

APR 15 1958



LIBRARY
OF THE
UNIVERSITY
OF ILLINOIS

507
F45
1919-21

~~B10LDGT~~

CENTRAL CIRCULATION BOOKSTACKS

The person charging this material is responsible for its renewal or its return to the library from which it was borrowed on or before the **Latest Date** stamped below. **The Minimum Fee for each Lost Book is \$50.00.**

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

TO RENEW CALL TELEPHONE CENTER, 333-8400

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

MAR 07 1995

FEB 13 1995

JAN 27 1997

FEB 10 1997

JAN 13 1997

When renewing by phone, write new due date below
previous due date.

L162

• •

507
F45
1919

Chicago, Ill.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 205.

REPORT SERIES.

VOL. V, No. 5.

ANNUAL REPORT OF THE
DIRECTOR

TO THE

BOARD OF TRUSTEES

FOR THE YEAR 1919.

FEB 10 1958



CHICAGO, U. S. A.
January, 1920.

DUPLICATE
Illinois State Library.

BIOLOGY



State Museum
Springfield, Ill.



STANLEY FIELD HALL, NEW BUILDING.

State Museum
Springfield, Ill.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 205.

REPORT SERIES.

VOL. V, No. 5.

ANNUAL REPORT OF THE
DIRECTOR

TO THE

BOARD OF TRUSTEES

FOR THE YEAR 1919.



THE LIBRARY OF THE

JAN 24 1958

UNIVERSITY OF ILLINOIS

CHICAGO, U. S. A.

January, 1920.



587
545
1911-21



CONTENTS.

	PAGE
Board of Trustees	300
Officers and Committees	301
Staff of the Museum	302
Report of the Director	303
Maintenance	306
Publications	306
Library	307
Cataloguing, Inventorying, and Labeling	308
Accessions	310
Expeditions and Field Work	318
Installation and Permanent Improvement	319
The N. W. Harris Public School Extension	328
Photography and Illustration	330
Printing	330
Financial Statement	331
Attendance and Receipts	333
Accessions	334
Department of Anthropology	334
Department of Botany	335
Department of Geology	337
Department of Zoölogy	338
Section of Photography	340
The Library	340
Articles of Incorporation	354
Amended By-Laws	356
List of Honorary Members and Patrons	362
List of Corporate Members	363
List of Life Members	364
List of Annual Members	366

THE BOARD OF TRUSTEES.

EDWARD E. AYER.	CHAUNCEY KEEP.
WATSON F. BLAIR.	GEORGE MANIERRE.
WILLIAM J. CHALMERS.	CYRUS H. McCORMICK.
MARSHALL FIELD.	MARTIN A. RYERSON.
STANLEY FIELD.	FREDERICK J. V. SKIFF.
FRANK W. GUNSAULUS.	A. A. SPRAGUE.
ARTHUR B. JONES.	WILLIAM WRIGLEY, JR.

HONORARY TRUSTEE.

OWEN F. ALDIS.

██████████

DECEASED, 1919

HARLOW N. HIGINBOTHAM.

██████████

OFFICERS.

STANLEY FIELD, *President.*

MARTIN A. RYERSON, *First Vice-President.*

WATSON F. BLAIR, *Second Vice-President.*

FREDERICK J. V. SKIFF, *Secretary.*

D. C. DAVIES, *Assistant Secretary and Auditor.*

SOLOMON A. SMITH, *Treasurer.*

COMMITTEES.

EXECUTIVE COMMITTEE.

STANLEY FIELD.

EDWARD E. AYER.

WATSON F. BLAIR.

WILLIAM J. CHALMERS.

MARSHALL FIELD.

ARTHUR B. JONES.

GEORGE MANIERRE.

A. A. SPRAGUE.

FINANCE COMMITTEE.

WATSON F. BLAIR.

ARTHUR B. JONES.

MARTIN A. RYERSON.

BUILDING COMMITTEE.

WILLIAM J. CHALMERS.

CYRUS H. McCORMICK.

FREDERICK J. V. SKIFF.

A. A. SPRAGUE.

SUB-COMMITTEE OF BUILDING COMMITTEE.

STANLEY FIELD.

A. A. SPRAGUE.

FREDERICK J. V. SKIFF.

AUDITING COMMITTEE.

GEORGE MANIERRE.

ARTHUR B. JONES.

ADMINISTRATION COMMITTEE.

EDWARD E. AYER.

FRANK W. GUNSAULUS.

WATSON F. BLAIR.

GEORGE MANIERRE.

CHAUNCEY KEEP.

PENSION COMMITTEE.

ARTHUR B. JONES.

A. A. SPRAGUE.

FREDERICK J. V. SKIFF.

STAFF OF THE MUSEUM.

DIRECTOR.

FREDERICK J. V. SKIFF.

DEPARTMENT OF ANTHROPOLOGY.

BERTHOLD LAUFER, *Curator.*

CHARLES L. OWEN, *Assistant Curator Division of Archæology.*

FAY COOPER COLE, *Assistant Curator Physical Anthropology
and Malayan Ethnology.*

ALBERT B. LEWIS, *Assistant Curator of African and Melanesian
Ethnology.*

J. ALDEN MASON, *Assistant Curator of Mexican and South
American Archæology.*

HELEN C. GUNSAULUS, *Assistant Curator of Japanese
Ethnology.*

DEPARTMENT OF BOTANY.

CHARLES F. MILLSPAUGH, *Curator.*

B. E. DAHLGREN, *Assistant Curator Economic Botany.*

EDWARD T. HARPER, *Assistant Curator of Cryptogamic Botany.*

DEPARTMENT OF GEOLOGY.

OLIVER C. FARRINGTON, *Curator.* H. W. NICHOLS, *Assistant Curator.*

ELMER S. RIGGS, *Assistant Curator of Paleontology.*

DEPARTMENT OF ZOÖLOGY.

CHARLES B. CORY, *Curator.*

WILFRED H. OSGOOD, *Assistant Curator of Mammalogy and Ornithology.*

WILLIAM J. GERHARD, *Assistant Curator Division of Entomology.*

EDMOND N. GUERET, *Assistant Curator Division of Osteology.*

R. MAGOON BARNES, *Assistant Curator Division of Oölogy.*

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION.

S. C. SIMMS, *Curator.*

RECORDER.

D. C. DAVIES.

ASSISTANT RECORDER.

BENJ. BRIDGE.

THE LIBRARY.

ELSIE LIPPINCOTT, *Librarian.*

EMILY M. WILCOXSON, *Assistant Librarian.*

January 1, 1920.

ANNUAL REPORT OF THE DIRECTOR.

1919

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, 1919.

Uncertainty as to the date of removal to the new Museum building in Grant Park was as far as humanly possible dissipated at the close of the year, by the joint opinion of all parties and agencies concerned in the big task that this movement could safely begin the latter part of April, and it is upon this understanding that the personnel of the Museum will enter the new year; with over ninety per cent of the material ready for transportation and the building practically completed. All the contracts incident to this most important work will have been closed during January and all arrangements perfected for the building of spur tracks from the Illinois Central Railroad to platforms to be constructed near the openings in each building provided for forwarding and receiving. It is now estimated that the transfer of all properties may be accomplished within sixty days and that before the end of 1920 sufficient installation will have been completed to justify admission of the public to at least certain sections of the new building.

After rather protracted negotiations, but without any serious dispute, the contract with the Government permitting the hospitalization of the new Museum building was cancelled and the Museum accepted from the Government an allowance as full satisfaction of the expenses incurred and additional cost imposed during the time the Government controlled building operations.

Mr. James Simpson, Vice-President of Marshall Field & Company and for many years the confidential associate of Marshall Field, donated to the Museum such a sum of money as would be required to construct the large assembly hall, or auditorium, in the new building. This gift was accepted with expressions which the circumstance would naturally invite. Subsequently, it was determined to dedicate this auditorium as "James Simpson Theatre of Field Museum of Natural History." It will accommodate one thousand people. A stage and its ordinary accompaniments, foot lights, orchestra stall, etc., are included in the

plan. The interior treatment of the theatre will be in harmony with that of the main building and it will be equipped with every modern appliance for facility and comfort.

The Trustees have named the large hall along the east side of the Department of Botany on the second floor of the new building in honor of Mrs. Stanley Field. In this hall will be installed the collections in plant reproduction, for which expensive and elaborate work under the direction of the Department of Botany, Mrs. Field has provided the essential funds. It will be known as Sara C. Field Hall.

The plaster model of the new Museum building, which has been on exhibition in the Rotunda of the present building for several years, by vote of the Board of Trustees has been presented to the Architectural School of Armour Institute.

The Woman's Temple building, located at the corner of La Salle and Adams streets, mortgage upon which was given to the Museum by Marshall Field before his death and which mortgage was foreclosed after years of default, was sold to the State Bank of Chicago during the month of May, and the proceeds added to the capital of the General Fund.

In order to increase the income to a sum demanded by the extended service of the public schools by The N. W. Harris Public School Extension of Field Museum of Natural History, the heirs of the late Norman W. Harris, who provided the foundation for the Extension, have donated to the Museum the sum of \$25,000.00.

Trustee William Wrigley, Jr., having granted an exclusive privilege to the Museum to survey, excavate and collect archaeological material on Catalina Island, the Museum, by permission of the grantor, entered in an arrangement with the Museum of the American Indian of New York City to prosecute scientific investigation on this island for the period of two years. An expedition for this purpose is to be commissioned by Mr. George G. Heye, President of the Museum of the American Indian, early in 1920.

A gift of unusual interest came from President Field; a Chinese cloisonné figure, perfect in execution and rich in color, about twenty-two inches high, representing a Grand Lama of the Buddhist Church of Tibet. Upon comparison with other images, the statue is identified as a portrayal of Pal-dan-ye-she, a church dignitary only next in rank to the Dalai Lama of Lhasa, and known as the Tashi Lama. Extended reference to this donation is made elsewhere.

An important accession during the year consisted of the private botanical collection of Mr. Edward T. Harper of Geneseo, Illinois. This collection is composed of 10,000 fungi, 10,000 flowering plants, over 800 titles of books and pamphlets and approximately 1,500 photograph

negatives. Mr. Harper desiring to continue his collecting and notes on this order of plants will remain in charge of this section in the Department of Botany, as Assistant Curator of Cryptogamic Botany. The transfer of the material will take place when the section which it is to occupy in the new building is ready for its reception.

Mr. George Langford of Joliet, Illinois, presented to the Museum his unusual collection of remains of mastodons obtained in Minooka, Illinois, and also specimens of mosasaurs from Kansas. The mastodon material includes remains of eight individuals. The expenses incurred by Mr. Langford in connection with this transfer were borne by Trustee Chauncey Keep.

The publication of "Sino-Iranica" by Dr. Berthold Laufer, Curator of the Department of Anthropology, funds for which were provided by Mrs. T. B. Blackstone and Mr. Charles R. Crane, has been completed and distributed.

Mr. William Wrigley, Jr. has presented to the Museum a notable collection of pre-Colombian gold ornaments from the United States of Colombia, excavated near the river Neshi, which is described in detail elsewhere. The gift comprises a brilliant and intrinsically valuable contribution to the rare material in the Museum.

An advance in salaries and the allowance of generous bonuses for the year 1919, recognized the increased cost of subsistence as well as the protracted and commendable services of the recipients.

Mr. Stanley Field was unanimously elected by the Board of Trustees an Honorary Member of the Institution, in recognition of the eminent service he has rendered to science.

Mr. John P. Wilson was elected a Patron of the Museum, in recognition of the eminent service he has rendered to the Institution.

The continued efforts of President Field to increase the Life Memberships of the Institution resulted in the election of the following during the year: Mark Morton, Silas H. Strawn, Edward S. Moore, Leroy A. Goddard, Robert H. Allerton, John V. Farwell, Ward W. Willits, Frederic McLaughlin, John Borden, Lafayette McWilliams, Joy Morton, Solomon A. Smith, Charles P. Wheeler, Frederick T. Haskell, Thomas E. Wilson, George E. Scott, Frank Hibbard, Frank O. Lowden, William O. Goodman, C. K. G. Billings, John W. Scott, G. F. Swift, Jr., A. G. Becker, Garrard B. Winston, Henry C. Lytton, William A. Pinkerton, David B. Jones, A. W. Goodrich, Thomas D. Jones, James C. Hutchins, John B. Drake, L. J. Hopkins, John B. Lord, Thomas W. Hinde, Adolph Nathan, Wallace C. Winter.

The death of Harlow N. Higinbotham, as a result of an automobile accident in New York City on April 18, 1919, has to be announced.

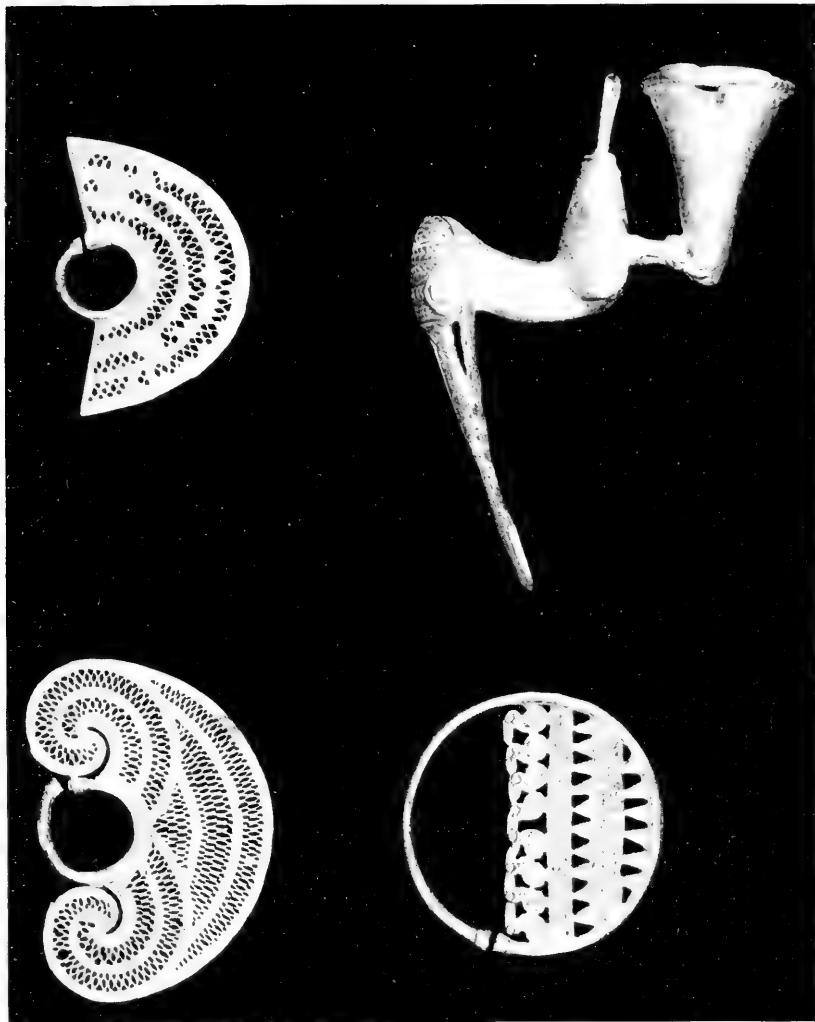
Mr. Higginbotham took a very active interest as President of the Columbian Exposition in securing for the Museum a vast quantity of material, which was the nucleus of the collections, and as Chairman of the Executive Committee of the Museum for fifteen years and as President of the Museum for twelve years, assisted effectively in the up-building of the Institution. He presented the collection of Gems and Jewels now installed in a hall named in his honor and gave other interesting but less costly material to the Museum. Mr. Higginbotham was succeeded as President by the incumbent of that office in 1909.

At the last regular meeting of the year, the Trustees were informed that the Founder of the Stanley Field Museum Employes' Pension Fund had suggested incorporating a system of life insurance in the benefits of the pension plan and that the Committee in charge of pensions had worked out a scheme which commended itself to Mr. Field. The Board of Trustees gave its approval, and it is probable that by the first of February, 1920, life insurance will be written upon the employes of the Institution.

MAINTENANCE.—The budget authorized by the Board of Trustees provided the sum of \$156,380.00 for the maintenance of the Museum for the year. The amount expended was \$132,252.00, which sum includes all expenditures made for preparing the entire contents of the Museum for removal to the new building. A satisfactory margin of \$24,130.00 appears as a result of the operations during the year. A further sum of \$0,039.00 was expended by special order of the Board of Trustees for collections, bonuses referred to elsewhere, and expeditions, bringing the total approximately to \$141,300.00.

PUBLICATIONS.—During the year four publications were issued, comprising parts of four volumes, details of which follow:

- Pub. 201.—Anthropological Series, Vol. XV, No. 3. Sino-Iranica. Chinese Contributions to the History of Civilization in Ancient Iran with special reference to the History of Cultivated Plants and Products. By Berthold Laufer. 1919. 446 pages. Edition 1,800.
- Pub. 202.—Report Series, Vol. V, No. 4. Annual Report of the Director for the Year 1918. January 1919. 69 pages, 26 halftones. Edition 1,950.
- Pub. 203.—Zoölogical Series, Vol. XIII, Part II, No. 2. Catalogue of the Birds of the Americas. By Charles B. Cory. 293 pages. 1 colored plate. December 1919. Edition 1,200.



GOLD EAR-RINGS AND CAST FIGURE OF A BIRD, FROM A MOUND IN COLOMBIA, SOUTH AMERICA.
Gift of Mr. Wm. Wrigley, Jr.



Pub. 204.—Botanical Series, Vol. IV, No. 2. Revision of the North American species of *Xanthium*. By Charles F. Millspaugh and E. E. Sherff. April 1919. 41 pages. 7 halftones. Edition 1,000.

In addition to the publications distributed for exchange purposes, two hundred and sixty-eight have been sold to various individuals who were not in a position to offer equivalent literature as an exchange.

THE LIBRARY.—There have been received by gift, exchange and purchase 1,716 books and pamphlets, an increase over last year's receipts. The library contains 72,736 bound and unbound books and pamphlets. The following list shows the number of titles in each Department:

General Library	45,792
Department of Anthropology	3,698
Department of Botany	7,640
Department of Geology	10,675
Department of Zoology	4,931

No especial event affecting the welfare of the library has occurred during the year; the endeavor has been to round out the work along the usual lines. With the activities of the curatorial staff largely engaged in preparations for moving to the new building, their requests for books were comparatively few during the first half of the year. With the cessation of that work and time again devoted to research their requests were renewed for books necessary for the study of material for installation purposes. For immediate use forty-three works were purchased. An important gift was received from Dr. Frank W. Gunsaulus of a rare and beautifully bound copy of Autograph Letters of Charles Darwin, written to J. Jenner Weir during the year 1868; also autographed copies by Louis Agassiz. These are the initial contributions to a very interesting collection to be known as, Gunsaulus collection of personalia and souvenirs of eminent naturalists. Early in the year the first volume of *The Monograph of the Pheasants*, by William Beebe, was published by the New York Zoological Society; a beautifully illustrated work of these gorgeous birds in their native haunts, to be complete in four volumes. When the attention of Mr. Edward E. Ayer was called to the work he immediately subscribed to the set for the Ayer Ornithological Library of the Museum. Mr. Ayer has also presented copies of *Seth-Smith's Handbook of the Imported Species (parakeets)*, and *Whitaker's Birds of Tunisia*. A number of desirable and valuable publications were received from contemporary institutions, both domestic and foreign, in exchange for the publications of the Museum. The number was especially noticeable because of the enormously enhanced cost of book-production. The Museum was most fortunate in receiving

from the Museum of Comparative Zoölogy, Harvard College, an almost complete set of its Memoirs, thirty-four volumes, covering the years 1864 to 1916. From the Sullivant Moss Society, New York City, was received a set to date of its publication, *The Bryologist*, in sixteen volumes. One hundred and seventeen books were bound during the year. While it ordinarily is unwise to keep separate numbers of serials and periodicals in an unbound condition, the prices of all materials used in binding having increased nearly one hundred per cent in the past few years, binding at present prices seems prohibitive. There were written and filed in the catalogues 18,054 cards. The regular monthly installment of author cards was received from the John Crerar Library. The Museum is unusually indebted this year to large libraries both in and out of Chicago for the loan of books that were necessary in the performance of its work; these courtesies are gratefully acknowledged, especially to the Library of Congress, the Library of the Department of Agriculture, the Surgeon General's Library, the John Crerar Library and the Library of the University of Chicago. A list of all accessions received by the Library during the year will be found elsewhere in this report.

DEPARTMENTAL CATALOGUING, INVENTORING, AND LABELING.—During the year, in the Department of Anthropology, the work of cataloguing has been carried on as new accessions were acquired, but this task was naturally eclipsed by the necessary preparations for moving collections into the new building. The total number of catalogue cards prepared amounts to 577. These cards were distributed over the single divisions as follows: China, Japan, and India 117; Melanesian Ethnology 325; South-West, Mexican, and South American Archæology 125; and North American Ethnology 10. All these cards have been entered in the inventory books of the Department, which now number thirty-eight. The number of annual accessions amounts to twenty-five, nineteen of which have been entered. The total number of catalogue cards entered from the opening of the first volume amounts to 153,548. The photographer made 297 negatives and two enlargements, and supplied 370 prints to the Department, 160 of these referring to Japanese sword-guards. Twenty-four prints were added to the photographic albums kept in the Department. The printer delivered to the Department a total of 5,419 labels for use in exhibition cases. These labels are distributed as follows: New Guinea 1,939; Eskimo and Northwest Coast 2,622; Mexico 841; and China 17. The printer further supplied the Department with 700 catalogue cards. 373 new label cards were added to the label file.

In the Department of Botany the entries made number 4,586,

bringing the total entries to 482,076. The card indexes have been augmented as follows:

	No. of Cards Augmented 1919	Total
Index of Botanical Species	4,383	152,033
Index to Common Names of Plants	349	20,299
Index to Yucatan Plants . . . . .	.....	6,362
Index to Euphorbiaceae . . . . .	.....	4,225
Index to Department Labels . . . . .	.....	3,100
Index to Geographic Localities	6	2,756
Index to Collectors and Collections	42	9,892
Index to Botanical Titles . . . . .	.....	1,500
Index to Department Library . . . . .	.....	8,800
Index to Illinois Flora . . . . .	.....	900
Index to Hand Specimens of Woods . . . . .	.....	800
Index to Installed Cases . . . . .	.....	595
Index to Photographs . . . . .	.....	600
	<hr/> 4,780	<hr/> 211,862

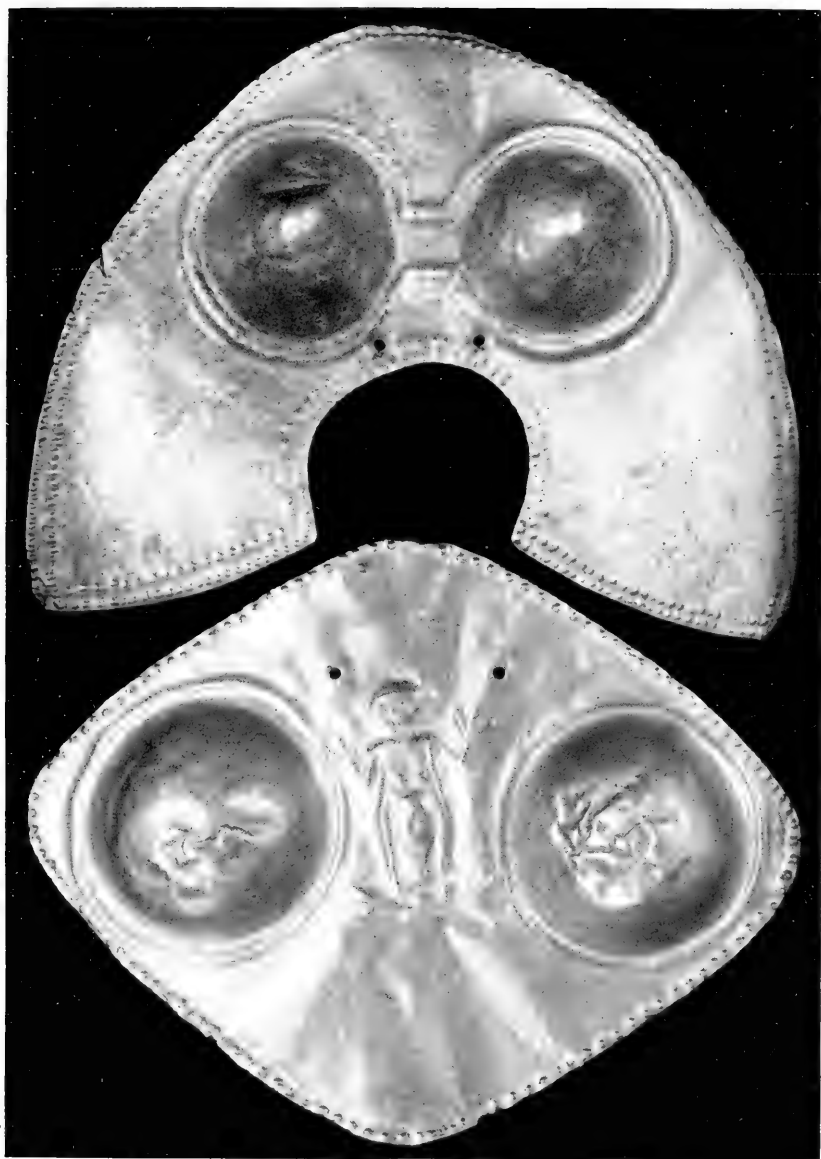
In the Department of Geology all accessions have been catalogued in full as received, with the exception of the Langford collection, which, as it was already packed on its arrival at the Museum, it seemed inadvisable to unpack for final cataloguing until space should be available for its installation. The entries made during the year number 591. These were chiefly of specimens of the Klechner and Dahlgren collections. A few labels have been made to fill gaps in the series of exhibition labels.

Owing to the inaccessibility of most of the study collections in the Department of Zoology, due to the preparation for removal to the new building, comparatively little cataloguing and labelling has been possible. The total entries made during the year number 553. There have been added 153 new entries in the Division of Ichthyology and 87 in Herpetology. Data for these entries have been added to the card catalogue and the specimens have been duly labelled and tin-tagged. Labels have also been prepared for a considerable portion of the exhibition collection in Ichthyology. Only 2 entries were made during the year in the Division of Osteology, an African elephant skull and a white rhinoceros skull received in exchange from the American Museum of Natural History. These were catalogued and index cards written to complete the record. In the Division of Mammalogy 6 catalogue entries were made and in the Division of Ornithology 305. The total entries to date number 101,014. The cards written during the year number 193, making a total of 34,406.

The following table shows the work performed on catalogues and the inventorying accomplished:

	No. of Record Books	Total No. of Entries to Dec. 31, 1919	Entries During 1919	Total No. of Cards Written
Department of Anthropology	38	153,548	577	153,688
Department of Botany	58	482,076	4,586	87,175
Department of Zoology	22	141,020	591	8,018
Department of Geology	40	101,014	554	34,406
The Library	14	111,076	2,716	277,026
Section of Photography	20	120,844	1,706	.....

ACCESSIONS.—The most notable accession of the year in the Department of Anthropology is represented by the generous and memorable gift of Mr. William Wrigley, Jr., being the gold treasure excavated from a mound on the river Nechi, in the province of Antigua, Colombia, South America. This remarkable and unique collection consists of 36 pre-Columbian gold ornaments, comprising four large embossed breast-plates of pure gold, two collars of gold foil, two rectangular plates, two fragmentary sheets of gold foil, one necklace of gold beads, four pairs of gold ear-rings, three cast figures of a bird, and eighteen miscellaneous ornaments. The four breastplates were beaten out on stone moulds carved in relief with the design required; they were apparently interred with women of high social standing, who were buried adorned with jewelry and ornaments they had most prized during their lifetime. Two of these plates are selected for illustration in this Report; also one of the birds and three of the ear-rings, which are exquisite both as to artistic quality of design and perfection of technique. The gold collection has been installed in the Gem Room, and is accompanied by a general label setting forth its significance. It has attracted a great deal of attention and given rise to many favorable comments, both in the press and on the part of archæologists. Mr. Stanley Field made a notable gift to the Department by adding to its Tibetan collection a fine portrait-statue, 22 inches high, wrought in cloisonné enamel and representing a Grand Lama of the Buddhist Church of Tibet. Comparison with other known images permits the establishment of the identity of this personage. In all probability it is a portrayal of Pal-dan-ye-she, a church dignitary only next in rank to the Dalai Lama of Lhasa and having his seat in Tashilhunpo in central Tibet. He is known as the Tashi Lama, being famous for having been the first Tibetan, who in 1774 entered into negotiations with the Anglo-Indian Government through George Bogle, an emissary of Warren Hastings, Governor General of India. In his diary Bogle characterizes him thus: "His disposition is open, candid, and generous. He is extremely merry and entertaining in conversation, and tells a pleasant story with a great deal of humor and action. I endeavored to find out in his character those defects which are inseparable from humanity, but he is so universally beloved that I had no success,



GOLD BREASTPLATES FROM A MOUND IN COLOMBIA, SOUTH AMERICA.
Gift of Mr. Wm. Wrigley, Jr.



and not a man could find in his heart to speak ill of him." Subsequently, he received an invitation from the Emperor of China to come to Peking, where he spent a year in one of the Lama temples, highly honored by the whole country. In 1780 he died a mysterious death, at the age of forty-two, officially of small-pox, but more probably of poison administered by imperial jealousy and disapproval of his intercourse with the English. Technically his image is a masterpiece and the finest specimen of cloisonné in the Institution. The background is yellow to indicate the robe of imperial yellow silk conferred upon the hierarch by the Emperor. The designs woven in this robe are all skillfully brought out by the process of inlaid enamels and represent the eight Buddhistic emblems of happy augury,—canopy, wheel of the law, conch, umbrella, lotus, vase, knotted cords, and double fish. The mitre is decorated with two red dragons soaring in clouds. The pedestal is ornamented in front with two lions in green, playing with a ball, and two dragons pursuing the flamed pearl; two elephants bearing tribute-gifts are shown on the sides, and three lotus-blossoms decorate the back of the base. Face and hands are gilt. Both composition and coloration are dignified and harmonious, and the statue conveys an excellent characterization of this historically interesting Grand Lama. Mr. Edward E. Ayer remembered the Department during the winter spent on the Pacific Coast, and a collection of six excellent knives, five from the Mohammedan Moro of the Philippines and one of Borneo manufacture, probably from the Kenyah or Kayan, is due to his generosity. The Borneo blade is beautifully chased and inlaid with brass, while the ivory handle is decorated with elaborate carvings. Three of the Philippine knives have wavy blades, and two are of the straight blade variety. In the latter group is a specimen of particular interest, because it is inlaid with a conventionalized floral pattern next to the hilt. A feather head-band used in the white-deer dance of the Indians of California, a good stone mortar with pestle, and a metate with muller, used by a child, were likewise presented by Mr. Ayer. His further contribution during the year is a Sioux woman's beaded dress of buckskin, taken by the late Lieut. Frederick Schwatka of the 3rd Cavalry from the village of the hostile Sioux chief, American Horse. This sleeveless, one-piece dress is probably unique owing to the large quantity of pink beads displayed over the back and breast extending onto the arms. This feature, together with its extraordinary state of preservation, makes it a museum specimen of the first order and now rarely encountered. A very unusual and beautiful ancient slate carving of the Haida on Queen Charlotte Islands, B. C., likewise obtained by Lieut. Schwatka at Victoria, B. C., in 1891, was presented by Mr. Martin A. Ryerson. It is a master-

piece of primitive sculpture. During the year Mr. Homer E. Sargent made two notable additions to his previous extensive contribution of 1917. These comprise two Pueblo squaw dresses secured about thirty years ago, three excellent Navaho blankets of native wool and dyes, and a Salish blanket of mountain-sheep wool, all of which strengthen the former gift. The last-named blanket is illustrated in this Report. To the continued interest of Dr. Frank W. Gunsaulus the Museum is further indebted for four remarkable additions,—first, a very important and most interesting collection coming from the native tribes of Formosa and brought to this country by S. Ishii, who for fifteen years has been chief of the Ethnological Survey of the Japanese Government on that island. It is well known that the task of the traveler and collector is fraught there with difficulties, especially in view of the fact that the wild tribes are secluded in the high mountainous regions. There are in this collection two complete costumes, one worn by a warrior chief on head-hunting expeditions, and a woman's dress. Other prominent features are three fine necklaces of agate and colored Venetian beads, which are highly prized by the natives and used for bartering purposes; several valuable wood carvings decorated with artistic designs; large pieces of textiles; a sword with a wooden scabbard carved with interesting ornaments; the model of a dugout, and several carved tobacco pipes and musical instruments. In view of the close affinity of the culture of the Formosan tribes with that of the Philippines, especially northern Luzon, which, for instance, is brought out by the artistic decorations of these specimens, this new material is of considerable scientific interest. A number of interesting photographs and two albums illustrating scenes of native life are added to the collection, which, it is hoped, will be placed on exhibition in the new building and act as a stimulus for future research in Formosa. Dr. Gunsaulus likewise presented a fine decorated metal shield from India and a celadon flower-vase in the shape of an elephant. Four glazed, ornamented porcelain tiles from Persia, due to his generosity, constitute a good beginning for a Persian collection. Miss Helen C. Gunsaulus donated a Japanese dagger with decorated sheath and hilt. Mrs. Henry J. Patten of Chicago presented an extraordinary ancient feather blanket from Rotorua, New Zealand, which was formerly the property of a Maori chief. A collection of 33 specimens from China was received from Mrs. Morgan S. Woodward of Chicago, being collected by herself at Peking in 1900, after going through the siege of the British Legation by the Boxer rebels. Among these are some trophies captured by American soldiers from the Boxers, the most curious object being a large jingal, about sixty pounds in weight, and inscribed in Chinese as hav-

ing been made in 1896 in the Arsenal of Tientsin; such jingals were carried by two soldiers on their shoulders and fired by a third man standing behind. Mr. G. L. Fitz-William, chemical and mining engineer of Hammond, Indiana, presented the Museum with an important ethnographical collection from the San Blas Indians, whom he had visited and studied. At the donor's request, this collection is to be named, in honor of his son, the "William Fitz-William Collection." The material is an excellent and representative collection from a very interesting tribe on the Isthmus of Panama. While not far removed from contact with civilization, this people preserves its aboriginality and particularly its purity of blood tenaciously. While they have been much brought into the light of publicity of late, the San Blas are seldom visited, and their specimens are rarely seen in museums. The most interesting part of the collection consists of women's garments, which are composed of many layers of bright colored cloths cut out in characteristic designs. Mr. G. F. Vivian contributed seven bows and thirty-six arrows from the Arawak of British Guiana, South America, collected by Dr. Geo. D. B. Dods; this is good and representative material, and there are several new types of arrows not heretofore in the Museum collection. Assistant Curator Mason presented eighteen ethnological and archæological objects from the Papago in Arizona, where he spent several weeks in the beginning of the year under a special leave of absence granted by the Institution. Mr. Joseph R. Morris of Deerfield, Illinois, donated twenty-three objects relating to Indian ethnology, collected at Fort Peck, Montana, in 1876. Among the prominent specimens in the lot are two choice blanket stripes, a buckskin gun-case, two splendid pouches, four knife-cases, and a netted wheel. Mr. Alfred R. Brown, Director of Education, Tonga, South Pacific, from whom the Museum purchased an Andaman Island collection in 1910, presented this year a small collection from the same group, which, while adding nothing new to the material on exhibition in the Museum, is of considerable scientific value. The technical culture of the aborigines of the Andaman Islands is not very rich, and at best yields a few weapons—chiefly bows and arrows,—some basketry, crude pottery, and scanty garments which are decorative and commemorative rather than for protection. All these are represented in this collection, and in addition a few modern imitations of the ancient bone-tipped arrows used in hunting and warfare. Included in the gift are two wood-carved images from the Nicobar Islands. One of these, the figure of a woman, is an excellent piece of native carving, and is a distinct addition to the exhibition collections. Such figures are believed to drive sickness and evil influences away from a house or village. While in Manokwari, Dutch New Guinea, in

December, 1912, Assistant Curator Lewis left a small sum in care of F. J. F. van Hasselt, a missionary stationed there, for the purpose of obtaining specimens from the north coast of Dutch New Guinea. This missionary was in the habit of taking trips every year to various parts of the coast, and stated that in the course of two or three years he could easily make a fairly representative collection. Owing to long delays in shipping caused by war conditions, the material arrived here only in July of this year. The collection comprises over three hundred specimens from various places along the north coast of Dutch New Guinea, including some fine large wooden figures, house ornaments, and about twenty-five ancestral images, called *koruar*. These are rare and valuable. Weapons, implements, household utensils, clothing and ornaments are all well represented. This part of New Guinea has been more or less visited by Europeans for many years, and very little of original native workmanship is at present to be had. The influx of the numerous Chinese and Malays settled along the coast has also tended to destroy or modify the native industries. Hence, but little from this region can be obtained, and that often betrays foreign influence.

The Department of Botany received the following important additions to its herbarium during the year: From the Philippine Bureau of Sciences 646 plants of the Philippines; Miss Anna King 300 specimens from Illinois; Paul C. Standley 285 Mexican plants of Arséne and Nicolas; B. F. Bush 70 plants of Missouri; Geological Survey of Canada 248 Canadian plants; Mrs. Stanley Field Plant Reproduction Section 102 plants of Georgia and Florida; Bernice Pauahi Bishop Museum 262 Hawaiian plants; The New York Botanical Garden 507 West Indian plants; C. F. Millspaugh 65 Wisconsin plants; H. M. Denslow 73 New England plants, and F. E. McDonald 63 plants of Illinois. The regional distribution of fully organized material to the herbarium in 1919 is shown in the following tabulation:

LOCALITY.	Added to Herbarium 1919	Total now in Herbarium
NORTH AMERICA (in general)	40	123
Alaska	4	1,350
Canada	4	909
Alberta	122	1,273
Athabasca	2	3
British America	3	3
British Columbia	33	1,486
Queen Charlotte Island	3	101
Vancouver Island	48	758
Herschen Island	1	1
Mackenzie	1	7
Nova Scotia	8	427

LOCALITY.	Added to Herbarium 1919	Total now in Herbarium
Ontario	39	1,709
Quebec	18	1,146
United States:		
Alabama	34	1,502
California	544	26,127
Colorado	22	12,607
Carolina (South)	5	1,103
Dakota (North)	1	651
Florida	74	20,405
Georgia	5	4,000
Illinois	494	28,462
Kansas	5	551
Louisiana	40	1,338
Maine	12	1,657
Maryland	7	1,373
Massachusetts	7	5,357
Michigan	1	3,913
Missouri	86	3,972
Nebraska	1	496
Nevada	13	1,308
New Hampshire	19	1,591
New Jersey	42	3,079
New Mexico	127	3,849
New York	79	7,550
Ohio	6	2,076
Pennsylvania	8	10,176
Tennessee	2	1,372
Texas	4	9,892
Utah	732	4,033
Vermont	19	3,623
Virginia	2	4,845
Wisconsin	65	5,072
Bahama Islands:		
New Providence	11	2,439
West Indies:		
Cuba	12	10,969
Grenada	5	819
Jamaica	1	7,695
Porto Rico	1	4,732
St. Kitts	1	14
Trinidad	1	495
Mexico	291	31,605
Yucatan	2	6,761
CENTRAL AMERICA:		
Costa Rica	17	629
Guatemala	1	3,084
Honduras	1	273

LOCALITY.	Added to Herbarium 1919	Total now in Herbarium
SOUTH AMERICA:		
Brazil	5	596
Chile	2	255
Colombia	507	2,938
Ecuador	2	852
Hermite Island	2	2
Venezuela	1	708
EUROPE (in general)		
Austria	52	7,796
France	10	8,382
Germany	21	8,717
Great Britain (in general)	7	1,433
England	97	2,556
Ireland	1	172
Isle of Man	1	1
Scotland	35	587
Wales	16	99
Norway	5	1,213
Sardinia	1	20
Spain	1	635
Sweden	2	9,721
Switzerland	79	3,717
ASIA:		
India	15	1,081
Ceylon	1	69
Palestine	1	613
Philippines	1,791	12,444
AFRICA:		
Abyssinia	5	226
Bourbon Island	1	1
Sierra Leone	1	13
OCEANICA:		
Auckland	1	1
Borneo (British)	2	10
New Zealand	5	1,533
Sandwich Islands (in general)	26	26
Kauai	44	493
Lauai	28	28
Maui	22	23
Molokai	22	22
Oahu	120	613
Samoa	4	67
Horticultural	68	3,349
Illustrations mounted as Herbarium sheets	40	2,276

The most important accession received by the Department of Geology during the year was a large collection of vertebrate fossils presented by Mr. George Langford. This collection represents the results of many years of labor on the part of Mr. Langford, and is valuable, not

only for the amount of the material contained in it, but also for its well-prepared condition. The collection consists of two principal series, one chiefly of remains of mastodons obtained in Minooka, Illinois, and the other of specimens of mosasaurs from Kansas. The mastodon material includes remains of eight individuals, which range in age from a young calf to an adult. Of one large, adult male, portions of the skull, complete lower jaws, many limb bones, vertebrae, ribs and foot bones are preserved, as well as a tusk nine feet in length, probably the largest tusk of an animal of this species ever found. The other individuals of this series are represented by various skeletal parts, an especially important feature being that the entire tooth development of the mastodon is shown by specimens ranging from the first milk teeth to the ponderous, grinding molars of the male adult. Of the collection illustrating mosasaurs, the most important feature is two nearly perfect skulls, one two feet, the other eighteen inches in length which have been carefully excavated from their matrix and mounted free. These display in remarkable completeness the characters of the heads of these extinct "sea serpents." Some vertebrae are also associated with these skulls. A large jaw of a Columbian mammoth and a head of the fossil fish, *Gillicus*, also are included in the collection. Three complete individuals from the meteorite fall which occurred at Cumberland Falls, Kentucky, in April of this year, have been added to the meteorite collection, one being the gift of Mr. W. R. Jillson. The meteorites of this fall are of peculiar interest on account of their unique composition and structure. Of the meteorites of Richardton, North Dakota, which fell June 30, 1918, four individuals, aggregating about ten pounds in weight, were obtained, partly by purchase and partly by exchange with Professor T. T. Quirke. By exchange with the British Museum, representative specimens of the Baroti, Kuttipuram and Warbreccan meteorites were secured. A specimen of amethyst showing remarkable distribution of color, and two valuable crystals of scheelite were presented by Mr. W. J. Chalmers as additions to the Chalmers crystal collection. Several specimens of high-grade gold ore from Cripple Creek, Colorado, showing considerable free gold, were presented with other material by Mrs. G. Mace, and a collection containing, among other specimens, several minerals used in optical work was received by gift from Dr. Geo. M. Gill. By exchange with Prof. M. E. Kleckner, about one hundred specimens of crystallized celestite, fluorite, calcite and sphalerite from localities in Ohio and Michigan and of forms previously unrepresented in the Museum were obtained. Six specimens of typical Barbadoes earth and one of globigerina marl from the Barbadoes Islands were obtained by exchange with the University of Iowa. These illustrate deposits of

deep-sea origin which also have industrial uses. Dr. B. E. Dahlgren during his stay in Florida and other southern states collected for the department about one hundred and thirty geological specimens chiefly from Florida, but also from localities in Kentucky and Tennessee. These included sixteen specimens of varieties of soils, marls, mucks and sands characteristic of certain portions of Florida; several large specimens of coquina, illustrating the varieties and forms which characterize the structure of this peculiar aggregate, and ninety specimens of invertebrate fossils, partly from recent formations in Florida and partly from formations of Chester age in Kentucky and Tennessee.

The principal accession during the year in the Division of Mammalogy was secured by gift from Col. Dale Bumstead of Oak Park. It consists of three well-prepared skins and skulls of the Lower California mountain sheep and several skulls of mule deer. The Division of Ornithology received 217 bird skins, 67 of which represent a part of the Museum's share from the Collins-Day expedition. An African elephant skull and a white rhinoceros skull were received as an exchange from the American Museum of Natural History. Among the additions made to the shell collection is a gift from Mr. Giuseppe Despott of the Natural History Museum in Malta, which consists of 433 named and well labeled specimens from the Maltese Islands. The fact that the Museum had few shells from these islands adds to the value of this acquisition. There were 949 shells and 10 crustaceans added to the Department during the year. A total of 63 specimens of insects was received, of which number 57 were a gift and 6 an exchange. The accessions in the Division of Ichthyology and Herpetology consisted chiefly of gifts, totaling 284 specimens. The most important of these is a collection of thirty amphibians and reptiles from the Mississippi River Valley, presented by Mr. J. W. Mackelden of St. Louis. Mr. Leon L. Pray, Mr. William J. Gerhard, Mr. Herbert L. Stoddard, and others, added a number of desiderata to the collection of Illinois and Indiana snakes. Mr. Stoddard also donated a collection of wall lizards, taken by him while in the service in France. Mr. J. G. Sinclair presented a few amphibians and reptiles from Arizona, Mr. M. H. Sackheim three from New Mexico, and Mr. Charles L. Hubbs several from southern California.

EXPEDITIONS AND FIELD WORK.—Finds of remains of mastodon at two localities, Monee, Illinois, and Leiter's Ford, Indiana, were investigated by Assistant Curator Riggs. The mode of the occurrence of the bones at these localities was studied, some exploration conducted at the sites and negotiations entered into with the owners of the specimens which may result in securing desirable material later. As a result of a trip to Porcupine, Ontario, Canada, gold-mining district, a number of typical



SCORPIONS AND WHIP SCORPIONS.
Installed on tablet mounts with a suggestion of the habitat of these poisonous creatures.



ores and rocks of the region were secured by Assistant Curator Nichols. Assistant Curator Hubbs carried on some local field work for the Department of Zoölogy, obtaining a number of specimens for mounting in small groups, as well as a series of certain species for the study collection.

INSTALLATION, REARRANGEMENT, PERMANENT IMPROVEMENT—Most of the time of the members of the staff of the Department of Anthropology was consumed by the complex preparations in connection with the moving operations, chiefly assembling, sorting, and arranging material for packing, dismantling and charting cases, preparing and labeling material for future installation in the new building, and keeping exact records of the location of packed material. As a sequel to this labor, all plans previously prepared for the halls of the new building were subjected to a thorough revision and to numerous modifications. Frequent visits were made to the new building by members of the staff, and the study of actual conditions permitted the visualizing of the situation more correctly than was possible from the floor plans. The total result of this year's packing in the Department of Anthropology may be summed up in dry figures as follows: 615 exhibition cases, 320 boxes, 457 crates, 76 cartons, 80 bundles or packages in burlap, and 27 kegs and barrels. All these items have been properly labeled and numbered. The process of packing may be regarded as practically completed. There were prepared for installation in the new building 101 cases, covering the Eskimo and the tribes of the northwest Coast of America, the Coast and Interior Salish, and the Plateau Indians. This required the complete or partial dismantling of 123 cases formerly on exhibition. In conformity with the new principles of installation, all duplicate material was eliminated, which has resulted in a net saving of twenty-two cases. In the new arrangement, also a considerable quantity of material formerly in storage is placed on exhibition, while many large specimens which have stood in the open, or have been attached to the walls, are now safely sheltered behind glass. It has been the endeavor to arrange the material in geographical and cultural sequence using an adequate number of specimens to illustrate the every-day, esthetic, and religious life of the people. In the Divisions of Archaeology and Ethnology twenty-two cases were arranged for future installation in the new building. These refer to the archaeology of Colombia and Mexico and to the ethnology of the Upper Amazon, Central Brazil and Paraguay. In most instances, all available material was selected for exhibition, but surplus and duplicate objects have been relegated to study and exchange collections. Special care has been taken of the group cases. A detailed plan of each has been made to be utilized in the new building for the reconstruction of the groups. Reproductions

of three Hopi altar-mosaics of the Powamu ceremony in papier-maché and in their correct colors have been made, which may eventually replace the present mosaics of sand. In view of the importance of the packing operations, the repair section of the Department was temporarily closed until October 1st. Careful attention was devoted to the treatment of the Egyptian sculptural stones in the Department, which was carried on under the supervision of the Curator of Geology. The results thus far obtained are very satisfactory. Seventy-five cases were cleaned and poisoned during the year. The appointment of Miss Helen C. Gunsaulus as Assistant Curator of Japanese Ethnology, permits the systematic and intelligent study and disposition of considerable material in this division already in the possession of the Department of Anthropology. Miss Gunsaulus brings to the work she has undertaken, studious habit and special training, with enthusiasm and aptness for museum practice, as the work thus far done upon the collections in this division gives evidence.

The Department of Botany installed no cases during the year, the time of the staff being expended in packing for removal to the new building. All the exhibition cases in the department were securely packed for transportation; this packing being so done that the contents of each case may be returned thereto with a minimum of time expended. Such specimens as could not be fastened securely *in situ* in the cases, were enclosed in cartons and packed in the lockers of the cases to which they pertain. The base lockers in each case were utilized for packing. In them were placed all duplicate and study specimens, each in an individual paper box or corrugated paper parcel, and all bottles enclosed in "egg-case" partitioned cartons designed to fit the bottles. Thus the specimens of each case remain with the case to which they pertain. Lockers not needed for the case contents were packed with bundles of mounted plants belonging to the herbarium collections. The exhibition cases are now all ready for removal and labeled as to the hall and spot on the floor of each hall that they are to occupy in the new building. Notwithstanding this packing, a large number of the cases are still on creditable exhibit, not materially disturbed though fully ready for transportation. In addition to the exhibition case packing, over 480 numbered boxes and crates of material have been packed for removal. In all cases a complete record has been kept of the packages and their contents. While the herbarium has not yet been disorganized, it has been made ready for packing while still referable. This and the appurtenances of the offices and laboratories can be prepared for removal promptly after transportation actually begins. The plant reproductions made in the Mrs. Stanley Field Laboratories, have been

left on exhibition in their regular places in each case. These will remain so installed until the moving force begins operations. The work of the staff of the Mrs. Stanley Field Laboratories has not been interrupted. The first four and a half months of the year were spent in Miami, Florida, where the laboratory and garden of the Plant Introduction Station of the U. S. Department of Agriculture served as headquarters and furnished facilities and accommodation. For this the Museum is indebted to Mr. David Fairchild, Agricultural Explorer in charge of the Plant Introduction Bureau of Plant Industry in Washington, and to Mr. Edward Simmonds, Superintendent of the Garden and Field Station in Miami, to the former for liberally extending to the Museum the privileges of the laboratory and station, and to the latter for innumerable acts of kindness and assistance, which made it possible to pursue the work successfully here. Thanks are also due to Mrs. Simmonds and the members of the staff of the Department of Agriculture who were stationed at the Laboratory during the past winter, viz., Dr. J. Rosenbaum, plant pathologist, Mr. Chas. E. Sando, plant physiologist, and Mr. Max Kisliuk, entomologist. The friendly and helpful attitude of all these men was a matter greatly to be appreciated in the rather narrow quarters of the laboratory. The main object of transferring the work to Florida for the winter was to secure studies and material for certain desirable plants which could be had and handled there more readily and economically than anywhere, namely: the Coccoanut palm, the Banana, the Pineapple, the Florida Cycad (*Zamia*), etc. The material needed for the reproduction of the specimens was secured. The most perishable parts were cast and colored and plaster moulds were made of other parts, formalin material packed and sent to the Museum, and photographs, color sketches and detail studies secured for use after return. At the same time there were found in the Plant Introduction Garden a number of interesting plants which fitted exactly into the plans for the Museum botanical exhibits. Such were, for instance, the South African *Carissa* or Natal Plum, introduced into the United States in 1901 by Mr. Fairchild and now grown as a hedge plant in many places in southern Florida. This is an excellent example of the type of plant which can scarcely be reproduced successfully except in the field, where it can be studied from day to day as the work progresses. The Silk Cotton tree, *Bombax*, with its large crimson flowers furnishes another such illustration. One of these flowers was made on the spot during the week or ten days the tree was in blossom. On the strength of this and the moulds which were made at the same time, a splendid branch of the Silk Cotton tree has been added to the exhibits. Another introduced South African plant of much interest found growing in the

subtropical garden was a scrubby tree of the Strychnine family, *Strychnos spinosa*, with large green or yellow fruit superficially resembling a grapefruit, but with a hard shell and chocolate colored pulp of pleasant taste and a clove like fragrance. A flowering and fruiting branch of this has also been added to the exhibits. One of the main lines of investigation and experimental culture pursued at the garden concerns Avocadoes, or Alligator Pears. Numerous varieties from diverse localities are being tried out here, with a view to the introduction into Florida of those found most suitable and valuable for general cultivation. Three thoroughly well-defined types, a Guatemalan, a Mexican and a West Indian, together with a Guatemalan-Mexican hybrid, were considered of sufficient public interest to be added to the collection. Of these reproductions were made. A number of other plants especially desired by the Department for its exhibits were collected and cast or modeled in part during the period in Miami. Such are the Seven-year Apple (*Casasia*), *Pandanus*, the Screw-pine, in flower; *Casuarina* Australian Pine or Beef-wood tree, Long staple Cotton, Water Hyacinth, etc. A pitcher-plant of the southern large-leaved, yellow flowered species, *Sarracenia flava*, was collected on the return to Chicago in the latter part of May. A single pitcher of this plant, measuring 38 inches, has since been reproduced and placed on exhibition. Some tubers and plants which were brought back in a living condition are being grown for the Museum by the Garfield Park greenhouse. Among these are a large Yam, a *Zamia*, etc. A Spider Lily (*Hymenocallis caribæa*) from Florida, grown at Garfield Park, has been reproduced as a type of Amaryllid lily. Within the last few months a Banana plant (a flowering and fruiting specimen) has been reproduced complete and has been installed temporarily on the gallery. Also a sprouted Cocoanut showing the relation of the seedling plant to the seed and old husk; a Cocoanut flower enlarged; the flowers of *Casuarina* enlarged; enlarged flowers of *Scrophularia*; enlarged flowers of *Sagittaria*; a branch of a Quince from Fort Valley, Georgia; a witches'-broom on the Sand pine; a mounted dry specimen of air plant (*Tillandsia*); a reproduction of the Natal Plum, a branch with fruits and flowers. A set of tomatoes, parasitized by the different fungi that constitute the main pests of this industry, were obtained at the Miami Laboratory, where this matter was being investigated, and were reproduced for the economic collections. At the same time pure cultures of the fungi in question were furnished by the plant-pathologist, and it is the intention of the Department to exhibit in connection with the affected fruit a model of each fungus sufficiently enlarged to make its structure plain to the naked eye. A longitudinal section of a common Fig enlarged, together with a corresponding model of the male fig, or

capri-fig, has just been completed. It shows as plainly as such models can the interesting and peculiar story of the pollination of the fig, and the intricate life-history of the minute hymenopterous insect concerned. A flowering branch of *Grevillea robusta* Australian oak, with the enlarged flowers modeled last year, completes the illustration of the Proteaceae. A summary of the results of the year's work in this Section is as follows: Reproductions completed and placed on exhibition: Banana, entire plant in flower and leaf; Sprouting cocconut, entire plant; *Carissa grandiflora*, fruit and flower branch of leaf; *Cydonia japonica*, branch in fruit and leaf; *Scrophularia Marylandica*, flower enlarged; *Hymenocallis caribæa*, entire plant; *Strychnos spinosus*, fruit and flower in leaf; *Sagittaria latifolia*, flower enlarged; *Casuarina equisetifolia*, flower enlarged; *Casasia clusiifolia*, branch fruiting and leafing; *Bombax grandiflora*, branch flowering and leafing; *Grevillea robusta*, branch flowering and in leaf; *Rhizoctonia solani*, *Macrosporium solani*, *Phytophthora infestans*, *Phoma destructiva*, on *Lycopersicum esculentum*; also parts of *Zamia*, *Cocoa*, *Amanas* and *Gossypium*.

In the Department of Geology some installation has been performed, chiefly for the purpose of putting some mounts into such condition that they could be moved with safety. To this end, mounting of a large skeleton of Megacerops was completed and the mount placed in a case in which it is at present exhibited and can probably be transported. This skeleton is made up entirely of the bones of a single individual and is very nearly anatomically complete, only two or three vertebrae being missing. A few of the limb bones were modeled from corresponding parts on the opposite side, but this was done with entire accuracy by casting. The skeleton is the only one of this genus which has as yet been mounted in any museum, and is the first specimen to show that the members of the genus were long-tailed animals. It was among the most primitive of the Oligocene titanotheres and was about the size of the modern black rhinoceros. The skeleton is mounted in three-quarters relief. The matrix, base and background against which the skeleton is shown have been made of plaster, colored to imitate the greenish clay in which the specimen was found. The plaster has also been tooled in such a manner as to suggest the excavation of the skeleton from the matrix. The posture is that of an animal in life, the skeleton being supported on its feet. The head, neck, torso and right limbs are, however, connected with the background for support, and the feet are partially enclosed in the matrix. Iron rods, made as inconspicuous as possible, have been introduced to support the left limbs. The specimen was collected in South Dakota in 1898 by a Museum expedition. After dismounting some of the dinosaur specimens for packing, the opportunity was im-

proved to make some modifications in the positions of the bones which study had shown would more correctly represent their relations. Some readjustments of the installation of the meteorite collection have been made in order to introduce new specimens and group more closely the different classes. Packing of exhibited specimens has been carried on as rapidly as possible during the year, and as a result the contents of two hundred and forty-one cases have been made ready for shipment, leaving only thirty-eight cases still to be packed. In addition, the work of packing the remaining study and stored collections has been carried on and brought to completion except for some specimens now stored in the basement. Practically all material exhibited on bases, such as the large fossil vertebrate mounts, has also, with the exception of the large dinosaur, been disassembled as far as was necessary and made ready for transportation. In choosing the sequence of collections for packing, those in halls somewhat removed from the main passageways were taken first, in order that the movements of visitors might be interfered with as little as possible while the work of packing was going on. All but three halls of the Department have now been closed to the public, and their contents packed. In these three remaining halls many of the specimens have been packed in such a way as to make them still available for observation. In packing, owing to the weight and hardness of many of the specimens on exhibition in the Department, it was found necessary to remove most of them from the cases and place them in boxes of sizes and shapes suitable for their transportation. In so doing considerable attention was paid to recording the position of the specimens in the cases in such a way as to ensure their rapid and accurate reinstallation on their arrival at the new building. For this purpose each case was given an arbitrary number which includes the temporary number of the hall to which the case is to be sent in the new building. This number has also an absolute value, and is to be retained for the case even if another location for the case should be decided upon. Before removing the specimens from the case, each specimen was given a number showing the location of the specimen within the case, the numbering being in a uniform order for each case, where the specimens were installed in such a manner as to permit. Thus a number 3-10 indicates that in reinstallation the specimen is to be placed on the third shelf from the top of the case and tenth in position from the left end of the shelf. A label bearing this installation number is wrapped with each specimen and on the reverse side of the corresponding printed label a similar number is penciled. In some cases the installation numbers of the specimens were marked on slips which were then fastened in the cases in the positions which the specimens occupied. In other cases, especially where the

installation did not fall into orderly lines, sketches were made on cross-section paper which showed in each case the amount and position of the space occupied by each specimen; the spaces were then numbered and corresponding numbers were wrapped with the specimens and penciled on the labels. The sketch itself was then in each instance fastened inside the corresponding case, so as to prevent its being transferred to any other exhibit. Specimens mounted upon tablets, which include most of the invertebrate fossils, were, for the most part, fastened securely in drawers underneath the cases. Sketches of the positions of the tablets in the cases were first made and numbered and corresponding numbers were penciled on the reverse sides of the tablets. Upon the outside of all packages and boxes containing specimens removed from cases, large department labels similar to those fastened inside the exhibition cases have been placed, giving the corresponding hall and case numbers, so as to insure constant connection of the specimens with the case. There is, further, painted on each package or box a brief label in the department color which describes the nature of the contents. A record has also been prepared in book form which shows in detail the numbers and forms of the exhibition cases and in adjoining columns the halls and alcoves in which the cases are to be placed. As containers for specimens to be packed, boxes and barrels were chiefly used, boxes of the size 36" x 20" x 14" being found especially suitable. Several thousand cartons and small wooden boxes were also employed, either as shipment units or for enclosing individual specimens or groups of specimens in larger boxes. Specimens which would be injured by moving in any other than an upright position were fastened in the exhibition cases. The method for fastening usually adopted was that of screwing metal studs into the metal strips used for supporting brackets at the back of the case and fastening wooden strips on the front of the studs in such a manner as to firmly enclose the specimen and its accompaniment of packing material. Other specimens of such shape that their transportation in boxes would be unsafe, were similarly packed in the cases, and the specimen labels have generally been packed in the cases in which they were originally exhibited. The packing of the fossil collections especially called for varied handling according to weight, mass and fragility. Much storage material which was still in the plaster and burlap wrapping in which it came from the field, was packed in strong boxes of $\frac{7}{8}$ inch lumber. The collections stored in wooden trays, consisting mostly of specimens that had partially been removed from the matrix, were packed in the trays. Specimens in smaller containers, such as paper trays, were wrapped with the trays, each with its label enclosed, and the whole packed snugly in wooden trays by the use of excelsior. These trays

were then stacked to form units of 15 inches in height, the uppermost tray being turned bottom up so as to form a cover. The whole was then formed into a bale. This proved not only the quickest and most effective means of packing, but had the advantage of keeping the specimens in the same trays which are to serve as storage for them in the new building. The large casts, such as those of *Megatherium* and *Hadrosaurus* were taken down and crated in sections. The head and legs were removed, and the thorax reenforced by longitudinal rods lashed across the ribs and secured at either end. All were then crated in units of such size as to permit easy transportation. Smaller skeletons, such as those of the Irish Deer, *Glyptodon* and *Uintatherium* were crated on their bases, with the heads removed when too large to be readily enclosed. Smaller skeletons of a fragile nature were, with their bases, placed in light crates, and were secured by a series of cordage stays running to the sides of the crates. Thus secured, the specimens were returned to the exhibition cases and fastened in position either by means of wires running to iron straps in the back of the case or by blocks screwed to the bottom of the case. Specimens packed in exhibition cases in this way are believed to be assured a safer handling than those placed in unprotected crates. Smaller specimens, such as skulls, were generally packed in paper cartons and secured in the exhibition cases either by blocks or by long, wooden braces fastened to iron studs screwed into the perforated and threaded strips designed to support the shelf-brackets. In some instances, however, the cartons were packed in large, wooden boxes. Very large skulls, such as those of *Titanotherium* and *Eobasilus*, were packed in special wooden crates and the whole returned to the exhibition cases to be moved in them. The Miocene camel skeleton was packed by disarticulating the legs, removing the head and pelvis, and supporting the torso on short, upright rods attached to a temporary base. The whole was then fastened firmly in an exhibition case. A number of heavy and fragile objects, such as specimens of *Daemonelix* and dinosaur bones, required re-enforcing. This was accomplished by the use of plaster and burlap, plaster and iron rods or a combination of all these. Since the spirals of *Daemonelix* made up of loosely-cemented sand, would little more than bear their own weight when in an upright position, they were, before removal from the exhibition case, reenforced with plaster and strips of burlap. To guard against possible breakage and crumbling, four quarter-inch rods were laid across the spirals parallel to their main axes. The peripheries of the spirals were then wound with plaster bandages which, crossing the rods at every turn, bound the whole firmly together. The mounts of dinosaur limbs were taken down and each large bone crated separately.

Previously to crating, the bones were covered with tissue paper to prevent the plaster from adhering to their finished surfaces, 2x4 inch timbers were fitted to the surfaces thus prepared, and all was lashed fast with plaster and burlap bandages. A similar treatment was given the large skull of Triceratops, which, owing to its thin and brittle substance, required especial care. Secure packing of the six hundred specimens of crude petroleum also presented a problem of some difficulty. These oils were exhibited in glass-stoppered bottles eighteen inches high and an inch and a quarter in diameter. No practicable method of sealing the stoppers oil-tight without defacing the bottles was found, since leakage was to be expected if the bottles were not maintained in an upright position. It was necessary also to avoid the use of excelsior or other finely divided packing material which might, in case of accident, become saturated with oil. Accordingly the stoppers were secured against loosening by tying caps of cheesecloth over them. The bottles were then placed in light, wooden boxes each of a size to hold thirty and of a height to allow one-quarter of the length of each bottle to project. To each box two pieces of heavy straw board were fitted, one two inches from the bottom and one over the top, and in these boards holes slightly larger than the diameter of the bottles were cut. When the bottles were threaded through these holes they were held flexibly but securely in position, and the upper quarter of the bottles projecting above the box was covered by crating which permitted a free view of the character of the contents and will protect the box from being inverted or roughly handled. To further facilitate carrying the bottles in proper positions, each box was equipped with suitable handles. The larger bottles of the collection, some of them eighteen inches in diameter, were similarly packed, though in specially made crates. Boxes of special sizes were also provided for the collection of marbles, the size chosen being such as to permit rapid packing and avoid too great weight. Of the series on exhibition in the West Court, the relief maps and the large model of the moon have been taken down and packed, leaving only the meteorite, crystal and gem collections now on exhibition.

Packing has been actively pursued in the Department of Zoölogy during the year. The only material in the Division of Mammalogy and Ornithology not ready for moving consists of the large habitat groups and the study collection of birds. The entire serial exhibition collections of mammals and birds have been secured *in situ* in their cases by means of cleats and braces or other devices to hold them securely in place. The study collection of mammals has been fully packed, mostly in original containers and the rooms in which they were kept have been dismantled. When not engaged in packing, one assistant has continued

in the preparation of plant accessories for the several large mammal groups still uncompleted, the Olympic elk group, the bison group, and the capybara group. The taxidermists have finished the preliminary models and manikins for a single Alaska moose. A giraffe and a hippopotamus are partly finished and practically ready for installation. The entire collection of the Division of Ichthyology and Herpetology was packed during the year and is now ready for shipment to the new building. The Section of Taxidermy has prepared the accessories for a number of small groups of local fishes and has been engaged in mounting certain fishes to fill in gaps in the synoptic series, which it is planned to make comparatively complete. In the Division of Entomology over three months at the beginning of the year were devoted to preparations for moving. As the entomological collections can be packed rather expeditiously and as it was unwise to render them inaccessible for any great length of time, the members of this Division assisted in the preparation of other material for removal. A large part of the year has been devoted to the making of two insect groups for a new case that was designed and built to accommodate them. One of the groups will represent the most conspicuous and characteristic insects of the sand dune region at Miller, Indiana, and the other will show the well known and destructive tomato worm in all its stages and with wax reproductions of its natural surroundings, etc. For specimens, casts of burrows, leaves and other accessory material, local field trips were made whenever they were considered necessary. While neither of the two groups has yet been finished, both have been so far advanced toward completion that they will be ready for installation by the latter part of January. The Division of Osteology packed fifteen exhibition cases with mounted skeletons and eighty-nine crates and boxes of various sizes, such as those for the whale, elephant, rhinoceros, hippopotamus and camel, including small ones for small ligamentary skeletons and skulls, which are now ready for removal. The skeletons, numbering twenty-seven (mostly ligamentary), that could not be packed in the condition they were in, were remounted.

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM OF NATURAL HISTORY. — At the close of the year there were 646 cases available for circulation among the public schools of Chicago. In view of the painstaking methods employed in the taxidermy and accessory work of all zoölogical groups, it is with pride and pleasure that attention is called to the fact that of the total cases available for circulation, fifty-eight zoölogical cases were completed during the past year.

When plans were being formulated for the actual loaning of cases to the public schools, it was the opinion of a committee composed of school

principals that only schools of elementary grades would be best served with loan cases. This idea has been followed out from the inauguration of the system up to the present time. During the next scholastic year the high schools, at the written request of Mr. J. E. Armstrong, Assistant Superintendent of Schools, will be scheduled to receive cases. In his request Mr. Armstrong said of the cases, "I have studied them with great interest and am firmly of the opinion that they would be of very great assistance in the high schools."

The Superintendent of the Municipal Pier formally requested cases be placed on exhibition on the pier during the period of school vacation, as was done last year. His request was granted and twenty-four cases were placed on exhibition there during the time specified. When the cases were returned to the Museum the Superintendent expressed his thanks and added, "I believe I am voicing the thanks also of a large body of visitors who found entertainment and instruction in leisurely contemplating your beautiful exhibits and the lessons they teach."

In reptile and similar branches of taxidermy the employment of the skin of a specimen for mounting has not given satisfactory results. The effects usually obtained being a shrunken and parchment-like surface and a fading and disappearance of the natural colors. As these faults seemed impossible to remedy, the use of the specimen's skin for mounting purposes has practically been abandoned. Better, though not entirely approved results, have been derived by making, in plaster, celluloid and other materials, casts of specimens, which were afterwards painted to represent the natural colors. Painting on the surface of a skin or on a cast has never brought an effect comparable with the living model. In order to produce an effect more natural in appearance than that accomplished by the use of the skin or by casts, this Department has been, at intervals during the past year, experimenting with pyralin, celluloid and similar materials. With celluloid as a medium it is found possible to make reproductions of a character so closely resembling the structure and coloring of the skin of the living specimen as to eliminate the necessity of painting it, thus displacing the objectionable appearance of paint as it is usually employed. Experiments have also been made in foliage reproducing in celluloid, using electro-deposited metal molds which possess strength sufficient to withstand the pressure required in the molding operations. The strength and elasticity of the celluloid is such as to correct the objectionable necessity of making the artificial leaf unnaturally thick.

During the year a request was received from Mr. H. Bolton, Director, Museum and Art Gallery, Bristol, England, and Secretary, Educational Section, The British Association for the Advancement of Science, for

information concerning the work and scope of this Department, the data thus provided to be placed before the Association's meeting at Bournemouth in September. A request was made for the loan of several cases by the Woodlawn Branch of the Chicago Public Library.

The Director of the Orthogenic Department of Rush Medical College, University of Chicago, visited this Department and after making a careful study of the cases on hand, requested the loan from time to time of several of them, stating that they would be very helpful in instructing backward children, classes of which are conducted by that college. The request was granted and two cases of economic material were loaned.

PHOTOGRAPHY AND ILLUSTRATION.— The following is a tabulation of the work performed in this section:

	Number of Negatives made	Number of Prints made	Number of Enlargements made	Number of Negatives developed for Field Expeditions	Number of Positives made. Used in making Enlargements
General	45	146	..	..	..
Anthropology	278	470	2	..	1
Botany	6	339	..	..	..
Geology	18	42	..	..	..
Zoölogy	98	..	..	..	..
Harris Extension	5	79	..	46	..
Distribution . . . . .	...	...	..	..	..
Gift . . . . .	...	23	..	..	..
Sale . . . . .	...	108	..	..	..
Totals	450	1,207	2	46	1
Total number of Catalogue entries during year 1919					1,706
Total number of Catalogue entries to December 31, 1919					120,844
Total number of Record Books					20

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

	Exhibition Labels	Other Impressions
Anthropology	5,921	1,200
Botany	91	4,650
Geology	610	2,100
Zoölogy	41	4,716
Harris Extension	355	800
General . . . . .	....	16,250
Library . . . . .	....	2,250

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

FREDERICK J. V. SKIFF, Director.



TYPE OF CASE LOANED TO PUBLIC SCHOOLS BY THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM.



FINANCIAL STATEMENT.

RECEIPTS AND DISBURSEMENTS.

January 1, 1919, to December 31, 1919.

RECEIPTS

Cash in Treasurer's hands December 31, 1918:			
General Fund	\$3,103.19		
Picture Postal Cards Fund	42.32		
Sinking Fund	347.96	\$	3,493.47
<hr/>			
Petty Cash on hand December 31, 1918			739.95
Dues of Annual Members			750.00
Dues of Life Members			17,600.00
Admissions and Check Rooms			3,780.15
South Park Commissioners			15,000.00
Interest on Investments and Bank Balances			9,990.83
Field Endowment Income			131,500.00
Field Endowment Sinking Fund			4,573.68
Field Endowment Sinking Fund — Income			1,567.27
New Building Moving and Furnishing Fund			23,235.00
Picture Postal Cards — Sales			693.32
Mrs. Stanley Field Plant Reproduction Fund			8,490.00
Sale of Publications — Special			468.88
William J. Chalmers Crystal Collection			500.00
Sundry Funds — Investment Income			7,026.60
Donations — Special:			
Charles R. Crane	\$ 500.00		
Mrs. T. B. Blackstone	2,500.00		
Dr. Frank W. Gunsaulus	300.00		
Chauncey Keep	300.00		
Edward E. Ayer	100.00		
Martin A. Ryerson	25.00		3,725.00
			<hr/>
			\$233,134.15

DISBURSEMENTS

Salaries	\$ 78,823.06
Guard Service	11,981.60
Janitor Service	7,016.15
Fire Protection	3,817.10
Heat and Light	19,912.61
Repairs and Alterations	9,811.79
Packing Supplies	1,531.84

332 FIELD MUSEUM OF NATURAL HISTORY — REPORTS, VOL. V.

Furniture and Fixtures:		
Exhibition Cases	\$ 168.00	
Herbarium Cases	512.00	680.00
<hr/>		
The Library:		
Books and Periodicals	\$ 628.85	
Binding, etc.	167.96	796.81
<hr/>		
Collections Purchased		476.15
Installation Supplies		887.21
Publications		1,150.20
Photography and Printing Supplies		409.61
General Expense:		
Freight, Expressage and Teaming	\$1,478.69	
Stationery, Postage and Telephone	647.11	
Liability Insurance	693.43	
Sundries	1,059.30	3,878.53
<hr/>		
Mrs. Stanley Field Plant Reproduction Fund		7,682.49
Stanley Field Ornithology Fund		50.00
William J. Chalmers Crystal Collection Fund		280.25
Joseph N. Field South Pacific Islands Fund		286.20
Employes Liberty Loan Bonds		1,399.60
New Building Moving and Furnishing Fund — Investments		26,965.00
Life Memberships Fund — Investments		18,220.00
General Fund Investments — Suspense		17,600.00
Sinking Fund — Investments		6,265.00
Picture Postal Cards Fund — Investments		800.00
Sundry Funds — Investments		1,150.00
<hr/>		
		\$221,871.20
In Treasurer's hands, December 31, 1919:		
General Fund	\$9,590.90	
Picture Postal Cards Fund	12.10	
Foreign Exchange	920.00	10,523.00
<hr/>		
Petty Cash on hand December 31, 1919		739.95
<hr/>		
		\$233,134.15

ATTENDANCE AND RECEIPTS FROM JANUARY 1, 1919, TO
DECEMBER 31, 1919.

ATTENDANCE

Paid Attendance:		
Adults	13,069	
Children	1,465	14,534
<hr/>		
Free Admission on Pay Days:		
School Children	4,637	
Students	2,645	
Teachers	345	
Members	52	
Officers' Families	84	
Press	8	
Special	731	8,502
<hr/>		
Admission on Free Days:		
Saturdays	20,975	
Sundays	79,788	100,763
<hr/>		
Total Attendance		123,799
Highest Attendance on any one day (July 6, 1919)		4,634
Highest paid Attendance on any one day (September 1, 1919)		667
Average Daily Admissions (363 days)		341
Average Paid Attendance (259 days)		56

RECEIPTS

Articles checked — 7,560 at 5 cents each	\$ 378.00
Admissions	3,402.15
	<hr/>
	\$3,780.15

ACCESSIONS.

DEPARTMENT OF ANTHROPOLOGY.

- ANDERSON, MARY LOUISE**, Chicago.
 1 piece of cartonnage from mummy-wrappings, 3 hands and 1 lower leg from mummy — Egypt (gift).
- AYER, EDWARD E.**, Chicago.
 6 Malayan kris — Borneo and Palawan (gift).
 White-deer dance ceremonial feather head-band — Hupa, California (gift).
 1 Sioux beaded buckskin dress — United States (gift).
 1 stone mortar with pestle, 1 child's metate with muller — Southern California (gift).
- BROWN, ALFRED REGINALD**, Tonga, South Pacific.
 Ethnographical material, chiefly basketry, weapons, headdresses, ornaments, 2 wooden images, altogether 113 specimens — Andamans and Nicobars (gift).
- JOSEPH N. FIELD SOUTH PACIFIC ISLANDS FUND.**
 Wood-carvings, images, weapons, implements, clothing, ornaments, and other ethnographical material — North Coast of Dutch New Guinea (gift).
- FIELD, STANLEY**, Chicago.
 Chisné portrait statue of a Tibetan Grand Lama, presumably Pal-dan-ye-she (1738-1780) — Peking (gift).
- FITZ-WILLIAM, G. L.**, Hammond, Indiana.
 Ethnographical objects from the San Blas Indians — Panama (gift).
- GUNSAULUS, FRANK W.**, Chicago.
 Ethnological objects: 2 costumes, textiles, necklaces, ornaments, sword, wood carvings, etc. — Formosa (gift).
 1 decorated metal shield — India (gift).
 4 glazed pottery tiles — Persia (gift).
 1 celadon flower-vase in shape of an elephant — Japan (gift).
- GUNSAULUS, HELEN C.**, Chicago.
 1 dagger with ornamented sheath and hilt — Japan (gift).
- LORD, J. B.**, Chicago.
 Buddhist bronze statuette — China (gift).
- MASON, J. A.**, Chicago.
 Ethnological and archaeological material from the Papago Indians, Piman stock — Santa Rosa, Arizona (gift).
- MCCAULEY, MRS. CHAS. A. H.**, Highland Park, Illinois.
 Miscellaneous ethnographical collection from Philippines and American Indians — Philippines, Aden, America (gift).
- MORRIS, JOSEPH R.**, Deerfield, Illinois.
 Ethnographical objects from Sioux Indians — Fort Peck, Montana (gift).



SALISH BLANKET MADE AT SPUZZUM, B. C., ABOUT 1863.
Gift of Mr. Homer E. Sargent.



PATTEN, MRS. HENRY J., Evanston, Illinois.

Ancient feather blanket of Maori chief — Rotorua, New Zealand (gift).

RYERSON, MARTIN A., Chicago.

1 slate carving — Queen Charlotte Islands, B. C. (gift).¹

SARGENT, HOMER E., Pasadena, California.

2 Navajo blankets (gift).

4 blankets — Southwest and Northwest Coast, U. S. A. (gift).

VIVIAN, G. F., Chicago.

7 bows, 36 arrows — Demerara, British Guiana (gift).

WOODWARD, MRS. MORGAN S., Chicago.

1 jingal, 5 rifles, 10 swords, 3 pistols, 3 cartridge-belts, 2 cannon-balls,

2 spears, 2 flags, 1 fireman's coat, 1 bamboo jacket, 1 bow, 1 printing-block, 2 musical instruments — Peking, China (gift).

WRIGLEY, WILLIAM JR., Chicago.

Pre-Columbian gold ornaments — Mound on Nechi River, Colombia (gift).

DEPARTMENT OF BOTANY.

BENKE, H. C., Elgin, Illinois.

1 herbarium specimen — Illinois (gift).

BERNICE PAUAAHI BISHOP MUSEUM, Honolulu, Hawaiian Isls.

262 herbarium specimens — Hawaiian Isls (exchange).

BUSH, B. F., Courtney, Missouri.

102 herbarium specimens — Missouri (gift).

COOK, A. T., Hyde Park, New York.

1 specimen potato seed balls — New York (gift).

DAHLGREN, B. E., Chicago.

1 fruit of Traveller's tree — Florida (gift).

DEAM, CHARLES C., Bluffton, Indiana.

22 herbarium specimens — Indiana and Michigan (gift).

DENSLOW, H. M., New York City, New York.

73 herbarium specimens — New York, Vermont and New Jersey (exchange).

FIELD MUSEUM OF NATURAL HISTORY.

Collected by E. T. Harper:

Various fungi.

Collected by C. F. Millspaugh:

4 herbarium specimens — California.

Purchases:

285 herbarium specimens — Mexico.

Mrs. Stanley Field Plant Reproduction Laboratory:

135 herbarium and economic specimens — Miami, Florida.

4 herbarium specimens — Georgia.

16 models — various localities.

Reproductions of *Ficus carica*, *Cassia clusifolia*, *Strychnos spinosus*, *Persea Persea*.

GAUMER, DR. GEO. F., Izamal, Mexico.

2 herbarium specimens — Yucatan (gift).

GEOLOGICAL SURVEY OF CANADA, Ottawa, Canada.

248 herbarium specimens — various localities (exchange).

23 herbarium specimens — various localities (gift).

- HALL, ELIHU, THE FAMILY OF, Athens, Illinois.
Private herbarium Elihu Hall — various localities (gift).
- JAPANESE COMMISSIONERS — W. C. E., Chicago.
50 specimens of tea (gift).
- JONES, ARTHUR B., Evanston, Illinois.
1 herbarium specimen — New York (gift).
- KING, ANNA, Ottawa, Illinois.
300 herbarium specimens — Illinois (gift).
- LANSING, O. E., JR., Chicago.
76 herbarium specimens — Illinois (gift).
- LUDWIG, C. A., Washington, D. C.
2 herbarium specimens — Virginia (gift).
- MCDONALD, F. E., Peoria, Illinois.
63 herbarium specimens — Illinois (gift).
- McLAIN, A. O., Chicago.
1 section of bark of Big tree, 2 cones of Coulter's pine — California (gift).
- MILLSPAUGH, CHARLES F., Chicago.
7 seeds — various localities (gift).
26 illustrations and descriptions (gift).
65 herbarium specimens — Wisconsin (gift).
- NEW YORK BOTANICAL GARDEN, Bronx Park, New York City.
507 herbarium specimens — Colombia (exchange).
11 herbarium specimens — New Providence, Bahamas (exchange).
- PARKE, DAVIS & CO., Detroit, Michigan.
6 herbarium specimens — Michigan (gift).
- PETERSEN, N. P., Reno, Nevada.
2 herbarium specimens — Nevada (gift).
- PHILIPPINE BUREAU OF SCIENCES, Manila, P. I.
180 herbarium specimens — Philippine Isls. (exchange).
466 herbarium specimens — various localities (exchange).
- RIDGWAY, ROBERT, Olney, Illinois.
5 herbarium specimens — Illinois (gift).
- SHERPP, EARL E., Chicago.
20 herbarium specimens — University of Chicago greenhouse (gift).
8 herbarium specimens — Illinois (gift).
Original description of *Taraxacum ceratophorum* and *Taraxacum lyratum* (gift).
7 original descriptions of *Xanthium* (gift).
1 herbarium specimen — Chicago, Illinois (gift).
Original description of genus *Taraxacum* (gift).
1 description of *Xanthium* and 1 specimen of *Xanthium* — Kansas (gift).
10 herbarium specimens — Illinois and Mexico (gift).
- TONDUZ, ADOLPH, Costa Rica.
6 herbarium specimens — Costa Rica (gift).
- UNITED STATES CUSTOMS HOUSE, APPRAISER'S STORE, Chicago.
2 samples gourd seed — Custom House (Africa) (gift).
- UNITED STATES NATIONAL MUSEUM, Washington, D. C.
94 herbarium specimens — various localities (exchange).

DEPARTMENT OF GEOLOGY.

- BRITISH MUSEUM (NATURAL HISTORY), London, England.
4 specimens of Baroti, Kuttipuram and Warbreccan meteorities (exchange).
- BUCKSTAFF, RALPH, Oshkosh, Wisconsin.
1 specimen obsidian — Mexico (gift).
2 specimens Cumberland Falls meteorite — Cumberland Falls, Kentucky (gift).
- CHALMERS, W. J., Chicago.
1 amethyst crystal — Mount Pleasant, Maine (gift).
2 scheelite crystals — Arizona (gift).
- CHAMBERLAIN, MRS. COL., Los Gatos, California.
2 specimens fossil wood partly altered to lignite — Los Gatos, California (gift).
- FIELD MUSEUM OF NATURAL HISTORY.
Collected by B. E. Dahlgren:
90 specimens invertebrate fossils, 35 specimens soils, coquina and products of weathering — Florida, Kentucky and Tennessee.
Collected by H. W. Nichols:
8 specimens of ores, minerals and rocks — Porcupine, Ontario.
Purchases:
1 specimen Richardton meteorite — Richardton, North Dakota.
2 specimens Cumberland Falls meteorite — Cumberland Falls, Kentucky.
- GALLAGHER, J. F., Chicago.
7 specimens mineral abrasives and roofing material — various localities (gift).
- GILL, DR. GEO. M., Chicago.
10 specimens minerals (gift).
- JILLSON, W. R., Frankfort, Ky.
1 specimen Cumberland Falls meteorite — Cumberland Falls, Kentucky.
- KANST, EDWIN A., Chicago.
1 group gypsum crystals in clay — 95th St. & Stony Id. Ave., Chicago (gift).
- KLECKNER, M. E., Tiffin, Ohio.
109 specimens calcite, fluorite and celestite — Ohio and Michigan (exchange).
- LANGFORD GEORGE, Joliet, Ills.
130 specimens of vertebrate fossils, chiefly remains of mastodons and mosasaurs — Illinois and Kansas (gift).
- MACE, MRS. G., Oak Park, Ills.
31 specimens of ores and minerals — various localities (gift).
- MARINER & HOSKINS, Chicago.
1 specimen arsenic crystals (gift).
1 group crystals of metallic arsenic — Chicago (artificial) (gift).
- MORRIS, J. R., Deerfield, Illinois.
1 fossil coral — Petoskey, Michigan (gift).
- QUIRKE, T. T., Minneapolis, Minnesota.
3 specimens Richardton meteorite — Richardton, North Dakota (exchange).
- RENNINGER, EDW., Chicago.
65 specimens fossils and concretions — various localities (gift).

SCHAEFER, WALTER, Chicago.

1 specimen Calymene — near Lemont, Illinois (gift).

SKINNER, WM. G., South Porcupine, Ontario.

2 specimens barite — Langmuir, near Porcupine, Ontario (gift).

UNIVERSITY OF IOWA, Iowa City, Iowa.

6 specimens Barbadoes earth, 1 specimen Globigerina marl — Barbadoes Ids. (exchange).

DEPARTMENT OF ZOOLOGY.

AMERICAN MUSEUM OF NATURAL HISTORY, New York City.

Skulls of African elephant and white rhinoceros — (exchange).

AYER, EDWARD E., Chicago.

1 snake skin, without head — (gift).

BEATY, W. L., South Butte, Montana.

1 specimen American goshawk — South Butte, Montana (gift).

BRANDLER, CHARLES, Chicago.

1 sculpin — Lake Michigan (gift).

3 lake-herring — Chicago (gift).

BUMSTEAD, COL. DALE, Oak Park, Illinois.

3 mountain sheep (skins and skulls), 3 deer (skulls) — Lower California (gift).

COALE, HENRY K., Highland Park, Illinois.

6 specimens Japanese birds — Japan (gift).

COOPER, A. R., Chicago.

3 cottoid fishes — Port Credit, Ontario (gift).

CORY, CHARLES B., Chicago.

1 ruffed grouse — Grandview, Wisconsin (gift).

CROZIER, W. J., Chicago.

Shells of two specimens of *Chiton tuberculatus*, having the seventh and eighth valves fused — Cross Bay, Bermuda (gift).

DESPOTT, GIUSEPPE, Malta.

433 shells — Maltese Islands (gift).

FIELD MUSEUM OF NATURAL HISTORY.

Collected by C. L. Hubbs and L. L. Pray:

6 sunfishes of rare species — Jackson Park Lagoon.

Collected by C. L. Hubbs, L. L. Pray and L. L. Walters:

27 fishes for mounting — Jackson Park Lagoon.

Transfer from Department of Anthropology.

1 lizard — Egypt.

Purchases:

42 specimens marine invertebrates, marine fishes, treefrog, frog, lizards, young alligator — Florida.

1 specimen gar — Wisconsin.

27 specimens nematodes, centipedes, millipedes and snakes — Illinois.

STANLEY FIELD ORNITHOLOGY FUND.

190 specimens birds — various localities (gift).

3 mammals (skins and skulls) — various localities (gift).

FISHER, MRS. H. S., Chicago.

500 shells (approx.) — near St. Petersburg, Florida (gift).

- FORBIS, HOMER, Albany, Missouri.
1 ichneumon fly — Albany, Missouri (gift).
1 cicada — Albany, Missouri (gift).
- FRIESSER, JULIUS, Chicago.
3 turtles — Michigan (gift).
- FRISON, THEO. H., Champaign, Illinois.
6 bumble-bees — Massachusetts, New York, Illinois and Nova Scotia (exchange).
- GERHARD, WM. J., Chicago.
1 ribbon snake — northern Indiana (gift).
9 garter snakes — Illinois (gift).
1 snake — New Lenox, Illinois (gift).
- GUERET, E. N., Chicago.
2 robber-flies — Chicago (gift).
12 sphinx moths — Chicago (gift).
- GUNSAULUS, HELEN C., Chicago.
1 snowy heron mounted in a frame with a curved, painted background — near Glenwood Springs, Colorado (gift).
- HAWKINS, F. P., Chicago.
1 walrus skull and tusks — (gift).
- HUBBS, CHARLES L., San Diego, California.
3 velvet ants — San Diego, California (gift).
2 lizards, 5 snakes — San Diego County, California (gift).
- HUBBS, CARL L., Chicago.
1 garter snake — Chicago (gift).
1 turtle — Chicago (gift).
31 fishes, 3 snakes — Illinois (gift).
3 waterbugs — Dune Park, Indiana (gift).
20 waterbugs — Miller, Indiana (gift).
- HUBBS, C. L. & L. L. WALTERS, Chicago.
25 fishes, 5 toads, 1 lizard — Lake County, Indiana (gift).
- HYMAN, C. H., Chicago.
1 king rail — Jackson Park, Chicago (gift).
- KLEINPASTE, J. B., Chicago.
1 praying mantis — in Chicago, on a load of lumber from the South (gift).
- LILJEBLAD, EMIL, Chicago.
1 lizard, 4 snakes, 1 bryozoan colony — Illinois (gift).
- MACKELDEN, J. W., St. Louis, Missouri.
30 amphibians and reptiles — Mississippi basin (gift).
- McCAULEY, MRS. C. A. H., Highland Park, Illinois.
1 glass sponge — Philippine Islands (gift).
- MORRIS, JOSEPH R., Deerfield, Illinois.
12 shells — (gift).
- OLIVER, J. K., Monterey, California.
1 abalone shell — Monterey, California (gift).
- PEACOCK, CHARLES, Chicago.
1 mounted green turtle — southern Florida (gift).
- PRAY, LEON L., Chicago.
1 snake — Beverly Hills, Illinois (gift).

- REEVE, REX W., Chicago.
 1 milk snake — Tremont, Indiana (gift).
- RENNINGER, EDW., Chicago.
 3 shells — Florida (gift).
- ROTHSCHILD & COMPANY, Chicago.
 1 cichlid fish (gift).
- SACKHEIM, M. H., Santa Fe, New Mexico.
 3 lizards — vicinity of Santa Fe, New Mexico (gift).
- SIEGEL, FRANK R., Chicago.
 1 muskallunge weighing 42 pounds — Cat-fish Lake, Wisconsin (gift).
- SINCLAIR, J. G., Chicago.
 1 spade-foot toad, 4 lizards, 1 snake — Arizona (gift).
 2 scorpions, 10 beetles — Tucson, Arizona (gift).
- STODDARD, HERBERT L., Chicago.
 1 garter snake — northern Indiana (gift).
 8 snakes, 3 lizards — northern Indiana (gift).
 35 wall lizards — France (gift).
- TOWNSLEY, F. O., Yosemite City, California.
 1 snake skin (gift).
- U. S. NATIONAL MUSEUM, Washington, D. C.
 7 mammals — various localities (exchange).
- WALTERS, LEON L., Chicago.
 1 garter snake — South Chicago, Illinois (gift).
 20 snakes, 1 turtle — Indiana and Illinois (gift).
- WELD, L. W., Evanston, Illinois.
 4 gall-insects (& 4 galls) — Williams, Arizona (gift).
- WESTFALL, C. C., Chicago.
 10 wood-boring isopods — Manchac pass, between Lakes Maurepas and Pontchartrain, Louisiana (gift).
- WOLCOTT, MRS. A. B., Chicago.
 1 spider — (gift).

SECTION OF PHOTOGRAPHY.

FIELD MUSEUM OF NATURAL HISTORY.

Made by Mrs. Stanley Field Plant Reproduction Expedition:

156 negatives plants, views, etc. — Southern Florida.

Made by Section:

1706 negatives and prints of Museum specimens.

HIGGINS, JOHN A., University of Illinois College of Medicine.

1 negative of Areca Catechu nuts — Philippine Islands.

THE LIBRARY.

BOOKS, PAMPHLETS, AND SERIALS.

(ACCESSIONS ARE BY EXCHANGE UNLESS OTHERWISE DESIGNATED.)

AFRICA

Durban Museum	1
East Africa and Uganda Natural History Society, Nairobi	1
Geological Society, Johannesburg	1



CLOISONNE ENAMEL STATUE OF PAL-DAN-YE-SHE, A FAMOUS TIBETAN HIERARCH.
Gift of Mr. Stanley Field.



Institut de Carthage, Tunis	I
Rhodesia Scientific Association, Bulawayo	I
Royal Society of South Africa, Cape Town	I
South Africa Association for Advancement of Science, Cape Town	I
South African Museum, Cape Town	I
ARGENTINA	
Academia de Ciencias, Cordoba	I
Museo Nacional de Historia Natural, Buenos Aires	I
Universidad Nacional, Facultad de Filosofía y Letras, Buenos Aires	I
AUSTRALIA	
Australian Museum, Sydney	I
Australian Ornithologists' Union, Melbourne	I
Botanic Gardens and Government Domains, Sydney	I
Department of Agriculture, Adelaide	2
Department of Agriculture, Sydney	I
Department of Agriculture, Wellington	I
Department of Fisheries, Sydney	I
Department of Mines, Sydney	I
Field Naturalists' Club, Melbourne	I
Forestry Commission, Sydney (gift)	I
Geological Survey, Perth	4
Government of the Commonwealth, Melbourne	2
Institute of Science and Industry, Sydney	I
Linnean Society of New South Wales, Sydney	I
National Herbarium, Melbourne	I
Public Library, Museum and Art Gallery, Adelaide	I
Public Library, Museums and National Gallery of Victoria, Melbourne	I
Queensland Department of Mines, Brisbane	4
Queensland Museum, Brisbane	I
Royal Australasian Ornithologists' Union, Melbourne	2
Royal Geographical Society of Australasia, Brisbane, Queensland	2
Royal Society of New South Wales, Sydney	I
Royal Society of Queensland, Brisbane	I
Royal Society of South Australia, Adelaide	2
Royal Society of Tasmania, Hobart	2
Royal Society of Victoria, Melbourne	2
Royal Society of Western Australia, Perth	4
South Australian Ornithological Society, Adelaide	I
University of Melbourne	I
Victoria Department of Agriculture, Melbourne	2
Western Australia Geological Survey, Perth	2
BELGIUM	
Académie Royale de Belgique, Brussels	9
Jardin Botanique de l'Etat, Brussels	I
Société Royale d'Archéologie, Brussels	I
Société Royale des Sciences, Liège	I
BRAZIL	
Bibliotheca Nacional, Rio de Janeiro	2
Instituto Agronomico de Estado, Sao Paulo	I
Ministerio da Agricultura, Industria e Commercio, Rio de Janeiro	I

Museu Nacional, Rio de Janeiro	1
Museu Paulista, Sao Paulo	1
Servico Geologico e Mineralogico, Rio de Janeiro	1
CANADA	
Department of Agriculture, Ottawa	10
Department of Agriculture, Victoria	1
Department of Marine and Fisheries, Ottawa	1
Department of Mines, Ottawa	1
Department of the Interior, Geological Survey, Ottawa	10
Entomological Society of Ontario, Toronto	1
Horticultural Societies of Ontario, Toronto	1
McGill University, Montreal	2
Nova Scotian Institute of Science, Halifax	1
Provincial Museum, Victoria	2
Royal Canadian Institute, Toronto	1
Royal Society of Canada, Ottawa	1
Société de Géographie, Quebec	1
CEYLON	
Colombo Museum	1
Royal Botanic Garden, Peradeniya	2
CHILE	
Biblioteca Nacional, Santiago de Chile	1
CHINA	
Botany and Forestry Department, Hong-Kong	1
DENMARK	
Botanical Garden, Library, Copenhagen	1
K. Bibliotek, Copenhagen	1
Naturhistorisk Forening, Copenhagen	1
Société Royale des Antiquités du Nord, Copenhagen	1
University of Copenhagen	2
ECUADOR	
Biblioteca de Alquier, Quito	1
Sociedad Ecuatoriana de Estudios Historicos Americanos, Quito	1
EGYPT	
Ministry of Public Works	4
FIJI ISLANDS	
Fijian Society, Suva, Fiji Islands (gift).	1
FRANCE	
Académie des Sciences, Paris	2
L'Ecole des Langues Orientales Vivantes, Paris	
Faculté des Sciences, Marseille	2
Musée d'Histoire Naturelle, Marseille	1
Muséum National d'Histoire Naturelle, Paris	2
La Nature, Paris	2
Société Botanique de France, Paris	1
Société d'Etudes Scientifiques, Angers	3
Société des Sciences Naturelles, La Rochelle	1
Société de Géographie, Paris	1
Société de Géographie, Toulouse	2
Société Franco-Japonaise, Paris	1

Société Nationale d'Agriculture, Sciences et Arts, Angers	1
Société Zoologique, Paris	2
Université de Montpellier, Cette	2

GERMANY

K. Sächsische Gesellschaft der Wissenschaften, Leipzig	1
K. Zoologisches und Anthropologisch-Ethnographisches Museum, Dresden.	1
Naturforschende Gesellschaft, Freiburg	1
Naturwissenschaftlicher Verein für Schleswig-Holstein, Kiel	1

GREAT BRITAIN AND IRELAND

Ashmolean Natural History Society of Oxfordshire, Oxford	1
Belfast Naturalists' Field Club	1
Brighton and Hove Natural History and Philosophical Society, Brighton	1
Bristol Museum and Art Gallery	1
British Association for the Advancement of Science, London	1
British Museum (Natural History), London	3
Cambridge Antiquarian Society	1
Cambridge Philosophical Society	1
Cambridge University Library	1
Fisheries Board, Edinburgh	2
Geographical Society, London	2
Great Britain Geological Survey, London	2
Imperial Bureau of Entomology, London	2
Imperial College of Science and Technology, London	1
Lancashire Sea Fisheries Laboratories, Liverpool	1
Linnean Society, London	3
Liverpool Biological Society	2
Manchester Literary and Philosophical Society	1
Manchester Museum	1
Natural History Society of Northumberland, Durham and Newcastle-on-Tyne	1
National Museum of Wales, Cardiff	1
Royal Anthropological Institute of Great Britain and Ireland, London	1
Royal Botanic Gardens, Edinburgh	1
Royal Botanic Gardens, Kew	2
Royal Colonial Institute, London	1
Royal Dublin Society	2
Royal Horticultural Society, London	1
Royal Society, London	2
Royal Society of Arts, London	1
Royal Society of Edinburgh	2
South London Entomological and Natural History Society	1
Tring Zoological Museum	1
Victoria and Albert Museum, London	1
Wellcome Chemical Research Laboratories, London	12
Zoological Society of London	1

INDIA

Anthropological Society, Bombay	1
Archæological Survey, Calcutta	5
Archæological Survey, Lahore.	1
Botanical Survey, Calcutta	2

Department of Agriculture, Bombay	1
Department of Agriculture, Madras	2
Department of Agriculture, Pusa	1
Geological Survey, Calcutta	4
Government Museum, Madras	1
Hyderabad Archaeological Society	1
Indian Museum, Calcutta	7
National Indian Association, Calcutta (gift)	1
Superintendent Hindu and Buddhist Monuments, Lahore	1
ITALY	
Accademia Giornia de Scienze Naturali, Catania	1
American Academy in Rome	1
Istituto Botanico dell'Universita de Pavia	2
Istituto Geografico de Agostini, Novara	1
Laboratorio di Zoologia Generale e Agraria, Portici	1
Museo Civico di Storia Naturale, Genoa	1
R. Accademia delle Scienze, Turin	3
R. Accademia di Scienze, Lettere ed Arti, Acireale	1
Società dei Naturalisti, Naples	1
Società Geografica Italiana, Rome	1
Società Geologica, Rome	1
Società Italiana d'Antropologia e Etnologia, Florence	1
Società Italiana de Scienze Naturali, Milan	1
Società Toscana di Scienze Naturali, Pisa	2
JAPAN	
Akita Mining College	1
Anthropological Institute, Tokyo	3
Bureau of Productive Industry Formosa Government, Taihoku	1
Geological Society, Tokyo	2
Imperial University of Tokyo, College of Agriculture	2
Imperial University of Tokyo, College of Science	2
Tohoku Imperial University, Sendai	1
Tokyo Botanical Society	1
JAVA	
Bataviaasch Genootschap van Kunsten en Wetenschappen, Batavia	2
Department of Agriculture, Buitenzorg	6
Encyclopaedisch Bureau, Weltevreden	1
Jardin Botanique, Buitenzorg	2
KOREA	
Government-General Chosen, Seoul	1
MEXICO	
Director General de Estadistica, Mexico	2
Istituto Geologico, Mexico	2
Sociedad Cientifica "Antonio Alzate," Mexico	1
Sociedad Geologico, Mexico	1
Sociedad Mexicana de Geografia y Estadistica, Mexico	3
NETHERLANDS	
Bataafsch Genootschap der Proefonder Vindelijke Wijsbegeerte, Rotterdam	2
K. Instituut voor de Taal-Land-en Volkenkunde van Nederlandsch Indie, The Hague	2

K. Nederlandsch Aardijkundig Genootschap, Amsterdam	I
Nederlandsche Dierkundige Vereeniging, Leiden	I
Rijks Ethnographisch Museum, Leiden	I
Rijks Herbarium, Leiden	I
Rijks Museum van Natuurlijke Historie, Leiden	I
Société des Amis de l'Art Asiatique, Amsterdam	I
NEW ZEALAND	
Acclimatisation Society, Wellington	I
Auckland Institute and Museum, Wellington	I
Department of Agriculture, Wellington	2
Department of Mines, Wellington	2
New Zealand Institute, Wellington	I
PERU	
Cuerpo de Ingenieros de Minas, Lima	I
Sociedad Geografica de Lima	I
PORTUGAL	
Academia das Sciencias de Lisboa	2
Institutó d'Anatomie, Lisbon	I
Société Portugaise des Sciences Naturelles, Lisbon	2
SPAIN	
Broteria, Salamanca	2
Institució Catalana d'Historia Natural, Barcelona	I
Junta de Ciencias Naturals, Barcelona	8
R. Academia de Ciencias Exactas, Fisicas y Naturales, Madrid	3
Sociedad Española de Historia Natural, Madrid	2
SWEDEN	
K. Biblioteket, Stockholm	4
K. Svenska Vetenskapsakademien, Stockholm	6
K. Universitets Biblioteket, Upsala	6
K. Vitterhets Historie och Antikvitets Akademien, Stockholm	2
Svenska Sällskapet för Antropologi och Geografi, Stockholm	I
Swedish Institute of Experimental Forestry, Stockholm	I
SWITZERLAND	
Botanic Garden, Zürich	I
Conservatoire et Jardin Botaniques, Geneva	I
Musée d'Histoire Naturelle, Lausanne	I
Naturforschende Gesellschaft, Basel	I
Naturforschende Gesellschaft, Zürich	2
Ostschweizerische Geograph.-Commerc. Gesellschaft, St. Gallen	I
Société Botanique de Genève	I
Société de Physique et d'Histoire Naturelle, Geneva	2
Société Entomologique, Bern	I
Société Neuchateloise de Géographie	I
URUGUAY	
Archivo General Administrativo, Montevideo (gift)	I
VENEZUELA	
National Library of Venezuela, Caracas (gift)	I
WEST INDIES	
Academia Nacional de Artes y Letras, Havana	2
Biological Station of Bermuda	I

Imperial Department of Agriculture, Barbadoes	1
Instituto de Segunda Enseñanza, Havana	1
Jamaica Institute, Kingston	1
Trinidad and Tobago Department of Agriculture, Port of Spain	2
Universidad de Habana	2
Balfour, Henry, London	2
Beardrich, Johannes, Dresden	1
Blackman, Aylward M., London	9
Bonaparte, Prince, Paris	2
Carpenter, G. H., Dublin	1
Beneletti, Salvador, Buenos Aires (gift)	1
Desport, Giuseppe, Malta	1
Dunod, H., Paris	1
Giuffrida-Ruggeri, Florence (gift)	1
Gleerup, C. W. K., Lund	1
Heim, Albert, Zürich	1
Hilditch, John, Manchester	8
Huard, V. A., Quebec	1
Janicki, Constantin, St. Croix (gift)	1
Maiden, J. H., Sydney, N. S. W.	1
Pires de Lima, Américo, Porto (gift)	1
Richter, Rudolf, Frankfurt a. M., (gift)	2
Rivet, P., Paris	4
Roth, H. Ling, Halifax, England	4
Torres, Luis Maria, Buenos Aires	1
Voretzsch, E. A., Christiania	1
Wittich, Ernesto, Mexico	1
ALABAMA	
Agricultural Experiment Station, Auburn	1
Alabama Geological Survey, University	1
ARIZONA	
Agricultural Experiment Station, Tucson	2
CALIFORNIA	
Agricultural Experiment Station, Berkeley	1
California Academy of Sciences, San Francisco	3
Cooper Ornithological Club, Hollywood	1
Fish and Game Commission, San Francisco	5
Leland Stanford Junior University, Stanford University	6
Pioneer Western Lumberman, Sacramento	1
Pomona College, Claremont	1
San Diego Society of Natural History	1
Scripps Institution of Biological Research, La Jolla	1
State Board of Forestry, Sacramento	1
State Mining Bureau, Sacramento	3
University of California, Berkeley	16
COLORADO	
Bureau of Mines, Denver	3
Colorado College, Colorado Springs	1

Colorado Museum of Natural History, Denver	1
Colorado School of Mines, Denver	1
Colorado Scientific Society, Denver	1
State Agricultural College, Fort Collins	1
CONNECTICUT	
Agricultural Experiment Station, New Haven	1
American Oriental Society, New Haven	1
Connecticut Academy of Arts and Sciences, New Haven	1
Hartford Public Library	2
Peabody Museum, New Haven	2
State Geological and Natural History Survey, New Haven	2
Wesleyan University, New Haven	1
Yale University, New Haven	2
FLORIDA	
Florida Geological Survey, Tallahassee	1
GEORGIA	
Geological Survey, Atlanta	2
HAWAIIAN ISLANDS	
Agricultural Experiment Station, Honolulu	1
Bernice Pauahi Bishop Museum, Honolulu	3
Board of Commissions of Agriculture and Forestry, Honolulu	2
Hawaiian College, Honolulu	2
Hawaiian Entomological Society, Honolulu	1
IDAHO	
Mining Industry, Boise	1
University of Idaho, Moscow	1
ILLINOIS	
Agricultural Experiment Station, Urbana	1
Armour Institute, Chicago	1
Art Institute of Chicago	2
Chicago Historical Society	4
Chicago Public Library	2
Department of Natural History Survey, Urbana	1
Engineering and Cement World, Chicago (gift)	1
Geographic Society of Chicago	1
Hardwood Record, Chicago (gift)	1
Industrial Survey, Springfield (gift)	1
John Crerar Library, Chicago	1
Lake Forest College	1
Lewis Institute, Chicago	1
Newberry Library, Chicago	2
Northwestern University, Evanston	1
State Academy of Science, Springfield	1
State Board of Agriculture, Springfield	1
State Historical Library, Springfield	2
Sweet, Wallach and Company, Chicago (gift)	1
University of Chicago	4
University of Illinois, Urbana	6
INDIANA	
Agricultural Experiment Station, Lafayette	1

Purdue University, Lafayette	4
State Board of Forestry, Indianapolis	1
State Entomologist, Indianapolis (gift)	1
University of Notre Dame	1
IOWA	
Geological Survey, Des Moines	2
Iowa State College, Ames	2
Iowa State Horticultural Society, Des Moines	2
University of Iowa, Iowa City	2
KANSAS	
Agricultural Experiment Station, Manhattan	3
Kansas State Historical Society, Topeka	2
State Board of Agriculture, Topeka	1
State Geological Survey, Lawrence	1
LOUISIANA	
Agricultural Experiment Station, Baton Rouge	1
Howard Memorial Library, New Orleans	1
State Museum, New Orleans	1
MAINE	
Agricultural Experiment Station, Orono	1
Bowdoin College, Brunswick	2
Department State Lands and Forestry	1
Portland Public Library	1
Portland Society of Natural History	1
MARYLAND	
Agricultural Experiment Station, College Park	2
Enoch Pratt Free Library, Baltimore	2
Johns Hopkins University, Baltimore	2
Maryland Institute, Baltimore	1
State Board of Forestry, Baltimore	3
MASSACHUSETTS	
Agricultural Experiment Station, Amherst	2
American Academy of Arts and Sciences, Boston	1
American Antiquarian Society, Boston	1
Amherst College	1
Archaeological Institute of America, Boston	1
Boston Museum of Fine Arts	2
Boston Public Library	1
Boston Society of Natural History	1
Clark University, Worcester	1
Essex Institute, Salem	2
Harvard Museum of Comparative Zoology, Cambridge	36
Harvard University, Arnold Arboretum, Jamaica Plain	1
Harvard University, Gray Herbarium, Cambridge	2
Horticultural Society, Boston	1
Marine Biological Laboratory, Woods Hole (gift)	1
New Bedford Free Public Library	2
Pan Egean Union of America, Boston (gift)	1
Peabody Institute	1
Peabody Museum, Cambridge	1

Peabody Museum, Salem	2
Salem Public Library	2
Springfield City Library Association	1
Springfield Natural History Museum	1
Tufts College, Boston	1
Williams College, Williamstown	2
Worcester County Horticultural Society, Worcester	1

MICHIGAN

Academy of Sciences, Ann Arbor	1
Agricultural Experiment Station, Agricultural College	3
Department of Parks and Boulevards, Detroit	1
Detroit Institute of Art	1
Geological and Biological Survey, Lansing	3
Grand Rapids Public Library	1
Michigan College of Mines, Houghton	1
Michigan State Library, Lansing	1
State Board of Agriculture, Lansing	1
State Board of Library Commissions, Lansing	1
University of Michigan, Ann Arbor	6

MINNESOTA

Agricultural Experiment Station, St. Paul	5
Minneapolis Institute of Fine Arts	1
Minnesota Historical Society, St. Paul	3
University of Minnesota, Minneapolis	7

MISSISSIPPI

Agricultural Experiment Station, Agricultural College	1
State Geological Survey, Jackson (gift)	2

MISSOURI

Agricultural Experiment Station, Columbia	1
Bureau of Geology and Mines, Jefferson City	2
City Art Museum, St. Louis	1
Missouri Botanical Garden, St. Louis	1
Missouri Historical Society, Columbia	2
St. Louis Academy of Sciences	1
St. Louis Natural History Museum Association (gift)	1
St. Louis Public Library	1
St. Louis University	1
State Historical Society, Columbia	1
Washington University, St. Louis	2

MONTANA

State Forester, Helena (gift)	3
---	---

NEBRASKA

Agricultural Experiment Station, Lincoln	1
University of Nebraska, Lincoln	2

NEVADA

Agricultural Experiment Station, Carson City	2
State University, Reno	2

NEW HAMPSHIRE

Forestry Commission, Concord	1
--	---

NEW JERSEY

Agricultural Experiment Station, Trenton	38
Department of Conservation and Development, Trenton	2
Geological Survey, Trenton	1
Newark Museum Association	2
Princeton University	1
State Museum, Trenton	1
Stevens Institute, Hoboken	1

NEW MEXICO

New Mexico Museum, Santa Fé	1
---------------------------------------	---

NEW YORK

Agricultural Experiment Station, Geneva	3
American Geographical Society, New York City	2
American Hellenic Society, New York City (gift)	1
American Institute of Mining Engineers, New York City	1
American Museum of Natural History, New York City	15
Brooklyn Botanic Garden	3
Brooklyn Institute of Arts and Sciences	3
Carnegie Foundation for the Advancement of Teaching, New York City (gift)	1
Columbia University, New York City	4
Cooper Union for the Advancement of Science and Art, New York City	1
Cornell University, Ithaca	3
Forest and Stream Publishing Company, New York City	1
Inter-American Magazine, New York City (gift)	2
Japan Society, New York City	1
Metropolitan Museum of Art, New York City	2
Museum of the American Indian, New York City	1
New York Academy of Sciences, New York City	1
New York Botanical Garden, New York City	1
New York Historical Society, New York City	1
Pratt Institute Free Library, Brooklyn	1
Public Library, New York City	1
Rochester Academy of Sciences	1
Rockefeller Foundation, New York City	1
State College of Forestry, Syracuse	2
State Library, Albany	1
State Museum, Albany	7
Staten Island Institute of Arts and Sciences, New York City	2
Stone Publishing Company, New York City	1
Zoological Society, New York City	2

NORTH CAROLINA

Elisha Mitchell Scientific Society, Chapel Hill	1
Geological and Economic Survey, Raleigh	1

NORTH DAKOTA

University of North Dakota, University	1
--	---

OHIO

Agricultural Experiment Station, Wooster	2
Cincinnati Museum Association	1
Cleveland Museum of Art	1
Cleveland Public Library	2

Denison University, Granville	I
Geological Survey, Columbus	I
State Archaeological and Historical Society, Columbus	I
State University, Columbus	12
University of Cincinnati	8
Wilson Ornithological Club, Oberlin	I
OREGON	
Agricultural Experiment Station, Corvallis	I
University of Oregon, Eugene	I
PENNSYLVANIA	
American Journal of Pharmacy, Philadelphia	I
American Philosophical Society, Philadelphia	I
Association of Engineering Societies, Philadelphia	I
Bryn Mawr College	I
Carnegie Institute, Pittsburgh	I
Carnegie Library, Pittsburgh	2
Carnegie Museum, Pittsburgh	2
Delaware County Institute of Science, Media	I
Engineers' Society of Western Pennsylvania, Pittsburgh	I
Franklin Institute, Philadelphia	2
Numismatic and Antiquarian Society, Philadelphia	I
Pennsylvania Museum and School of Industrial Art, Philadelphia	I
Philadelphia Academy of Natural Sciences	I
Philadelphia Commercial Museum	I
Sullivant Moss Society, Pittsburgh	16
University of Pennsylvania, Philadelphia	3
University of Pennsylvania Museum, Philadelphia	2
Wagner Free Institute of Science, Philadelphia	I
Wistar Institute of Anatomy and Biology, Philadelphia	20
Wyoming Historical and Geological Society, Wilkes-Barre	I
PHILIPPINE ISLANDS	
Bureau of Education, Manila	I
Department of Agriculture, Manila	I
Department of Interior, Bureau of Science, Manila	6
Department of Public Instruction, Manila	I
RHODE ISLAND	
Agricultural Experiment Station, Kingston (gift)	I
Park Museum, Providence	I
SOUTH CAROLINA	
Charleston Museum	I
SOUTH DAKOTA	
Agricultural Experiment Station, Brookings	I
Geological and Natural History Survey, Vermilion	I
South Dakota School of Sciences, Rapid City	I
TENNESSEE	
State Board of Entomology, Nashville	I
State Geological Survey, Nashville	I
TEXAS	
Agricultural Experiment Station, College Station	I

VIRGINIA

University of Virginia, Charlottesville	1
Virginia Geological Survey, Charlottesville	2
Virginia State Forester, Charlottesville	2

WASHINGTON

Laboratory of Forest Pathology, Spokane	1
Puget Sound Biological Station, Washington University, Seattle	2
Washington University, Seattle	3
Washington University, Historical Society, Seattle	1

WASHINGTON, D. C.

American Mining Congress	1
Carnegie Endowment for International Peace (gift)	1
Federal Board of Vocational Education, Washington (gift)	1
National Education Association (gift)	2
National Zoological Park	1
Pan American Union	2
United States Government	436

WEST VIRGINIA

Agricultural Experiment Station, Morgantown	2
---	---

WISCONSIN

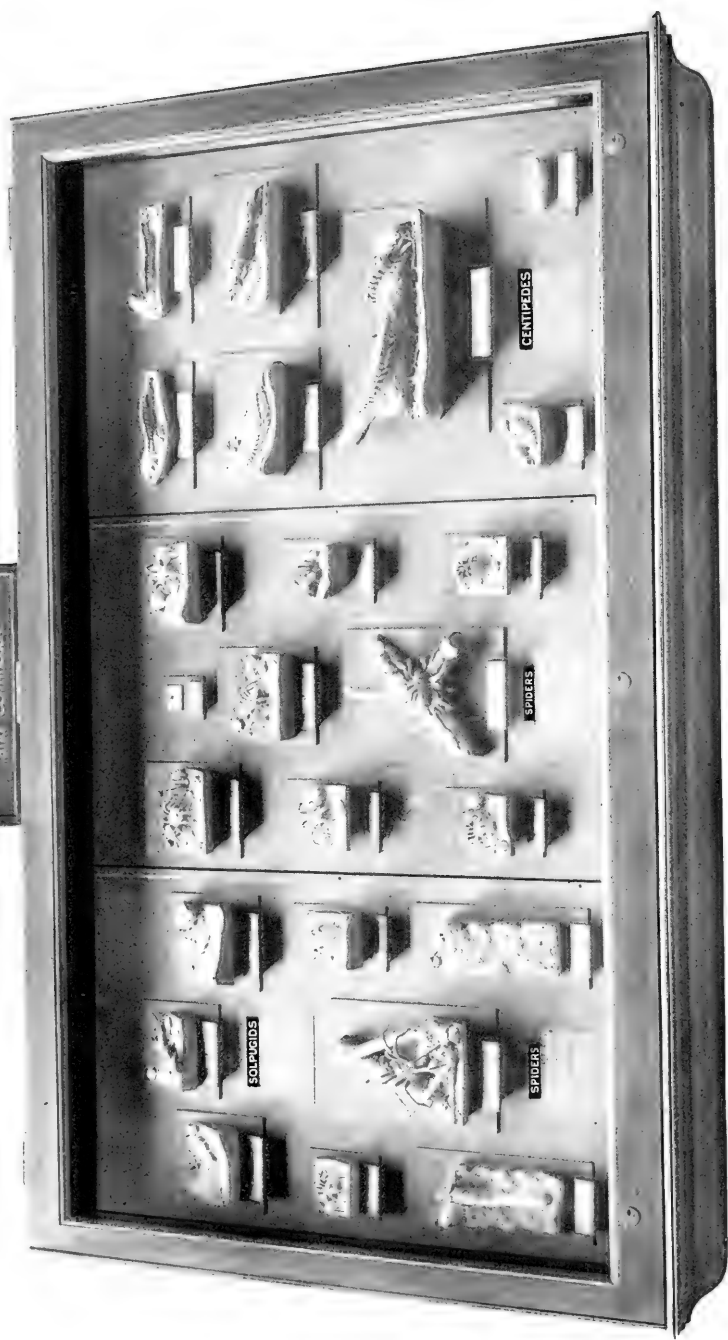
Academy of Sciences, Madison	2
Agricultural Experiment Station, Madison	2
Archaeological Society, Milwaukee	1
Beloit College	1
State Historical Society, Madison	2
State Horticultural Society, Madison	1
University of Wisconsin, Madison	1

WYOMING

Agricultural Experiment Station, Laramie	1
--	---

Arthur, Joseph C., Purdue, Indiana	1
Ayer, Edward E., Chicago (gift)	6
Bergman, H. F., Washington, D. C.	4
Blatchley, W. S., Indianapolis, Indiana	1
Booy, Theodoor de, Yonkers, New York	1
Brandege, Townshend S., Berkeley, California	1
Cook, Melville T., New Brunswick, New Jersey	4
Detmers, Freda, Columbus, Ohio	1
Eigenmann, Carl H., Bloomington, Indiana	1
Farwell, Oliver A., Detroit, Michigan	7
Gerhard, W. J., Chicago	13
Goldsmith, William M. (gift)	2
Goodspeed, Edgar J. Chicago (gift)	1
Gunsaulus, Dr. P. W. (gift)	3
Hall, Ivan C., Berkeley, California (gift)	5
Harper, Edward T., Geneseo, Illinois (gift)	6
Harris, G. D., Ithaca, New York (gift)	1
Hubbs, Carl L., Chicago	150

Solpugids, Tarantulas,
and Centipedes.



SOLPUGIDS, TARANTULAS AND CENTIPEDES.
Installed on tablet mounts, the upper surface of which suggests the habitat of these much feared arthropods.

Kroeber, A. L., Berkeley, California	1
Laufer, Berthold, Chicago	4
McGregor, E. A., Chapel Hill, North Carolina (gift)	1
Mason, J. Alden, Chicago	3
Millspaugh, C. F., Chicago	43
Moorehead, Warren K., Andover, Massachusetts	1
Morse, Edward S., Salem, Massachusetts	2
Muttkowski, Richard Anthony, Milwaukee, Wisconsin	1
Nichols, H. W., Chicago	4
Osborn, Henry Fairfield, New York City	4
Penrose, R. A. F., Jr., Philadelphia	1
Roberts, Thomas S., Minneapolis, Minnesota	1
Rowlee, W. W., Ithaca, New York (gift)	4
Slonaker, James R., Palo Alto, California (gift)	2
Strong, R. M., Chicago (gift)	2
Townsend, Charles H., New York City	1
Van Perborgh, Louis, New York City (gift)	1
Van Rippen, Bene, Cambridge	2
Wolcott, A. B., Chicago (gift)	1
Weir, James R., Missoula, Montana (gift)	23

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:

1. 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, Archaeology, 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:

Edward 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. Kohlsaas, 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. Fitzsimmons, 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 }
 COOK COUNTY } ss.

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.

(JUNE 12, 1916.)

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 (\$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 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 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.

HONORARY TRUSTEES.

SECTION 1. As a mark of respect, and in appreciation of services performed for the Institution, those Trustees who by reason of inability, on account of change of residence, or for other cause or from indisposition to serve longer in such capacity shall resign their place upon the Board, may be elected, by a majority of those present at any regular meeting of the Board, an Honorary Trustee for life. Such Honorary Trustee will receive notice of all meetings of the Board of Trustees, whether regular or special, and will be expected to be present at all such meetings and participate in the deliberations thereof, but an Honorary Trustee shall not have the right to vote.

ARTICLE IV.

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 V.

THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation except as hereinafter provided. 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 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, except as hereinafter provided. 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.

SEC. 5. The Harris Trust and Savings Bank of Chicago shall be Custodian of "The N. W. Harris Public School Extension of Field Museum" fund. The Bank 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 by the Auditor, the Director and Chairman of the Administration Committee. It shall be no part of the duties of the said Custodian to see that the warrants have been issued in conformity with such vouchers.

ARTICLE VI.

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 VII.

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. He shall certify to the correctness of all vouchers for the expenditure of the money of the corporation.

ARTICLE VIII.

COMMITTEES.

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

SEC. 2. The Finance, Auditing and Pension Committees shall each consist of three members, and the Building and Administration Committees shall each consist of five members. All members of these five 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, the Chairman of the Pension 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 re-invest 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 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.

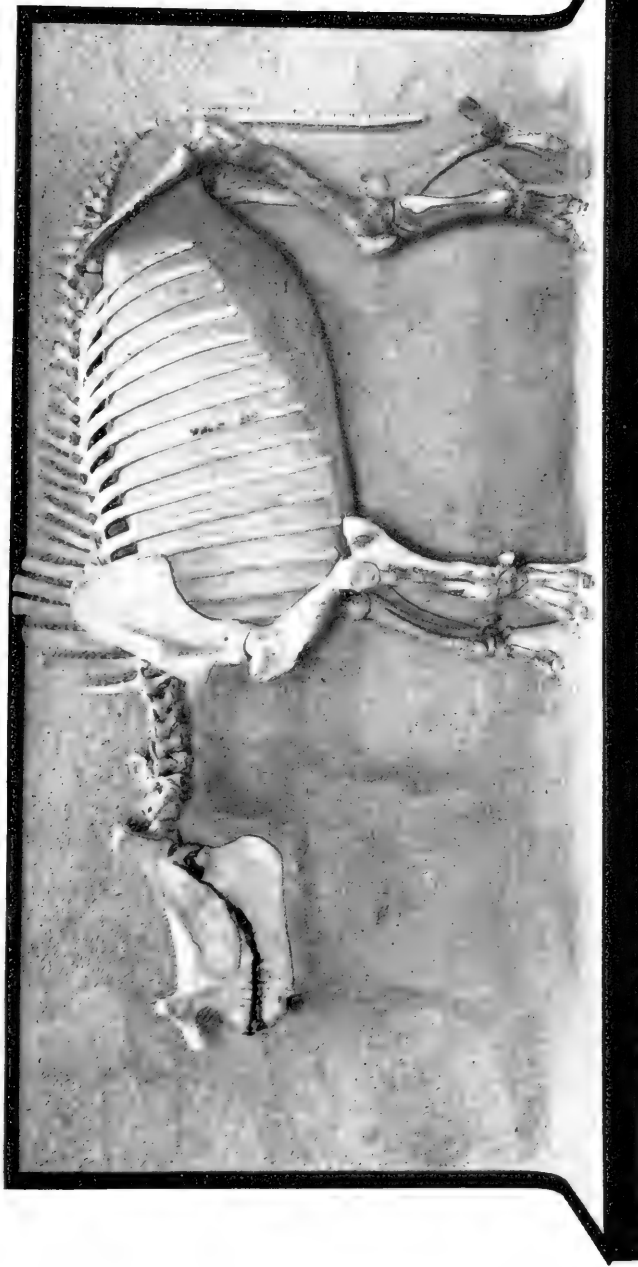
SEC. 8. The Administration Committee shall have general supervision of the affairs of the Museum. The Committee shall hold one meeting each month with the Director at the Museum within a week preceding each Monthly Meeting of the Board of Trustees.

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 Pension Committee shall determine by such means and processes as shall be established by the Board of Trustees to whom and in what amount the Pension Fund shall be distributed. These determinations or findings shall be subject to the approval of the Board of Trustees.

SEC. 11. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 12. 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.



SKELETON OF EXTINGUISHED UNGULATE, ALLOPS MARSHI, SOUTH DAKOTA BAD LANDS.
The mount is constructed from the bones of a single individual.



ARTICLE IX.**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, the Auditing Committee, and the Pension 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 X.

SECTION 1. 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	CHARLES B. CORY
MRS. TIMOTHY B. BLACKSTONE	STANLEY FIELD
	STANLEY McCORMICK

DECEASED.

HARLOW N. HIGINBOTHAM

PATRONS.

ALLISON V. ARMOUR	GEORGE MANIERRE
EDWARD B. BUTLER	CHARLES H. MARKHAM
ALFRED M. COLLINS	JOHN S. MILLER
LEE GARNETT DAY	JOHN BARTON PAYNE
ERNEST R. GRAHAM	HOMER E. SARGENT
FRANK W. GUNSAULUS	JAMES SIMPSON
CHARLES L. HUTCHINSON	FREDERICK J. V. SKIFF
VERNON SHAW KENNEDY	WILLARD A. SMITH
	JOHN P. WILSON

CORPORATE MEMBERS.

ALDIS, OWEN F.
ARMOUR, ALLISON V.
AYER, EDWARD E.
BARTLETT, A C.
BLAIR, WATSON F.
BUTLER, EDWARD B.
CHALMERS, W. J.
CHATFIELD-TAYLOR, H. C.
COLLINS, ALFRED M.
CRANE, RICHARD T.
DAY, LEE GARNETT
EASTMAN, SIDNEY C.
ELLSWORTH, JAMES W.
FIELD, MARSHALL
FIELD, STANLEY
GAGE, LYMAN J.
GETTY, HENRY H.
GRAHAM, ERNEST R.
GUNSAULUS, FRANK W.
GUNTHER, C. F.
HUTCHINSON, CHARLES L.
JONES, ARTHUR B.
KEEP, CHAUNCEY
KENNEDY, VERNON SHAW
KOHLSAAT, HERMAN H.
McCORMICK, CYRUS H.
MARKHAM, CHARLES H.
MANIERRE, GEORGE
MILLER, JOHN S.
MITCHELL, JOHN J.
PAYNE, JOHN BARTON
PECK, FERD W.
PORTER, GEORGE F.
RYERSON, MARTIN A.
SARGENT, HOMER E.
SIMPSON, JAMES
SKIFF, FREDERICK J. V.
SMITH, WILLARD A.
SPRAGUE, A. A.
STONE, MELVILLE E.
WILSON, JOHN P.
WRIGLEY, WILLIAM, JR.

DECEASED, 1919.

HIGINBOTHAM, H. N.

LIFE MEMBERS.

ALDIS, OWEN F.
 ALLEN, BENJAMIN
 ALLERTON, ROBERT H.

BAKER, MISS ISABELLE
 BANKS, ALEXANDER F.
 BARRELL, FINLEY
 BARRETT, MRS. A. D.
 BARRETT, ROBERT L.
 BARTLETT, A. C.
 BASSFORD, LOWELL C.
 BEALE, WILLIAM G.
 BECKER, A. G.
 BILLINGS, C. K. G.
 BILLINGS, FRANK
 BLACKSTONE, MRS. T. B.
 BLAINE, MRS. EMMONS
 BLAIR, HENRY A.
 BLAIR, WATSON¹F.
 BOOTH, W. VERNON
 BORDEN, JOHN
 BOYNTON, C. T.
 BREWSTER, WALTER S.
 BROWN, WILLIAM L.
 BUFFINGTON, EUGENE J.
 BUTLER, EDWARD B.
 BYLLESBY, H. M.

CARR, CLYDE M.
 CARRY, EDWARD F.
 CARTON, L. A.
 CHALMERS, WILLIAM J.
 CLAY, JOHN
 COBE, IRA M.
 CRAMER, CORWITH
 CRANE, CHARLES RICHARD
 CRANE, RICHARD T.
 CUDAHY, JOSEPH M.
 CUMMINGS, D. MARK

DAU, J. J.
 DAWES, CHARLES G.

DAY, ALBERT M.
 DEERING CHARLES
 DEERING, JAMES
 DELANO, FREDERIC A.
 DICK, ALBERT BLAKE
 DONNELLEY, REUBEN H.
 DONNELLEY, THOMAS E.
 DRAKE, JOHN B.
 DRAKE, TRACY C.

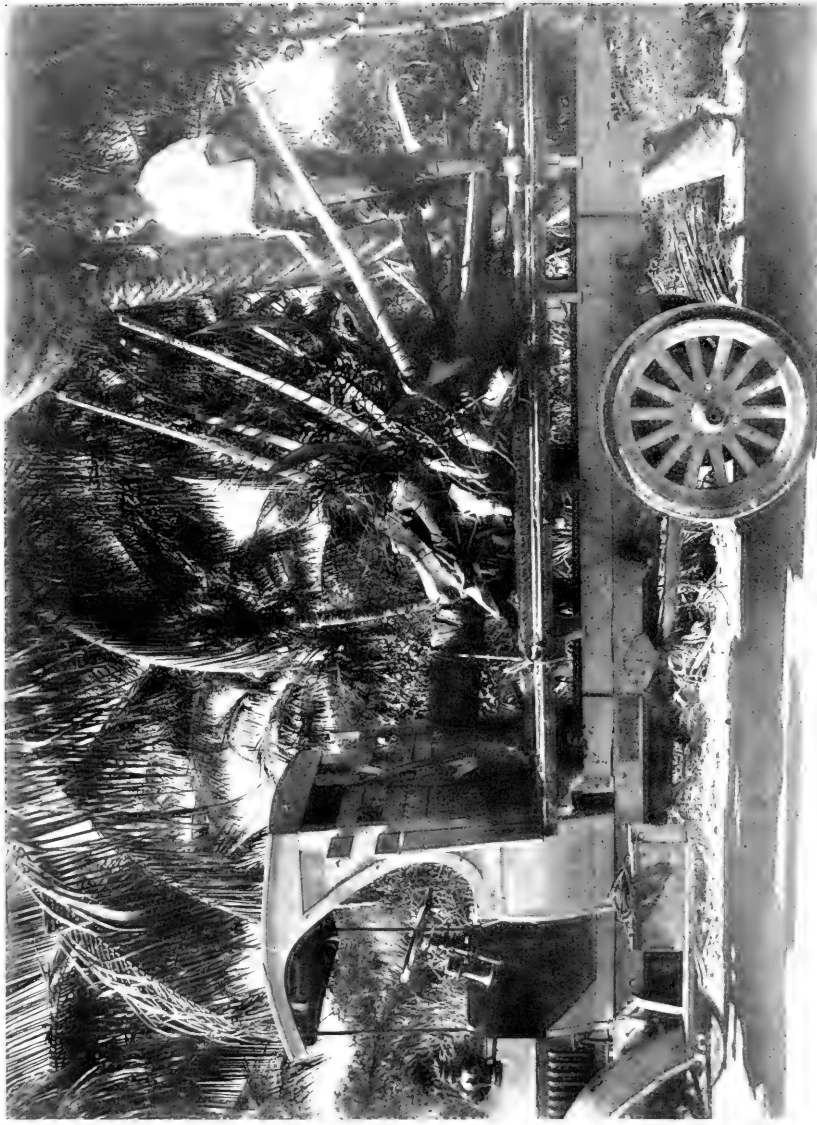
ECKHART, B. A.

FAIR, ROBERT M.
 FARWELL, JOHN V.
 FARWELL, WALTER
 PAY, C. N.
 FIELD, MARSHALL
 FIELD, STANLEY
 FORSYTH, ROBERT
 FULLER, WILLIAM A.

GARTZ, A. F.
 GARY, JOHN W.
 GODDARD, LEROY A.
 GOODMAN, WILLIAM O.
 GOODRICH, A. W.
 GRISCOM, CLEMENT A.
 GROMMES, JOHN B.

HAMILL, ERNEST A.
 HASKELL, FREDERICK T.
 HIBBARD, FRANK
 HILL, LOUIS W.
 HINDE, THOMAS W.
 HOPKINS, L. J.
 HOROWITZ, L. J.
 HOXIE, MRS. JOHN R.
 HUGHITT, MARVIN
 HULBURD, CHARLES H.
 HUTCHINS, JAMES C.
 HUTCHINSON, C. L.

INSULL, SAMUEL



BOTANICAL COLLECTING IN FLORIDA. THE OBJECT ON THE TRUCK IS THE FLOWERING STEM OF A COCONUT PALM.



JOHNSON, MRS. ELIZABETH
AYER

JOHNSON, FRANK S.

JONES, ARTHUR B.

JONES, DAVID B.

JONES, THOMAS D.

KEEP, CHAUNCEY

KELLEY, WILLIAM V.

KING, FRANCIS

KING, JAMES G.

KIRK, WALTER RADCLIFFE

LAMONT, ROBERT P.

LAWSON, VICTOR

LOGAN, SPENCER H.

LORD, JOHN B.

LOWDEN, FRANK O.

LYTTON, HENRY C.

McCORMICK, MRS.

McCORMICK, CYRUS H.

McCORMICK, HAROLD F.

McELWEE, ROBERT H.

McLAUGHLIN, FREDERIC

McLENNAN, D. R.

McWILLIAMS, LAFAYETTE

MacVEAGH, FRANKLIN

MARK, CLAYTON

MASON, WILLIAM S.

MITCHELL, JOHN J.

MOORE, EDWARD S.

MORTON, JOY

MORTON, MARK

MUNROE, CHARLES A.

NATHAN, ADOLPH

NEWELL, A. B.

ORR, ROBERT M.

PAM, MAX

PATTEN, HENRY J.

PIKE, EUGENE S.

PINKERTON, WILLIAM A.

PORTER, GEORGE F.

PORTER, H. H.

RAWSON, FREDERICK H.

REAM, MRS. CAROLINE P.

REVELL, ALEXANDER H.

REYNOLDS, GEORGE M.

ROBINSON, THEODORE W.

ROSENWALD, JULIUS

RUNNELLS, JOHN S.

RUSSELL, EDMUND A.

RUSSELL, EDWARD P.

RYERSON, MRS. CARRIE H.

RYERSON, EDWARD L.

RYERSON, MARTIN A.

SCOTT, GEORGE E.

SCOTT, JOHN W.

SHEDD, JOHN G.

SIMPSON, JAMES

SMITH, ORSON

SMITH, SOLOMON A.

SPOOR, JOHN A.

SPRAGUE, ALBERT A.

STOUT, FRANK D.

STRAWN, SILAS H.

STURGES, GEORGE

SWIFT, CHARLES H.

SWIFT, EDWARD F.

SWIFT, G. F., JR.

SWIFT, LOUIS F.

THORNE, CHARLES H.

THORNE, ROBERT J.

WHEELER, CHARLES P.

WILLARD, ALONZO J.

WILLITS, WARD W.

WILSON, THOMAS E.

WILSON, WALTER H.

WINSTON, GARRARD B.

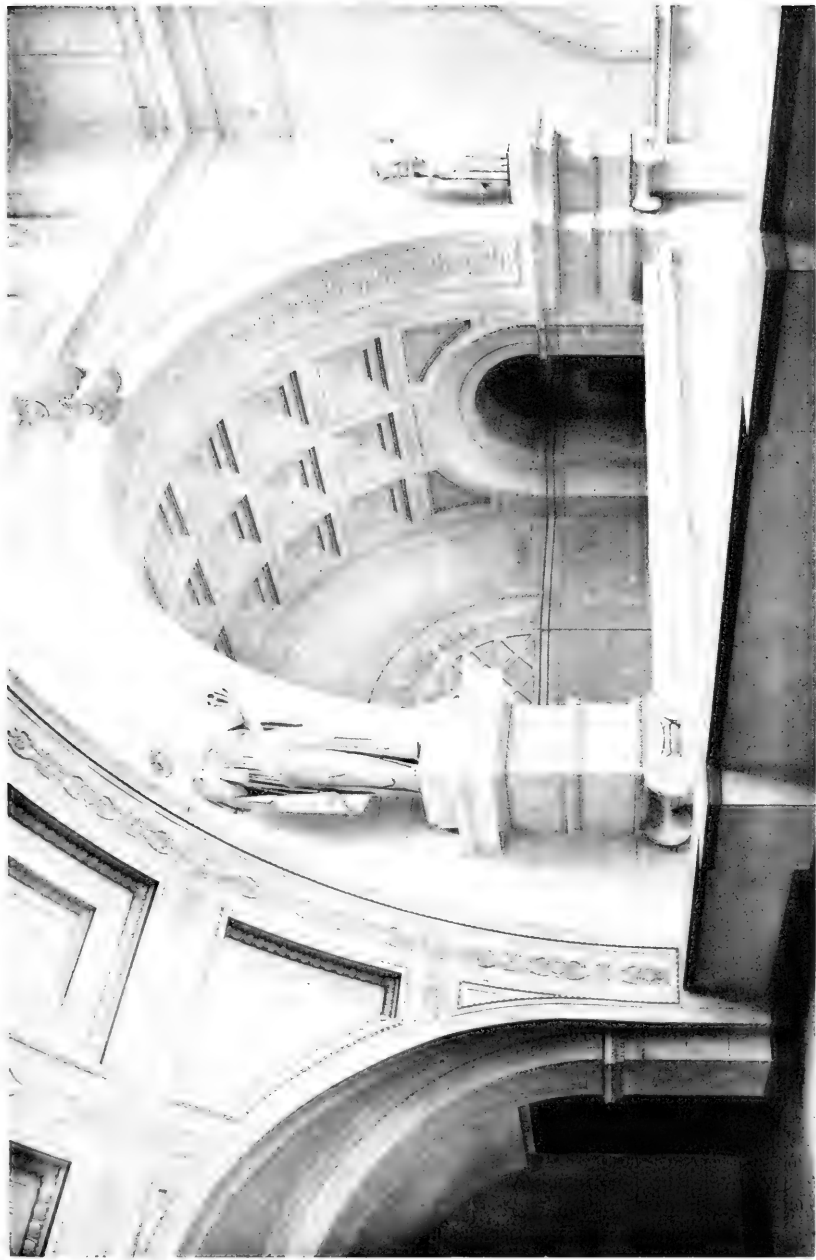
WINTER, WALLACE C.

ANNUAL MEMBERS.

- ADAMS, CYRUS H.
 ADAMS, MILWARD
 ALLERTON, ROBERT H.
 ARMOUR, GEORGE A.
 BAILEY, EDWARD P.
 BECKER, A. G.
 BILLINGS, C. K. G.
 BOAL, CHARLES T.
 BURLEY, CLARENCE A.
 COMSTOCK, WILLIAM C.
 COONLEY-WARD, MRS. L. A.
 CUMMINGS, E. A.
 CURTIS, FRANCES H.
 EISENDRATH, W. N.
 FORGAN, JAMES B.
 FRANK, HENRY L.
 FULLER, O. F.
 FÜRST, CONRAD
 GLESSNER, J. J.
 GOODRICH, A. W.
 GORDON, EDWARD K.
 GREY, CHARLES F.
 GURLEY, W. W.
 HARRIS, JOHN P.
 HASKELL, FREDERICK T.
 HIBBARD, WILLIAM G., Jr.
 HITCHCOCK, R. M.
 HOLT, GEORGE H.
 JENKINS, GEORGE H.
 JONES, J. S.
 KEITH, W. SCOTT
 LAMB, FRANK H.
 LINCOLN, ROBERT T.
 LINN, W. R.
 LOGAN, F. G.
 LORD, J. B.
 LOWDEN, FRANK O.
 LYTTON, HENRY C.
 McCREA, W. S.
 McWILLIAMS, LAFAYETTE
 MacFARLAND, HENRY J.
 MAGEE, HENRY W.
 MANSURE, E. L.
 MAYER, LEVY
 MEYER, MRS. M. A.
 MOORE, N. G.
 MULLIKEN, A. H.
 NATHAN, ADOLPH
 NOLAN, JOHN H.
 NORTON, O. W.
 PALMER, PERCIVAL B.
 PARKER, FRANCIS W.
 PEARSON, EUGENE H.
 PINKERTON, W. A.
 RIPLEY, E. P.
 ROSENBAUM, JOSEPH
 ROSENFELD, MRS. MAURICE
 SCHMIDT, DR. O. L.
 SCHWARTZ, G. A.
 SHORTALL, JOHN L.
 SKINNER, THE MISSES
 SOPER, JAMES P.
 SPENCE, MRS. ELIZABETH E.
 STOCKTON, JOHN T.
 STUART, ROBERT
 UIHLEIN, EDWARD G.
 WACKER, CHARLES H.
 WALKER, JAMES R.
 WALKER, WILLIAM B.
 WALLER, EDWARD C.
 WHITEHEAD, W. M.
 WILSON, MRS. E. C.
 WILSON, M. H.
 WORCESTER, MRS. C. H.

DECEASED.

SEIPP, MRS. C.



DETAIL, STANLEY FIELD HALL, SHOWING STATUARY SCIENCE AND DISSEMINATION OF KNOWLEDGE.





WEST COLONNADE, SECOND FLOOR OVERLOOKING STANLEY FIELD HALL LOOKING SOUTH.





WEST COLONNADE PARALLELING STANLEY FIELD HALL, FIRST FLOOR LOOKING SOUTH.





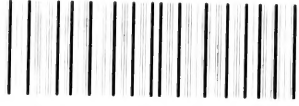
AN EXHIBITION HALL, NEW MUSEUM BUILDING.







UNIVERSITY OF ILLINOIS-URBANA



3 0112 003370084