECEIPTS FROM JANUARY 1, 1908, TO DECEMBER 31, 1908.

Attendance.

TITEADANCE.	
Paid Attendance —	
Adults	05
Children	57 19,862
Free Admission on Pay Days	
School Children 5,5	81
Students	89
Teachers	28
Members: Corporate	29
Annual	61
Life	9
Officers' Families	64
Special	8 I
Press	5 11,547
Admission on Free Days —	
Saturdays	1.1
Sundays	79 184,193
Total Attendance	215,602
Highest Attendance on any one day (August 23, 1908)	7,376
Highest Paid Attendance on any one day (September 7,	
1908) <b></b>	456
Average Daily Admissions (366 days)	589
Average Paid Admissions (262 days)	75
Receipts.	
Guides Sold — 1,625 at 25 cents each	\$406.25
Articles Checked — 11,861 at 5 cents each	593.05
Admissions	4,761.65
	\$5,760.95

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HALL 78. NON-METALLIC MINERALS.

JAN., 1909.

## ACCESSIONS.

## DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) AYER, EDWARD E., Chicago. 1 red pigment - Egypt. BARBER, C. M., La Porte, Indiana. I fish trap, of split cane arranged and fastened to form a narrow cane with handle of cane - Lake Atitlan, Guatemala. BROOKLYN INSTITUTE MUSEUM, Brooklyn, New York. 23 Anthropological photographs - Southwest (exchange.) DEISHER, H. K., Kutztown, Pa. g large photographs of groups of baskets of donor's collection FIELD MUSEUM OF NATURAL HISTORY. Collected by E. E. Aver: Archæological objects - Egypt and Italy. Ethnological objects - from Nubia. Collected by F. C. Cole: Ethnological objects - Luzon and Palawan Islands. Collected by Geo. A. Dorsey: Ethnological specimens - Java. Ethnological specimens - Bismarck Arch. Ethnological specimens of the Todas - Nilgiri Hills, India. Crania, human - New Ireland, Crania, human — German New Guinea. Objects of Hindu Religion - Madras, India. Singhalese Ethnology - Ceylon. Ethnological specimens - Solomon Islands. Boomerangs, arrow heads, etc. - Australia. Ethnological specimens - German New Guinea. Ethnological specimens - New Ireland and adjacent Islands. Collected by B. Laufer: Ethnological objects - Sikkim. Purchases: Winnebago blood doctor's outfit. I wooden ladle, I quirt (bone handle), I game (feet bones of deer), I quiver (buffalo hide), I bow, I knife (deer horn handle) -Black River Falls, Wisconsin, I skull of an African of Lumba tribe with tribal marks, 2 central incisors of lower jaw removed and sockets filled, also notch between two upper central incisors - Africa.

Sacred medicine bundle.

Buffalo robe.

Large gourd rattle of the Pawnee Indians.

- Buckskin shirt, trimmed with locks of hair, buckskin fringe, broad bands of old colored bead and large ornamentations in colored porcupine quill work on front and back.
- Ethnological objects from Nebraskan Winnebago Indians Winnebago, Nebraska.
- I drum stick, I deer necklace, and bear claw.
- 2 medicine rattles.

r ladle.

3 balls of native twine.

2 native made bags.

Ethnological material - Winnebago.

1 squaw pipe - Wisconsin.

Ethnological material — German New Guinea.

HALL, LIEUT. C. S., United States Army.

Saddle bag of tanned hide with long fringe of same — Sierra Madre Mts., Sonora, Mexico.

HIGINBOTHAM, H. N., Chicago.

1 chipped flint arrow point.

- 1 chipped flint blade --- Gary, Indiana.
- HOWARD, MRS. C. H.

1 piece of timber rafter from ruins - Casa Grande, Gila Valley,

- Arizona.
- HUSSAR, MRS. LILIAN, Chicago.

Ethnological objects - Camarine Prova, Luzon, Philippine Islands.

LARKIN, T. J., Chicago.

Sinew backed bow, eight arrows and buffalo hide quiver — White Earth, North Dakota.

MUSEUM FÜR VÖLKERKUNDE, Berlin, Germany.

Ethnological objects - Brazil (exchange).

McCORMICK, CYRUS H., Chicago.

2 Chilcotin baskets.

OPPENHEIM, M. A., Chicago.

I rain coat of intestine, sewed with sinew — Katzebue Sound, Alaska.

PRICE, JOHN E., Seattle, Washington.

1 Apache Indian medicine man's cap — Mexican border.

SNOW, EDGAR M., Chicago.

Fire sticks, obtained by donor from Samoa.

SPENCER, REV. IRVING, Chicago.

4 wooden figures (2 on one base, 2 singly), 1 wooden dish, animal shape with lid back — Bana, N. V. P. I.

QUIBELL, J. E., Bedrashien, Egypt.

2 photographs and one plan of the tomb of Niterieser.

#### DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) BARTLETT, H. H., Cambridge, Massachusetts. 6 herbarium specimens — Massachusetts and Georgia. BEBB. ROBERT, Chicago. 2 herbarium specimens — Europe. BOLIVIAN COMMISSION W. C. E., 1803, Chicago. 10 economic specimens — Bolivia. 1 herbarium specimen — Bolivia. BOWERS, W. V., Chicago. 2 herbarium specimens --- Illinois. BRANDEGEE, T. S., Berkelev, California. 2 herbarium specimens - Mexico. BRANNON, M. A., University, North Dakota. Herbarium specimens - Colorado. CALDWELL, OTIS W., Chicago. I Microcycas calocoma parts of staminate and ovulate cones ----Cuba. CALKINS, W. W., Berwyn, Illinois. 1 herbarium specimen - North Dakota. 1 herbarium specimen - Illinois. 78 herbarium specimens - Illinois. 35 herbarium specimens - Illinois. 1 herbarium specimen — Illinois. CHASE, MRS. AGNES, Washington, D. C. 6 plant descriptions. CONZATTI CASSIANO, Oaxaca de Juarez, Mexico. 162 herbarium specimens — Mexico. 94 herbarium specimens - Mexico. 97 herbarium specimens - Mexico. COULTER, DR. J. M., Chicago. 3 drawings. o fibers. COWLES, DR. HENRY C., Chicago. 1 herbarium specimen — Illinois. CUSICK, WM. C., Union, Oregon. 16 herbarium specimens - Oregon. DETMERS, MISS FREDA, Columbus, Ohio. 9 herbarium specimens. EDUCATIONAL MUSEUM, St. Louis, Mo. 1 tappa cloth -- Pacific Islands. FAWCETT, GEO. L., Miami, Florida. 1 flowers of Vanilla Eggersii. FERRY, J. F., Chicago. 1 herbarium specimen — Wisconsin. FIELD MUSEUM OF NATURAL HISTORY. Collated by J. M. Greenman: 2 plant descriptions.

2 plant descriptions. 2 photographs of plants. I description of Citharexylum lucidum. 5 plant descriptions. Collated by C. F. Millspaugh: 11 drawings and plates. 224 drawings tracings, and descriptions. 4 herbarium specimens. Collated by Section of Photography and Illustration: 1 photograph of Abronia Carletoni. Collected by L. J. K. Brace. 1 herbarium specimen — Bahamas. Collected by R. A. Dixon: 324 herbarium specimens - Texas. Collected by O. E. Lansing, Jr.: 91 herbarium specimens - Lake Chicago Basin. Collected by C. F. Millspaugh: 1 Juglans regia (nuts) Paris, France. Collected by H. H. Smith: 180 slab specimens — Missouri. 78 wheel specimens - Missouri. 170 board specimens - Missouri. 12 herbarium specimens — Missouri. 48 winter twigs - Missouri. 24 fruit specimens - Missouri. 11 fungi - Missouri. 20 economic specimens — Missouri 448 herbarium specimens — Missouri. 168 branch specimens - Missouri. 20 hand specimens — Missouri. 352 herbarium specimens - West Virginia. 17 dry fruits - West Virginia. 38 hand specimens - West Virginia 101 slab specimens - West Virginia. 82 board specimens - West Virginia. 29 wheel specimens - West Virginia. 28 economic specimens — West Virginia. 40 winter twigs - West Virginia. Collected by P. Wilson and L. J. K. Brace: 756 herbarium specimens — Bahamas. Purchases: 430 herbarium specimens - Guatemala. 4 economic specimens. 680 herbarium specimens - Canada, Alaska, Labrador and Nova Scotia. 276 herbarium specimens - Nevada and California. 176 herbarium specimens — Paraguay 296 herbarium specimens — Oregon and Washington.

7.077 herbarium specimens — various localities. 163 herbarium specimens - United States. 616 herbarium specimens — Guatemala. 030 herbarium specimens - Western United States. 29 herbarium specimens — United States. 170 herbarium specimens — Montana. 872 herbarium specimens - Canada. 244 herbarium specimens — Mexico. 1.005 herbarium specimens — United States and Mexico. 4 specimens economic material - France and Turkey. 142 herbarium specimens — California. 8 economic specimens drugs. 261 herbarium specimens - Jerusalem. 7 economic specimens - Jerusalem 2 Vitis vinifera grape sugar, Fœniculum vulgare - Fennel seed. FULLER, GEO. D., Chicago. 16 herbarium specimens — Alberta GARVENS, W., New Rochelle, N. Y. 70 herbarium specimens — Florida. 109 herbarium specimens — Maine and New York. GATES. FRANK C., Chicago. 1 herbarium specimen — Illinois. GEHE & COMPANY, A. G., Dresden, Germany. 4 oar weed surgical appliances. GRAY HERBARIUM, Cambridge, Mass. 285 herbarium specimens — Bahamas (exchange). GREENMAN, J. M., Chicago. r colored plate of dacca cotton. 1 herbarium specimen — Africa. I photograph of Zea Mays L. 1 herbarium specimen — Massachusetts. GRINNELL, JOSEPH, Pasadena, California. 63 herbarium specimens - California. GUTHRIE, OSSIAN Chicago. 2 white oak (fossils) Chicago, Illinois. HILL, E. J., Chicago. 65 herbarium specimens — United States. INSTITUTIONS OF SCIENCE AND ART, Dublin, Ireland. 29 samples of dyed yarns (exchange). IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS Ames. Iowa. 118 herbarium specimens --- China KING, E. W., Coyame, Chihuahua, Mexico. 1 herbarium specimen — Mexico. KONIGL BOTANISCHES MUSEUM, Berlin, Germany. 1 herbarium specimen — Guatemala. KNUDSON, P. E., Ephraim, Wis. r fruits of Celastrus scandens L - Wisconsin.

LANSING, O. E., JR., Chicago. 1 economic specimen Lycoperdon gemmatum --- Illinois. LEWIS, A. B., Chicago. 1 specimen cork — British East Africa. LUNELL, DR. J., Leeds, North Dakota. 11 herbarium specimens — North Dakota. MILLSPAUGH, C. F., Chicago. 2 economic specimens - New Jersey. 1 Chrysobalanus Icaco, varach candle — Africa. 1 sophisticated maple sugar. I barley sugar. 14 economic specimens — Austria, Germany, Italy, and Sicily. 3 specimens — olives, opium, almonds — Palestine and Turkey. I Catalpa speciosa fruit — Lake Chicago Basin. 1 Catalpa bignonioides fruit — Lake Chicago Basin. MOSELEY, E. L., Sandusky, Ohio. 743 herbarium specimens -- Ohio (exchange). MYERS, G. W., Chicago. 2 herbarium specimens — Colorado. NEW MEXICO AGRICULTURAL EXPERIMENT STATION, New Mexico. 204 herbarium specimens - New Mexico. NEW YORK BOTANICAL GARDEN, Bronx Park, New York City. 26 herbarium specimens — New Jersey and Jamaica (exchange). 9 herbarium specimens - various localities (exchange). 6 herbarium specimens - New Providence, Bahamas (exchange). 29 herbarium specimens — Barbados (exchange). 1 herbarium specimen - Jamaica. 177 herbarium specimens — Bahamas and Jamaica (exchange). PRINGLE, C. G., Burlington, Vermont. I herbarium specimen — Mexico. REECHER, S. E., Chicago. 24 herbarium specimens — Illinois. 7 herbarium specimens - Illinois. 8 herbarium specimens - Illinois. ROWLEE, W. W., Ithaca, N. Y. I Dipsacus sylvestris fruits - New York. SEFFER, DR. PEHR OLSSON, Mexico City, Mexico. 46 rubber samples - Mexico. SKIFF, F. J. V., Chicago. 1 Cyperus Papyrus - Spain. SLOCOM, A. W., Chicago. 1 specimen fungus - Michigan. SMITH, W. O., Winchester, Indiana. 1 diatomaceous earth - New York. UNITED STATES NATIONAL MUSEUM, Washington, D. C. 251 herbarium specimens — Mexico (exchange). 1 herbarium specimen — Ontario, Canada.

VAN HOUTEN AND ZOON, C. J., Chicago.

WILLARD, O. T., Chicago.

r herbarium specimen -- Illinois. WOOTON, E. O., Mesilla Park, New Mexico. 13 herbarium specimens - New Mexico. DEPARTMENT OF GEOLOGY (ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) ADAMS. C. C., University of Chicago, Chicago. I specimen thomsonite in matrix -- Isle Royale, Lake Superior. ALABAMA WHITE MARBLE CO., Gantt's Quarry, Alabama. 6 polished slabs marble — Gantt's Quarry, Alabama. ALBRIGHT, W. F., Chicago. Bones and tooth of mammoth - Dallas, Texas. ATLAS SCHOOL SUPPLY CO., Chicago. Relief map of Palestine. BRIDGE, B., Chicago. 1 specimen moss agate — Guernsey, Wyoming. CARNEGIE MUSEUM, Pittsburgh, Pennsylvania. Casts of limb bones and feet of Apatosaurus. COLORADO SCHOOL OF MINES, Golden, Colorado, 22 specimens rocks and minerals -- Colorado (exchange). CRAWFORD, W. L., JR., Dallas, Texas. 1 lower jaw of Smilodon, 2 leg bones of mammoth - Dallas, Texas. DESERET MUSEUM, Salt Lake City, Utah. 33 large crystals of selenite - South Wash, Wayne Co., Utah (exchange). DAVIES, D. C., Chicago. 2 specimens marl - Radcliffe on Trent, Notts, England. ESTATE OF H. A. WARD, Chicago. Section of Lampa meteorite --- Chile. FIELD MUSEUM OF NATURAL HISTORY. Collected by O. C. Farrington: 3 specimens clay and cement materials - Dallas, Texas. 22 specimens peridotite, 3 specimens asphalt, 7 specimens gypsum, 1 specimen Ostrea - Southwestern Arkansas. Collected by J. F. Ferry: 6 specimens rock of volcano of Turrialba, Costa Rica. I specimen rock phosphate - Aruba, Dutch West Indies. Collected by H. W. Nichols: 1 specimen bog clay, 1 specimen soil - Hammond, Indiana. Collected by E. S. Riggs: Vertebrate fossils from Loup Fork Miocene, Raw Hide Buttes, Wyoming, as follows: 7 specimens extinct camel representing two genera. 4 specimens oreodonts representing three genera.

- 5 specimens extinct horse.
- 2 specimens extinct dog.
- 2 specimens Moropus.
- 10 specimens extinct rhinoceros.
- Collected by A. W. Slocom:
  - 4,950 specimens Cretaceous and Tertiary invertebrates.
  - 5 specimens marl, 5 specimens concretions, 3 specimens minerals Mississippi.
  - 11 specimens fossil corals Little Traverse Bay, Michigan.
  - 117 specimens Devonian invertebrates, 46 specimens pebbles and concretions Emmet Co., Michigan.

Purchases:

- 1 Leighton meteorite.
- 2 sections Ainsworth and Williamstown meteorites.
- 68 species fossil corals Falls of the Ohio.
- 200 specimens invertebrate fossils; 25 specimens vertebrate fossils Patagonia.
- 1 specimen vivianite Leadville, Colorado.
- 3 specimens chrysoberyl Peru, Maine.
- 6 specimens minerals various localities.
- 4 relief maps.
- 8 specimens gold ore Rawhide, Nevada.
- 3 mineral specimens.
- 1 specimen tetrahedrite Utah.
- Skull, tusk, and miscellaneous bones of mammoth Alaska.

4 mineral specimens.

- GAMBA, F. PEREIRA, Pasto, U. S. of Colombia.
  - 1 specimen gold ore near River Guachicono, Colombia, South America.
- IOLA CO-OPERATIVE ZINC & LEAD CO., Zinc, Arkansas.
  - 1 specimen blende, 1 specimen blende concentrates, 1 specimen float galena — Iola Mine, Zinc, Arkansas.
- JOHNSTON, L., Chicago.

8 specimens rock-crystal - Jonesboro, Arkansas.

KURTZ, S. A., Bellevue, Ohio.

1 calcite crystal — Bellevue, Ohio.

LARKIN, THOMAS J., Chicago.

1 specimen opal in breccia — Fort Bayard, New Mexico.

MILLER, M. J., Chicago.

5 specimens cinnabar pebbles — Washington Creek, Alaska.

MOSELEY, E. L., Sandusky, Ohio.

94 specimens fossils, 13 specimens minerals, 11 geological specimens — Sandusky, Ohio (exchange).

NEWBERRY, W. W., Chicago.

18 specimens ores, 16 specimens pyrite, 13 specimens fossils, 2 specimens siliceous oolite — Bromide, Oklahoma.

PHILADELPHIA MINERALOGICAL CLUB, Philadelphia, Pennsylvania. 54 specimens minerals of Pennsylvania (exchange). .

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FIELD MUSEUM OF NATURAL HISTORY.



GROUP OF WOODCHUCKS. Marmota monax. (LINN.)

RING, H. A., Nome, Alaska.

2 specimens placer gold ores — Gold Run Creek — Seward Peninsula, Alaska

VERMONT MARBLE CO., Proctor, Vermont.

15 polished slabs of marble — Vermont.

# DEPARTMENT OF ZOÖLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) AKELEY, MRS. C. E., Chicago. 2 beetles - Kilo, Congo Region, Africa. BARBER, C. M., Chicago. I waterbug - Chicago. 6 frogs - Chicago. BARKER, F. H., Victoria, Australia. 41 shells - Victoria, Australia (exchange). BRAZIL, DR. VITAL, Sao Paulo, Brazil. 11 snakes - Sao Paulo, Brazil (exchange). CARPENTER, C. H., Chicago. 1 dragonfly - Illinois. 1 spider — Michigan. CARRIAKER, M. A., JR. 12 fishes — Costa Rica (exchange). CHAVES DIOCLECIANO, Managua, Nicaragua. 7 beetles, 1 moth, 55 butterflies — Nicaragua (exchange). CHILDREN'S MUSEUM, Brooklyn, New York. 2 fishes - Guatemala. COBB, B. B., Chicago. 1 turtle - Chicago. DEUBLER, L., Chicago. 1 beetle - Chicago. DEWEY, C. L., Chicago. 1 turtle - Dowagiac, Mich. FARRINGTON, O. C., Chicago. 1 American woodcock — Chicago. FIELD MUSEUM OF NATURAL HISTORY. Collected by C. E. Akeley: 2 eggs of the Secretary bird - British East Africa. Collected by C. M. Barber: 6 snakes, 7 frogs, 1 salamander - Willow Springs, Illinois. 150 fishes - Willow Springs and Lockport, Illinois. Collected by C. B. Cory: Nest and eggs of Prothonotary warbler — English Lake, Indiana. Collected by N. Dearborn: 50 fishes — Venezuela. 204 specimens dragonflies, bird lice, bugs, grasshoppers, beetles, butterflies, moths and flies - Venezuela.

27 lizards — Curacao, Dutch West Indies.

1,115 bird skins - Venezuela and adjacent Islands.

Collected by C. L. Dewey:

9 black terns, 1 least bittern, 3 yellowhead blackbirds.

8 redwinged blackbirds, 1 bobolink, 2 king rails, 2 sora rails, nestlings — Fox Lake, Illinois.

Collected by Geo. A. Dorsey and Mrs. Clemens:

531 specimens shells — various localities.

Collected by J. F. Ferry:

1,000 bird skins — Costa Rica and Panama.

1,100 bird skins - Venezuela and adjacent Islands.

1 heron, 2 blackbirds, 9 woodpeckers, 11 flycatchers, 3 vireos, 5

thrushes, 7 wrens, nuthatches and chickadees, 8 sparrows, 2 tanagers, 28 warblers, 2 cuckoos — Woodruff, Wisconsin.

100 specimen shells.

2 lizards, 1 toad — Costa Rica.

1 snake, 9 lizards — Aruba, Dutch West Indies.

2 lizards, 1 snake — Colon, Panama.

1 toad, 3 lizards — Costa Rica.

1 toad, 4 lizards, 1 snake — Costa Rica.

6 lizards - Bonaire, Dutch West Indies.

1 wasp, 2 beetles, 2 bugs, 3 bird lice, 1 grasshopper, 1 centipede — various localities.

3 thrushes, 2 vireos, 2 warblers, 1 sparrow, 1 swallow, 1 flycatcher, 1 rail, 1 snipe — Lake County, Illinois.

Collected by W. J. Gerhard:

1 toad.

397 specimens dragonflies, grasshoppers, bugs, beetles, butterflies,

moths, flies, bees, wasps and parasites — Illinois and Indiana. Collected by E. Heller:

176 mammal skins, 5 mammal skeletons, 24 mammals in alcohol — Louisiana.

2 snakes, 12 lizards, 1 salamander — Louisiana.

Collected by S. F. Hildebrand:

1 salamander — Wolf Lake, Indiana.

Collected by S. E. Meek:

2 fishes — Millers, Indiana.

1 snake — Millers, Indiana.

1 snake — Pine, Indiana.

3 fishes - Jackson Park, Chicago.

8 fishes — Pine, Indiana.

11 fishes — Baudette, Minn.

6 fishes — Liverpool, Indiana.

10 fishes — Fox Lake, Illinois.

17 fishes — Jackson Park, Chicago.

20 fishes — Millers, Indiana.

63 fishes — Pine, Indiana.

Collected by S. E. Meek and W. Heim: s turtles, 1 salamander — Meredosia, Illinois, 30 fishes --- Meredosia, Illinois. 31 fishes -- Pullman, Illinois. 26 fishes - Alton, Illinois. Collected by S. E. Meek, S. F. Hildebrand, and J. Freisser: 140 fishes - Fox River and McHenry, Illinois. Collected by S. E. Meek and V. Shelford: 105 fishes - Calumet River, Clarke, Indiana. Collected by A. W. Slocom: 157 fresh water shells - Emmet Co., Michigan. 20 beetles, moth, bugs, bee, spider, grasshopper, etc. -- Mississippi. 203 fresh water shells - Mississippi. Collected by H. H. Smith: 2 turtles — Batesville, Missouri. 1 hornet's nest — West Virginia. Collected by L. L. Pray: 1 blue jay's skin — Dowagiac, Mich. Collected by A<sup>4</sup>. B. Wolcott: 177 specimens dragonflies, grasshoppers, bugs, moths, flies, beetles, bees. etc. - Illinois and Indiana. Purchases: 6 snakes, 14 lizards, 18 toads, 7 frogs - Costa Rica. 620 sets (2,500 specimens) bird eggs - various localities. 146 specimens spiders, scorpions, grasshoppers, mantids, roaches, bugs, bees and wasps, beetles, moths and butterflies - Palestine. 42 specimens jointed spider, digger-wasp, beetles - Arizona. 153 specimens insects, 18 specimens reptiles, 51 mammal skins -Arizona. 1 porcupine fish --- Jamaica. 50.000 specimens butterflies and moths. 60 mammal skins - various localities. 16 young alligators — Florida. 27 alligator eggs — Florida. 5 otter skins - Queen Charlotte Islands. 5 mammal skins — British Guiana. 2 finches - Horner's Ranch, Hawaii. 1 albinistic robin, 1 albinistic sparrow — Geneva, Illinois. 2 jays — various localities. 1 jaeger gull, 1 vega gull - various localities. 213 bird eggs - Iowa. 1 goose, 1 duck, 3 nighthawks, 1 sparrow - various localities. 2 bird skins. 1 whooping swan - Greenland. 13 bird skins — Costa Rica. 14 bird skins. 2 mammal skins. 2 barn owls - Enid, O. T.

- 1 golden eagle Custer, Wyoming.
- 298 bird skins British Guiana.

Mounted by E. N. Gueret:

- $\scriptstyle\rm I$  skeleton of tree frog.
- ${\mathfrak z}$  skeletons of turtle and snakes.
- 2 skeletons of turtles.
- 3 skeletons of turtles.
- 1 skeleton of fish.
- I skeleton of turtle.
- I skeleton of turtle.
- 1 skeleton of alligator.
- I skeleton of turtle.
- I skeleton of Dowitcher bird.
- 1 skeleton of blanding's turtle.
- 1 skeleton of black bear.
- 2 skeletons of alligator and capybara.
- I skeleton of tapir.
- I skeleton of sea elephant.
- 3 skeletons of turtles.
- I skeleton of screech-owl.
- I skeleton of fish.
- 3 skeletons of snapping turtles.
- 3 skeletons of turtles.
- I skeleton of box turtle.
- 1 skeleton of fish.
- 1 skeleton of gar-pike.
- 5 skeletons of fishes.
- I skeleton of turtle.
- I skeleton of bird.
- I skeleton of screech-owl.
- FRIESSER, J., Chicago.
  - 1 beetle, 1 fly larva, 1 stonefly, 1 fly various localities.
  - 1 snake, 6 frogs McHenry, Illinois.
  - 3 fishes McHenry, Illinois.
- FOWLER, DR. W. N., Bluffton, Indiana.
  - 2 eider ducks, 2 ivory gulls, 1 puffin, 1 jaeger.
- GEILHUFE, F. H., Chicago
- 2 bullfrogs Liverpool, Indiana.
- GUERET, E. N., Chicago.
  - 1 beetle Chicago.
- HACK, PAUL, Orope, Venezuela.
  - 8 beetles Orope, Venezuela.
- HERTZ, A., Chicago.
  - 3 roaches, 1 grasshopper Illinois and Indiana.
- HILDEBRAND, S. F., Chicago.
  - 1 spider Chicago.
- HOWE, MURRAY, Chicago.
  - 6 muskrats Iowa.

HULL AND BANGS, Waukegan, Illinois. 5 crossbills - Waukegan, Illinois. HUME, I. A., Chicago, 1 red bat - Chicago. KENKEL, L. V., Chicago. 60 beetles - Michigan. KWIAT, A., Chicago. 2 dragonflies - Clarke, Indiana. LANSING, O. E., IR., Chicago. 1 lizard - Pine, Indiana. LILIEBLAD, E., Chicago. 1 bee, 2 wasps - Memphis, Tenn. LONGLEY, W. E., Oak Park, Illinois. 4 parasites - Oak Park, Illinois. MANWELL, J. M., Chicago. 1 bumblebee — Chicago. McCORMICK, CYRUS H., Chicago, 6 premolars and molars of horse. 5 beetles — Brazil. MILLSPÄUGH, C. F., Chicago. 2 moths - Toarmina, Sicily. MORRILL, MRS. A. D., Chicago. 1 mounted aptervx. I mounted bird of paradise. MOSELEY, E. L., Sandusky, Ohio. 8 snakes. 8 turtles, 1 salamander - Sandusky, Ohio (exchange). 10 snakes, 4 turtles — Sandusky, Ohio (exchange). MUELLER, FRED M., Chicago. 1 beetle — Germany. MUNZNER, H., Chicago. 1 beetle, 8 centipedes, 3 spiders - Illinois. NATIONAL MUSEUM, Costa Rica. 22 fishes — Costa Rica. O'BRIEN, B., Corliss, Wis. 1 mole cricket - Corliss, Wis. RIECK, A., Chicago. 1 bug - Chicago. SMITH, CASSIUS F., Chicago. 2 water bugs, 11 beetles - Illinois and Mexico. SMITH, H. L., Chicago. 2 wasp nests - Chicago. STEPHENSON, F. M., Chicago. I Mexican deer. I grizzly bear — El Paso, Texas. 2 cinnamon bears - El Paso, Texas. STRECKER, J. K., JR., Waco, Texas. 37 specimens beetles, dragon flies, velvet-ant, butterflies - Texas (exchange).

TRIGGS, CHAS. W., Chicago.

ı turtle — Canada.

VON LENGERKE & ANTOINE, Chicago.

1 great bustard.

WALKER, DR. J. W., Chicago.

1 butterfly — Millers, Indiana.

WATERBURY, J. C.

1 salamander — Chicago.

WALCOTT, A. B., Chicago.

1 tree toad - Beach, Illinois.

WRIGHT, A. H., New Concord, Ohio.

1 great horned owl - New Concord, Ohio.

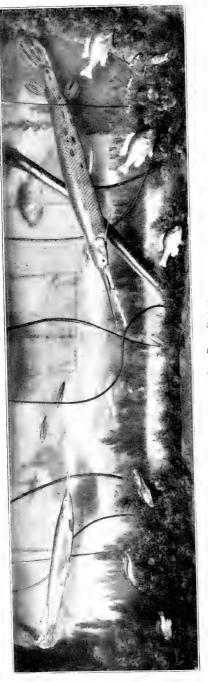
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Rendiconti e memorie, ser. 3a, v. 4-5, 1904-1906.

ALABAMA AGRICULTURAL EXPERIMENT STATION, Auburn, Alabama. Bulletin, current numbers (gift).

ALABAMA DEPARTMENT OF ARCHIVES AND HISTORY, Montgomery, Alabama.

Bulletin, no. 1.

ALLEN, GLOVER M., Cambridge, Massachusetts.

AMBROSETTI, JUAN B., Buenos Aires, Argentina.

I pamphlet.

AMERICAN ACADEMY OF ARTS AND SCIENCES, Cambridge, Massachusetts.

Memoirs, v. 13, no. 6.

Proceedings, current numbers.

AMERICAN ANTIQUARIAN SOCIETY, Boston, Massachusetts. Proceedings, v. 10.

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Proceedings, first annual meeting, 1907.

Women in industry (gift).

AMERICAN ASSOCIATION OF MUSEUMS, Pittsburgh, Pennsylvania. Proceedings, v. 1, 1907 (gift).

AMERICAN CHEMICAL JOURNAL PUBLISHING COMPANY, Baltimore, Maryland.

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- AMERICAN FOLK-LORE SOCIETY, Cambridge, Massachusetts. Journal, current numbers.
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Notizblatt, no. 41, 41a, 42, 43.

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Return, 1908.
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BRÜNN LANDWIRTHSCHAFT LANDES VERSUCHSSTATION FÜR
PFLANZENKULTOR, Brünn, Germany.
Bericht, 1907.
Mitteilungen, 3 nos., 1899–1907.
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BRYN MAWR COLLEGE, Bryn Mawr, Pennsylvania.
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BÜCKING, H., Strassburg, Germany.
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Echinoderma-holothuroidea.
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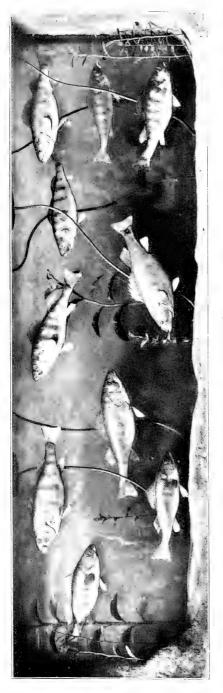
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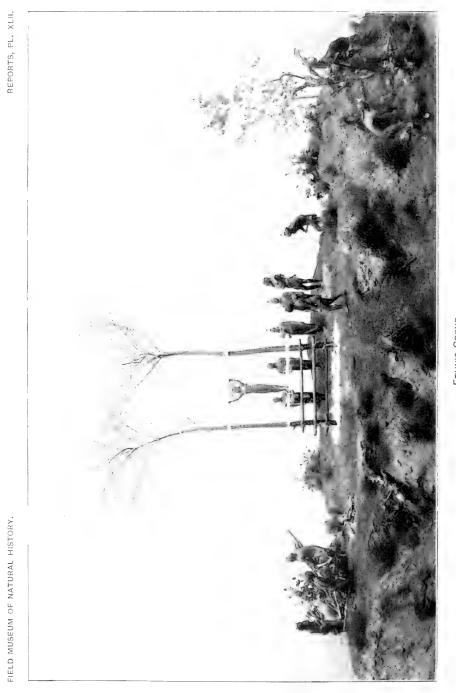
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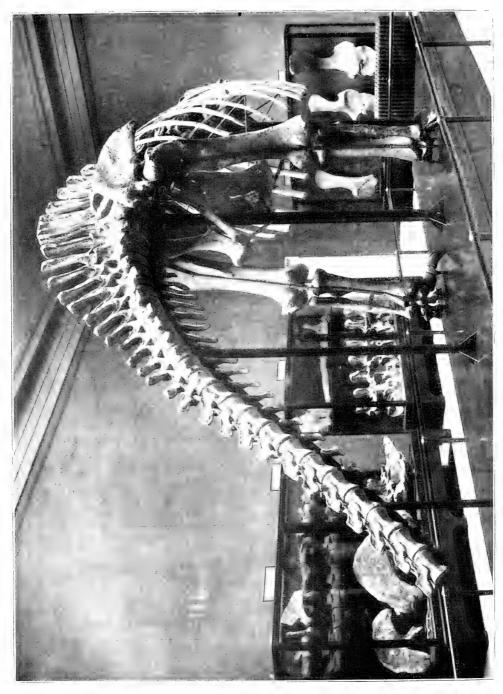
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REPORTS, PL. XLIII.



FIELD MUSEUM OF NATURAL HISTORY.

# ARTICLES OF INCORPORATION.

# STATE OF ILLINOIS.

DEPARTMENT OF STATE. WILLIAM H. HINRICHSEN, Secretary of State.

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

Now, therefore, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINR CHSEN, Secretary of State.

[SEAL.]

Secretary

### TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned, citizens of the United State, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

 $\boldsymbol{r}.$  The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archæology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(Signed),

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohlsaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, Geo. F. Bissell, John R. Walsh, Chas. Fitzsimons, John A, Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, Willaim E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour. STATE OF ILLINOIS, } ss.

COOK COUNTY.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

# CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.

# AMENDED BY-LAWS.

(JANUARY 28, 1907)

### ARTICLE I.

MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons, and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$ro.oo), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

*First.*— Free admittance for the member and family, to the Museum on any day.

Second.— Ten tickets every year, admitting the bearer to the Museum on pay days.

Third.— A copy of all publications of the Museum, when requested.

*Fourth.*— Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time, shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons, or Honorary Members, shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars, at any one time, shall, upon the unanimous vote of the Board of Trustees, become a life member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board of Trustees upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SEC. 6. Honorary Members shall be chosen by the Board of Trustees from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

# ARTICLE II.

### BOARD OF TRUSTEES.

SECTION I. The Board of Trustees shall consist of fifteen members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled by a majority vote of the remaining members of the Board, and the election may be held at any regular meeting.

SEC. 2. Regular meetings of the Board shall be held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

### ARTICLE III.

#### OFFICERS.

SECTION I. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary, and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

#### ARTICLE IV.

#### THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation. He shall make disbursements only upon warrants drawn by the Director

### JAN., 1909. ANNUAL REPORT OF THE DIRECTOR.

and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed.

SEC. 2. The securities and muniments of title belonging to the Corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SEC. 3. The Treasurer shall give bond in such amount, and with such sureties, as shall be approved by the Board of Trustees.

SEC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director. All vouchers executed for expenditures for the construction and maintenance of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

# ARTICLE V.

### THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of all of the property and affairs of the Museum, and shall control the operations of the institution, subject to the authority of the Board of Trustees and the Executive Committee. The Director shall be the official medium of communication between the Board, or its committees, and the scientific staff and maintenance force.

SEC. 2. There shall be four scientific departments of the Museum — Anthropology, Botany, Geology, and Zoölogy, each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board, upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director, upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SEC. 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month. At

the Annual Meeting, the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

#### ARTICLE VI.

#### AUDITOR.

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board.

### ARTICLE VII.

#### COMMITTEES.

SECTION 1. There shall be four Committees, as follows: Finance, Building, Auditing, and Executive.

SEC. 2. The three Committees first above named shall each consist of three members, who shall be elected by ballot by the Board at the Annual Meeting, and who shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairmen by the order in which the members are named in the respective Committee; the first member named shall be Chairman; the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession to the chairmanship being in this order in the event of the absence or disability of the Chairman.

SEC. 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Auditing Committee, and three other members of the Board to be elected by ballot at the Annual Meeting.

SEC. 4. Four members of the Executive Committee shall constitute a quorum, and in all other standing committees, two members shall constitute a quorum. In the event that, owing to the absence or inability of members, a quorum cannot be present at any meeting of any committee, then the Chairman thereof, or his successor, as herein provided, may summon any member of the Board of Trustees to act in place of the absentee.

SEC. 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest, funds, subject to the approval of the Board.

SEC. 6. The Building Committee shall have supervision of the construction, reconstruction, extension, and maintenance of any kind and all buildings used for Museum purposes.

SEC. 7. The Executive Committee shall have supervision over all matters pertaining to the Museum. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommen-

# JAN., 1909. ANNUAL REPORT OF THE DIRECTOR.

dations as to expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the respective Committees shall be considered as authorized to make the expenditures detailed therein. No increase in the expenditures under any items of the Budget shall be made, except by authority of the Board of Trustees, but the Executive Committee shall have authority, in cases of emergency, to expend a further total sum not exceeding two thousand dollars in any one month.

SEC. 8. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SEC. 9. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 10. The President shall be ex-officio a member of all Committees, and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

### ARTICLE VIII.

#### NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board, each year, a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, and the Auditing Committee, and for three members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting, and voted upon at the following Annual Meeting in January.

### ARTICLE IX.

#### AMENDMENTS.

SECTION 1. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.

# HONORARY MEMBERS.

EDWARD E. AYER HARLOW N. HIGINBOTHAM · ROBERT F. CUMMINGS CHARLES B. CORY

STANLEY McCORMICK MRS. TIMOTHY B. BLACKSTONE

DECEASED,

MARY D. STURGES.

# PATRONS.

ALLISON V. ARMOUR WILLIAM I. BUCHANAN VERNON SHAW KENNEDY GEORGE MANIERRE

FREDERICK W. PUTNAM FREDERICK J. V. SKIFF WILLARD A. SMITH EDWIN WALKER

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# CORPORATE MEMBERS.

ADAMS, GEORGE E. ALDIS, OWEN F. ARMOUR, ALLISON V. AYER, EDWARD E.

BARTLETT, A. C. BLACK, JOHN C. BLAIR, WATSON F. BLATCHFORD, ELIPHALET W. LATHROP, BRYAN BUCHANAN, W. I. BUCKINGHAM, EBENEZER BURNHAM, DANIEL H. BUTLER, EDWARD B.

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WACKER, CHARLES H. WALKER, JAMES R. WALKER, WILLIAM B.

WARNER, EZRA J. WEBSTER, GEORGE H. WHITE, A. STAMFORD WHITEHEAD, W. M.

WILSON, MRS. E. C. WILSON, M. H. WOODCOCK, LINDSAY T.

# DECEASED.

BELDEN, J. S. KEENE, JOSEPH BOUTON, N. S. WOOD, S. E. HAMILTON, I. K.

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Stanley Field, President.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 140.

· REPORT SERIES.

Vol. III, No. 4.

# ANNUAL REPORT OF THE DIRECTOR

TO THE

# BOARD OF TRUSTEES

#### FOR THE YEAR 1909.



CHICAGO, U. S. A. January, 1910.

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# ANNUAL REPORT OF THE DIRECTOR. 1909.

To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1909.

In the extension of its scientific operations into remote lands. and in the accumulation of material of great value from new fields consist the more important activities of the Museum for 1000. The expedition into Tibet, in the South Pacific Islands, and in the Philippines, and the acquisition of material by purchase from Egypt and German New Guinea, the Rothrock herbaria and library, and the collections made by subordinate Museum expeditions in Guatemala, British New Guinea, Bermuda, Fiji Islands, etc., have unitedly brought to the stores of the institution the most valuable material from every point of view that any year has recorded. This has been done without interference with the work of rearranging and labeling and recasing old material and the installation of new material in accordance with the plans for the occupation of the new building, inaugurated four years ago. In the introduction of new material to the exhibition series in all departments, and the consequent extension of geographical areas, scientific discrimination has resulted in considerable elimination of material in all departments, both because of space requirements and because of the transfer of apparent duplicates to the study collections, whereby the latter were rendered more complete in themselves without detracting from the interest of the exhibited collections, at least from a popular standpoint. In all the scientific departments increased storage facilities for duplicates and for exchange material have been provided and the spaces and systems for the accommodation of study material have been enlarged and improved. It will be observed too, that in response to the demands for reference books, necessary for the identification and description of material, the departmental libraries have had gratifying additions. The capacity of the printing shop has been doubled to meet the requisitions for labels, the output of which this year has greatly increased. The generous appropriations for exhibition cases for all departments have hardly equaled the requirements, but the pro-

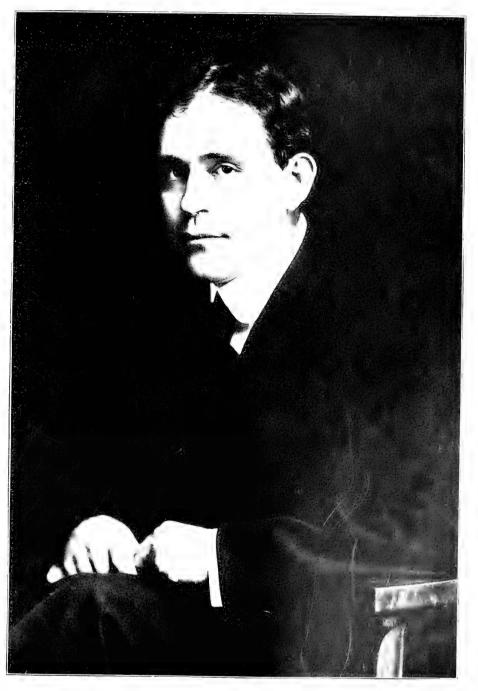
vision made has resulted in a noticeable improvement in the physical appearance of the exhibition halls throughout the building, more especially in the Departments of Botany and Geology, which now present as near an appearance of completeness as it is desirable or possible for an active Museum to attain.

In the publications of the Museum for the year, Curator Cory's "Birds of Illinois and Wisconsin" has attracted much favorable and gratifying criticism, while the descriptive catalogue. by Prof. Tarbell, of the collection of reproductions of the bronzes in the Naples Museum, selected by Mr. Edward E. Ayer, constitutes by general consent a valuable contribution to the literature of classical archæology.

The murder of Dr. William Jones of the Department of Anthropology, while on an expedition for the Museum among the Ilongots of the Philippine Islands, was a shock to his associates in the Museum, no greater, however, than it was to his compeers and to student ethnologists throughout the world. Dr. Jones was a young man of the very best attainments in his chosen field, whose death came while performing service fully as patriotic and high in purpose as that actuating any man whose career has had a tragic close. The Museum has just learned of the intended return of Assistant Curator S. C. Simms, who visited the scene of Dr. Jones' last work and has secured the material and notes gathered by him and caused a suitable monument, funds for which were privately provided, to be erected at the spot where the body of Dr. Jones was buried. The Trustees have caused a bronze memorial tablet designed by Theodore Lescher to be cast for insertion in the wall surrounding the Philippine collection in the Museum.

The engagement of Curator Dorsey to prepare a series of articles on the ethnology and sociology of the Old World for publication in the Chicago Tribune, while depriving the Museum for a time of the important service of a much valued member of the scientific staff, is nevertheless so closely allied with the purposes and possibilities of the Department of Anthropology, that the arrangement might be said to enlarge its scope. The letters thus far published have attracted wide attention and there can be no doubt of the importance of this contribution to the knowledge of those concerned in the sociologic conditions of the world and those specially interested in the rapidly changing intellectual and moral averages of the United States by reason of the introduction into its body politic of the peoples undergoing the capable scrutiny of Dr. Dorsey. Among other changes in the staff is the acceptance by Mr. Wilfred H. Osgood of an appoint-

#### FIELD MUSEUM OF NATURAL HISTORY.



The Late Doctor William Jone .



#### JAN., 1910. ANNUAL REPORT OF THE DIRECTOR.

ment to the Assistant Curatorship of Mammalogy and Ornithology. Mr. Osgood brings to the Department of Zoölogy an established reputation of high order. He is a scholar, an author, and an educator. His better known labors have been with the mammals of the Northwest Coast, and he is an acknowledged authority among the younger group of mammalogists. He is at present in London working up the Museum African material, in which it is believed a number of new types will be found. Prof. B. E. Dahlgren, the well known modeler in wax and glass, especially assigned to the Department of Botany, is an acquisition of importance. A number of striking pieces resulting from the art, skill, and scientific knowledge of Prof. Dahlgren have already been placed on exhibition in the Botanical gallery. One or more minor resignations have been offered in the scientific departments, capable men accepting advancement to higher positions in other institutions.

The creation by the Board of Trustees of an Administration Committee to which was assigned some of the duties theretofore imposed upon the Executive Committee, and the monthly meetings of this new Committee at the Museum, has been of distinct advantage in the more prompt consideration of important questions by the corporation authorities.

The President (Señor Don Manuel Estrada Cabrera) of the Republic of Guatemala requested the United States Bureau of Fisheries to recommend some person to make a survey of Lakes Amatitlan and Atitlan, for the purpose of determining whether and how the quantity and quality of the food and game fishes of those lakes could be increased. Assistant Curator Meek was recommended, because of his knowledge of and interest in Tropical fresh-water fishes. The survey was made by Dr. Meek while on a Museum expedition to Central America. The scientific result of this survey was recorded in a publication of the Museum, Vol. VII, pages 159 to 206. Three other Museum publications with a total of 75 pages resulted from this expedition.

By consent of President Higinbotham of the World's Columbian Exposition, the collection of sketch models loaned to the Museum by the World's Fair of 1893, which have been on exhibition in the Rotunda since 1894, were presented to the West Chicago Park Commissioners for exhibition in the public parks of the city, excepting a few pieces selected by and presented to the Art Institute. A number of these models have been installed in Garfield Park, and add a distinct note of artistic culture to the grounds.

MAINTENANCE.— The Annual Budget authorized by the Board of Trustees provided the sum of  $S_{174,290}$  for the maintenance of the Museum for the fiscal year. The actual amount expended was  $S_{145,512}$ , leaving a balance within the anticipated expense for the year of  $S_{28,778}$ . In addition to the cost of maintenance, sums were expended for collections and new installation, expeditions, etc., that brought the total to  $S_{198,472}$ . As will be observed from the details of the financial statement, the total sum of  $S_{21,163}$ , in individual contributions has also been disbursed for special collections and expeditions.

LECTURE COURSE. — The Spring and Autumn Lecture Courses, comprising course number thirty in March and April and course number thirty-one in October and November, seventeen lectures in all, had the same gratifying attendance that has now become the custom. There have been few lectures when the demands for admission have not exceeded the capacity of the hall, and in no case has the attendance been unsatisfactory.

Following is the Thirtieth Free Lecture Course, with the subjects and lecturers, delivered during the months of March and April, 1909: March 6. — "The R. F. Cummings' Philippine Expedition: Travels Among the Bataks, Apavaos, and Tinguians."

Mr. F. C. Cole, Ethnologist.

- March 13. "The Nation's Resources and the Nation's Future." Prof. Joseph A. Holmes, Geological Survey, Washington, D. C.
- March 20. -- "An Ancient Delta and its Fossil Treasures."

Prof. E. C. Case, University of Michigan.

March 27. — "The Yosemite National Park."

Mr. William E. Curtis, Washington, D. C.

April 3. — "Cross Roads in Evolution."

Dr. N. Dearborn, Assistant Curator of Ornithology. April 10. — "Evolution of Swimming Animals."

Mr. E. N. Gueret, Assistant Curator of Osteology.

April 17. — "The German South Seas — I. Solomon Islands and New Ireland."

Prof. George A. Dorsey, Curator of Anthropology. April 24. — "The German South Seas — II. New Guinea."

Prof. George A. Dorsey, Curator of Anthropology.

Following is the Thirty-first Free Lecture Course, with the subjects and lecturers, delivered during the months of October and November, 1909:

Oct.	2. — ''The Bermuda Islands.''
	Prof. Oliver C. Farrington, Curator of Geology.
Oct.	9. — ''Canadian Lakes.''
	Rev. Frederic Campbell, Brooklyn, New York.
Oct.	16. — "Savage Mutilation and Ornament."
	Dr. Walter Hough, United States National Museum,
	Washington, D. C.
Oct.	23. — "Patterns and Colors of Marbles."
	Prof. Henry W. Nichols, Assistant Curator of Geology.
Oct.	30. — "The Plant Life of the Sea."
	Dr. Marshall A. Howe, Curator New York Botanical
	Garden.
Nov.	6. — "The Indians of the Painted Desert."
	Mr. Frederick I. Monsen, New York City.
Nov.	13. — "Our Present Knowledge of Human Lineage."
	Dr. William Albert Locy, Department of Zoölogy,
	Northwestern University.
Nov.	20. — "Zoölogical Collecting in Alaska."
	Prof. Wilfred H. Osgood, Assistant Curator of Mam-
	malogy and Ornithology.
3.7	

Nov. 27. — "Southern Florida and its Fishes."

Dr. Seth E. Meek, Assistant Curator of Zoölogy.

**PUBLICATIONS.**— The following list is presented of the publications issued since the date of the last report, with the number of pages and illustrations:

- Pub. 129. Geological Series, Vol. III, No. 7. Notes on Various Minerals in the Museum Collection. By O. C. Farrington and E. W. Tillotson, Jr. 32 pp., 17 illustrations (1 colored plate), edition 1,500.
- Pub. 130. Anthropological Series, Vol. VII, No. 3. Catalogue of Bronzes, etc., in Field Museum of Natural History. By F. B. Tarbell. 144 pp., 300 half-tones, edition 2,500.
- Pub. 131. Zoölogical Series, Vol. IX. The Birds of Illinois and Wisconsin, by C. B. Cory, 764 pp., illustrated, edition 2,500.
- Pub. 132. Zoölogical Series, Vol. VII, No. 7. New Species of Fishes from Tropical America. By S. E. Meek. 5 pp., edition 1,500.

- Pub. 133. Report Series, Vol. III, No. 3. Annual Report of the Director to the Board of Trustees, for the year 1908. 108 pp., 10 illustrations (half-tones), edition 2,500.
- Pub. 134. Geological Series, Vol. IV, No. 1. New Echinoids from the Ripley Group of Mississippi. By A. W. Slocom. 16 pp., 3 half-tones, edition 1,500.
- Pub. 135. Ornithological Series, Vol. I, No. 4. Catalogue of a Collection of Birds from British East Africa. By Ned Dearborn. 49 pp., 1 map, edition 1,500.
- Pub. 136. Botanical Series, Vol. II, No. 7. Prænunciæ Bahamenses — 11. Contribution to a Flora of the Bahamian Archipelago. By C. F. Millspaugh. 32 pp., edition 1,500.
- Pub. 137. Ornithological Series, Vol. I, No. 5. The Birds of the Leeward Islands, Carribbean Sea. By C. B. Cory 63 pp., 1 map, edition 1,500.
- Pub. 138. Zoölogical Series, Vol. X, No. 1. A Peculiar Bear from Alaska. By W. H. Osgood. 3 pp., 1 half-tone, edition 1,500.

The Museum exchange list now numbers 1,241 names, of which 649 are in foreign countries and 592 in the United States and its possessions.

The following table shows the number of exchanges with each of the foreign countries:

Argentine Republic	Great Britain	5
Australia 23	Greece	
Austria	Italy	
Belgium	India	
Borneo	Japan	7
Brazil 8	Java 4	ļ
British Guiana	Liberia	Į.
Canada	Malta	
Central America 6	Mexico	7
Ceylon 2	Netherlands	3
Chili 2	New Brunswick	1
China I	New Zealand	5
Cuba 4	Norway 8	3
Denmark	Peru	2
East Africa	Portugal	5
Egypt I	Roumania	I
France . 57	Russia	)
Fiji Islands	Spain	5
Germany 133	Sweden	1

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Constant of a state of a	
Switzerland	6 Uruguay
South Africa	2 West Indies 4
Tasmania .	3 Yucatan I
Trinidad . U. S. Colombia	ι. · ·
	s the number of foreign exchanges
receiving the different publicati	ons:
Anthropological	
Botanical	
Geological	
Ornithological	· · · · · · · · · · · · · · · · · · ·
Zoölogical	337         314         212         287
Report	
	ributed to the different States and
Insular Possessions as follows:	and the second states and
	2 New Jersey 16
Arkansas	, see get a set
California	
Delaware.	
District of Columbia.	o Oregon
Florida	· · · · · · · · · · · · · · · · · · ·
Illinois 5	
Indiana	_
Iowa	
Kansas	7 Texas
T T T	2 Utah 2
	3 Vermont
NC 1 1	9 Washington . 4
Massachusetts	
Michigan	3 Wisconsin . 10
	9 Wyoming 2
3.67	3 Philippine Islands 2
Missouri	
	2 Hawaii 6
Nebraska	7 501
	2
New Hampshire	
The following table shows	s the number of domestic exchanges
receiving the different sublication	ongt

receiving the different publications:

Anthropological						247
Botanical						324
Geological						326
Ornithological .						166
Zoʻological						270
Report						501

337

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THE LIBRARY.— The Library now contains 50,639 volumes distributed as follows:

General library								35,038
Anthropological library								2,136
Botanical library								4,884
Geological library								5,984
Zoölogical library								1,894
Library of Exposition L	iter	atu	re					703
P								50,639

The additions for the year consist of 3,152 books and pamphlets. Including books received with collections, gratifying additions have been made, though the continued source of growth is through exchanges, the publications received in this way being quite an element in the library's accessions. During the year approximately 500 letters have been written soliciting exchanges from contemporary societies not on the exchange list. A number of favorable replies have already been received and exchanges effected. The largest single acquisition received was that which accompanied the Rothrock herbarium, consisting of 342 books and 380 pamphlets. Many of the books filled gaps in the Museum collection, and where they duplicated, the corresponding copy was placed in the Departmental library. The Rothrock library is valuable in that it is representative of the botanical activities of many years and contains volumes of rare works. It is also interesting and significant to note that the price has advanced over the original cost of many of the books in the collection from fifty to seventy-five per cent. Other noteworthy acquisitions were received from the following: Madame Leo Errera, Brussels; Mrs. Henry Dibblee; Mr. Edward E. Aver; Academie des Sciences de L'Empereur Francois Joseph I, Prague; Botanic Gardens, Copenhagen; Deutsch Natur. Medisin. Verein fur Bohm; K. Universitets Bibliotek. Lund; Roval Botanic Gardens of Calcutta; Roval Gardens, Kew: and Superintendent of Documents, Washington. Twenty-five volumes of Linneana were loaned by the University of Chicago to the Museum for use in the Department of Botany. Collaboration has been rendered in the second edition of the Union List of Serials for the libraries of Chicago, and 1,017 titles have been supplied. The list in preparation is to be published by the John Crerar Library. The first edition of this publication has proven of value both to the staff and students generally. An earnest effort is being made to dispose of the unaccessioned duplicate material now in the Library. A list of this material was submitted to each Curator from which

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to select such material as might be desirable to retain. The remainder was then classified and twenty-five typewritten lists were sent to as many societies and libraries, with request for exchange. It was evident from replies received that the majority of these institutions did not have their duplicate material available for exchange. However, small exchanges were effected, and as several of the lists are still out, it is possible that some further exchanges may be made. By request of the United States Department of Agriculture 375 duplicate bulletins and circulars received from that department were returned for redistribution. Fourteen thousand two hundred and twenty cards have been written and inserted in the card catalogues. Monthly installments of the John Crerar Library catalogue have been received. To accommodate the ever increasing card catalogues in the library it became necessary to again add to the card cabinet. In view of the future use of these cabinets it seemed wise that, instead of adding to the wooden cabinets now in use, purchase be made of steel cabinets. A satisfactory type has been adopted.

DEPARTMENTAL CATALOGUING, INVENTORYING, AND LABELING. - The most important collections catalogued in the Department of Anthropology have been the R. F. Cummings' Philippine Collection, secured by Mr. F. C. Cole among the Tinguian and near-by tribes of Northwestern Luzon, and also among the pigmy Bataks and the Tagbanua of Palawan; the collections secured by the Curator in 1908 in India, Cevlon, Sumatra, Java, New Ireland, Admiralty and Solomon Islands; also the superb Parkinson collection from German New Guinea, the gift of Mr. Joseph N. Field of Manchester, England. Additions have been made to the classified Tribal Lists, and the Card Catalogue for the same has been maintained. 5,400 catalogue cards were written and entered in the Inventory Books, which now number 33. The work of labeling has also continued with gratifying results. 3,725 new black labels were placed in the department, distributed as follows: 525 in the Igorot collection; 930 in the Tinguian, Apayao' and Kalinga collections; 835 among the Bella Coola, Tsimshian, and Haida exhibits. The work of labeling the North Court, with its alcoves, has practically been completed. For this purpose 1,350 standard black labels, in aluminum ink, were used. About 85 other large case and hall labels of varying size were placed here and there throughout the department.

The Curator of the Department of Botany reports that the labeling of specimens in cases being installed, and those previously

lacking labels, has been more satisfactory than in previous years; 42 cases have been fully labeled with the prospect of a completely labeled installation by Spring. During the addition of the labels to previously installed collections a number of these were rearranged, and two cases entirely reinstalled, to meet the demands of better methods. The mounting and cataloguing of the smaller accessions of the year is complete, while heavy inroads upon the material in the larger herbaria have been made. 31,679 specimens have been catalogued in the 54 record books of the department, of which 13,959were from the University of Chicago herbarium and 6,000 from the Rothrock collection. The Geographic index and that of the Collectors are both complete to date. The card indices of the department library and of economic plant names have multiplied, 1,250 cards having been written and organized into the 15,850 now in the cases.

All specimens in the Department of Geology received during the year have been inventoried and catalogued, as received, the number of entries for the year being 4,102 and the total number on the Department books 103,081. Sixty cards have been added to the catalogue of vertebrate fossils and a complete card catalogue of the Department library has been made. This numbers to date 1,816 cards. A considerable number of temporary written labels have been prepared and placed in the collections to serve until printed ones can be provided. About 400 such labels were prepared for the collections in Halls 65 and 66, and about 300 for the collections in Hall 72. Some of the latter are more or less descriptive. Sixty-two printed labels have been prepared and distributed in the gem collection in Higinbotham Hall, completing the labelling of this collection, and 271 paleontological labels, some of them descriptive, have been made and distributed in the paleontological collections. In addition, copy for about 800 labels chiefly relating to the economic collections has been prepared and placed in the hands of the printer.

The cataloguing and labeling of specimens in the Department of Zoölogy has continued and at a rate exceeding that of the increase of the collections and encourages the belief that this work, which has fallen behind on account of sudden large accessions in the past, will soon be abreast of other routine work. During the year, about 8,000 regular catalogue entries were made, including 6,700 in Ornithology, 1,200 in Mammalogy, and 100 in Oölogy. Many of the specimens thus catalogued have required new labels and these have been supplied, while a large percentage of the entries have been recorded in the systematic card catalogues. Labels for exhibition specimens have





been prepared and installed from time to time as required. The entire collection of both mammals and birds has been critically examined with regard to possible damage by insects and found to be in excellent condition. Material in pickle has been carefully examined and supplied with fresh preservative. This material, which consists mostly of skins of large mammals secured by Museum expeditions, is being removed from pickle and dressed as fast as possible. Since July 1, about 150 of these large skins have been treated by the tanners.

The year's work on catalogues and inventorying is shown in detail below.

	No. of Record Books.	Total No. of Entries to Dec. 31, 1909.	Entries during 1909.	Total No. of Cards Written.
Department of Anthropology	33	99,543	5,403	103,933
Department of Botany	54	276,421	31,679	
Department of Geology	20	103,081	4,102	6,740
Department of Zoölogy	40	82,206	9,077	28,718
The Library	I 2	72,037	8,116	90,300
Section of Photography .	6	80,762	II,344	

Accessions. -- Among the most important accessions of the year in the Department of Anthropology should be mentioned the two collections from German New Guinea, one from Huon Gulf, numbering 500 specimens; another, a general collection of more than a thousand pieces, from the central coast region. The latter includes carved posts, large carved canoes, and two rare dance masks from Hansa Bay, the larger one more than 16 feet in height. These valuable acquisitions were the gift of Mr. Joseph N. Field of Manchester, England. The material obtained by Mr. Aver last year but not prepared for exhibition until last Spring consisted of 18 strings of beads, composed of carnelian, glass, and glazed earthenware; 18 mortuary stone vases and jars of great beauty and value, among which is a beautiful alabaster vase for ointment; 40 weights of a wide range of sizes, made of stone and copper; a mirror and bottle, each of bronze; 16 stone statuettes, some in a more or less fragmentary condition, among which is a beautiful figure of Osiris and also a fine red stone statue of the twelfth dynasty (inscribed "His father Teta, His mother Nefertari''); 4 mortuary cloths (in frames upon the east wall of Hall 9); I coffin lid of wood; 8 coffin lids of stone, all somewhat fragmentary, with one exception; a large, inscribed brick; 4 burnt clay mortuary offerings; 2 wooden mortuary boxes; 2 small mortuary figures of wood, one containing a rectangular cavity for receiving a papyrus; a mummied hawk; 2 mummied antelopes;

the head of a mummy, a mummy and a rectangular coffin. In addition to several wood carvings and stone tablets there are colored casts of 27 stones in Hatshepsa Temple, representing the procession of the Sacred Boat. Of very special interest is a small wax figure, of the Ptolemaic Period, in the form of Osiris, Lord of Bekha (the Eastern Mountain), found at Tehneh, Province of Mirich, Upper Egypt. Within it is the mummy of a falcon. With the figure are images of 4 genii, along with cakes of an undetermined substance. A portion of this accession consisted of a small group of cinerary vessels from Etruria and ancient Roman bronze vessels, now installed in the North Court. The two large Mastaba tombs, excavated under the direction of Mr. Edward E. Ayer at the Necropolis of Sakara, one of them being the gift of Mr. Martin A. Rverson, referred to in the 1908 report as anticipated accessions, were received at the Museum the past year and given storage in a special brick room constructed at the east unused entrance of the Museum, as it was not considered advisable to erect the tombs in the present building. The tombs filled 206 large cases, some of them ten feet in length, the total shipment weighing 96 tons; the installation of one of the stelæ in Egyptian Hall is referred to in another part of this report. Among gifts from Mr. Edward E. Aver were two rare, carved wooden images from New Ireland. Mr. R. F. Cummings gave a small Mangvan collection, made by Dr. Fletcher Gardner, Bloomington, Indiana, while serving as a surgeon in Mindoro. This accession is valuable, owing to the extreme scarcity of cave material in the Philippines, about 50 specimens of the lot coming from the burial cave of Pokanin, midway between the towns of Bulalacao and Mansalav in Southern Mindoro. Other interesting gifts were 8 paintings of Hopi Indians by E. W. Burbank, presented by Mr. Stanley McCormick, and a unique woven garment, ornamented with tufts of human hair, found in an old mission of Lower California by Mr. W. H. Dupee of Chicago and by him given to the Museum. Of the important and interesting accessions by purchase, were an Egyptian sarcophagus of granite, a collection of Kabyle (Algiers) jewelry, and several Assanian and Babylonian seals collected by Mr. Aver. Mention should be made of a small accession from Angola, West Central Africa, which forms a valuable addition to the Woodside-Ovimbundu collection.

The most conspicuous addition to the herbarium during the year is that of the personal herbarium and library of Dr. J. T. Rothrock, who, as a member of several of the early surveys of the West, not only amassed large and valuable collections himself, but through his asso-

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ciation with Dr. Asa Gray, Dr. George Thurber, Dr. John Torrey and other early botanists, was able to secure many rare plants and sets of plants. His herbarium consists of nearly 25,000 sheets, largely from the west, north and southwest, Mexico and Florida. It contains long series of the plants of Bean, Berlandier, Bigelow, Bischoff, Bolander, Brendel, Burk, Canby, Chapman, Clinton, Curtiss, Garber, Ghiesbright, Hall and Harbour, Sutton Haves, Kellogg, Kenney, Lemon, Leow, Mann, John Stuart Mill, Palmer, Parry and Palmer, Pope, Porter, Pringle, Regel, Reverchon, Thurber, Vasev, Ward, Wolf, and Wright. This herbarium comprises collections made principally from 1840 to 1880, thus directly supplementing that of Patterson, secured by the Museum some years ago, which dates from 1880 to 1900. The Rothrock herbarium is mostly mounted and 6,000 sheets have already been put through and placed in the organized herbarium of the Museum. The other notable herbaria now incorporated with that of the Museum are those of Dr. Arthur Schott, M. S. Bebb, H. N. Patterson, C. F. Millspaugh, A. A. Heller, John K. Small, L. J. Wahlstedt, A. S. Hitchcock, and the University of Chicago. Other series secured to the herbarium this year are: Clemens, Philippine, 1,150; Bloomer, Arizona, 900; von Tuerckheim, Guatemala, 406; Conzatti, Mexico, 185; Purpus, Mexico, 523; C. R. Barnes and Land, Mexico, 303; Stewardson Brown, Bermuda, 150; S. S. Visher, Dakota, 198; Botanic Gardens, Natal, 105; Fiebrig, Paraguay, 155; Tracy, Gulf States, 507; Britton and Harris, Jamaica, 770; J. T. Rothrock, Bahamas, 162; L. J. K. Brace, Bahamas, 231; Percy Wilson, Bahamas, 489; R. A. Dixon, Illinois, 400; Wright, Illinois, 139; J. H.Maiden, New South Wales, 100; W. E. Broadway, Trinidad and Tobago, 450; J. Macoun, Canada, 335, and H. H. Smith, Georgia, 479. Arranged geographically the specimens added to the organized herbarium during the year are as follows:

				University of Chicago Loan.	Addition to	Total now in Herb'm*
Alaska					195	537
Canada (in general)				38	.3	1,050
Alberta					47	3.31
British Columbia					103	7.0.3
Newfoundland				244		464
Quebec						4.5
United States						
Alabama				20	39	793
				I,227	1,867	6,634

 $\ast$  Totals are from these few geographic localities only. This does not tabulate the whole herbarium.

United States					University of Chicago Loan.	Museum Addition to Herbarium.	Total now in Herb'm.
Arkansas .					3		188
California					1,80.1	1,367	16,769
Colorado .					296	1,004	6,754
Dakota					4		24
North Dakota						4	47
South Dakota						198	282
District of Columbia					I		1,815
Florida					131	175	15,987
Georgia					13	546	4,192
Illinois					252	360	16,087
Indiana	•				106	34	3,440
Iowa .					5		1,282
Kentucky					258		644
Louisiana						2	
Maine					 228	2 I	945
Massachusetts .					228	I	1,093
					2		2,052
Mexican Boundary						39	1,390
Michigan					,	I 2	2,111
Minnesota					Ι		589
Mississippi					5	40	1,860
Missouri		2			I	8	651
Montana					2 ()	5	2,979
Nevada					5	39	401
New Hampshire					40		977
New Jersey					7 I	I	I,492
New Mexico					113	322	2,266
New York					114	2 I	4.772
North Carolina.					232	36	1,133
Oklahoma						125	286
Oregon					795	9	4,913
Pacific Coast .					101		470
Pennsylvania					2	.3	6,491
Rocky Mountains .					I		728
South Carolina					5	• • •	547
Southwestern States					74		74
Tennessee					10	8	68 I
Texas					1.402	695	6.056
Utah					417	362	1,322
Vermont .					183	23	1,302
Virginia .					331	2	1,078
Washington .					883		4,291
West Virginia						36	1,254
Wisconsin						4	745
Wyoming						126	863
Yellowstone Park .					3		267
Bahamas		-	-	-	.,		,
Andros Island .						4	1,264

Bahamas								University of Chicago Loan.	Museum Addition to Herbarium.	Total now in Herb'm.
Cat Island									18	446
Crooked Island									20	331
Eleuthera .								· · · ·	7 I	664
Fortune Island.					•				2 1	344
Inagua .								• •	21	344 441
Long Island				·			•		2 I I	441 141
Mariguana .		•			·	·			I	141
New Providence					•	•	•			/
Hog Island .							•	• • •	440	2,386
D'1' D 1		•			•	•	·		I 2 I	190
0						•			13	13
Salt Cay Bank										
Elbow Cay				•					7	7
Water Cay					•	•			26	26
Anguilla .					•	•	•		134	134
Cat Sal .									43	43
Watling's									9	458
Bermuda									151	627
West Indies										
Cuba									167	5,093
Dominica .									2	78
Grenada									2.1	801
Jamaica.									780	6,056
Porto Rico									т	3,969
St. Kitts									I	10
St. Thomas									II	438
Tobago .									16	438 56
Trinidad							•		310	394
Mexico						•		3.138	2,268	25,402
Coronados Island	1.		•			•			2,200	10
Lower California				•	•	·	•	227	20	
Central America	•			•	•	•		227	20	1,632
Costa Rica .								(		. 0
0 1					•	•	•	110		487
Guatemala Honduras				٠,		-	·	584	423	2, I.4 I
Panama.		·	•		·	•	•	7.5	• • •	484
South America		•	•	•	•	•		• • • •	7	51
Argentine				•	•			I		824
Paraguay					•				155	. 1,392
Venezuela .									Ι7	959
Europe										
Denmark								• •	I	Ι
Germany									1	4,051
Italy .								.3		917
Sardinia								1		2
Asia										
India .								2		727
Palestine .									23	1.134

Asia					University of Chicago Loan.	Museum Addition to Herbarium.	now in
Philippines						1.150	2,228
Siberia						60	468
Africa							3,833
Madagascar				•		7	9
Natal						105	764
Australia						206	1,190
Total			٠		13,607	14,819	

Total increase of the organized herbarium during the year, 28,426 specimens.

In Geology the gift of the Tonopah meteorite, weighing nearly two tons, is a notable accession. This was presented through the generositv of Messrs. Stanley Field, R. T. Crane, Jr., Cyrus H. Mc-Cormick, and George F. Porter, of the Board of Trustees. The mass was obtained entire and is the largest meteorite specimen in the Museum collection as well as one of the largest known. The meteorite exhibits atmospheric shaping and pitting in a remarkable degree. A very interesting specimen of copper boulder weighing 22 pounds found near Lake Geneva, Wisconsin, and a specimen of asbestos from Canada, were presented by Mr. Edward E. Aver of the Board of Trustees. Mr. William J. Chalmers of the Board of Trustees kindly added to the Chalmers crystal collection a superb crystal of golden beryl showing negative crystals. From Thomas S. Chalmers were received three specimens of gold ore from Cripple Creek, Colorado, showing some of the richest ore found in the early days of the Independence Mine. A large collection, comprising over 300 specimens, of native copper, silver, calcite, hematite, datolite, and other minerals and fossils, chiefly from the Lake Superior region, was received from Mrs. Joseph Austrian of Chicago. The collection was made by her husband, the late Mr. Austrian, during the early days of copper mining in the Lake Superior region and hence contains many specimens no longer procurable. From F. Pereira Gamba were received 11 specimens of gold ores and associated rocks of Colombia; from Nippon Toki Gomei Kwaisha 12 specimens of clavs and other minerals used in the manufacture of Japanese porcelains; from L. V. Kenkel a large photograph, 5 feet in length, of the Miles glacier, and other photographs of Alaska; from President John Goff 45 specimens of fossil echinoids from Mississippi; and from W. W. Newberry 24 specimens oölite and fossils from Oklahoma. By exchange, specimens of the Dokachi and Futtehpur meteorites were obtained from

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the Geological Survey of India, and from Grebel, Wendler & Co., a specimen of the Buschhof meteorite and ten specimens of minerals. Important material obtained by purchase included an unusually complete mastodon skull from Yorkville, Illinois, and a nearly complete skeleton of the rare fossil beaver-like animal *Castoroides ohioensis* from Indiana. A large slab 31½ square feet in area showing over 200 calices of the fossil crinoid Uintacrinus from Kansas and a series of well-preserved crinoids from the Kinderhook group of Le Grand, Iowa, were also obtained by purchase. Accessions by collection include several hundred specimen fossils of Bermuda; about 200 specimens of ores and minerals of the Pacific Northwest and Alaska, obtained from exhibitors at the Seattle Exposition: 76 specimens of fossils, ores and minerals from Oklahoma and nearly 3,000 specimens of invertebrate fossils from Wilmington, Illinois, and adjoining localities.

The acquisitions during the year in the Department of Zoölogy were extensive and important, comprising 122 mammals, 1,170 bird skins, 300 eggs, 4,989 specimens of fishes, and 201 reptiles. An interesting and important collection of mammals and birds was obtained through the kind offices of Mr. Rodway of the Georgetown Museum, British Guiana. Mr. Rodway's interest in the Museum is gratifying and highly appreciated. Approximately 1,300 of the fishes were collected on the Florida Keys by Assistant Curator Meek; 30 specimens were collected in Venezuela by Mr. J. F. Ferry, and the remainder from near Chicago by Mr. Hildebrand. A large collection of mostly fresh-water fishes was purchased from Mr. Woolman. The collection contains many rare species from the Southern States and from Mexico. Of the reptiles, 71 important ones were collected on the islands near Venezuela by Mr. Ferry, and the next in importance were secured through exchange from Mr. Hunter of St. Louis. The acquisitions in the Division of Entomology consisted mainly of small lots of insects, mostly of local species, though by purchase 163 specimens were obtained from Charles Weber, who collected them on the island of Palawan, Philippine Islands.

EXPEDITION AND FIELD WORK.— One of the most important expeditions of the year has been that of Assistant Curator Simms in continuation of the survey of the Philippine Islands, the funds for which are provided by Mr. Robert F. Cummings. On his arrival at Manila Mr. Simms proceeded to the Cagayan valley with the object of assembling the material collected by Dr. Jones and arranging for its dispatch to Manila. Dr. Jones, having made an exhaustive study of the Hongots of Dumabatu, Tamsi, Alicad, and Cagadyangan, and having assembled his collections at Dumabatu, was preparing to raft them to Echaque, when he was killed by natives. The following report from Assistant Curator Simms, dated November 26, 1909, from Tagudin, Mt. Province, is of interest: "I have the pleasure to report that my stay in the Ifugao territory (where I journeved after completing my work in connection with the affairs of the late Dr. Jones) was one of success, having collected more than a thousand specimens forming a typical and comprehensive collection from this interesting people, who, up to the time of making this collection were but poorly represented in the Museum. In this collection there is a full size typical house, also forges, models, objects in progress of manufacture, etc. My next scene of investigation and collecting was among the Igorot of the sub-province of Amburayan - principally at Bacun and immediate vicinity. From this little known area I made a collection of several hundred specimens which greatly increase the value of an already large and valuable collection of Igorot material, by the filling in of a previously existing gap. I sincerely hope to get my material shipped soon, that it may reach Chicago the first of the coming year." The collections of Dr. Jones and Assistant Curator Simms are now in transit from Manila. Dr. Berthold Laufer continued his ethnological survey of Tibet under the Blackstone fund. Early in May, Assistant Curator Lewis left for New Guinea and the adjacent islands, beginning the three years survey under the Joseph N. Field South Pacific Islands Fund. After a brief stay in Hawaii he proceeded to the Fiji islands, where he was able to secure a fairly comprehensive collection, comprising about 70 type specimens, baskets, mats, posts, fishing outfits, etc., in various stages of completion. From Fiji Mr. Lewis journeved to Sydney, Australia, and from thence to Herbertshöhe, Bismark Archipelago. From here, without delay, he set out upon a trip along the coast of German New Guinea, from Huon Gulf to Berlin Hafen, with the intention of returning to the former locality to begin work. Early in October Mr. Cole returned to the Philippines on his second R. F. Cummings' Expedition, to make investigations among the wild tribes of the southern islands. He will first work among the Mangyans of Mindoro, a Malayan tribe having a written language quite different from that used by other Malavan people. After visiting certain sections of Palawan he will go to Negros for a somewhat lengthy sojourn. Upon completion of this work he will go to Mindanao for an extended stay among pagan tribes found toward the interior of that island.

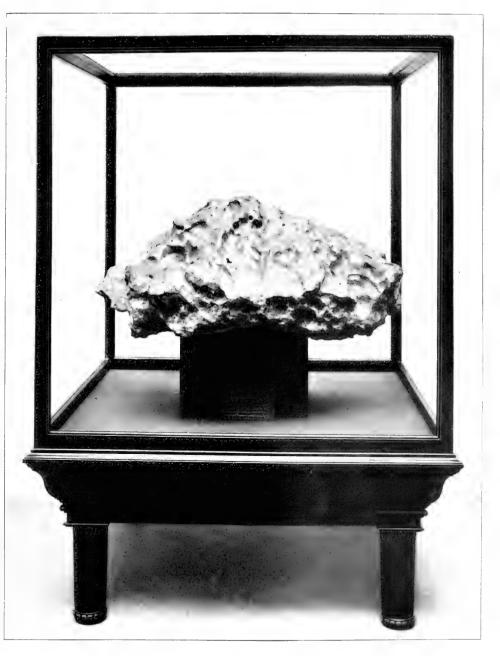
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Three field trips in the interest of the Department of Botany have been successfully made during the year. The herbarium staff spent a week among the sandstone outcrops of the Starved Rock region, not only to assure a representation of the plants of that interesting locality in the herbarium, but to secure valuable exchange material. This trip resulted in 183 specimens, and 11 sets of specimens for exchange with other herbaria. Mr. R. A. Dixon, one of the preparators of the department, made a like trip to Madison, Montgomery, and Walther counties. Texas, securing 180 specimens for the herbarium and 575 specimens for exchange. Mr. Huron Smith. Dendrologist, made his field base this year in the mountains of West Virginia and Northern Georgia where he collected 149 tree specimens, 110 negatives of trees, 250 herbarium specimens of trees, 592 specimens of various plants for the general herbarium, and 1,342 specimens for exchange. Mr. B. E. Dahlgren made a trip to Jamaica in February and March to secure studies and specimens of tropic fruits for reproduction. From this expedition he returned 117 specimens, molds, and mounts together with a long series of water-color studies of living plants and fruits in situ. In his work on the island he was generously accorded accommodations at the Hope Botanical Gardens at Kingston and material assistance by the Director, Mr. H. H. Cousins, Mr. William Harris, and other members of the staff.

In March a trip was made to the Bermuda Islands by the Curator of Geology and full series obtained illustrative of the coral and æolian limestones, cave products, soils and erosion forms of these islands. Of the latter forms, two large potholes nearly two feet in depth collected were especially important in illustrating these peculiar formations. Specimens of the fossil shells and corals of the islands were obtained in large number and about 60 photographs made, illustrating various geographic features but more especially the variations in elevation and subsidence of the islands. The Alaska-Yukon-Pacific Exposition at Seattle was visited near its close by the Curator and a considerable quantity of valuable material illustrative of the ores and minerals of Alaska and the Pacific Northwest obtained from exhibitors there. Among the material obtained was a number of pay gravels from placer mines of Alaska, low grade gold ores of Alaska, copper ores, including those of native copper, from the Copper River district, tin and tungsten ores from Teller, Alaska, showing associations like those of the Cornwall region, specimens illustrating the coals of Alaska, including anthracite and natural coke, sulphur and antimony ores from Alaska, representative ores from the mines of

the State of Washington, including ores from the New Republic mine, gold-bearing lead ores from Metaline, nickel, mercury, and antimony ores from Cle Elum, a series of copper ores illustrating transition from carbonate to sulphide from the Glacier Peak district, iron and chromite concentrates from the black sands of Cape Flattery, talc, fire clavs and potterv clavs and a series of silver-lead ores of the important mines of the Coeur d'Alene district, Idaho. Some choice mineral specimens were also obtained, including a fine group of smoky quartz crystals from Mt. Hood and a specimen of the new mineral hulsite. Some excellent Cretaceous fossils of unique form of preservation and including a new nautiloid species were also obtained. On the same trip the asphalt fossil beds near Los Angeles, California, and the Grand Canvon of Arizona were visited and valuable specimens collected and photographs made. A brief trip to Southern Oklahoma was made by the Assistant Curator from which ores, fossils, and other geological material of the territory were obtained. The ores secured were chiefly of iron and manganese and illustrative of the gradations among these ores and the replacement of limestone by iron. Good specimens of glass sand were also obtained. The fossils obtained were chiefly bryozoa and brachiopods. In addition, specimens of calcareous and siliceous oölites were collected and some field studies made regarding the origin of the latter. The Assistant Curator of Invertebrate Paleontology continued during the year the work of collecting invertebrate fossils in the Chicago area and at Wilmington, Illinois. In the Chicago area over 500 specimens of Niagara age were collected, chiefly crinoids, sponges, and corals. Several of the crinoids furnished additional illustrations of the new species recently described by the Assistant Curator and some new forms were obtained. Several hundred Pleistocene shells were also collected in the area. At Wilmington over 2,000 specimens of Richmond age were obtained, nearly all of which are new to the collections. These include representatives of about 20 species of Brachiopods, several species each of Pelecypods and Cephalopods, and 35 species of Bryozoans.

During January, February and March, Mr. John F. Ferry of the Department of Zoölogy, visited the islands of Bonaire, Aves, Los Roques, Orchilla, Tortuga, Blanquilla, Los Hermanos, Margarita, and Testigos, situated off the northern coast of South America. His collections number 824 birds, 27 birds' eggs, 19 mammals; and in addition small collections of fishes, reptiles, and invertebrates were made. As a result, 8 species and subspecies of birds new to science were discovered and a large number of species new to the collections



Tonopah (Nevada) Meteorite. Weight 3.275 lbs.

of the Museum were obtained. In addition much information of value in the study of migration, variation, and geographic distribution was secured. In May, June, and July Mr. Ferry again took the field and worked in the vicinity of Prince Albert and Ouill Lake. Saskatchewan, where he secured 105 birds, 22 mammals, 36 sets of birds' eggs with nests, and a large amount of accessory material for the preparation of exhibition groups of the water birds which breed in this region. Later a second expedition to the same locality was undertaken by Mr. Ferry, accompanied by Mr. L. L. Pray, to procure a series of pelicans and additional accessory material, which proved successful. In the early part of December, Mr. C. A. Corwin, Artist. and Mr. L. L. Pray, Taxidermist, spent two weeks in northern Louisiana, securing sketches and accessories for bird groups in course of preparation. During March, April, and May, Assistant Curator Meek and Mr. Heim visited Key West and Dry Tortugas, Florida, for the purpose of collecting fishes and accessory material for fish groups, as well as making studies for the same. On this expedition 1,300 alcoholic specimens together with 400 fish skins were secured, representing 50 species. There was also collected a large quantity of sea ferns, sea feathers, sponges, corals, starfish, sea urchins and other material for accessory work. Of the 400 fish skins about 200 were preserved in brine, 175 are mounted but not finished, and 25 are mounted, ready for exhibition. Over 1,500 entomological specimens were collected by the Assistant Curator of the division on a trip made in the late summer to the southern part of Illinois. Among the insects obtained were a number of interesting species which are not found in the northern section of the State, where most of the field work has been done in the past. As a result of a trip made by Mr. Freisser to Northern Mexico, over 200 very desirable insects were obtained from that section.

Following is a list of the expeditions since the date of the last Report:

Locality. Key West and TortugasS.	Collector. E. Meek,	Material. Fishes for groups and study material.
Margarita Islands and va- rious other islands off		
north coast South America J	. F. Ferry,	Birds and mammals.
Saskatchewan J.	. F. Ferry,	Birds, birds' eggs, nests, etc., for groups.
Jamaica	. E. Dahlgren,	Tropical fruits.
Fiji — German New Guinea		
(Huon Gulf) A	. B. Lewis,	General Ethnological collec- tions.

Locality.	Collector.	Material.	
West Virginia and Northern			
Georgia	.H. H. Smith,	Timbers.	
Starved Rock, Illinois .	.J. M. Greenman,	Herbarium specimens.	
Bermuda Islands	.O. C. Farrington,	Geological specimens.	
Luzon, P. I.	.S.C. Simms.	Collections among Igorot tribes of northern Luzon.	
Mindoro, P. I	.F.C.Cole,	Collections and investigations among Mangyans.	
China and Tibet	.B. Laufer,	General collection of Ethnol- ogy and investigations.	
Mexico	.G. A. Dorsey,	Reconnoissance of certain ruins in Chiapas.	
Oklahoma	.H. W. Nichols,	Ores.	
A. Y. P. Exposition	.O.C. Farrington,	Ores and minerals of Pacific Northwest and Alaska.	
Saskatchewan	.J. F. Ferry,	Birds, including adults and young, birds' eggs and nests for groups and study material.	
Lemont and Wilmington,			
Illinois	.A. W. Slocom,	Invertebrate fossils.	
Southern Illinois	.W. J. Gerhard,	Insects, etc.	
Luzon, P. I. ·	.Wm. Jones,	Investigations and collections among the Ilongots, pro- vince Isabela.	
Texas	.R.A. Dixon,	Herbarium specimens.	

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT. --- The ethnological material secured by Mr. Cole in Northwestern Luzon during the second Robert F. Cummings' Philippine Expedition, chiefly among the Tinguian, Apavao, and Kalinga tribes, has been installed in new cases entirely, filling Hall 41 and partially filling Hall 57, with the exception of two cases. Hall 41 is entirely occupied with material from the Tinguian tribe. This comprehensive exhibit consists of basketry, matting, a case fully illustrating the manufacture of textiles, blanketry, women's costumes, men's dress and accessories, medicine and foods, toys and musical instruments, fishing paraphernalia. Two Tinguian groups are about completed for Hall 41. A life-size forge group of five figures, illustrates the manufacture of head axes and spears. A miniature village group, built to scale by Dumagat, a native boy, consists of house models, rice granary, balaua, spirit houses, rice seed-beds, and accompanying accessories. About thirty figures of the natives at their daily tasks will lend added interest to this case. Two cases of Kalinga-Tinguian-Igorot material from the Saltan River Vallev and from the TinguianApayao-Kalinga people of the Tineg River Valley complete the quota of 21 cases filling this Hall. In Hall 57 are already installed two additional cases of Kalinga-Tinguian-Igorot ethnological specimens from the Saltan River Valley: two cases of Kalinga material, one case each of Batak and Tagbanua ethnological material from Palawan. Over 200 photographs, along with new maps, have been placed in these cases to further illustrate the use of objects shown. In this Hall there vet remain to be installed two cases of Batak material and three of Apavao, for which cases are still lacking. 17 New Guinea house posts have been placed in the coves of Hall 58. In Hall 53 two cases of ethnological specimens, comprising basketry, weapons, house posts, drums, carved figures, a wooden bed, shell money, etc., from New Ireland and close-by islands, have been temporarily installed. This material, except a small quantity from the Parkinson collection, was gathered by the Curator of the Department during his hurried trip around the world in 1008. From the hall ceiling were suspended boats. outrigger canoes, from the Solomon Islands, New Guinea and New Britain, and a surf raft from the Solomon Islands. Upon the east and west walls were fastened ceremonial house carvings from New Guinea, a portion of the Voogdt collection, presented by Mr. Joseph N. Field. Here also have been installed two dance masks, the larger over 16 feet in height, from Hansa Bay, German New Guinea. These masks are rare since they are usually destroyed after having served the temporary purpose for which they were made. In Hall 37 has been installed a case of material from Sumatra and one from Java, consisting of material collected by the Curator during his recent visit to these islands. A case of Java ethnology stands in Hall 39 and two cases of the same material vet remain to be installed upon the arrival of the consignment of new cases. Here also is a case of Apache-Yuma and Havasupai ethnology. In the south cove of Hall 38 have been placed temporarily four Philippine spirit houses collected by Mr. Cole on the second R. F. Cummings' Expedition. On the wall of the cove are four large rice planters from the Island of Cuyo. In the center of the Hall stand temporarily three cases of Apache material, consisting of two cases of Medicine Dance paraphernalia, and one case of painted buckskins, implements of the chase, various household utensils, tools used in tanning, etc. Some confusion of installation exists in Halls 37, 38, and 39, leading to the east annex, owing to the temporary use of Hall 7 by Zoölogy. As soon as it is released to Anthropology this condition will be improved by the installation of the collections originally designed for this hall. In Hall

6 were installed six cases of Apache material, comprising objects of personal adornment, accessories to dress, children's playthings, medicine, foods, games, awl cases, musical instruments, grinding implements, transportation, basketry, and warfare. Three cases will be required to complete the installation of the Apache material. In the south end of the Hall have been installed the Navaho exhibits. largely the gift of Mr. Aver, and consisting chiefly of blankets and a splendid lot of old Navaho basketry. A case of old Tlingit armor has been installed in Alcove III. Owing to the crowded condition of the Egyptian Hall, the installation there of the sarcophagus and large false doorway, recently secured by Mr. Aver, made considerable rearrangement necessary. Case 41, Alcove 123, has been rearranged. In Hall 40 a rearrangement of five cases was rendered necessary through the addition of certain material procured by Mr. Cole in Northern Luzon. The cases of the North Court have been felted anew and provided with suitable screws, rendering them more nearly dust proof than before.

The economic botanical collections have received the addition of 215 specimens of more than ordinary interest. The progress of installation in the Department of Botany has far exceeded that of any previous year. The entire west galleries have been completed through the installation of 40 cases, and 42 have been completely labeled. The large and valuable drendrologic series from Paraguay has been resawed, redressed, and installed with bark and wood in approximation, in 7 highly interesting cases; the 39 principal woods of the Island of Trinidad occupy a half case brilliant and attractive in color, these with 41 species of woods from British Guiana, complete the case; another case sets forth 70 species of Colombian woods; another, 161 species of the woods of Venezuela, the latter a very complete and carefully identified series. The dendrologic collections end with two cases of more than ordinary interest; one of these contains an enlarged model showing the structure of wood; the other a long series of specimens illustrating the manner and results of government timber tests. The unique and highly attractive display of woods in , the Department now comprises 45 complete cases fully and descriptively labeled. To the systematic display in economic botany, 29 cases have been added during the year; one of these illustrates the plants of the Bible, the labels presenting relative quotations concerning each; another is devoted to tea in its various forms, types, and characters; another contains 9 small families of plants, the snakeroots, poke weeds, sandal-woods, waterlilies, buttercups, pinks and bearberries; and another the pines, cedars, and fir. A case illustrates the wood chip industry of Japan together with a long series of interesting and comparative coniferous fruits from the Orient. Australia, and the tropics. A case of Coontie starch plants with their interesting cone-like flowers and fruits; and the cattail flags and objects of their utilization. An additional case in the grass family shows the utilization of grass fibres in cordage and basketry, and the roots in dveing. Two and a half further cases, illustrating the palms, bring the representation of this utilitarian family up to 14 cases. An additional case of the oaks walnuts and birches has been added, and another to the representation of the mulberry family, containing the interesting tapa cloth, letter-wood, fustic, and other products. A highly interesting case of the breadfruit family with its rubber gum, nuts, and meal. A case illustrating the magnolia, custard apple, witchhazel and sycamore families with their instructive fruits, woods, and other products. Four cases in the bean family have been added to the four previously on exhibition, the four new ones include the woods, fibres, fruits, seeds, gums, and dveing and tanning barks produced by this valuable family. The mahogany family now occupies a case of high interest as do also the orange family, the spurge family, and the soapworts. The buckthorns and vines vield a highly instructive exhibit of products with the tea family occupying a part of the same case. The gutta-percha family with its rubbers, gums, and resins, and the passion flowers and lace-barks completes another installation. The cacti, pomegranates, and mangroves fill another case, and the interesting and curious monkey-pot family with that of the clove and allspice another. The family of the parsleys yielding many odorous fruits such as the cumin, anise, angelica, caraway, and the ill-smelling gums asafætida and angelica, is now well represented. The black gum, azalea, dogwood, and ebony families, producing many valuable products, and the sapodilla family, of chewing gum notoriety are fully exploited. The morning glory family, with the milkweeds, complete another interesting case; the mint family, and that of the sesames, another. The madder family with its coffee, dyes, and tans, and the potato family with many common food examples, complete the economic installation of the year. The plans of the Curator of Botany have been, from the first, to combine both taxonomic and economic characteristics in the cases devoted to systematic botanical installation. Up to the present year the absence of a capable reproductionist upon the staff of the department has necessitated installation of economic material only; now, how-

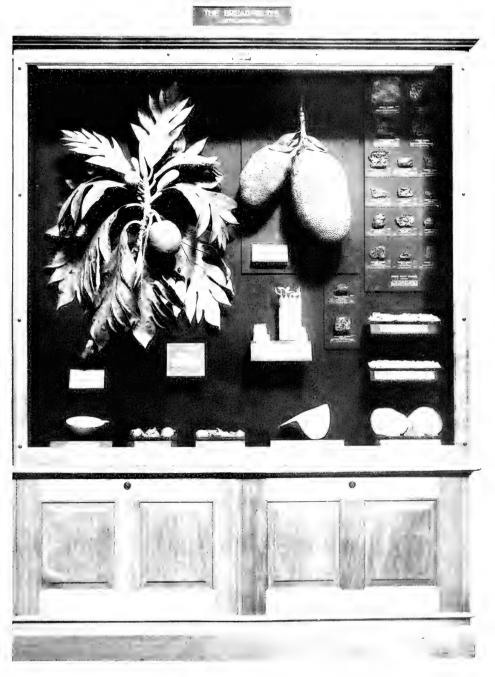
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ever, a Modeler's section has been equipped and placed in charge of Dr. B. E. Dahlgren, a capable scientific artist, and the results of his work in reproduction are finding places in the plant The case devoted to the breadfruit family, illustrated families. in this Report, clearly indicates the proposed plan of installation. In this case the material illustrates the family characters and products as follows: A life-size reproduction of the end of a leafy, flowering, and fruiting branch of the breadfruit (Artocarpus incisa) shows the leaf-form and characters; the disposition and characteristics of the flowers, and the immature and mature fruit in exact relation; with this are two enlargements from nature exemplifying the intimate structure and character of the flowers, both male and female, the more delicate features of which are reproduced in glass to insure stability and permanence in the reproductions; in close association is a natural sized ripe fruit, shown in section, to illustrate both the developed ovary and the peculiarities of the fruit itself. These four reproductions together exemplify all the botanical characters that distinguish the family and unite its genera and species in intimate relationship. Another similar installation has been completed illustrating the chocolate family; in this a chocolate tree (Theobroma cacao) is represented in full fruit and leaf, an enlarged model depicts the peculiar flower in botanic detail; and a third the ripe fruit with its seeds (chocolate beans) invested in their natural coating of mucilaginous tissue. Several other group models now well under way will soon add deep and renewed interest to cases already installed with products only. No Museum has ever before attempted such comprehensive educational installation, and the result in interesting the public in plant life is already being felt. A rearrangement of the two easterly herbarium rooms became necessary in order to better arrange the departmental library to accommodate the increase of books obtained through the Rothrock accession. The herbarium cases in the northeast room were removed to the southeastern to replace the books therein. The entire walls of the former room are now in book shelves the content of which makes a creditable beginning of a botanical library. The subject, author, and species card indices have been kept up to date and the accessibility and utility of the library notably increased. The herbarium work has progressed satisfactorily during the year, though there is still a large part of the Wahlstedt, Rothrock, and University of Chicago herbaria awaiting the organization that will render the specimens an integral part of the Museum herbarium.

In Higinbotham Hall the series of gold nuggets and crystallized gold was moved to one of the floor cases and mounted and labeled in accordance with the method employed for the general gem collection. Unlabeled specimens of the gem collection were supplied with labels to the number of about sixty. In Hall 36 the large slab of Uintacrinus acquired during the year and shown in Plate LII was placed on exhibition. The preparation of this slab for exhibition involved considerable labor as the slab had been imperfectly mounted when received and was unsafe for exhibition without further treatment. In order to prepare it for exhibition and make a firm and durable mount, the surface designed for exhibition was covered with tissue and a thick covering of plaster poured over it. The slab was then reversed and the plaster previously forming the bed carefully removed from the rear side. A thick bed of plaster was provided for this side and a heavy and durable framework placed around it. The plaster was then removed from the front side and the whole framed in heavy plate glass. In Hall 50 a fine mastodon skull from Yorkville, Illinois, has been installed in place of the large cast of Elephas ganesa. Some needful repairs were made upon the mastodon skeleton in the same Hall. A wall case, corresponding in pattern to those already in the Hall. was provided for a series of Tertiary and Quaternary invertebrate fossils, including those collected by the Curator in Bermuda, and the specimens installed in it. Other specimens installed in the Hall include a slab mount of a nearly complete skeleton of the Miocene wolverine Aelurocyon, a skull and fore and hind legs of Moropus elatus, two skulls of Diceratherium, two skulls of Archaotherium mortoni, a skull of Oligobunis, and a fore leg of Hypohippus. In Hall 61 a nearly complete skeleton of Castoroides from Indiana was assembled and installed in a wall case. This is a rare form of beaver-like animal of which only one other skeleton and three incomplete skulls have been found, although the first remains were found in this country in 1838. Besides its rarity this skeleton is remarkable for its large size, the animal having been more than two feet in height and five feet in length and having incisors ten inches long. In Hall 62 a large floor case four feet square was provided for the Tonopah meteorite and the meteorite, weighing nearly two tons, installed in it. The case is of the same pattern as the other floor cases in the Hall. Some readjustment of the other floor cases was necessary in order to obtain space for this one, and the time during readjustment was improved to thoroughly paraffin the series of Toluca meteorites, in order to check incipient

decomposition. Some small meteorite specimens were also installed in their proper places in the collection. In Hall 65 a large mahogany case 5 feet square by 8 feet high has been provided for an exhibit of selenite crystals from Utah. These are mounted in the form of the geode in which they originally occurred. The case is provided with glass on one side and the interior is lighted with electricity. A large number of crystals are shown in this exhibit, many of them weighing between 50 and 100 pounds each, and the restoration of the conditions under which they were found in nature has been made as realistic as possible. A case has also been provided in this Hall for the remarkable fulgurite, 9 feet in length, obtained from Indiana, and the specimen installed therein. The remaining collections in the Hall have been completely rearranged and labeled and some new material added, including the specimens of concretions and potholes brought by the Curator from Bermuda. In addition to the exhibits named the Hall as now installed contains two cases of cave products, one of ripple marks, mud cracks, etc., a half case of glacial material and a half case illustrating rock weathering, two cases of concretions and one case of septaria. In order to complete the labeling of this Hall temporarily, about 200 written labels were prepared and installed. A similar rearrangement and labeling has been made of the material in the wall cases in Hall 66. A half case is now devoted to rock textures, a half case to rock jointing, two cases to volcanic products, a half case to faults and folds, a half case to dendrites, a half case to oölites, a half case to veins, and a half case to products of metamorphism. A considerable quantity of rough building-stone and marble material of various sizes which had been obtained from a number of sources was reduced to uniform size for installation with the regular building-stone and marble collection in Hall 67. Twenty four-inch cubes of limestone, sandstone, granites, and other building stones were added in this way to the building-stone collection and six large polished slabs of granite, diorite, and other eruptive rocks. In addition about 100 specimens of polished marbles smaller than the standard size were grouped by locality or pattern in frames of the standard size of 10 x 15 inches and added to the marble collection. Twenty-five of these frames containing from one to eight specimens each have been installed and thus a considerable number of important specimens which it had not been possible to exhibit hitherto was added. About 70 temporary labels written in white ink on black cards were also prepared for this collection and installed. A series of specimens illustrating the manufacFIELD MUSEUM OF NATURAL HISTORY.

REPORTS, PLATE XLVIII.



Combined Taxonomic and Economic Installation. The Botanical Characters Modeled.

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ture of Japanese pottery received from Nippon Toki Gomei Kwaisha has been installed in Hall 68. This series exhibits both material and stages of manufacture. Hall 70, devoted to varieties of coal and hydrocarbons, has been completely reinstalled during the vear. New cases have been provided throughout and the specimens. with some additions, reinstalled in them. The cases adopted are wall and floor cases of the type already in use in Hall 68. with the exception that the wall cases are deeper. Seven wall cases and six floor cases of these types have been placed in the Hall. Five of the wall cases are devoted to the collection illustrating varieties of coal from lignite to anthracite. Besides the coals of this country those of England, Germany, and Australia are especially well represented. The two additional wall cases are three feet deep and are devoted to large specimens of asphalts, cannels, and other coals, including a complete section, six feet in height, of an Australian coal seam. Of the floor cases, one is occupied by diamonds and diamond-bearing earths and rocks from most of the important diamondbearing regions of the world. Another is devoted to a very complete collection of graphites from various localities and countries. The others contain asphalts, gilsonite, and other hydrocarbons of economic importance as obtained from various localities. A complete collection of rocks associated with the coals of Saarbrücken, Germany, and illustrating in a general way the rocks usually associated with coal occupies another floor case. The total number of specimens now exhibited in the Hall is as follows: 44 American lignites, 9 American cannels, 55 American bituminous coals, 29 English and miscellaneous European coals, 54 German coals, 17 specimens illustrating German coal washing, 12 specimens foreign bituminous coals, 17 specimens anthracite coals, 17 large specimens of French and California asphalts, American anthracites, cannels, etc., 31 specimens diamondiferous rocks and gravels, 50 specimens graphite, 50 specimens of peat and its products, and 63 specimens of asphalts and related hydrocarbons. Hall 72, devoted to ores of the precious metals and lead has also been completely reinstalled during the year. New cases have been provided and a complete reorganization of the collections made. The wall cases are of the type used in Hall 79 with some changes in the felting and hinging. Ten of these wall cases have been provided. On the floor of the Hall fifteen cases have been placed, five of which, placed in the center of the Hall, are devoted to larger specimens. These cases are similar to those used in Hall 79 except that the sides have been made in a single light of glass instead of two lights, and

these lights are removable entire when it is desired to open the case. The other floor cases are of the type already in use in Hall 68. Before reinstallation of the specimens they were carefully cleaned and any essentially duplicate material eliminated. The general plan of installation which had been previously adopted was retained, the ores being placed in geographic order in the wall cases. As before, the ores of a group of mining districts have been placed together and for all such groups an individual label has been prepared. It may be said that most of the important mining districts of the precious metals of the world are represented in this collection. The large specimens on the floor of the Hall are grouped geographically also as far as possible. Specimens too large for these cases were removed to the West Dome. All of the specimens in Hall 72 are now protected by glass, so that much better preservation of them is insured than has been possible hitherto. In addition to the large specimens the floor cases contain a number of special collections, such as those illustrating alloys of gold and silver, salvage of gold and silver waste, and platinum ores from various parts of the world. Three floor cases are also devoted to the metallurgy of the precious metals and lead. In one of these is exhibited an elaborate German method of treating silver and lead ores, the results of the different processes being connected by lines to show the course of treatment. A collection illustrating smelting of silver-lead ores in the ordinary manner occupies another case. In order to make the representation of the process somewhat more graphic, this collection has been provided with a model of a blast furnace. In this model, which was constructed in the Department, the various features of the blast furnace are shown in detail and a portion of the wall of the furnace is represented as removed from the rear so that the interior charge of the furnace may be seen. A model of a cyanide plant for the extraction of gold has also been constructed and placed in one of the floor cases. The model shows five wooden tanks placed upon trestles and filled with representations of the solutions and ores used in the processes. The tanks are connected by pipings shown in the model and a steam pump and zinc box are shown. A summary of the collections at present exhibited in the Hall and their distribution is as follows: One case, synoptic collection, placer gold ores, Canadian ores and Appalachian Mountain ores; one-half case, lead ores of the Mississippi Valley; two and one-half cases, Colorado ores; one case Nevada, Montana, Idaho, South Dakota, Washington, and Utah ores; one case, California and Arizona ores; one-half case, New Mexico ores; one case, Mex-

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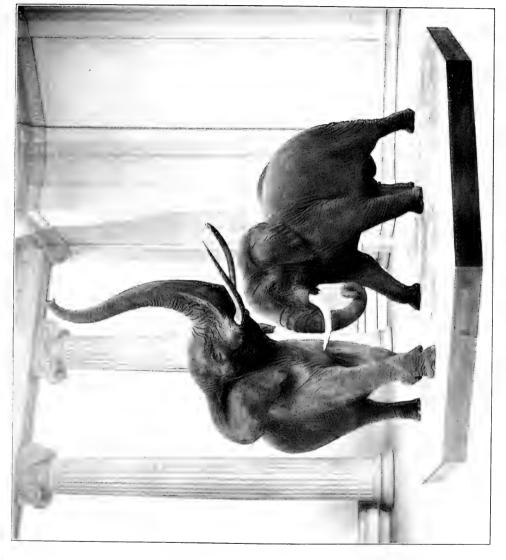
ican ores; one-half case, South American ores; one case, Colombian ores: one case, ores of Australia, Africa, and Europe; one case, gold ores of Alaska: one case alloys of precious metals; one case salvage of gold and silver wastes: one case ores of platinum; one case metallurgy of silver-lead ores; one case metallurgy of gold, silver, and lead, illustrated by models; one case large specimens South American ores; one case large specimens Mexican ores; one case large specimens New Mexico and Colorado ores; one case large specimens Colorado ores; and five cases large specimens of typical gold and silver ores from all parts of the world. The relief maps of Leadville. Mt. Blanc, Carmelo Bay, and Mt. Desert exhibited in Halls 76 and 77 were repainted and framed during the year. Some additions were made to the map of Auvergne and one of the large maps of the Henry Mountains was framed. About fifty labels were placed in Hall 78 in number sufficient to complete the labeling of the collections in this Hall and a few additional specimens were installed. In Hall 79 the large mass of manganese ore from Brazil weighing 3.300 pounds, obtained from the St. Louis Exposition, was installed upon a mahoganized base. There was also added to the exhibition series in this Hall the important series of copper ores from Alaska and Washington secured by the Curator at the Seattle Exposition, and a number of mercury, tin, tungsten, antimony, cobalt, nickel, and iron ores from the same source. About 100 hand-written labels were made for the new specimens. The West Dome not proving sufficiently well lighted for the display of small specimens, the four cases of lead ores previously exhibited there were removed and a number of large specimens brought from Hall 72 to take their place. For these as well as for the large specimens already on exhibition in the dome, neat mahoganized bases were provided and the general appearance of this hall much improved thereby. A number of important specimens have during the year been prepared in the laboratory of vertebrate paleontology for exhibition. The largest of these was the mastodon skull with one tusk obtained from Yorkville, Illinois. Although this skull was nearly complete when received, some restoration was found necessary to insure its preservation. The restorations made were based on careful studies of skulls both of ancient and modern elephants. Considerable treatment of the tusk was also found necessary on account of its strong tendency to fall apart, and long experimentation was required before a satisfactory mode of preservation was discovered. By imbedding the tusk entire in paraffin, however, and then removing the excess of paraffin, a

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satisfactory result was obtained. As only one tusk was present, another was modeled in plaster and the whole carefully assembled and bolted together. It was then mounted upon a well-constructed base. An excellent specimen of especial local interest has thus been secured. Another important preparation was that of a skeleton of the Miocene camel (Oxydactylus longipes) the material for which was collected by the Museum Paleontological Expedition of 1908 in Nebraska. By means of the restoration of a few bones a complete skeleton was obtained. This skeleton stands over six feet in height and exhibits to a striking degree the characters of the camel family. Only one other complete skeleton of the form is known. A nearly complete skeleton of the Miocene wolverine, Aelurocyon, was chiseled from its matrix and mounted in slab form. Two skulls of Archæotherium, one of which was collected in South Dakota in 1808 and the other in Nebraska in 1908, were also cleaned from matrix and mounted. These skulls were unusually well preserved and one may be a new species. A fore leg of Hypohippus obtained in Nebraska in 1908 and illustrating an interesting stage in the evolution of the horse was mounted. Two skulls of the two-horned rhinoceros or Diceratherium from Nebraska, a skull of Oligobunis from the same locality and a skull and fore and hind legs of the remarkable form Moropus were also prepared and mounted. Two cases of storage trays were provided in addition to those already employed for storage of vertebrate fossils and were nearly filled with cleaned and identified specimens. A similar case of trays has also been provided for the invertebrate fossils which will be used for specimens awaiting identification, before their removal to the exhibition or the study series. Considerable progress has been made in organizing the study collection of ores and other economic minerals, a large part of the specimens having been cleaned, wrapped, labeled, and distributed. To the Department photograph albums 179 prints have been added during the year, making the total number 2,372. Books, pamphlets, and maps to the number of 492 have been added to the Department library, making the total number in the library 6,042, and some binding and repairing of books and rearrangement of shelf series in this connection has been performed.

The Department of Zoölogy installed during the year a striking pair of African elephants in the central rotunda of the Museum. Aside from this, no large groups have been completed though several important studies both of mammals and of birds are well under way

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and will doubtless be installed during the year. A habitat group of antelopes (Antelocapra americana) has been begun and in November Mr. Julius Friesser visited northern Mexico securing the necessary accessory material. Owing to the generosity of Mr. Stanley Field, who provided the necessary funds, four large habitat groups of birds have been begun and bid fair to excel any work of the kind which has been undertaken. These groups will show the following North American species under natural conditions: 1, California condors (scene, mountains of Southern California); 2, wild turkeys (scene, forest of Northern Louisiana); 3, white pelecans, cormorants, gulls, etc. (scene, breeding grounds, Quill Lake, Saskatchewan region. Canada); 4, wild geese, ducks, terns, etc. (scene, breeding grounds. vicinity of Prince Albert, Saskatchewan, Canada). In this connection the services of Mr. C. A. Corwin have been secured to prepare the painted backgrounds. Ten large mammals have been added to the systematic series of mounted mammals during the year. These include 2 glacier bears, 1 Stone's caribou 1, mountain goat, 2 Alaska wolves, 1 wolverene, and 2 Alaska lynx. About 80 small and medium-sized birds have been finished and placed on exhibition. A collection of photographs of living animals intended especially for use of the taxidermists has been begun and proves most valuable. One fish case containing 4 groups of fresh-water fishes and 36 jars of fishes in formaldehvde have been installed. One python has been mounted, and a large alligator has been installed in the exhibition rooms. In progress of preparation is a case 6 x 12 feet to contain 6 groups of tropical fishes, each group with a glass front 3 x 6 feet; below these groups, occupying the entire floor of the case, is being installed a group consisting of a large tiger shark and her 44 young. Much attention has been given during the past year to the collection of local insects, with a view to installing an exhibition collection representing the insect fauna of the State. For several years it has not been possible to prepare the specimens as rapidly as they were received, with the result that a large amount of material has accumulated which has not been pinned. It was to the preparation of these insects that more time was devoted than to any other work, by the Assistant Curator. Owing to facilities for degreasing skulls and skeletons, which were secured through the courtesy of Mr. William Warwick, Superintendent of the Standard Oil Company plant at Whiting, Indiana, who placed a building at the disposal of the Museum for that purpose, 43 skeletons and skulls were degreased.

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In the Museum laboratory the following specimens were prepared:

Skulls cleaned for the Division of Mammalogy	Ζ.				· 753	
Skeletons repaired and remounted					. 8	
Skulls mounted for Craniology					. I7	
Skeletons mounted for Osteological collection					. 8	
Total					- 86	
IOLAI		-	-		. 700	

**PRINTING.**— It will be noticed that a large number of labels have been printed during the year. The office is now well equipped, its facilities enlarged, and the number of employees increased. The following figures show the number of impressions in the way of label printing and other impressions:

				Labels.	Other Impressions.
Department of Anthropology				3,724	5,250
Department of Botany				6,081	19,630
Department of Geology				27 I	255
Department of Zoölogy				391	29,925
Director's Office					75,005
Higinbotham Hall				6.2 .	

PHOTOGRAPHY AND ILLUSTRATION.— Unusual activity marked the progress in this important division. 875 negatives, made in the field, were developed; over 1,200 lantern slides, and 84 Lumiere Autochrome photographs. The following is a statement of the work performed:

	Negatives.	Prints.	Lantern Enl Slides. me	Lumiere arge- Auto- ents. chrome.	Field Ex-
Director's Office	. 24	281			
Department of Anthropology	. 1,807	5,000	772 .		6
Department of Botany.	. 28	834		25 4	282
Department of Geology .	. 83	208	166 .	65	II4
Department of Zoölogy .	. 200	288	249 .	28 15	473
General		97			
Gift		118	60 .		
Sale		91	26.		
Totals	. 2,142	6,917	1,273	53 84	875
Total number of inventor	ry ent <del>ri</del> es t	o Decei	nber 31, 1	909	. So,762
Entries from December 3					. 11,344

# JAN., 1910. ANNUAL REPORT OF THE DIRECTOR.

ATTENDANCE.— The attendance for the year shows a slight decrease over the previous year. The following is the list of school classes (thirty pupils or more) that visited the Museum during the year:

(unity papie of more) unit instead the states and	, our	
Schools and Location.	Teachers.	Pupils.
University High Fifty-ninth Street and Monroe Avenue	2	31
Hyde Park High Fifty-seventh Street and Kimbark Avenue	I	45
Hyde Park High — Fifty-seventh Street and Kimbark Avenue Hyde Park High — Fifty-seventh Street and Kimbark Avenue	I	35
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	55
University Elementary - Fifty-ninth Street and Monroe Ave-		
nue	3	75
Forest Park — Forest Park, Illinois	2	47
Parkside — Seventieth Street and East End Avenue	I	36
University Elementary - Fifty-ninth Street and Monroe Ave-		0
nue	2	30
Oglesby — Seventy-ninth Street and Emerald Avenue	2	32
Hyde Park High - Fifty-seventh Street and Kimbark Avenue	I	43
	Ι	45
Hyde Park High — Fifty-seventh Street and Kimbark Avenue Hyde Park High — Fifty-seventh Street and Kimbark Avenue	2	52
Parkside — Seventieth Street and East End Avenue	. 2	34
Parkside — Seventieth Street and East End Avenue	I	36
Hyde Park High Fifty-seventh Street and Kimbark Avenue	I	42
Joliet Township — Joliet, Illinois	2	92
Blue Island — Blue Island, Illinois	2	55
Burke — Fifty-second Street and Prairie Avenue	3	38
South Harlem — Harlem, Illinois	2	35
James Shields — South Rockwell, corner West Forty-third	-	31
Englewood High - West Sixty-second Street and Stewart	<sup>^</sup>	0 -
Avenue	Ţ	160
Prescott — Wrightwood Avenue and North Ashland Avenue	Î	30
Harrison — Twenty-third Place and Wentworth Avenue	3	31
University Elementary Fifty-ninth Street and Monroe Ave-	.)	0 -
nue	Ι	45
University of Chicago — Chicago, Illinois.		30
James Shields — South Rockwell, corner West Forty-third.	I	44
Harvey — Harvey, Illinois	I	30
Frances E. Willard — Forty-ninth Street and St. Lawrence	-	0-
Avenue	I	31
Gladstone — Robey Street, corner Washburne Avenue	I	37
Blue Island — Blue Island, Illinois	4	149
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	I	109
Kershaw — Union Avenue and Sixty-fourth Street .	ĩ	45
Frances E. Willard — Forty-ninth Street and St. Lawrence	k	40
Avenue	2	36
Earle — Sixty-first Street and Hermitage Avenue	2	44
Raymond — Thirty-sixth Place and Wabash Avenue	3	60
Blue Island — Blue Island, Illinois	2	64
Kenwood — Lake Avenue and Fiftieth Street	2	45
Blue Island — Blue Island, Illinois	6	35
Druc Island Druc Island, Illinois	.,	55

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Schools and Location.	Teachers.	Pupils
Prescott — Wrightwood Avenue and North Ashland Avenue .		52
James Shields — South Rockwell, corner West Forty-third		50
Mark Sheridan — Twenty-seventh Street and Wallace Street	. I	58
James Shields — South Rockwell, corner West Forty-third	I	47
James Shields South Rockwell, corner West Forty-third	I	30
St. Vincent — Webster Avenue, corner Sheffield Avenue	2	30
Seward — Forty-sixth Street and Hermitage Avenue	2	38
John C. Coonley - Leavitt Street and Belle Plaine Avenue	2	33
William Penn — Sixteenth Street and Avers Avenue	2	148
Bowen High — Eighty-ninth Street and Manistee Avenue	2	39
University of Chicago — Chicago, Illinois	2	104
Pullman - One Hundred and Thirteenth Street and Morse Ave-		
nue		39
Barnard - One Hundred and Fourth Street, corner Charles		
Avenue	I	30
Altgeld — Seventy-first and Loomis Streets	3	42
McCormick Vacation West Twenty-seventh Street, corner		
Sawyer Avenue	Ι Ο	563
University of Chicago Chicago, Illinois.		36
University of Chicago — Chicago, Illinois		51
University of Chicago — Chicago, Illinois.		30
University of Chicago Chicago, Illinois.		45
St. Ignatius — 413 West Twelfth Street		32
Raymond — Thirty-sixth Place and Wabash Avenue		80
James Wadsworth Sixty-fourth Street and Greenwood Ave-		
nue		95
Forest Park — Forest Park, Illinois		67
James Wadsworth — Sixty-fourth Street and Greenwood Ave-		(
nue		46
Wendell Phillips High Thirty-ninth Street and Prairie Ave-		
nue		37 81
Bismarck — Central Park, corner Armitage Avenue James Wadsworth — Sixty-fourth Street and Greenwood Ave-		01
nue		2 4
James Wadsworth — Sixty-fourth Street and Greenwood Ave-		37
nue		44
Thornton Township High — Harvey, Illinois		72
Jewish Training — $554$ West Twelfth Place		35
Walter Scott — Sixty-fourth Street and Washington Avenue.		43
Oakland — Fortieth Street, between Langley and Cottage		40
Grove Avenues		43
Larmie — Evanston, Illinois	Ι	31
Jewish Training — $554$ West Twelfth Place		32
Oak Park High — Oak Park, Illinois		35

Herewith are also submitted financial statements, list of accessions, names of members, etc. FREDERICK J. V. SKIFF,

Director.

# FINANCIAL STATEMENT.

## GENERAL ACCOUNT.

# RÉCEIPTS AND DISBURSEMENTS

From January 1, 1909, to December 31, 1909.

#### Receipts

Cash in Treasurer's hands, December 31, 1908	847.348.32
Petty Cash on hand, December 31, 1908	739.95
Dues of Annual Members.	1,590.00
Admissions and Check Rooms	5.710.50
Sales of Guides	359.25
South Park Commissioners	15,000.00
Interest on Investments .	45.289.28
Field Endowment Income	172,156.80
Interest on Daily Balances	1,069.47
Sundry Receipts and Refunds	2,385.09
Sundry Sales	239.16
R. F. Cummings' Philippine Fund	4.273.07
Joseph N. Field South Pacific Islands Fund	10,000.00
Stanley Field Ornithology Fund.	1,000.00
Huntington W. Jackson Fund	.40.00
Special Donations —	
Richard T. Crane, Jr	
George F. Porter	
Cyrus H. McCormick	
Stanley Field	
Sundry	3.525.00
Marshall Field Endowment Sinking Fund New Building Moving and Furnishing Fund In-	1,000.00
come	1.200.00
	\$312.034.98

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	ISBURSEMENTS		
Salaries .			\$82,033.74
			12,796.32
Janitor Service			8,557.82
			2,945.18
Heat and Light —		A	
Wages		\$3,666.00	
Fuel		7,162.50	
Supplies, gas, etc.		1,304.41	12,132.01
Repairs and Alterations — Wages of Carpenters, Pain Material used — paints, o plaster, etc.	ters, Roofers, etc. ils, glass, lumber,	\$11,542.46 1.346.16	• 12,888.62
			12,000.02
Furniture and Fixtures . The Library —			4.334.93
Books and Periodicals		\$1.581.15	
Binding		701.12	
Sundries .		71.50	2,356.83
Sections of Printing and Photog	raphy .		2,171.18
Collections, etc., Purchased .			29,644.21
Departmental Expense			6,442.00
Expeditions			7.214.77
Publications			7,881.55
General Expense Account —			
Freight, Expressage and '	C_7	\$4,023.52	
Stationery, Postage, Tele		988.03	
Northern Trust Company		564.05	
Sundries .		1,495.84	7,071.44
Mrs. Timothy B. Blackstone Fur	ıd		15,000.00
R. F. Cummings' Philippine Fur			5,196.93
Stanley Field Ornithology Fund			967.60
			\$219,636.03
In Treasurer's hands December	31, 1909	\$65.914.41	0219,030.03
Petty Cash on hand		739-95	
New Building Moving and Fur			
vestment		25,621.53	
Marshall Field Endowment Sin!			
ment.		1.023.06	93,298.95
			\$312,934.98

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# ATTENDANCE AND RECEIPTS FROM JANUARY 1, 1909 TO DECEMBER 31, 1909.

Attendance.

	-A	TTF	END	ANC	Е.				
Paid Attendance									
Adults								20,160	
Children								I,2IO	21,370
Free Admission on Pay Days									
School Children								5,318	
Students								3,524	
Teachers								477	
Members: Corporate .								77	
Annual .								76	
Life								7	
Officers' Families								1.4.4	
Special								146	
Press								2	9.771
Admission on Free Days									
Saturdays								38,499	
Sundays			·					139,530	178,029
Total Attendance									209,170
Highest Attendance on any one	da	y ()	July	25	, I	)09)			6,941
Highest Paid Attendance on any	y d	ay	(Sej	oter	nbe	er 6,	190	9)	549
Average Daily Attendance (365	da	ys)							573
Average Paid Admissions (259 d	lay	s)							82
	т	2 7 0	EIP	<b>T</b> C					
Guides sold — 1,437 at 25 cents									\$359.25
Articles Checked — 11,176 at 5									558.80
Admissions									5,100.70
Addinissions	•	•	•	•					5,100.70
									\$6.078.75

# ACCESSIONS.

DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AYER, E. E., Chicago.

Clay mold from Cat's-eye --- Egypt.

2 carved wooden images — New Ireland. (Collected by G. A. Dorsey.)

Facsimile of the Papyrus of Ani, in the British Museum.

CUMMINGS, R. F., Philippine Expedition.

Skulls of Igorot, Tinguian, Ilocanos — Luzon Island. (Collected by F. C. Cole.)

1 Bagobo skull (purchased from Miss Laura E. W. Benedict).

 115 ethnological specimens, 48 objects from burial cave of Pokanin
 — Mindoro, Philippine Islands (purchased from Dr. Fletcher Gardner).

DORSEY, GEO. A., Chicago.

1 Ifugao skull.

DUPEE, WALTER HAMLIN, Chicago.

Rectangular woven garment, probably kilt, ornamented with tufts of human hair — Lower California.

FERRY, J. F., Chicago.

Flat carrying basket - Margarita Island.

FIELD, JOSEPH N., Manchester, England. South Pacific Islands' Fund. 1,000 ethnological specimens from Central Coast, carved posts, etc. general ethnological collection, canoes, etc.— New Guinea (purchased from Captain H. Voogdt).

> 500 ethnological specimens from Huon Gulf. (purchased from Captain H. Voogdt).

FIELD MUSEUM OF NATURAL HISTORY.

Collected by Edward E. Ayer and Geo. A. Dorsey:

Mastaba tomb from Necropolis of Sakkara - Egypt.

Granite sarcophagus — Egypt.

Collected by A. B. Lewis:

94 ethnological specimens — Berlin Hafen, New Guinea.

Purchases:

Ethnological specimens from Angola, West Central Africa, mostly from the interior from the district of Bihe, and used by the tribe known as the Ovimbundu.

Ethnological specimens — Ceylon.

29 pieces of Kabyle jewelry — Algiers, Africa.

11 Roman seals - Algiers, Africa.

2 Skokomish baskets — Washington.

38 models of Igorot figures, to be used in group work of Northern Luzon, Philippine Islands.

McCORMICK, STANLEY, Chicago.

6 oil paintings of participants in the famous Hopi Snake Dance ----Arizona. (Painted by E. A. Burbank).

2 oil paintings of children in ceremonial costumes — Arizona. (Painted by E. A. Burbank).

RYERSON, MARTIN A., Chicago,

Mastaba tomb from Necropolis of Sakkara — Egypt,

VOOGDT, CAPTAIN H., Freidrich-Wilhelms Hafen, New Guinea. 1 stone image — Huon Gulf, New Guinea.

#### DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AIKEN, W. H., Cincinnati, Ohio,

1 herbarium specimen — Oklahoma.

AKERMAN, ALFRED, Athens, Georgia.

1 herbarium specimen -- Georgia.

BERNICE PAUAHI BISHOP MUSEUM, Honolulu, H. I.

4 economic specimens — Hawaii.

BIRUM, ELI W., Saratoga, Indiana.

5 economic specimens as follows:

I five pound can sorghum molasses, 3 complete sorghum plants, sorghum canes, extracted canes, 4 fruiting heads - Indiana.

BOTANIC GARDENS, Sydney, Australia.

109 herbarium specimens — Australia (exchange).

1 herbarium specimen — Tasmania (exchange).

103 herbarium specimens — Australia (exchange).

101 herbarium specimens - New South Wales, Australia (exchange).

BRANDEGEE, T. S., Berkeley, California.

5 herbarium specimens - Mexico.

CALKINS, W. W., Berwyn, Illinois.

1 herbarium specimen — Illinois.

CHAMBERLAIN, C. J., Chicago.

4 herbarium specimens - Mexico.

2 fruits in alcohol — Mexico.

CLARK, H. W., Chicago.

1 Toxylon pomiferum fruit -- Illinois.

CONZATTI CASSIANO, Caxaca de Juarez, Mexico.

18; herbarium specimens — Mexico.

COULTER, J. M., Chicago.

1 herbarium specimen — Michigan.

CUSICK, WM. C., Union, Oregon.

9 herbarium specimens — Oregon.

DEAM, C. C., Indianapolis, Indiana.

1 herbarium specimen — Indiana (exchange).

16 herbarium specimens - Guatemala.

30 herbarium specimens — Florida (exchange).

DESERT LABORATORY, Tucson, Arizona.

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2 economic specimens fruits and gum - Arizona.
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DIXON, R. A., Chicago.

1 herbarium specimen - Grass Lake, Illinois.

23 herbarium specimens - Vermont.

5 herbarium specimens — Montana.

186 herbarium specimens — Illinois.

24 herbarium specimens - Utah.

FIELD MUSEUM OF NATURAL HISTORY.

Collated by J. M. Greenman:

13 plates.

2 photographs.

2 plant descriptions.

I photograph of type specimen.

Collated by C. F. Millspaugh:

- 138 herbarium specimens Bahamas, Cuba, and Jamaica.
- I photograph of type specimen.
- 4 economic specimens Kentucky, British India, West Indies and Peru.
- 3 economic specimens Jamaica.

1 tracing.

7 herbarium specimens.

32 economic specimens.

3 economic specimens - California.

r straw specimen.

2 economic specimens - California and Illinois.

2 economic specimens - Spain and Cevlon.

Collected by B. E. Dahlgren:

118 economic specimens - Jamaica.

Collected by R. A. Dixon:

760 herbarium specimens — Texas.

Collected by J. M. Greenman, O. E. Lansing, Jr., and R. A. Dixon: 1,453 herbarium specimens — Illinois.

Collected by C. F. Millspaugh: .

4 fruit specimens.

Collected by H. H. Smith:

36 herbarium specimens — West Virginia.

42 board specimens — West Virginia.

28 slab specimens — West Virginia.

7 wheel specimens - West Virginia.

7 economic specimens — West Virginia.
2 dry fruit specimens — West Virginia.

1 specimen fruits in formalin - West Virginia.

1 herbarium specimen - Illinois.

479 herbarium specimens - Georgia.

112 economic specimens — Georgia.

6 specimens drv fruits - Georgia.

a specimens fruits in formalin — Georgia. 13 herbarium specimens — West Virginia. 7 dry fruits — West Virginia. 28 economic specimens - West Virginia. 10 winter twigs - West Virginia. 101 slab specimens -- West Virginia. 82 board specimens - West Virginia. 20 specimens wheel sections -- West Virginia. 374 herbarium specimens — various localities. 54 herbarium specimens - Tobago, West Indies. 155 herbarium specimens — Paraguay. 338 herbarium specimens — West Indies. The private herbarium and library of Dr. J. T. Rothrock, West Chester, Pennsylvania. 61 herbarium specimens — various localities. 303 herbarium specimens — Arizona. 198 herbarium specimens — Black Hills, South Dakota. 1 herbarium specimens - Tobago, West Indies. 522 herbarium specimens --- Mexico. 507 herbarium specimens — various localities. 106 herbarium specimens — Guatemala. 597 herbarium specimens - Arizona.

32 specimens crude drugs.

414 herbarium specimens - West Indies.

1.150 herbarium specimens - Philippine Islands.

28 herbarium specimens - Palestine.

15 economic specimens - Palestine.

Modeled by B. E. Dahlgren:

Purchases:

11 models of plants - Jamaica.

3 models of plants - Indiana.

FULLER, GEORGE D., Chicago.

40 herbarium specimens — Alberta, British Columbia.

7 herbarium specimens — various localites.

GARRETT, A. O., Salt Lake City, Utah.

14 herbarium specimens — Utah.

GATES, FRANK C., Chicago.

43 herbarium specimens — various localities (exchange).

27 herbarium specimens — Illinois.

GLOYE, MAX C., Michigan City, Indiana.

1 specimen Brazilian cedar — Brazil.

1 specimen laurel — British Guiana.

1 board specimen — Mexico.

GREEN, CHARLES D., Alleghenv, Pennsvlvania.

1 fruit specimen — Norway.

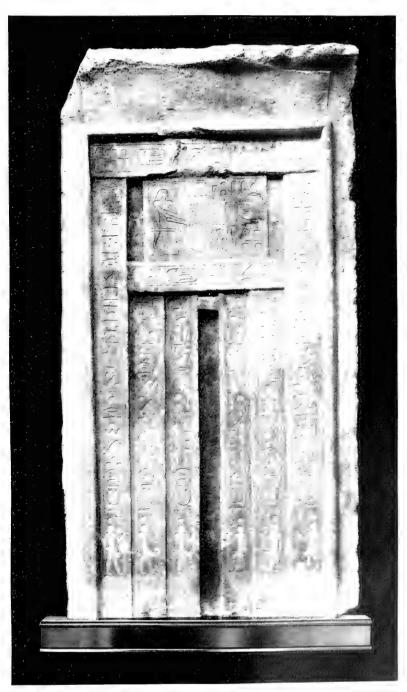
GREENMAN, J. M., Chicago.

r herbarium specimen — Massachusetts.

5 herbarium specimens — Indiana.

2 herbarium specimens — Utah.

HILL, E. J., Chicago. 77 herbarium specimens — various localities. HOPE BOTANICAL GARDEN, Kingston, Jamaica. 1 trunk of tree fern - Jamaica. ISELY, F. B., Tonkawa, Oklahoma. 124 herbarium specimens — Oklahoma. KIRKWOOD, J. E., Tucson, Arizona. 90 herbarium specimens — Mexico. 1 herbarium specimen — Arizona. LANSING, O. E., Jr., Chicago. 1 fungus specimen — Illinois. LUNELL, J., Leeds, North Dakota. 4 herbarium specimens — North Dakota. MAC DOUGAL, D. T., Tucson, Arizona. 2 photographs of Juliana --- Mexico. 9 economic specimens — Arizona. 2 cactus candy specimens — Tucson, Arizona. MILLSPAUGH, C. F., Chicago. 17 economic specimens. 2 economic specimens - Japan. r economic specimen — Jamaica. 2 economic specimens - Mexico. 1 economic specimen — Curacao. r economic specimen — Florida. I fruit specimen. ; herbarium specimens - Pennsylvania. MISSOURI BOTANICAL GARDEN, St. Louis, Missouri. 1 description of Callicarpa cinerea. MITCHELL, J. C., Chicago. 1 specimen strawberry fruits — Chicago. MYERS, G. W., Chicago. 3 herbarium specimens — Colorado. NATAL BOTANIC GARDENS, Berea, Durban, Natal. 105 herbarium specimens - various localities (exchange). NEW YORK BOTANICAL GARDEN, Bronx Park, New York. 4 economic specimens - Bahamas, Jamaica, and Mexico (exchange). 233 herbarium specimens — Cuba and Bahamas (exchange). 3 economic specimens — Java (exchange). 771 herbarium specimens — Jamaica (exchange). 6 herbarium specimens - Florida (exchange). 151 herbarium specimens — Bermuda (exchange). 551 herbarium specimens — Bahamas (exchange). 4 herbarium specimens - Barbadoes (exchange). REECHER, S. E., Sparta, Illinois. 77 herbarium specimens — Illinois. 6 herbarium specimens — Missouri. REYNOLDS, MISS CARRIE A., Mayfair, Illinois. 4 herbarium specimens - Illinois. 3 herbarium specimens — Illinois.



False Door of Large Mastaba Torth

ROTHROCK, J. T., West Chester, Pennsylvania. 1 steel engraving of Dr. Asa Grav. r photograph of John Bartram House. I photograph of C. S. Bradford. r photograph of Quercus Muhlenbergii. I photograph of M. Woronin. r photograph of Andre Michaux. 1 photograph of A. de Bary. 1 photograph of E. Stahl. 301 herbarium specimens — West Indies. ROWLEE, W. W., Ithaca, New York, 1 fruit specimen. ROYAL GARDENS, Kew, London, England. 1 specimen seeds — Niger River (exchange). RUSBY, H. H., New York City. 1 economic specimen - Holland. SMITH, H. H., Chicago. 4 economic specimens - Indiana. 2 herbarium specimens — Illinois. 2 economic specimens — Indiana. THE CHINA TEA ASSOCIATION, London, England. 18 samples of English breakfast teas — Hankow, China. THE JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J. 12 specimens illustrating steps in the manufacture of lead pencils. TRELEASE, WM., St. Louis, Missouri, 1 herbarium specimen — Mexico. UNITED STATES BUREAU OF PLANT INDUSTRY, Washington, D. C. 1 specimen macaroni wheat - South Dakota. UNIVERSITY OF CALIFORNIA, Berkeley, California. 173 herbarium specimens — Arizona (exchange). UNIVERSITY OF CHICAGO, Chicago. 303 herbarium specimens — Mexico. WERTER, P. J., Miami, Florida. r economic specimen — Florida. WRIGHT, WILBUR H., Chicago. 209 herbarium specimens -- Illinois, Indiana, and Wisconsin. DEPARTMENT OF GEOLOGY. (ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AUSTRIAN, MRS. JOSEPH, Chicago. 322 specimens of minerals, fossils, etc. AYER, E. E., Chicago. 1 specimen asbestos - Ontario. 1 glaciated copper boulder, weight 22 lbs.- Lake Geneva, Wisconsin.

BEEBE, J. O., Burlington, Iowa.

10 plaster casts of fossil crinoids.

CATLIN, H. W., Oaxaca, Mexico.

5 specimens silver ore - Oaxaca, Mexico.

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CHALMERS, THOS. S., Chicago. 3 specimens gold ore - Cripple Creek, Colorado. CHALMERS, WM. J., Chicago. 1 crystal golden beryl - Poland, Maine. COX, E. H., Fort Dodge, Iowa. 1 specimen clay concretion - Fort Dodge, Iowa. DOWD, JOHN, Bristol, Illinois. 1 leg bone of fossil deer - Bristol, Illinois. FARRINGTON, O. C., Chicago. 2 specimens diamond, in matrix - Brazil (loan). 4 specimens crystallized topaz — New Hampshire (loan). FIELD, STANLEY; CRANE, R. T., Jr.; McCORMICK, CYRUS H.; PORTER, GEO. F. Tonopah meteorite. FIELD MUSEUM OF NATURAL HISTORY. Collected by O. C. Farrington: 159 specimens ores and minerals of Washington, Idaho, and Alaska. 1 specimen volcanic dust — Alaska. 3 specimens trilobites — British Columbia. 5 specimens cretaceous fossils --- Washington. 2 specimens fossil wolf - Los Angeles, California. 10 specimens rocks — Arizona and Oregon. I glaciated pebble --- Homewood, Illinois. 1 specimen pyrargyrite — Oaxaca, Mexico. 2 specimens silver ore — Oaxaca, Mexico. 3 specimens copper ore - Oaxaca, Mexico. I specimen chert - Oaxaca, Mexico. 7 specimens rocks — Bermuda. 3 specimens potholes — Bermuda. 4 specimens concretions — Bermuda. 3 specimens soils and sands -- Bermuda. 1 specimen building stone — Bermuda. 110 specimens fossils - Bermuda. 7 specimens fossil shells— Yorkville, Illinois. Collected by J. F. Ferry: 1 specimen magnesite — Margarita Islands, Venezuela. Collected by H. W. Nichols: 76 specimens fossils, ores, and minerals - Bromide, Coal Co., Oklahoma. Collected by A. W. Slocom: 102 specimens invertebrate fossils - Petoskey and Bay View, Michi-2174 specimens invertebrate fossils - Wilmington, Illinois. 47 specimens invertebrate fossils - Cook County, Illinois. 1 specimen clay -- Cook County, Illinois. 4 concretions — Cook County, Illinois. 10 specimens geodes - Romeo, Illinois.

05 specimens invertebrate fossils - Cook County, Illinois.

2 specimens sandstone — Lemont, Illinois. 16 specimens invertebrate fossils -- Cook County, Illinois, r specimen bitumen — Thornton, Illinois. 350 specimens Pleistocene shells - Willow Springs, Illinois. Purchases. 3 specimen slabs of crinoids - Le Grand, Iowa. 23 specimens crinoids (10 species) - Le Grand, Iowa. 1 slab Uintacrinus socialis — Beaver Creek, Logan Co., Kansas. r skeleton of fossil beaver (Castoroides ohioensis)- Fairmount, Indiana. r skull of mastodon with one tusk --- Yorkville, Illinois, GAMBA, F. PEREIRA, Pasto, U. S. of Colombia. 11 specimens gold ores and associated rocks — Porvenir mine. Piedrancha. GEOLOGICAL SURVEY OF INDIA, Calcutta, India. 1 specimen Dokachi meteorite (exchange). 1 specimen Futtehpoor meteorite (exchange). GOFF, JOHN, Pontotoc, Mississippi, 15 specimens (2 species) fossil echinoids — Pontotoc, Mississippi, GOODALE, FRED, Bristol, Illinois, r specimen eroded limestone. GREBEL, WENDLER & COMPANY, Geneva, Switzerland. 1 specimen Buschhof meteorite (exchange). 10 specimens minerals (exchange). HOWLAND, LOUIS M., Paris, France. 7 specimens fossil sharks' teeth — Cavaillon, France. KENKEL, LOUIS V., Harper, Washington. 34 views of mines, caves, and rock formations --- Montana and Washington. 16 photographs of Alaska glaciers. LIEBINGER, FELIX, Vienna, Austria. 2 maps of Dolomitic Alps. MILLAR, A. O., Minneapolis, Minn. 3 specimens diamond-bearing peridotite — Pike Co., Arkansas. 2 specimens fuller's earth - Pike Co., Arkansas. NEWBERRY, W. W., Chicago. 5 specimens silicious oölite — Bromide, Oklahoma. 1 concretion - Bromide, Oklahoma. 2 pseudomorphs — Bromide, Oklahoma. r piece stalactite --- Bromide, Oklahoma. 15 specimens fossils - Bromide, Oklahoma. NIPPON TOKI GOMEI KWAISHA, Noritake, Japan. 12 specimens clays and other minerals used in the manufacture of Japanese porcelain. SLOCOM, A. W., Chicago. r specimen jasper in hematite - Ishpeming, Michigan. TALBERT, JOS. T., Chicago. 6 specimens gilsonite - Utah. 1 specimen anthracite — Colorado.

WEBER, JOHN A., Chicago.

1 specimen native copper - Lake Superior.

### DEPARTMENT OF ZOOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

ANNIS, N. P., Chicago. 1 fly — Chicago. BAKER, HENRY D., Hobart, Tasmania. 1 mounted platypus — Tasmania. BLISS, RAYMOND E., Jr., Chicago. 2 fishes (mounted) - Manitouish Waters, Wisconsin. COALE, HENRY K., Highland Park, Illinois. 1 mink — Deerfield, Lake County, Illinois. 1 deer mouse - Highland Park, Illinois. DEUBLER, L., Chicago. 2 flies --- Hessville, Indiana. 2 beetles - Hessville, Indiana. DEWEY, C. L., Chicago. 1 turtle — Dowagiac, Michigan. DOHMAN, U. A., Chicago. 1 bee — Chicago. 1 beetle-larva — Chicago. 1 bumblebee — Chicago. DORSEY, GEO. A., Chicago. 1 paradise bird - Solomon Islands. 1 kingfisher - Solomon Islands. 1 jacana — Solomon Islands. FERRY, J. F., Chicago. 1 bat — Chicago. 1 moth — Porlamar, Margarita. FIELD MUSEUM OF NATURAL HISTORY. Collected by C. E. Akeley: 1 millipede — Voi, British East Africa. 3 bugs - Tana River, British East Africa. 3 beetles - Tana River, British East Africa. Collected by E. B. Chope: 232 dragonflies, grasshoppers, bugs, beetles, flies, moths and bees, wasps, etc.-- Illinois and Wisconsin. 874 spiders, dragonflies, grasshoppers, bugs, butterflies, moths, beetles, flies and bees, wasps, etc.-- Northern Illinois. Collected by Geo. A. Dorsey: 1 walking stick --- Interior of Bougainville, Solomon Islands. Collected by J. F. Ferry: 6 snakes — Venezuela, South America. 63 lizards --- Venezuela, South America. 1 frog - Venezuela, South America.

JAN., 1910.

1 turtle — Venezuela, South America. 31 fishes — Venezuela, South America. 1 frog — Ouill Lake, Saskatchewan, 17 mammals — Saskatchewan. 1 moth - Margarita Islands. 835 bird skins - Margarita Islands. 15 mammal skins, 1 butterfly, 1 centipede - Margarita Islands. 105 bird skins - Saskatchewan. 36 sets of eggs (with nests) 192 eggs — Saskatchewan. 27 nests (without eggs)— Saskatchewan. Collected by Julius Friesser: 208 grasshoppers, bugs, beetles and bees, wasps, etc.-- Mexico. Collected by W. I. Gerhard: 735 spiders, nerve-wings, grasshoppers, dragonflies, bugs, beetles. butterflies, moths, flies and bees, wasps, and parasites-Northern Illinois and Northern Indiana. I lizard - Olive Branch, Illinois, Collected by S. F. Hildebrand: 168 fishes - Stendal and Pikeville, Indiana. 71 reptiles — Stendal and Pikeville, Indiana. r millipede — Pikeville, Indiana. Collected by O. E. Lansing: 1 beetle - Starved Rock, Illinois. Collected by S. E. Meek and W. Heim: 360 fishes - Dry Tortugas, Florida. 942 fishes - Key West, Florida. s lizards - Key West, Florida. Collected by L. L. Pray: 3 fox squirrel skins - Tallulah, Louisiana. 4 gray squirrel skins - Tallulah, Louisiana. ; black fur squirrels — Tallulah, Louisiana. 5 mice — Tallulah, Louisiana. 12 squirrels - Tallulah, Louisiana. 5 mice - Tallulah, Louisiana. 2 bird skins - Tallulah, Louisiana, 1 turkey buzzard - Tallulah, Louisiana. r pileated woodpecker - Tallulah, Louisiana. Collected by V. Shelford and S. F. Hildebrand: 254 fishes --- Illinois. 4 turtles. 3 snakes. 3 frogs. Collected by A. B. Wolcott: 533 dragonflies, grasshoppers, bugs, moths, beetles, flies and bees, wasps, etc.- Illinois and Indiana. Purchases: 5 mounted reptiles as follows: I snake, I frog, I toad and 2 lizards — Europe.

1 small rodent --- Darjeeling, India. 4 beetles - Darjeeling, India. 30 moths - Darjeeling, India. 210 butterflies - Darjeeling, India. 3 monkeys — British Guiana. r porcupine — British Guiana. 1 paca — British Guiana. 1 agonti — British Guiana. 1 bracket — British Guiana. 1 dog — British Guiana. 1 jaguar — British Guiana. 1 ocelot — British Guiana. 32 squirrels, muskrats, mice. minks, weasels, moles, and shrews, 2 flying lizards - Palawan, Philippine Islands. 215 shells — Palawan, Philippine Islands. 112 butterflies - Palawan, Philippine Islands. 3 moths - Palawan, Philippine Islands. 1 mantis - Palawan, Philippine Islands. 4 katydids - Palawan, Philippine Islands. 5 bees, parasites, etc.- Palawan, Philippine Islands. 34 beetles --- Palawan, Philippine Islands. 2 sowbugs - Palawan, Philippine Islands. 2 spiders - Palawan, Philippine Islands. 1 mountain goat skin 1 porpoise. 1 spoon bill cat fish — Scotts, Arkansas. 3,231 fishes --- various localities. 1 golden eagle — Bozeman, Montana. 11 bird skins - Darjeeling, India. r wild turkey — Missouri. 18 bird skins - Jamaica, West Indies. 142 ducks, ibises, toucans, tinamous, parrots, hawks, woodpeckers humming-birds, and others mostly small passerine birds --British Guiana. 1 American rough leg hawk - Geneva, Illinois. FREEBURG, GUS., Liverpool, Indiana. 2 snakes — Liverpool, Indiana. FRIESSER, JULIUS, Chicago. to beetles, flies, and specimens of scale insects - Illinois and Michi-3 turtles - McHenry, Illinois. GERHARD, WM. J., Chicago. 16 grasshoppers, crickets, etc.- Eastern Pennsylvania, Southern New Jersey, and Maryland. GLYNN, PETER, Chicago. 1 salamander - Downer's Grove, Illinois.

GREGOR, DARLING K., Fulton, Missouri.

- 25 lizards Oklahoma.
- $\frac{1}{7}$  frogs Oklahoma.

GUERET, E. N., Chicago. r short eared owl - Grass Lake, Illinois. 1 red wing black birds - Grass Lake, Illinois. r rusty black bird — Grass Lake, Illinois. 1 snake --- Wauconda, Lake County, Illinois. HARDEE, F. E., Chicago. r snake — India. r skeleton of snake. HELLER, ISIDORE, Chicago. Lowl (mounted). L cormorant (mounted). HILDEBRAND, S. F., Chicago. T beetle --- Chicago. 2 scorpions — Globe, Arizona. z lizards — Globe, Arizona. HOWE, MURRAY, Chicago, 2 skulls of bear — Alaska. HURTER, JULIUS, St. Louis, Missouri. 10 reptiles (exchange). JACKSON, H. H. T., Madison, Wisconsin. 3 owls, 2 shorebirds, 1 bobwhite, 2 woodpeckers, 8 passerine birds -Wisconsin (exchange). KWIAT, ALEX., Chicago. 1 fly - Palos Park. Illinois. McCOY, G. W., San Francisco, California. 5 rats — San Francisco, California. 1 mole — San Francisco, California. 1 weasel - San Francisco, California. 15 fleas — San Francisco, California. McINTYRE, G., Walworth, Wisconsin. 6 moths — Walworth, Wisconsin. MOULTON, MRS. G. M., Chicago. r spine of catfish — Caribbean Sea. MUNZNER, H., Chicago. 1 bumblebee — Chicago. OSGOOD, W. H., Chicago. r skunk skull. r raccoon skull. PARK FISHERMEN, Jackson Park, Chicago. 1 turtle — Jackson Park, Chicago. RADDATZ, R. C., Chicago. 2 woodchuck skulls - Dry Bay, Alaska. RAVEN, HENRY F., Simon, Costa Rica. 1 squirrel skin — Simon, Costa Rica. 1 oriole — Cumana, Venezuela. r parrot — Cumana, Venezuela. 47 bird skins - Costa Rica and Venezuela. SETON. ERNEST T., Cos Cob, Connecticut.

16 mice and shrews.

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SKINNER, HENRY, Philadelphia, Pennsylvania. 2 butterflies - Ft. Wingate, New Mexico. SMITH, C. F., Chicago. 8 wasps - San Carlos, Vera Cruz, Mexico. 10 bees — Chicago. 1 katydid — Palos Park, Illinois. 5 bees - Chicago, Illinois. SMITH, AUSTIN PAUL, Brownsville, Texas. 1 rock wren - Brownsville, Texas. 1 cardinal — Brownsville, Texas. 1 titmouse — Brownsville, Texas. 1 sparrow — Brownsville, Texas. 1 warbler — Brownsville, Texas. 1 water thrush — Brownsville, Texas. STEVENS, MRS. A., Chicago. 1 beetle — Chicago. THAYER MUSEUM, Lancaster, Massachusetts. 41 sets of bird's eggs including 73 eggs - Lower California. THOMPSON, S. L., Chicago. 1 ichneumon fly --- Chicago. TUTTLE, MRS. M. 40 bryozoans — Santa Cruz, California. UNITED STATES DEPARTMENT OF COMMERCE AND LABOR Washington, D. C. 50 fresh-water shells - various localities. UNITED STATES EXPRESS COMPANY, Chicago. 1 monkey. UNITED STATES NATIONAL MUSEUM, Washington, D. C. 2 squirrels - Venezuela (exchange). WEBER, C. M., Palawan, Philippine Islands. 2 shells — Tara Islands, Palawan. 1 shell — Bacuit, Palawan. 3 shells - Coron Islands, Palawan. 1 shell — Binga, Mt. Capoas, Palawan. 1 shell — Palawan. WILLARD, F. C., Tombstone, Arizona. 4 snakes - Tombstone, Arizona. WOLCOTT, A. B., Chicago. 1 moth --- Chicago. 1 moth --- North Evanston, Illinois. 1 beetle — New Harmony, Indiana.

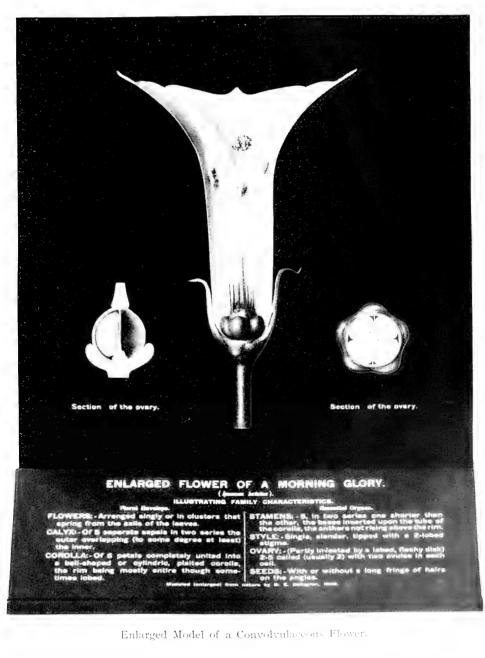
1 wasp — New Harmony, Indiana.

1 turtle — West Pullman, Illinois.

1 toad — West Pullman, Illinois.

FIELD MUSEUM OF NATURAL HISTORY.

REPORTS, PLATE LI.



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# SECTION OF PHOTOGRAPHY

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.) DAYKIN BROTHERS, Cleveland, Ohio, 16 views of Bermuda scenery (exchange). FIELD MUSEUM OF NATURAL HISTORY. Made by C. H. Carpenter: 2,142 negatives, 6,017 prints, 1,273 lantern slides, 53 enlargements, 84 Lumiere Autochrome photographs, 875 negatives developed. Made by F. C. Cole: 6 portraits of natives, etc. - Philippine Islands. Made by O. C. Farrington: 54 negatives of general views — Bermuda Islands. 24 negatives of general views - Mexico. 18 negatives of general views - California and Arizona. Made by J. F. Ferry: 300 negatives of general views - Saskatchewan. Made by S. E. Meek: 84 negatives of fishes, views, etc.-- Florida. Made by W. H. Osgood: 4 negatives of landscapes — South Chicago. Made by H. H. Smith: 12 portraits of trees — Chicago. 146 portraits of trees, landscapes, etc.— West Virginia. 36 portraits of trees, landscapes, etc. Purchases: 721 portraits, views, landscapes, etc. 465 portraits of mammals. 80 views of India and types of natives. 6 colored lantern slides — Bermuda. 10 lantern slides — Bermuda. 32 lantern slides — Bermuda and the Colorado River. 34 lantern slides — Alaska. SKIFF, FREDERICK J. V., Chicago. 9 portraits of living mammals. UNITED STATES NATIONAL MUSEUM, Washington, D. C. I portrait of adult walrus.

#### THE LIBRARY.

#### BOOKS, PAMPHLETS, AND SERIALS.

(ACCESSIONS ARE BY EXCHANGE UNLESS OTHERWISE DESIGNATED.) ABERDEEN UNIVERSITY, Aberdeen, Scotland.

1 reprint.

ADAMS, F. D. T., Montreal, Canada.

ı pamphlet.

ALABAMA AGRICULTURAL EXPERIMENT STATION, Auburn, Alabama.

Bulletin, current numbers (gift).

ALLEN, J. A., New York City.

2 reprints.

AMANI-BIOLOGISCH LANDWIRTSSCHAFT-INSTITUT, Deutsch Ostafrika.

Der pflanzer, v. 5, no. 1-8,

AMERICAN ACADEMY OF ARTS AND SCIENCES, Boston, Massachusetts.

Proceedings, current numbers.

- AMERICAN ANTIQUARIAN SOCIETY, Boston, Massachusetts. Proceedings, current numbers.
- AMERICAN ASSOCIATION OF MUSEUMS, Pittsburgh, Pennsylvania. Proceedings, v. 2, 1908.
- AMERICAN CHEMICAL JOURNAL PUBLISHING COMPANY, Baltimore, Maryland.

Journal, current numbers.

- AMERICAN FOLK-LORE SOCIETY, Cambridge, Massachusetts. Journal, current numbers.
- AMERICAN GEOGRAPHICAL SOCIETY, New York City.

Bulletin, current numbers.

AMERICAN INSTITUTE OF MINING ENGINEERS, New York City. Transactions, v. 39, 1908.

Yearbook, 1909.

AMERICAN MINING CONGRESS, Denver, Colorado.

Report of proceedings, 11th annual session, 1908 (gift).

- AMERICAN MUSEUM OF NATURAL HISTORY, New York City. 45 publications.
- AMERICAN ORIENTAL SOCIETY, New Haven, Connecticut. Journal, v. 29.
- AMERICAN PHILOSOPHICAL SOCIETY, Philadelphia.
  - Proceedings, current numbers.
- AMES BOTANICAL LABORATORY, Easton, Pennsylvania. Contributions, no. 9.
- AMSTERDAM. DUTCH ROYAL GEOGRAPHICAL SOCIETY, Amsterdam, Netherlands.

Zuidwest Niew-Guinea Expedite, 1904-5.

AMSTERDAM K. AKADEMIE VAN WETENSCHAPPEN, Amsterdam, Netherlands.

6 publications.

- ANGERS. SOCIÉTÉ D'ÉTUDES SCIENTIFIQUES, Angers, France. Bulletin, v. 37.
- ANGERS. SOCIÉTÉ NATIONALE D'AGRICULTURE, SCIENCES ET ARTS, Angers, France.

Mémoires, v. 10.

ANNALES DES MINES, Paris, France.

Current numbers.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRE-LAND, London, England.

Journal, current numbers.

ARCHAEOLOGICAL INSTITUTE OF AMERICA, New York City, American journal of archaeology, current numbers. Index, vol. 1-10. ARCHIV FÜR RELIGIONWISSENSCHAFT, Leipzig, Germany Current numbers. ARCTOWSKI, HENRY K., Melle, Belgium. 1 pamphlet (gift). ARDENNES. SOCIÉTÉ D'HISTOIRE NATURELLE, Ardennes, France. Bulletin current numbers ARIZONA AGRICULTURAL EXPERIMENT STATION, Tueson, Arizona, Annual report, no. 10, 1008. Bulletin, current numbers. ARKANSAS AGRICULTURAL EXPERIMENT STATION, Favetteville, Arkansas. Bulletin, current numbers. ARMOUR INSTITUTE OF TECHNOLOGY, Chicago. 2 publications. ASIATIC SOCIETY OF BENGAL, Calcutta, India. Proceedings, current numbers. ASSOCIATION OF ENGINEERING SOCIETIES, Philadelphia. Iournal, current numbers. ATKINSON, GEORGE F., Ithaca, New York. 3 reprints. AUGSBURG NATURHISTORISCHER VEREIN, Augsburg, Germany. Bericht, 1008. AUSTRALASIAN ASSOCIATION FOR ADVANCEMENT OF SCIENCE. Adelaide, Australia. Report, no. 11, 1007. AUSTRALIAN MUSEUM, Sydney, New South Wales. Report, 1908. 4 publications. AYER, EDWARD E., Chicago. 4 volumes (gift). AZAMBUJA DE, GRACIANO A., Porto Alegre, Brazil. I publication. BAKER, HENRY D., Hobart, Tasmania. 3 pamphlets (gift). BALCH, E. S., Philadelphia. 1 pamphlet. BARBER, EDWIN ATLEE, Philadelphia. 1 publication. BATAVIAASCHE GENOOTSCHAP VAN KUNSTEN EN WETEN-SCHAPPEN, Batavia, Java. Tijdschrift, v. 51, no. 3-4. Verhandelingen, v. 57. BATH NATURAL HISTORY AND ANTIQUARIAN FIELD CLUB Bath, England. Proceedings, v. 11, no. 3.

FIELD MUSEUM OF NATURAL HISTORY - REPORTS, VOL. III. 386 BAYERN. ORNITHOLOGISCHE GESELLSCHAFT, Munich, Germany. Mitteilungen, current numbers. Verhandlungen, v. 8. BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY, Belfast, Ireland. Report and proceedings, 1907-8. BELFAST NATURALISTS' FIELD CLUB, Belfast, Ireland. Proceedings, current numbers. BELOIT COLLEGE, Beloit, Wisconsin. Catalogue, 1008-0. BERGENS MUSEUM, Bergen, Norway. 2 publications. BERLIN. DEUTSCHE GEOLOGISCHE GESELLSCHAFT, Berlin, Germany. Monatsschrift, current numbers. Zeitschrift, current numbers. BERLIN. DEUTSCHE GESELLSCHAFT FÜR ANTHROP., ETHNOL. UND URGS., Berlin, Germany. Zeitschrift für ethnologie, current numbers. BERLIN, DEUTSCHE GESELLSCHAFT FÜR ERDKUNDE, Berlin, Germany. Bibliotheca geographica. v. 14. Zeitschrift, current numbers. BERLIN. DEUTSCHE GESELLSCHAFT FÜR VOLKSTUMLICHE, Berlin, Germany. Naturwochenschrift, current numbers. BERLIN. DEUTSCHE UNIVERSITÄT, Berlin, Germanv. Jahres-verzeichnis, v. 23. BERLIN. K. BIBLIOTHEK, Berlin. Germany. [ahresbericht, 1908-9. BERLIN. K. BOTANISCHER GARTEN UND MUSEUM, Berlin, Germany. Notizblatt, no. 44, 45. BERLIN. K. PREUSSICHE AKADEMIE DER WISSENSCHAFTEN, Berlin, Germany. Sitzungsberichte, current numbers. BERLIN. VEREIN FÜR VOLKSKUNDE, Berlin, Germany. Zeitschrift, current numbers. BERLIN. ZOOLOGISCHES MUSEUM, Berlin, Germany. Bericht, 1908. Mitteilungen, current numbers. BERN UNIVERSITÄT, Bern, Switzerland. 8 dissertations. BERNICE PAUAHI BISHOP MUSEUM, Honolulu, Hawaiian Islands. 3 publications. BÖHMEN NATURWIS, LANDESDURCHFORSCHUNG, Prag, Austria. Archiv. v. 13, no. 2; v. 14, no. 2. BOMAN, ERIC, Paris, France. Antiquités de la région andine.

BOMBAY ANTHROPOLOGICAL SOCIETY, Bombay, India. Journal, current numbers. BONN, NATURHISTORISCHER VEREIN, Bonn, Germany, Sitzungsberichte, 1008. Verhandlungen, v. 65, pt. 1. BORDEAUX. SOCIÉTÉ LINNÉENE, Bordeaux, France. Procès-verbaux, v. 62. BOSTON MUSEUM OF FINE ARTS, Boston, Massachusetts, 5 publications. BOSTON PUBLIC LIBRARY, Boston, Massachusetts. Annual report, no. 57, 1908-9. BOSTON SOCIETY OF NATURAL HISTORY, Boston, Massachusetts. 3 publications. BOSTON TRANSIT COMMISSION, Boston, Massachusetts. Annual report, no. 14, 1908. BOSTON UNIVERSITY, Boston, Massachusetts, President's report, 1907-8. Yearbook, v. 36. BOWDOIN COLLEGE, Brunswick, Maine. Catalogue, 1908-1909. Librarian's report, 1908-9. BRAND, CHARLES J., Washington, D. C. Guide to modern Peru (gift). BRANDEGEE, T. S., Berkeley, California. i separate. BRANDENBURG BOTANISCHER VEREIN, Brandenburg, Germany. Verhandlungen, v. 50. BRAUNSCHWEIG VEREIN FÜR NATURWISSENSCHAFT, Braunschweig, Germany. Jahresbericht, no. 14. BREMEN. NATURWISSENSCHAFTLICHER VEREIN, Bremen, Germany. r publication. BRIGHTON AND HOVE NATURAL HISTORY AND PHILOSOPHI-CAL SOCIETY, Brighton, England. Abstracts of papers and annual report, 1908. BRISTOL MUSEUM AND ART GALLERY, Bristol, England. Report, 1908. BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. London, England. Report, Dublin meeting, 1908. BRITISH COLUMBIA LEGISLATIVE ASSEMBLY, Victoria, British Columbia. Sessional papers, 1908, 1909. BRITISH COLUMBIA MINISTER OF MINES, Victoria, British Columbia. Annual report, 1908. BRITISH COLUMBIA PROVINCIAL MUSEUM, Victoria, British Columbia. Visitors' guide.

- FIELD MUSEUM OF NATURAL HISTORY REPORTS, VOL. III. 388
- BRITISH MUSEUM (NATURAL HISTORY), London, England. 12 publications.
- BROOKLYN INSTITUTE OF ARTS AND SCIENCES, Brooklyn, New York.

46 publications.

BRÜNN, LANDWIRTSCHAFT LANDES VERSUCHSSTATION FÜR PFLANZENKULTOR, Brünn, Austria.

Bericht, 1907-8.

- BRÜNN. NATURFORSCHENDER VEREIN, Brünn, Austria. Verhandlungen, v. 46.
- BRUSSELS. ACADÉMIE ROYALE DES SCIENCES, DES LETTRES ET DES BEAUX-ARTS, Brussels, Belgium.

Annuaire, 1000.

Bulletin, current numbers.

- BRUSSELS. JARDIN BOTANIQUE DE L'ETAT, Brussels, Belgium. La végétation en Belgique.
- BRUSSELS. MUSÉE ROYALE D'HISTOIRE NATURELLE, Brussels, Belgium.

1 extract.

BRUSSELS. SOCIÉTÉ D'ARCHÉOLOGIE, Brussels, Belgium. Annales, current numbers. Annuaire, v. 20.

BRYN MAWR COLLEGE, Brvn Mawr, Pennsylvania. Calendar, 1000.

Monographs, reprint series, v. 7.

BUDAPEST. SOCIÉTÉ ROYALE HONGROISE DES SCIENCES NATURELLES, Budapest, Hungary.

Aquila, current numbers.

BUENOS AIRES. FACULTAD DE FILOSOFIA Y LETRAS, Buenos Aires, Argentina.

Publications, no. 4-5.

BUENOS AIRES. MUSEO DE FARMACOLOGIA, Buenos Aires, Argentina.

3 publications.

BUENOS AIRES. MUSEO NACIONAL, Buenos Aires, Argentina. Anales, ser. 3, t. 10.

I pamphlet.

BUFFALO PUBLIC LIBRARY, Buffalo, New York.

Annual report, no. 12.

- BUFFALO SOCIETY OF NATURAL SCIENCES, Buffalo, New York. Bulletin, current numbers.
- BUITENZORG. DEPARTMENT OF AGRICULTURE, Buitenzorg, Java. Bulletin, current numbers.

i separate.

- BUITENZORG. S'LANDS PLANTENTUIN, Buitenzorg, Java. 9 publications.
- BURMA, ARCHAEOLOGICAL SURVEY, Burma, India. Report, 1008-0.

CALCUTTA. ROYAL BOTANIC GARDENS, Calcutta, India. Annals, v. 11.
CALIFORNIA ACADEMY OF SCIENCES, San Francisco, California.
Proceedings, current numbers.
CALIFORNIA AGRICULTURAL EXPERIMENT STATION, Berkeley, California.
Bulletin, current numbers.
Circulars, current numbers.
CALIFORNIA STATE LIBRARY, Sacramento, California.
Biennial report, 1906–1908.
Occasional papers, current numbers.
CALIFORNIA STATE MINING BUREAU, San Francisco, California.
Bulletin, 46, 50-53. Map.
Report, Board of Trustees, 1908.
CALIFORNIA UNIVERSITY, Berkeley, California.
32 publications.
CALL, R. ELLSWORTH, New York City.
6 publications.
CAMBRIDGE ANTIQUARIAN SOCIETY, Cambridge, England.
List of members, etc., 1909.
Proceedings, current numbers.
CAMBRIDGE MUSEUM AND LECTURE ROOMS SYNDICATE, Cam- bridge, England.
Annual report, no. 43, 1908.
CAMBRIDGE PHILOSOPHICAL SOCIETY, Cambridge, England.
Proceedings and transactions, current numbers.
CAMBRIDGE PUBLIC LIBRARY, Cambridge, Massachusetts.
Annual report, 1908–9.
Bulletin, current numbers.
CAMBRIDGE UNIVERSITY LIBRARY, Cambridge, England.
Report, 1908.
CAMERANO, LORENZO, Milano, Italy.
4 pamphlets. CAMPINAS CENTRO DE CIENCIAS, Sao Paulo, Brazil.
Revista, current numbers.
CANADA, BOTANICAL SOCIETY, Halifax, Nova Scotia.
Report, 1906-7, 1907-8.
3 pamphlets.
CANADA. GOVERNMENT OF, Ottawa, Canada.
8 reports.
17 topographical sheets.
4 maps. CANADA. ROYAL SOCIETY, Ottawa, Canada.
Proceedings and transactions, 3d. ser., v. 2.
CANADIAN INSTITUTE, Toronto, Canada.
Transactions, v. 8, no. 3.

FIELD MUSEUM OF NATURAL HISTORY - REPORTS, VOL. III. 390 CAPE OF GOOD HOPE. DEPARTMENT OF AGRICULTURE, Cape Town, South Africa. 13 publications. CAPE TOWN. GOVERNMENT ENTOMOLOGIST, Cape Town, South Africa. Report. 1008. CARDIFF NATURALISTS' SOCIETY, Cardiff, Wales. Transactions, v. 41. CARDIFF PUBLIC LIBRARIES, Cardiff, Wales. Annual report, no. 46, 1907-8. CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACH-ING, New York City. Annual report 1908 (gift). CARNEGIE INSTITUTE, Pittsburgh, Pennsylvania. 4 publications. CARNEGIE LIBRARY OF PITTSBURG, Pittsburgh, Pennsylvania. Annual report, no. 13, 1909. Bulletin, current numbers. CARNEGIE MUSEUM, Pittsburgh, Pennsylvania. 5 publications. CARPENTER, G. H., Dublin, Ireland. Irish naturalist. current numbers. CARTHAGE INSTITUTE, Tunis, Africa. Revue tunisienne, current numbers. CASSON, HERBERT N., Chicago. I publication (gift). CATANIA, ACCADEMIA GIOENIA DI SCIENZE NATURALI, Catania, Italy. Bollettino, current numbers. CETTE. UNIVERSITÉ DE MONTPELLIER, INSTITUT DE ZOOLO-GIE, Cette, France. Mémoire, no. 17. CEYLON AGRICULTURAL SOCIETY, Colombo, India. o publications. CEYLON ROYAL BOTANIC GARDENS, Peradeniya, Ceylon. o publications. CHARLESTON MUSEUM, Charleston, South Carolina. 7 publications. CHICAGO ACADEMY OF SCIENCES, Chicago. 3 publications. CHICAGO ART INSTITUTE, Chicago. ro publications. CHICAGO COMMERCIAL CLUB, Chicago. Plan of Chicago (gift). CHICAGO HISTORICAL SOCIETY, Chicago. Annual report, 1908. CHICAGO PUBLIC LIBRARY, Chicago. 6 publications.

CHICAGO, SOUTH PARK COMMISSIONERS, Chicago. Report, 1006-1008. CHICAGO UNIVERSITY, Chicago. 70 publications. CHILE. BIBLIOTECA NACIONAL, Santiago de Chile. 27 publications. CHRISTIANIA MINERALOGICAL INSTITUTE, Christiania. Norway 3 publications. CINCINNATI MUSEUM ASSOCIATION, Cincinnati, Ohio. Annual report, 1908. CINCINNATI PUBLIC LIBRARY, Cincinnati, Ohio. 8 publications. CINCINNATI UNIVERSITY, Cincinnati, Ohio. 1; publications. CLARK UNIVERSITY, Worcester, Massachusetts. 5 publications. CLARKE, JOHN M., Albany, New York. I bulletin. CLEVELAND PUBLIC LIBRARY, Cleveland, Ohio. 5 publications. COGNIAUX, A. 4 separates. COIMBRA UNIVERSITY LIBRARY, Coimbra, Portugal. Boletin, current numbers. COLBY COLLEGE, Waterville, Maine. Catalogue, 1908-0. COLE, FAY COOPER, Chicago. 1 pamphlet. COLLEGIO DE S. FIEL, S. Fiel, Portugal. Broteria, current numbers. COLLIERY ENGINEER COMPANY, Scranton, Pennsylvania. Mines and minerals, current numbers. COLLINGE, WALTER E., Berkhamsted, England. 5 reprints. COLMAR. SOCIÉTÉ D'HISTOIRE NATURELLE, Colmar, Germany. Mitteilungen, B. 9, 1907-8. COLN. RAUTENSTRAUCH-JOEST-MUSEUM FÜR VOLKERKUNDE, Cologne, Germany. Ethnologica, v. 1. COLOMBO MUSEUM, Colombo, India. Administrative report, 1908. Spolia zeylanica, current numbers. COLORADO BUREAU OF MINES, Denver, Colorado. Report, 1907-8. COLORADO COLLEGE, Colorado Springs, Colorado. Studies, science ser., current numbers. COLORADO STATE AGRICULTURAL COLLEGE, Fort Collins, Colorado. 16 publications.

COLORADO STATE HISTORICAL AND NATURAL HISTORY SO-CIETY, Denver, Colorado.

Biennial report, 1906-8.

COLUMBIA UNIVERSITY, New York City.

32 publications. CONCARNEAU. Laboratoire de zoologie et de physiologie maritimes,

Concarneau, France.

Travaux scientifiques, t. I, fasc. 2-5.

CONCILIATION INTERNATIONALE, Paris, France.

2 pamphlets.

- CONNECTICUT ACADEMY OF SCIENCE, New Haven, Connecticut. Transactions, v. 15.
- CONNECTICUT AGRICULTURAL EXPERIMENT STATION, New Haven, Connecticut.

Bulletin, current numbers.

Report, no. 31-32, 1907-8.

COOK, MELVILLE T., Newark, Delaware.

5 reprints.

- COOPER ORNITHOLOGICAL CLUB, Hollywood, California. 10 publications.
- COOPER UNION FOR THE ADVANCEMENT OF SCIENCE, New York City.
  - Annual report, no. 50.

COPENHAGEN BOTANIC GARDEN, Copenhagen, Denmark. 9 publications.

COPENHAGEN. K. BIBLIOTHEK, Copenhagen, Denmark.

Aarsberetning, 1906-1909.

- COPENHAGEN NATURHISTORISK FORENING, Copenhagen, Denmark. Videnskabelige meddelelser, 1908.
- CORNELL UNIVERSITY, Ithaca, New York.

Librarian's report, 1907-8.

r pamphlet.

- COSTA RICA MUSEO NACIONAL, San José, Costa Rica. 6 publications.
- CROSS, WHITMAN, Washington, D. C.
- 6 separates.
- CROYDON NATURAL HISTORY AND SCIENTIFIC SOCIETY, Croydon, England.

Proceedings and transactions, 1907-8.

CUBA. ESTACION CENTRAL AGRONOMICA, Santiago de las Vegas, Cuba.

10 publications.

CULLOM, S. M., Washington, D. C.

Official register, U. S., v. 1-2.

CZERNOWITZ. K. K. FRANZ JOSEPH UNIVERSITÄT, Czernowitz, Austria.

4 reports.

DARMSTADT. VEREIN FÜR ERDKUNDE, Darmstadt, Germany. Notizblatt, 1008.



Slub of fossil crinoids (Cintacrinus sociatis), showing more than 200 individuals. Size,  $7/5 \ge 4^{1/2}$  feet

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# ARTICLES OF INCORPORATION.

# STATE OF ILLINOIS.

DEPARTMENT OF STATE. WILLIAM H. HINRICHSEN, Secretary of State.

To ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

Now, therefore, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

[SEAL.]

W. H. HINRICHSEN,

Secretary of State.

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# TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned, citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

I. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archæology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Aver, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

### (Signed),

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNallv, Edward E. Aver, John M. Clark, Herman H. Kohlsaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, George F. Bissell, John R. Walsh, Chas. Fitzsimons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Soov Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Rverson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS { ss.

COOK COUNTY

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.

# AMENDED BY-LAWS.

(APRIL 12, 1909.)

### ARTICLE I.

MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons, and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (S10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

First. — Free admittance for the member and family to the Museum on any day.

Second. — Ten tickets every year, admitting the bearer to the Museum on pay days.

*Third.* — A copy of all publications of the Museum when requested.

*Fourth.* — Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time, shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons, or Honorary Members shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars (\$500.00), at any one time, shall, upon the unanimous vote of the Board, become a Life Member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SEC. 6. Honorary Members shall be chosen by the Board from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

# ARTICLE II.

### BOARD OF TRUSTEES.

SECTION I. The Board of Trustees shall consist of fifteen members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled at a regular meeting of the Board, upon the nomination of the Executive Committee made at a preceding regular meeting, by a majority vote of the members of the Board present.

SEC. 2. Regular meetings of the Board shall be held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

# ARTICLE III.

### OFFICERS.

SECTION I. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary, and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

### ARTICLE IV.

#### THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation. He shall make disbursements only upon warrants drawn by the Director

### JAN., 1910. ANNUAL REPORT OF THE DIRECTOR.

and countersigned by the President. In the absence or inability of the Director warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrants shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed. It shall be no part of the duties of the Treasurer to see that the warrants have been issued in conformity with such vouchers.

SEC. 2. The securities and muniments of title belonging to the Corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SEC. 3. The Treasurer shall give bond in such amount, and with such sureties, as shall be approved by the Board of Trustees.

SEC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director, and the Chairman of the Administration Committee. All vouchers executed for expenditures for the construction or reconstruction of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or, in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

### ARTICLE V.

#### THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of the Museum, and shall control the operations of the institution, subject to the authority of the Board of Trustees and its Committees. The Director shall be the official medium of communication between the Board, or its Committees, and the scientific staff and maintenance force.

SEC. 2. There shall be four scientific departments of the Museum — Anthropology, Botany, Geology, and Zoölogy, each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SEC. 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month.

At the Annual Meeting the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

### ARTICLE VI.

### AUDITOR.

SECTION I. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial conditions and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board. He shall certify to the correctness of all vouchers for the expenditure of the money of the corporation.

### ARTICLE VII.

#### COMMITTEES.

SECTION 1. There shall be five Committees as follows: Finance, Building, Auditing, Administration and Executive.

SEC. 2. The Finance, Building and Auditing Committees shall each consist of three members, and the Administration Committee shall consist of five members. All members of these four Committees shall be elected by ballot by the Board at the Annual Meeting, and shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees the Board shall designate the Chairman and Vice-Chairman by the order in which the members are named in the respective Committee; the first member named shall be Chairman, the second named the Vice-Chairman, and the third named Second Vice-Chairman, succession to the Chairmanship being in this order in the event of the absence or disability of the Chairman.

SEC. 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Administration Committee, the Chairman of the Auditing Committee, and two other members of the Board to be elected by ballot at the Annual Meeting.

SEC. 4. Four members shall constitute a quorum of the Executive Committee; three members shall constitute a quorum of the Administration Committee, and in all other standing Committees two members shall constitute a quorum. In the event that, owing to the absence or inability of members a quorum of the regularly elected members cannot be present at any meeting of any Committee, then the Chairman thereof, or his successor, as herein provided, may summon any member of the Board of Trustees to act in place of the absentee.

SEC. 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest, funds, subject to the approval of the Board.

SEC. 6. The Building Committee shall have supervision of the construction, reconstruction, and extension of any and all buildings used for Museum purposes.

SEC. 7. The Executive Committee shall be called together from time to time as the Chairman may consider necessary, or as he may be requested to do







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by three members of the Committee, to act upon such matters affecting the administration of the Museum as cannot await consideration at the Regular Monthly Meetings of the Board of Trustees. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommendations as to the expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the respective Committees shall be considered as authorized to make the expenditures detailed therein. No increase in the expenditures under any items of the Budget shall be made, except by authority of the Board of Trustees, but the Executive Committee shall have authority, in cases of emergency, to expend a further total sum not exceeding two thousand dollars in any one month.

SEC. 8. The Administration Committee shall have general supervision of the affairs of the Museum. The Committee shall hold one meeting each month with the Director at the Museum within a week preceding each Monthly Meeting of the Board of Trustees.

SEC. 9. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SEC. 10. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 11. The President shall be ex-officio a member of all Committees and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

### ARTICLE VIII.

#### NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board each year a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, the Administration Committee, and the Auditing Committee, and for two members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting and voted upon at the following Annual Meeting in January.

### ARTICLE IX.

SECTION I. Whenever the word "Museum" is employed in the By-Laws of the Corporation, it shall be taken to mean the building in which the Museum as an Institution is located and operated, the material exhibited, the material in study collections, or in storage, furniture, fixtures, cases, tools, records, books, and all appurtenances of the Institution, and the workings, researches, installations, expenditures, field work, laboratories, library, publications, lecture courses, and all scientific and maintenance activities.

SEC. 2. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.

# HONORARY MEMBERS.

EDWARD E. AYER HARLOW N. HIGINBOTHAM ROBERT F. CUMMINGS CHARLES B. CORY

STANLEY McCORMICK MRS. TIMOTHY B. BLACKSTONE

DECEASED. GEORGE M. PULLMAN MARY D. STURGES.

# PATRONS.

ALLISON V. ARMOUR DANIEL H. BURNHAM ERNEST R. GRAHAM VERNON SHAW KENNEDY FREDERICK J. V. SKIFF GEORGE MANIERRE

JOHN S. MILLER JOHN BARTON PAYNE FREDERICK W. PUTNAM WILLARD A. SMITH EDWIN WALKER

DECEASED. WILLIAM I. BUCHANAN

# CORPORATE MEMBERS.

ADAMS, GEORGE E. ALDIS, OWEN F. ARMOUR, ALLISON V. AYER, EDWARD E.

BARTLETT, A. C. BLACK, JOHN C. BLAIR, WATSON F. BLATCHFORD, ELIPHALET W. BUCKINGHAM, EBENEZER BURNHAM, DANIEL H. BUTLER, EDWARD B.

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HEAD, FRANKLIN H. HIGINBOTHAM, H. N. HUTCHINSON, CHARLES L.

IONES, ARTHUR B.

KENNEDY, VERNON SHAW KOHLSAAT, HERMAN H.

LATHROP. BRYAN

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WALKER, EDWIN WALSH, JOHN<sup>§</sup>R.

DECEASED.

ARMOUR, PHILIP D. BAKER, WILLIAM T. BISSEL, GEORGE F. BUCHANAN, W. I. CRAWFORD, ANDREW DAVIS, GEORGE R. FITZSIMONS, CHARLES HALE, WILLIAM E. HARPER, WILLIAM R. HATCH, AZEL F. JACKSON, HUNTINGTON W. LEITER, L. Z.

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NEWELL, A. B.

ORR, ROBERT M.

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THORNE, GEORGE R. TREE, LAMBERT

WELLS, M. D. WILLARD, ALONZO J. WOLFF, LUDWIG

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FAIR, R. M.

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INSULL, SAMUEL

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NATHAN, ADOLPH NOLAN, JOHN H. NORTON, O. W. NOYES, LA VERNE W.

OEHNE, THEODORE ORB, JOHN A. OSBORN, HENRY A.

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TEMPLETON, THOMAS TOBEY, FRANK B.

UIHLEIN, EDWARD G.

WACKER, CHARLES H. WALKER, JAMES R. WALKER, WILLIAM B. WALLER, EDWARD C. WARNER, EZRA J. WEBSTER, GEORGE H. WHITE, A. STAMFORD WHITEHEAD, W. M. WILSON, MRS. E. C. WILSON, M. H. WOODCOCK, LINDSAY T.

# DECEASED.

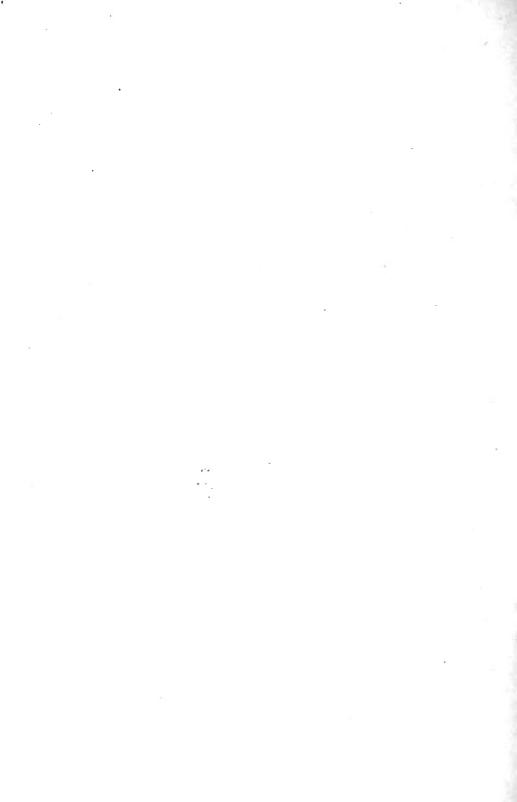
MORRIS, MRS. NELSON RANDALL, THOMAS D. STEELE, HENRY B.



Scene of Excavation of Mastaba Tombs. (Stones Boxed and Ready for Shipment.)

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