



507 F45 1939-41

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.

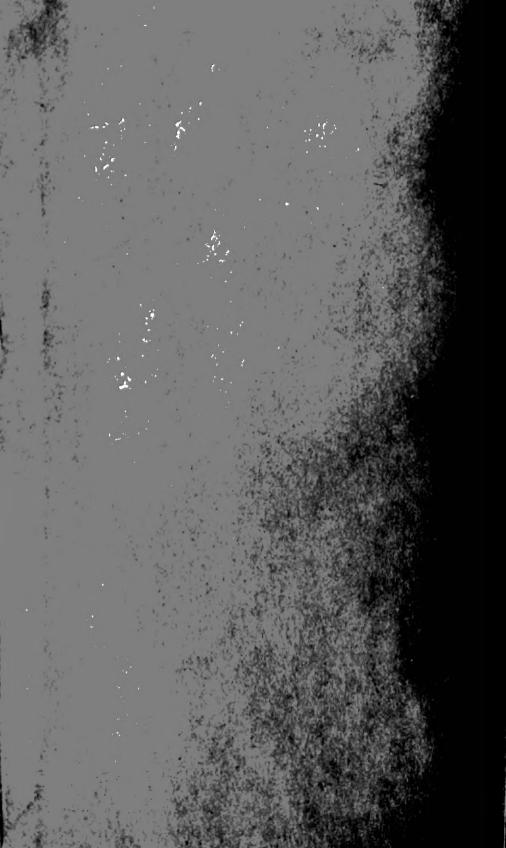
Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

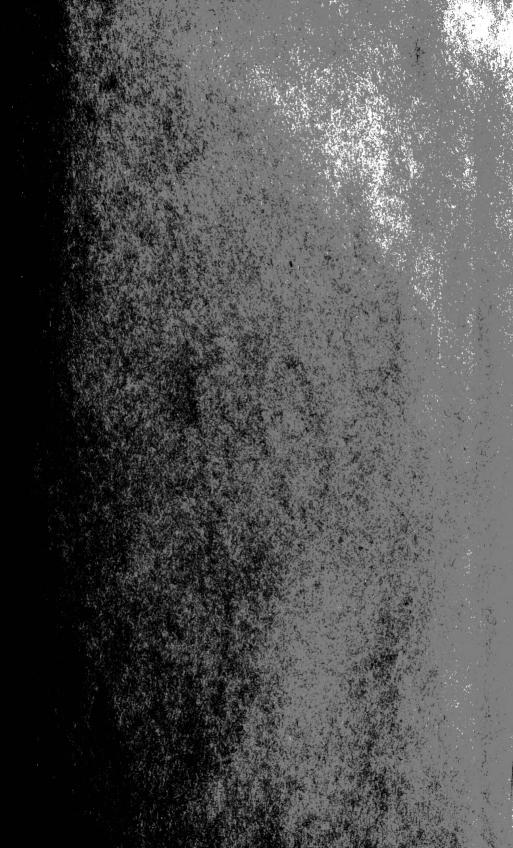
TO RENEW CALL TELEPHONE CENTER, 333-8400

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

APR 2 1 1995 APR 2 4 1995

When renewing by phone, write new due date below previous due date. L162







PUBLICATIONS

OF

FIELD MUSEUM OF NATURAL HISTORY

REPORT SERIES VOLUME XII



CHICAGO, U.S.A. 1939–1941 JUL 3 0 1942
UNIVERSITY OF ILLINOIS



ANNUAL REPORT OF THE DIRECTOR

TO THE

BOARD OF TRUSTEES

FOR THE YEAR 1940



UNIVERSITY OF LUNC

REPORT SERIES
FIELD MUSEUM OF NATURAL HISTORY
VOLUME 12, NUMBER 2
JANUARY, 1941

PUBLICATION 497







ANNUAL REPORT OF THE DIRECTOR

TO THE

BOARD OF TRUSTEES

FOR THE YEAR 1940



REPORT SERIES
FIELD MUSEUM OF NATURAL HISTORY
VOLUME 12, NUMBER 2
JANUARY, 1941

PUBLICATION 497

CONTENTS

| List of Plates | 31 |
|--|----|
| | |
| | 33 |
| Former Members of the Board of Trustees | 34 |
| Former Officers | 35 |
| List of Staff | 36 |
| Report of the Director | 39 |
| Department of Anthropology |)9 |
| Department of Botany | 17 |
| Department of Geology | 27 |
| Department of Zoology | 35 |
| N. W. Harris Public School Extension | 15 |
| James Nelson and Anna Louise Raymond Foundation for | |
| | 18 |
| Lectures for Adults | 56 |
| Layman Lectures | 57 |
| Library | 58 |
| Publications and Printing | 32 |
| Photography and Illustration | 36 |
| Maintenance and Construction | 37 |
| | 71 |
| Membership | |
| 1 | 76 |
| Comparative Financial Statements | |
| The state of the s | 78 |
| | |
| | 94 |
| | 96 |
| List of Members | |
| Benefactors |)2 |
| Honorary Members |)2 |

180 Contents

| List of Members Continued | | | | PAGI |
|--------------------------------|---|---|---|------|
| Patrons | | | | 302 |
| Corresponding Members | | D | 0 | 303 |
| Contributors | , | | ٠ | 303 |
| Corporate Members | | | | 304 |
| Life Members | | | | 301 |
| Non-Resident Life Members | | | | 306 |
| Associate Members | | | | 307 |
| Non-Resident Associate Members | | | | 321 |
| Sustaining Members | | | | 321 |
| Annual Members | | | | 291 |

LIST OF PLATES

| | | PAGE |
|-----|--|------|
| 13. | Colonel Albert A. Sprague | 177 |
| 14. | Chinese Lacquered Wooden Grille | 204 |
| 15. | Sasanid Portal | 210 |
| 16. | Potato Planting in Peru | 218 |
| 17. | Bee Swarm Orchid | 222 |
| 18. | A Small Fossil Deer-like Mammal | 226 |
| 19. | Alaskan Fur Seal Rookery | 234 |
| 20. | Giant Carnivorous Bird | 238 |
| 21. | North Island Kiwi | 242 |
| 22. | Portable Natural History Exhibit for Chicago Schools | 250 |



OFFICERS, TRUSTEES, AND COMMITTEES, 1940

President STANLEY FIELD

First Vice-President ALBERT A. SPRAGUE

Second Vice-President SILAS H. STRAWN

Third Vice-President ALBERT W. HARRIS Secretary
CLIFFORD C. GREGG

Treasurer and Assistant Secretary
SOLOMON A. SMITH

BOARD OF TRUSTEES

LESTER ARMOUR
SEWELL L. AVERY
W. McCormick Blair
Leopold E. Block
Boardman Conover
Walter J. Cummings
Albert B. Dick, Jr.
Joseph N. Field
Marshall Field
Stanley Field

ALBERT W. HARRIS
SAMUEL INSULL, JR.
CHARLES A. McCulloch
WILLIAM H. MITCHELL
GEORGE A. RICHARDSON
THEODORE ROOSEVELT
SOLOMON A. SMITH
ALBERT A. SPRAGUE
SILAS H. STRAWN
ALBERT H. WETTEN

JOHN P. WILSON

COMMITTEES

- Executive.—Stanley Field, Solomon A. Smith, Charles A. McCulloch, George A. Richardson, Albert A. Sprague, Marshall Field, Silas H. Strawn, John P. Wilson.
- Finance.—Solomon A. Smith, Albert W. Harris, Leopold E. Block, John P. Wilson, Albert B. Dick, Jr., Walter J. Cummings.
- Building.—Charles A. McCulloch, Albert H. Wetten, William H. Mitchell, Joseph N. Field, Lester Armour.
- Auditing.—George A. Richardson, W. McCormick Blair, Albert H. Wetten.
- Pension.—Albert A. Sprague, Sewell L. Avery, Samuel Insull, Jr.

FORMER MEMBERS OF THE BOARD OF TRUSTEES

| George E. Adams* | | | | | | | | | | 1893-1917 |
|--------------------------|---|--|--|--|----|-----|----|-----|-----|------------|
| OWEN F. ALDIS* | | | | | | | | | | 1893-1898 |
| Allison V. Armour* | | | | | | | | | _ | 1893-1894 |
| EDWARD E. AYER* | | | | | | | | | | 1893-1927 |
| John C. Black* | | | | | | | | | | 1893-1894 |
| M. C. Bullock* | | | | | | | | | | 1893-1894 |
| Daniel H. Burnham* | | | | | | | | | , | 1893 -1894 |
| George R. Davis* . | | | | | | | | | | 1893-1899 |
| JAMES W. ELLSWORTH* | | | | | | | | | | 1893-1894 |
| CHARLES B. FARWELL* . | | | | | | | | | | 1893 -1894 |
| FRANK W. GUNSAULUS* | | | | | 13 | 19: | 3 | 189 | 1.4 | 1918-1921 |
| EMIL G. HIRSCH* | | | | | | | | | | 1893-1894 |
| Charles L. Hutchinson* | | | | | | | | | | 1893-1894 |
| John A. Roche* | | | | | | | | | | 1893-1894 |
| MARTIN A. RYERSON* | | | | | | | | | | 1893-1932 |
| EDWIN WALKER* | | | | | | | | | | 1893-1910 |
| WATSON F. BLAIR* | | | | | | | | | | 1894-1928 |
| WILLIAM J. CHALMERS* | , | | | | | | | | | 1894-1938 |
| HARLOW N. HIGINBOTHAM* | | | | | | | | | | 1894-1919 |
| HUNTINGTON W. JACKSON* | | | | | | | | | | 1894-1900 |
| ARTHUR B. JONES* | | | | | | | | | | 1894-1927 |
| GEORGE MANIERRE* | | | | | | | | | | 1894-1924 |
| NORMAN B. REAM* | | | | | | | | | | 1894-1910 |
| NORMAN WILLIAMS* | | | | | | | | | | 1894-1899 |
| CYRUS H. McCormick* | | | | | | | | | | 1894-1936 |
| MARSHALL FIELD, JR.* | | | | | | | | | | 1899-1905 |
| FREDERICK J. V. SKIFF* . | | | | | | | | | | 1902-1921 |
| GEORGE F. PORTER* | | | | | | | | | | 1907-1916 |
| RICHARD T. CRANE, JR | | | | | 15 | 908 | 3- | 191 | 2, | 1921-1931 |
| JOHN BARTON PAYNE* | | | | | | | | | | 1910-1911 |
| CHAUNCEY KEEP* | | | | | | | | | | 1915-1929 |
| HENRY FIELD* . | | | | | | | | | | 1916-1917 |
| WILLIAM WRIGLEY, JR.* | | | | | | | | | | 1919-1931 |
| JOHN BORDEN | | | | | | | | | | 1920-1938 |
| JAMES SIMPSON* | | | | | | | | ٠ | | 1920-1939 |
| HARRY E. BYRAM | | | | | | | | | | 1921-1928 |
| ERNEST R. GRAHAM* | | | | | | | | | | 1921-1936 |
| D. C. DAVIES* | | | | | | | | | | 1922-1928 |
| CHARLES H. MARKHAM* | | | | | | | | | | 1924-1930 |
| FREDERICK H. RAWSON* | | | | | | | | | | 1927-1935 |
| STEPHEN C. SIMMS* | | | | | | | | | | 1928-1937 |
| WILLIAM V. KELLEY* | | | | | | | | | | 1929-1932 |
| FRED W. SARGENT* | | | | | | | | | | 1929-1939 |
| LESLIE WHEELER* | | | | | ٠ | | | | | 1934-1937 |
| | | | | | | | | | | |

FORMER OFFICERS

| Presidents | | | | | | | | | | | | | | |
|--------------------------------|---|-----|-----|---------|-----|----|----|---|---|---|---|---|---|-----------|
| EDWARD E. AYER* | | | | | | | | | | | | | | 1894-1898 |
| HARLOW N. HIGINBOTHAM* | | | | Ĭ. | | | | | | | | | | 1898-1908 |
| | • | • | • | • | • | • | • | • | • | · | • | ٠ | • | 1000 1000 |
| $First\ Vice	ext{-}Presidents$ | | | | | | | | | | | | | | |
| Martin A. Ryerson* | | | | | | | | | | | | | | 1894-1932 |
| Second Vice-Presidents | | | | | | | | | | | | | | |
| NORMAN B. REAM* | | | | | | | | | | | | | | 1894-1902 |
| MARSHALL FIELD, JR.* | | | | | | | | | | | | | | |
| STANLEY FIELD | | | | | | | | | | | | | | |
| WATSON F. BLAIR* | | | | | | | | | | | | | | |
| James Simpson* | | | | | | | | | | | | | | 1933-1939 |
| ALBERT A. SPRAGUE | | | | | | | | | | | | | | 1929-1932 |
| | | | | | | | | | | | | | | |
| Thir | d | Vi | ce- | P_{i} | es | de | nt | S | | | | | | |
| ALBERT A. SPRAGUE | | | | | | | | | | | | | | 1921-1928 |
| James Simpson* | | | | | | | | | | | | | | 1929-1932 |
| | S | eci | ete | ari | es | | | | | | | | | |
| RALPH METCALF | | | | | | | | | | | | | | 1894 |
| GEORGE MANIERRE* | - | | | | | | | | | | | | | |
| Frederick J. V. Skiff* . | | | | | | | | | | | | | | |
| D. C. DAVIES* | | | | | | | | | | | | | | 1921-1928 |
| STEPHEN C. SIMMS* | | | | | | | | | | | | | | 1928-1937 |
| | | | | | | | | | | | | | | |
| | 7 | re | asi | ure | ers | | | | | | | | | |
| Byron L. Smith* | | | | | | | | | | | | | | 1894-1914 |
| Directors | | | | | | | | | | | | | | |
| Frederick J. V. Skiff* . | | | | | | | | | | | | | | 1893-1921 |
| D. C. DAVIES* | • | • | • | | | | | | | | | | | 1921-1928 |
| | | | | | | | | | | | | - | • | 1000 1005 |
| OTHER OF DIMENS | • | ٠ | • | • | • | • | • | ٠ | • | • | • | • | • | |

* DECEASED

LIST OF STAFF

DIRECTOR

CLIFFORD C. GREGG

DEPARTMENT OF ANTHROPOLOGY

Paul S. Martin, Chief Curator
Henry Field, Curator, Physical Anthropology
Albert B. Lewis, Curator, Melanesian Ethnology
Wilferd D. Hambly, Curator, African Ethnology
C. Martin Wilbur, Curator, Chinese Archaeology and Ethnology
Richard A. Martin, Curator, Near Eastern Archaeology
Alexander Spoehr, Assistant Curator, American Ethnology and Archaeology
A. L. Kroeber, Research Associate, American Archaeology
Marjorie Kelly, Associate, Southwestern Archaeology
John Rinaldo, Associate, Southwestern Archaeology
T. George Allen, Research Associate, Egyptian Archaeology
Robert Yule, Assistant, Archaeology

DEPARTMENT OF BOTANY

B. E. Dahlgren, Chief Curator
Paul C. Standley, Curator, Herbarium
J. Francis MacBride, Associate Curator, Herbarium
Julian A. Steyermark, Assistant Curator, Herbarium
Francis Drouet, Curator, Cryptogamic Botany
Llewelyn Williams, Curator, Economic Botany
Samuel J. Record, Research Associate, Wood Technology
E. E. Sherff, Research Associate, Systematic Botany
Emil Sella, Chief Preparator, Exhibits
Milton Copulos, Artist-Preparator

DEPARTMENT OF GEOLOGY

HENRY W. NICHOLS, Chief Curator Elmer S. Riggs, Curator, Paleontology Bryan Patterson, Assistant Curator, Paleontology Paul O. McGrew, Assistant Curator, Paleontology James H. Quinn, Chief Preparator, Paleontology Sharat K. Roy, Curator, Geology Henry Herpers, Assistant Curator, Geology Bryant Mather, Assistant Curator, Mineralogy

DEPARTMENT OF ZOOLOGY WILFRED H. OSGOOD, Chief Curator

Colin Campbell, Sanborn, Curator, Mammals
Rudyerd Boulton, Curator, Birds
C. E. Hellmayr, Associate Curator, Birds
Emmet R. Blake, Assistant Curator, Birds
Boardman Conover, Research Associate, Birds
Louis B. Bishop, Research Associate, Birds
Ellen T. Smith, Associate, Birds
Melvin A. Traylor, Jr., Associate, Birds
R. Magoon Barnes, Curator, Birds' Eggs
Karl P. Schmidt, Curator, Amphibians and Reptiles
Clifford H. Pope, Assistant Curator, Amphibians and Reptiles
Alfred C. Weed, Curator, Fishes
William J. Gerhard, Curator, Insects
Rupert L. Wenzel, Assistant Curator, Insects
Fritz Haas, Curator, Lower Invertebrates
Edmond N. Gueret, Curator, Anatomy and Osteology
D. Dwight Davis, Curator, Anatomy and Osteology

TAXIDERMISTS

JULIUS FRIESSER L. L. PRAY W. E. EIGSTI C. J. ALBRECHT LEON L. WALTERS JOHN W. MOYER

FRANK C. WONDER, Assistant Taxidermist FRANK H. LETL, Preparator of Accessories NELLIE STARKSON, Artist-Preparator

DEPARTMENT OF THE N. W. HARRIS PUBLIC SCHOOL EXTENSION
JOHN R. MILLAR, Curator
A. B. WOLCOTT, Assistant Curator

THE LIBRARY

EMILY M. WILCOXSON, Librarian MARY W. BAKER, Associate Librarian EUNICE GEMMILL, Assistant Librarian

REGISTRAR HENRY F. DITZEL AUDITOR BENJAMIN BRIDGE

WARREN E. RAYMOND, Assistant Registrar A. L. Stebbins, Bookkeeper

RECORDER—IN CHARGE OF PUBLICATION DISTRIBUTION ELSIE H. THOMAS

PURCHASING AGENT ROBERT E. BRUCE THE BOOK SHOP
NOBLE STEPHENS, Manager

THE JAMES NELSON AND ANNA LOUISE RAYMOND FOUNDATION FOR PUBLIC SCHOOL AND CHILDREN'S LECTURES

MIRIAM WOOD, Chief

LEOTA G. THOMAS MARIE B. PABST ELIZABETH HAMBLETON BERT E. GROVE

LOREN P. WOODS

PUBLIC RELATIONS COUNSEL H. B. HARTE

PAUL G. DALLWIG, the Layman Lecturer

DIVISION OF MEMBERSHIPS PEARLE BILINSKE, in charge

DIVISION OF PRINTING
FARLEY H. WADE, in charge
LILLIAN A. Ross, Editor and Proofreader

DIVISIONS OF PHOTOGRAPHY AND ILLUSTRATION
C. H. CARPENTER, Photographer Carl F. Gronemann, Illustrator
HERMAN ABENDROTH, Assistant Photographer
JOHN JANECEK, Assistant Illustrator

A. A. MILLER, Collotyper CLARENCE B. MITCHELL, Research Associate, Photography

> STAFF ARTIST ARTHUR G. RUECKERT

GENERAL SUPERINTENDENT

W. H. CORNING JAMES R. SHOUBA, Assistant Superintendent

> CHIEF ENGINEER WILLIAM E. LAKE

CAPTAIN OF THE GUARD E. S. ABBEY



ANNUAL REPORT OF THE DIRECTOR

1940

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, 1940. Again I am privileged to report substantial successes in many lines of activity. Perhaps the principal emphasis has been placed upon the rehabilitation of the building itself. For several years financial conditions, and the pressure of new construction and expansion have interfered to some extent with both ordinary and extraordinary maintenance of the splendid structure housing our collections. During the past year it has been possible to refinish completely the roof of the building, replacing all materials found to be defective or in a state of deterioration. The renewal of downspouts begun the year before was brought to completion. The exterior of the entire building was gone over carefully by tuckpointers so that all open cracks which might work to the detriment of the structure were cleaned, filled, and properly pointed. The terrace wall surrounding the building was also checked over in detail and all cracks filled and pointed. Many of the marble blocks which had been pushed out of position by repeated frosts were removed and reset. Excavations were made behind the walls for the purpose of removing and replacing any of the supporting structure in need of attention. Every effort has been made to perfect this work so that the building will be water tight and winter tight. A severe degree of wear and tear is normal in any building subjected to the climatic extremes characteristic of the Chicago area, particularly any structure in such an isolated and exposed location as the Museum's site. It is a source of great satisfaction, therefore, to realize that increased maintenance efforts have now checked the effects of these conditions, and that necessary repairs have been made or are well under way.

The principal exhibition feature of note was the opening on July 31 of the new Hall of Babylonian Archaeology (Hall K), bringing to a culmination the work of about seventeen years, beginning with the Field Museum–Oxford University Expedition to Kish (1923–33). The central feature of this hall is the reconstruction of a gateway of the Sasanid period (Plate 15). A new departure is the installation of a frieze composed of enlarged copies made from impressions of tiny cylinder seals excavated at Kish. The cases, lighting, and

arrangement of the hall are such as to bring it into complete harmony and unity. It tells a most interesting story of this ancient civilization.

Another outstanding new exhibit completed is a habitat group representing the "home life" of fur seals in the Pribilof Islands, Alaska Plate 19), installed in the Hall of Marine Mammals (Hall N). Containing forty animals, including huge "bulls," as the mature males are called, the much smaller "cows" or females, and the "pups" or young seals, this group is one of the largest exhibits in the Museumand probably is the largest fur seal group in any museum. Twenty, four birds of species inhabiting the same environment as the seals also appear in the group. The animals were collected in 1937 by a special expedition conducted for the purpose by Staff Taxidermist C. J. Albrecht, who spent more than two years after his return in preparation of the exhibit.

Completion of another important new exhibit which has long been in preparation occurred with the hanging of the last group of "The World's Food Plants" murals, painted by Mr. Julius Moessel, in the Hall of Food Plants Hall 25. Eight of these were hung in the previous year, and the nine additional ones placed on the walls in 1940 complete the project. The paintings depict vividly the husbanding and transportation of the world's important vegetable products. They are of interest not only for the story they tell, which co-ordinates with the exhibits of economically important plants and plant products in the hall, but also as decorative works of art (Plate 16).

Detailed accounts of other new installations, and reinstallations of exhibits, will be found in the departmental sections of this Report.

The exhibition program at Field Museum is approaching the point where a vastly different type of exhibit will come more and more into use. The plans for the construction of habitat groups of animals and birds of the world have almost come to complete realization. The next few years will bring about a change in exhibition technique as new material is prepared. The emphasis will turn from "what things are" to the "how" and "why" of their being. A pioneer in this program is the new exhibit, brought out during 1940, entitled "What is a Bird?" This exhibit shows graphically the main features distinguishing the birds from mammals and reptiles, and goes into such detail as the presentation of cross sections of the tubular bones of birds, enlarged sections illustrating the structure of feathers, and other diagrammatic and explanatory material.

In connection with the opening of the Hall of Babylonian Archaeology (Hall K) the Museum published an illustrated leaflet, Ancient Seals of the Near East, by Mr. Richard A. Martin, Curator of Near Eastern Archaeology. Likewise, when the last of the "World's Food Plants" murals was hung in Hall 25, a leaflet, The Story of Food Plants, by Dr. B. E. Dahlgren, Chief Curator of Botany, was published.

On the radio Field Museum continued its educational work through the medium of a series entitled "How Do You Know?" given through the courtesy of the National Broadcasting Company over its Blue Network. I am especially indebted to Miss Judith Waller of N.B.C. and to the University Broadcasting Council for their fine co-operation and help in this series. It was our attempt not only to tell the listening public facts revealed by science, but to reveal as well the methods by which scientific conclusions are reached. Through this program it was hoped further to establish in the popular mind the authenticity of scientific research and the correctness of its resulting conclusions.

Upon the invitation of the Zenith Radio Corporation, Field Museum presented a series of television programs. These, of course, were entirely experimental and were devised for the purpose of testing the effectiveness of television as an educational medium for transmitting scientific information. The results clearly indicate the tremendous value this medium will possess when it has been perfected, as it will then carry to millions of children in schoolrooms, as well as to other audiences, a story of science which will reach them both aurally and visually at the same time. It will be possible to demonstrate chemical experiments or to exhibit poisonous reptiles without any danger whatever to the observer. It will be possible to show rare specimens, which should not be entrusted to the risks of even the best transportation facilities, to persons many hundreds of miles distant. The possibilities are, in fact, such as to challenge the imagination and best efforts of all who are interested in producing an enlightened citizenry.

In the expansion of the educational work of Field Museum I am particularly pleased to commend the work of Miss Miriam Wood, Chief of the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures, and of her entire staff of guide-lecturers. This small and effective group of workers is seizing every possible opportunity to promote progressive education through lectures in the Museum and in the classrooms of Chicago's

schools, through the printed "Field Museum Stories," and through mimeographed sheets of information or of questions and answers. In conjunction with the Chicago Public School Broadcasting Council and radio stations associated with it, there has been developed a system of radio follow-ups whereby designated representatives from various schools come to the Museum after the broadcasts and receive additional instruction in the subjects that were featured over the air. Mrs. Leota G. Thomas of the Raymond Foundation, as Chairman of the Chicago Museum Schools Relations Committee of the Progressive Education Association, has been instrumental in gathering and co-ordinating material of great value in the furtherance of co-operative educational endeavor. It is regretted on the part of the Raymond Foundation that Mr. Loren P. Woods, for two and one-half years a member of its staff, was transferred to the Department of Zoology at the end of the year. In compensation, however, Mr. Woods has assumed a position of increased responsibility and opportunity, as Assistant Curator of Fishes.

Equally important in the field of co-operation with the schools are the activities of the N. W. Harris Public School Extension, which had another successful year of operation. Besides continuing its regular bi-weekly schedule of circulating traveling exhibits to nearly 500 schools and other institutions through which an aggregate of some 500,000 children are repeatedly reached every year, the Harris Extension has developed new types of exhibits, new services, and various technical improvements. How well this department of the Museum is fulfilling its functions was shown again in 1940, as in so many other years, by the many letters of commendation received from teachers, principals, school officials, and large numbers of the school children themselves.

Due to troubled conditions in Europe and Asia, Field Museum sent out no expeditions beyond the limits of the western hemisphere. It is essential, however, that research work be continued, and expeditions must ever be one of the essential activities of a great research museum. Expeditions are necessary in order to procure examples of new and unknown species; they are necessary to round out incomplete representations of plant and animal life, human cultures, or rocks and minerals, so as to establish comprehensive study collections as a basis for reference and further determinations; they are necessary for the training of the newer and younger members of the scientific staff, because a comprehensive knowledge of the subjects within the scope of a museum cannot be obtained alone

from the study of books and isolated specimens. It is essential that the biologist have knowledge of plants and animals in their native surroundings; that the geologist have knowledge of rocks and minerals as they naturally occur; that the ethnologist and archaeologist have knowledge from personal contact with contemporaneous civilizations or the buried relics which their predecessors left behind.

This year, for the fourth time, Mr. Leon Mandel sponsored and led an expedition aboard his yacht, collecting birds, mammals, fishes, and reptiles that inhabit little-known islands and keys of the Caribbean—almost forgotten tiny possessions of the United States, Cuba, Honduras, Mexico, and British Honduras. At the end of the year, Mr. Mandel was planning another expedition to the Galapagos Islands and the coast of Peru. The expedition was scheduled to sail early in January, 1941.

The Magellanic Expedition of Field Museum, which began during the summer of 1939 its work in various parts of South America, including the southernmost tip of that continent, completed its work in 1940. Dr. Wilfred H. Osgood, Chief Curator of Zoology and leader of the party, returned in April, and Mr. Colin C. Sanborn, Curator of Mammals, returned in June.

Details of these and other expeditions will be found in the departmental sections of this Report.

From the Chicago Park District the Museum received during the year \$58,130.33 as compared with \$86,093.85 received in 1939.

In my report for the year 1939 I stated that the legislative act, under which the Chicago Park District levied a tax to aid in the support of Field Museum of Natural History and other museums, was invalidated by the Illinois Supreme Court during the year.

I am now happy to report that during the year 1940 an act was passed by the Legislature of the State of Illinois which corrected the technicality which led to the nullification of the first act. The first tax collections under the new act will become due in 1941.

Credit for framing and passage of this act is due to one of our Trustees, Colonel Albert A. Sprague, and to Mr. Frederick C. Hack, Mr. Charles J. Calderini, Mayor Edward J. Kelly, and Mr. Robert J. Dunham, President of the Chicago Park District, without whose help and co-operation the matter could not have been brought to a satisfactory conclusion.

Of considerable interest and importance is a change in the staff of Field Museum brought about by the retirement of Dr. Wilfred H. Osgood, who joined the staff July 1, 1909, and has been, since November 1, 1921, Chief Curator of the Department of Zoology. Dr. Osgood is the first to be retired under the provisions of the pension plan announced in the Annual Report of 1939. Fortunately, his retirement does not take from Field Museum the services of this outstanding scientist, but rather gives to this institution and to the entire field of science his best efforts by virtue of freeing him from the routine details of administering a department. It has long been a matter of sincere regret on my part that the system in vogue in our great museums has been such as to reward outstanding scientists by making them chief curators, in which position administrative duties largely interfere with the scientific research which is of outstanding interest to them and of paramount value to the world. Since the system cannot be changed arbitrarily at the moment, it is gratifying to know that the workings of the pension fund may at least bring back into active scientific study many of those men who have served well, who have been honored by appointment to positions of administrative responsibility, and who are willing at last to lay aside those cares to re-engage in the activities in which they are pre-eminently needed.

Mr. Karl P. Schmidt, who has headed the Division of Amphibians and Reptiles at Field Museum since August 1, 1922, succeeds Dr. Osgood as Chief Curator of the Department of Zoology. While I rejoice at this honor so justly bestowed upon him, I must voice my regret at the interference with his scientific endeavors that it is bound to produce. Mr. Clifford H. Pope joined the staff of Field Museum during the year and succeeds Mr. Schmidt as Curator of Amphibians and Reptiles.

Other retirements, new appointments, promotions, and changes in personnel occurred, as follows:

Miss Miriam Wood was appointed Chief of the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures, taking the place of Miss Margaret M. Cornell, who retired at the end of 1939. Miss Wood had been a member of the Raymond Foundation staff since 1929. Early in the year, Mr. Bert E. Grove joined the Raymond Foundation staff as a lecturer.

Mr. Emil Liljeblad, Assistant Curator of Insects, retired on pension, and Mr. Rupert L. Wenzel was appointed to the position thus vacated.

Dr. Alexander Spoehr was appointed Assistant Curator of American Ethnology and Archaeology. Dr. Francis Drouet, having completed a two-year appointment as Curator of Cryptogamic Botany, was given a permanent appointment to that position. Mr. D. Dwight Davis, Assistant Curator of Anatomy and Osteology, was promoted to Curator; Mr. Paul O. McGrew, Assistant in Paleontology, was promoted to Assistant Curator, and Mr. James H. Quinn, Assistant, was promoted to Chief Preparator in Paleontology, these promotions to be effective from January 1, 1941.

Mr. John Janecek was appointed Assistant Illustrator, and Mrs. Eunice Gemmill was appointed Assistant Librarian. Mr. Farley H. Wade was placed in charge of the Division of Printing, succeeding Mr. Dewey S. Dill. Miss Nellie B. Starkson was appointed Artist-Preparator in the Department of Zoology.

Mr. John William Harrison, a preparator in the Department of Anthropology for many years, was retired on pension, as were Mr. A. W. Mahlmann, pressman in the Division of Printing, and Messrs. John Weber and Patrick Walsh, Museum guards.

A few temporary appointments for specific tasks and periods of time were made, and several new preparators, guards, and clerical assistants were employed during the year.

The Museum was again indebted, as it has been for several years past, for assistance in research work and other activities by a group of volunteer workers who have toiled faithfully. Some of these workers are named in the List of the Staff at the beginning of this book, being designated by the titles "Research Associate" and "Associate," which distinguish them from salaried workers. One other in the list, Mr. Paul G. Dallwig, with the title "The Layman Lecturer," also serves without compensation. Grateful acknowledgment is herewith made to all the volunteers so listed, and also to the following: Miss Anne Harding, Miss Virginia Coward, Miss Jane Darrow, and Miss Margaret Ross, who worked in the Department of Anthropology; Mr. Donald Richards, Mrs. G. B. Stifler, and Dr. V. O. Graham, who assisted in the Department of Botany; Mr. Leonard C. Bettson, Jr., and Mr. John M. Schmidt, who helped in the Department of Geology; Miss Elizabeth Best, Mr. Melvin A. Traylor, Jr., and Mrs. M. J. Taylor, who worked in the Department of Zoology; and Mr. Clarence L. Brown, who served as a volunteer on the lecture staff of the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures.

As in former years, it is my privilege and pleasure to commend especially the splendid work done by workers supplied by the Work

Projects Administration, a federal government agency. Over the period of years that this agency has co-operated with Field Museum many of its workers have developed a high degree of skill. Repeatedly, WPA workers have become employees of Field Museum as vacancies occurred for which they were qualified. Many of the tasks on which they were engaged have become practically dependent upon them, and it is with regret that the tendency toward reduction of personnel on this project is noted. Many objectives have been reached, however, and new methods coupled with improved efficiency must be relied upon to hold the gains made possible with the assistance of this organization. It is especially desired to commend the whole-hearted co-operation of Miss Jessie Steers, Resident Superintendent of the Project. The average number of men and women employed by the WPA at Field Museum during 1940 was 165. The highest number at any one time was 200. The aggregate manhours worked by the entire force was approximately 257,400.

On September 1, the Director of the Museum was called into the service of the United States Army, serving as a Major of Infantry on the Special Staff of the Sixth Corps Area Headquarters, in Chicago. It is desired to express here to the President and the Board of Trustees of the Museum his appreciation for their liberality in arranging for the continuation of the essential control of the institution by the Director despite the limited time which, temporarily, he is able to devote to that responsibility. It is also desired to record the appreciation of the entire staff of the Museum for the action of the Board of Trustees which guarantees, to every man called into service of the armed forces of the United States for a one-year period under Public Resolution No. 96 or the Selective Service and Training Act of 1940, the return of his former position when he is able to resume it, and the continuation without cost to him of all insurance and pension benefits then in force.

For the third successive year, paid admissions to the Museum declined despite an increase in total attendance. The total number of visitors received at the Museum during 1940 was 1,450,685, exceeding the 1939 attendance by more than 40,000; the paid admissions, however, numbered only 80,888 as against 83,518 in 1939, 91,097 in 1938, and 94,217 in 1937, which was the last year showing an increase in paid admissions.

The uninterrupted growth of total attendance year by year shows that the Museum is fulfilling its educational and cultural missions for an ever greater public. This fact is a source of gratification. The decrease in paid admissions is not in itself a matter of great moment since it is not the Museum's aim to develop door receipts as a major source of revenue. Nevertheless, in times like the present and the several years past, when income from other sources has declined, the decrease also in paid admissions emphasizes the financial problems of an institution dependent chiefly on income from investment of endowment funds, and on contributions.

As I have noted in past years, the total effectiveness of the Museum's services to the public is by no means measured by the citation of any one figure such as total attendance of more than 1,450,000. To get a truer picture of the institution's sphere of influence, it is necessary to add to this figure the numbers of children reached by the activities of the Harris Extension and the Raymond Foundation, and when this is done it is found that the total number of persons directly reached is close to 2,200,000. But even this does not tell the whole story, for there is a further and greater public whose numbers must run into many millions throughout this country, and abroad, to whom scientific information of Field Museum origin is brought indirectly through many other channels such as radio, publications, and press reports.

Special programs within the Museum itself brought a combined total attendance of 126,951. Included in this category are the spring and autumn courses of lectures for adults on Saturday afternoons in the James Simpson Theatre; the spring, summer, and autumn motion pictures for children presented in the Theatre by the Raymond Foundation; the daily and special guide-lecture tours for adults and children; the Sunday afternoon lectures presented by the Layman Lecturer, Mr. Paul G. Dallwig; and a number of programs for special groups to which the use of the Theatre and Lecture Hall was extended.

Among special groups of visitors coming to the Museum during the year were the adult graduating class of the Chicago Public Schools, whose commencement exercises were held in the James Simpson Theatre in June; the Delta Delta Delta sorority, which attended a special lecture by Mr. Paul G. Dallwig, the Layman Lecturer, in July; a group of 65 librarians from Michigan towns and cities, sent in November by the Kellogg Foundation to make special studies at the Museum; the Mid-West Federation of Geological Societies, which held its meetings at the Museum in December; and the groups of young delegates sent to the Museum annually in December by the National Congress of Four-H Clubs. The Four-H

groups in 1940 numbered 1,522 boys and girls from farms of the United States and Canada, an increase of more than 50 per cent over the groups of the previous year. These groups, especially selected as rewards for good work, represent the cream of North American rural youth. Their Congress is held simultaneously with the International Live Stock Exposition which also is the source of many additional adult visitors received at the Museum each December. At the Live Stock Exposition the Museum co-operated by displaying a number of the traveling exhibits circulated by the N. W. Harris Public School Extension.

The Annual Meeting of the Board of Trustees was held January 15, at which time Mr. Stanley Field was re-elected for his thirtysecond consecutive year as President of the Museum. Mr. Silas H. Strawn was elected Second Vice-President, filling the vacancy caused by the death in the previous year of Mr. James Simpson. All other Officers of the Museum were re-elected. At the December 16 meeting of the Trustees, Mr. Boardman Conover was elected to membership on the Board, filling a vacancy which had existed for a year. Mr. Conover for many years has been interested in and intimately associated with the work of Field Museum and has served voluntarily on the staff as Research Associate in Ornithology since 1924. He has been a member and leader of several important Museum expeditions, and has contributed generously to help finance them. For his services and his contributions, the Trustees had previously honored him at various times by electing him a Patron, a Contributor, a Corporate Member, and a Life Member of the Museum.

In recognition of recent eminent services to the Museum, Colonel Albert A. Sprague, Mr. Frederick C. Hack, and Mr. Charles J. Calderini were elected Patrons of the Museum at a meeting of the Board of Trustees held September 28.

At the September meeting, the Museum Trustees also voted to add the names of Mr. Charles H. Schweppe and the late Charles K. Knickerbocker to the list of Contributors to the Museum -a list, maintained in perpetuity, of all persons whose contributions to the institution, in money or materials, range from \$1,000 to \$100,000. At their meeting of November 18, the Trustees elected Mrs. Frederick S. Fish, of New York, a Contributor. Mr. Schweppe's election was in recognition of generous cash contributions for the carrying out of an exhibition project now in preparation. Mr. Knickerbocker was posthumously elected in recognition of his gift of a notable

collection of more than 10,000 birds' eggs, many of them extremely rare, which with previous collections in the Museum gives this institution representation of virtually all species of North American birds' eggs. The election of Mrs. Fish followed her gift of a pair of remarkable carved marble lions from China, which have been added to the exhibits in George T. and Frances Gaylord Smith Hall (Hall 24, Chinese Archaeology).

One new Life Member, Mr. Hughston M. McBain, of Chicago, and one Non-Resident Life Member, Mr. Oscar U. Zerk, of Kenosha, Wisconsin, were elected during 1940.

Beginning on page 302 of this Report will be found complete lists of all classes of Museum Members. The total number of memberships, as of December 31, 1940, was 4,225. There is thus a small gain over the previous year, when the number on the corresponding date was 4,171, and, as this is the second successive year in which a gain has been made, it may be hoped that it indicates a reversal of the previous trend toward decline. The administration of the Museum deeply appreciates the support given it by the civic-minded citizens who are enrolled as Members. The continued growth of membership represents an important source of hope for the continued expansion of the Museum's scientific and educational activities.

At a meeting of the Trustees, held May 27, action was taken to change the name of the Hall of Plant Life (Hall 29) to "Martin A. and Carrie Ryerson Hall," in memory of the late Martin A. Ryerson and the late Mrs. Carrie Ryerson, both of whom were notable benefactors of this institution.

With deep regret, record must be made of the death on February 4, 1940, of Mr. Fred W. Sargent. Mr. Sargent had been a Trustee of the Museum from 1929 until June 19, 1939, when ill health compelled him to resign. For a number of years he was a member of the Auditing Committee.

Note is regretfully made of the death of Mr. Rufus C. Dawes, on January 8, 1940. His passing was a great loss to Chicago, and to the Museum of Science and Industry, of which he was President. In this loss the administration of Field Museum feels a distinct share, for although his own institution demanded most of his time and energy, Mr. Dawes was keenly interested also in the work of Field Museum, and was a Life Member of this institution.

Two veteran members of the scientific staff passed away during the year. Dr. Albert Buell Lewis, Curator of Melanesian Ethnology, died on October 10, in his seventy-fourth year. He had been a member of the Museum staff since 1908, prior to which he had built up a scholarly background as student and graduate student at the University of Chicago and Columbia University, and as instructor at the University of Nebraska. Dr. Lewis's leadership of the Joseph N. Field South Pacific Expedition 1909 13: resulted in bringing to Field Museum an ethnological collection which has few rivals anywhere in the world in the completeness of its representation of the cultures of such regions as New Guinea, New Britain, and New Caledonia. As a result of his researches, the Museum was able to publish noteworthy contributions to ethnology. He was a Fellow of the American Association for the Advancement of Science and the American Anthropological Association, and a member of Sigma Xi.

Mr. Edmond Narcis Gueret, Curator of Anatomy and Osteology, died on November 30, at the age of eighty-one. Fully sixty-five years of his life were devoted to his specialty, the preparation of animal skeletons and special osteological dissections which layman and scientist alike recognize as among the best that human fingers could devise. The teaching materials in a dozen medical schools, the halls of osteological exhibits in many museums especially Field Museum, whose staff he joined in 1900, and innumerable preparations in Field Museum's research collections remain as lasting monuments to his skill.

Mr. John Buettner, a pensioner of Field Museum, who had served as a carpenter and preparator from 1894 to 1937, died on July 21.

Under the Museum's group insurance policy, \$3,000 was paid to the widow of Dr. Lewis, \$2,500 to the widow of Mr. Gueret, and \$2,000 to the widow of Mr. Buettner.

As usual, the Museum is indebted to a number of individuals for contributions of funds to insure its progress and the maintenance of its activities; and to many others for gifts of materials to expand the exhibits, the research collections, and the Library. The gratitude of the institution is herewith extended to the donors of all such contributions. In the following paragraphs will be found acknowledgments of some of the outstanding contributions of funds (the list is not complete because in a few instances donors desiring to remain anonymous have requested that their gifts be not publicly noted):

The continued generosity of Mr. Marshall Field, member of the Board of Trustees, which has been of such major importance year after year in sustaining the Museum over its most difficult financial problems, was again manifested with gifts in 1940 amounting to the munificent total of \$284,680.73.

Gifts from Mr. Stanley Field, President of the Museum, totaled \$22,700 and were placed in a special fund to be used for such purposes as may later be announced.

From Mrs. James Nelson Raymond, Founder of the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures, there were received gifts totaling \$6,000 to be used in meeting the operating expenses of that division of the Museum.

Mr. Charles H. Schweppe contributed the sum of \$2,500 toward the costs of a proposed exhibition project, and pledged himself to meet the further costs when ascertained.

Mrs. Clarence C. Prentice made a contribution of \$1,000 to the Leslie Wheeler Fund for the continued purchase of specimens of birds of prey required to expand the collection begun by the late Leslie Wheeler, former Trustee of the Museum.

The Jewish Welfare Fund, of Chicago, by a final contribution of \$500, paid the balance of its pledge of funds toward the salary of a scientist employed on the Museum staff.

The Rockefeller Foundation contributed \$1,000 as a salary for the temporary employment of an archaeologist to carry out a special research project in connection with Chinese archaeological and historical material. Mr. Malcolm Farley, the expert employed for this purpose, unfortunately died during the course of the work, but the project is being carried to completion by his widow, assisted by other archaeologists.

The late Frederick T. Haskell left the Museum a bequest of \$10,000. A legacy of \$8,000 was designated for the Museum in the will of the late William B. Storey.

In the departmental sections of this book will be found details of the many gifts of material received for the collections of the Museum; such gifts are noted also in the complete List of Accessions which begins on page 278.

One of the most notable gifts received during 1940 consists of X-ray apparatus, fluoroscopic screen, mechanical devices for automatic control and timing, and all other accessories required for the installation of a unique exhibit whereby an Egyptian mummy will be shown intermittently with the projection of the X-rayed image

of its skeleton. This equipment was presented to the Museum by the General Electric X-ray Corporation, of Chicago, which during two exposition seasons operated it, with a mummy lent by Field Museum, as a feature of the General Electric exhibits at the New York World's Fair 1939 40. The roentgenographic and mechanical devices used for the purpose were especially designed and built by the technical and engineering staffs of the X-ray company, and represent an investment of many thousands of dollars. The Museum plans to install this exhibit in a special chamber to be constructed in the Hall of Egyptian Archaeology Hall J early in 1941, and the General Electric X-ray Corporation has generously offered the services of its technical experts to assist in completion of this project. The popularity of the exhibit at the New York Fair, where it was viewed by approximately 9,000,000 visitors, indicates that it should prove to be an outstanding public attraction when it has been permanently installed at the Museum.

Field Museum's collection of Chinese ivory objects was more than doubled by a bequest of the late Louis L. Valentine, giving his entire private collection to this institution. Some very fine and old specimens are included in this bequest. Especially noteworthy are a number of late Ming ivories of the sixteenth and seventeenth centuries.

From Mr. Michael Lerner, of New York, the Museum received two very interesting specimens for use in the new Hall of Fishes (Hall O), which is in preparation. One of these is a large Pacific black marlin; the other is a thresher shark.

Mr. Emil Liljeblad, Assistant Curator of Insects, who retired during the year, made a noteworthy gift of his personal collection comprising some 2,500 comparatively small beetles from California. This acquisition will greatly improve the Museum's representation of the many kinds of beetles found in that state. Mr. Liljeblad also made a notable contribution of books and pamphlets to the Museum Library.

A major project of reconstruction and rearrangement in the Museum Library was begun in the latter part of the year, and should be completed early in 1941. This involves converting the former stackroom into a new reading room, and requires rebuilding the ceiling at a lower level to co-ordinate with a new system of indirect lighting by fluorescent tubular lights concealed in coves around the edges of the ceiling. In addition to improved lighting, the new reading room will offer better facilities for the comfort and

convenience of visitors, and will be more accessible to them when they arrive on the third floor by the passenger elevator. Also, the better arrangement will make it possible for attendants to give more efficient service. Included in the reconstruction work are the creation of new offices for the Librarians, and the conversion of the old reading room into a stackroom. The plans for this work are so drawn, and the schedule of construction so timed, that all of the work will be completed without interruption of the Library's service to the public while the changes are being made.

Plans were completed and the first phases of work undertaken for a complete reinstallation of H. N. Higinbotham Hall (Hall 31—the Gem Room), and the hall was temporarily closed for this purpose on September 24. It is expected that the project will be completed, and the hall reopened, early in 1941. New types of exhibition cases and improved lighting will make the display of precious stones much more attractive, and make it possible for those who are interested to study gem characteristics under better conditions than heretofore.

To protect valuable material in offices, laboratories, workshops, storerooms, and libraries on the third floor from casual marauders, wire partitions with sliding doors were installed at the head of the eight stairways leading to that floor. Such protection is most important, especially on Saturday afternoons, Sundays, and holidays, when the majority of the staff are absent. The doors are kept locked at all such times.

In addition to painting backgrounds for several habitat groups opened during the year, and for others still in preparation, Staff Artist Arthur G. Rueckert made studies for certain murals. These are planned for addition to the series on outstanding forms of plant life, begun in Martin A. and Carrie Ryerson Hall (Hall 29) of the Department of Botany by a former Staff Artist, the late Charles A. Corwin.

Success continued to mark the operation of the Book Shop established in the Museum in 1938. Indicative of growing public confidence has been an increase in the number of sales made on mail orders. Visitors to the Museum found a larger and more varied stock of books available for over-the-counter sales. The policy of offering only the best books in the fields related to the Museum's work was maintained. Before any book, either for adults or children, is accepted for display and sale it must first be passed upon by a member of the institution's scientific staff qualified to exercise judgment in the particular subject to which the book pertains.

The exhibits at Field Museum continued to serve as inspirational material for sketching and painting by students of the School of the Art Institute of Chicago. The professional art school sent classes to study problems occurring in such courses as the history of art, drawing, composition and research, and pattern design. The classes for children, known as the Saturday Junior Department, were brought to Field Museum by instructors as a part of the regular curriculum. This co-operation is a source of satisfaction to both institutions.

The five hundredth anniversary of the invention in Europe of printing from movable type, and the four hundredth anniversary of the first printing in America, were commemorated in 1940 throughout the nation by printers, publishers, and libraries. Field Museum, in concert with other institutions, recognized this occasion. Two special exhibits of books from the Museum's Library were placed on display, one in Stanley Field Hall in the summer, and one in Albert W. Harris Hall in the autumn.

The first of these temporary exhibits was devoted to some of the world's oldest, and some of its most beautiful, books on natural history. Among the old ones were British, French, Dutch, Venetian, and German works published in the sixteenth and seventeenth centuries. Featured for beauty were such books as the great "elephant folio" edition of Audubon's The Birds of America. In order to demonstrate the progress of scientific writing and printing, there were also shown some outstanding books of more recent years. The second exhibit showed the development in books on natural history, and especially the history of biology, from early printings down to the present time. Among works shown were those of Cuvier, Swammerdam, Buffon, Linnaeus, Lamarck, Galton, and Darwin.

Field Museum was represented by an exhibit at the Rotary Business Exposition held in the Hotel Sherman, April 9 12. This exhibit, which included the mounted giant panda Su-Lin, was seen by at least 20,000 persons. Among other items in the display were ancient business documents on cuneiform tablets from Kish, examples of N. W. Harris Public School Extension traveling exhibition cases, material illustrating the activities of the Raymond Foundation, and scientific publications of the Museum. Mr. A. J. Franzen, taxidermist of the Harris Extension, gave demonstrations of the mounting of birds.

A special exhibit illustrating the scope of the work in which Field Museum has been assisted by the Work Projects Administration





CHINESE LACQUERED WOODEN GRILLE

Before and after restoration in the laboratories of the Department of Anthropology. This elaborate grillwork, carved from a single wooden plank, came from a tomb near Ch'ang-Sha, probably dating prior to 200 B.C. George T. and Frances Gaylord Smith Hall (Hall 24), Case 4 ANNACUSILA OL MENNOIS DE A LEMI was held in George M. Pullman Hall. This was presented in conjunction with the national exhibits by WPA projects in all parts of the country during what was termed "This Work Pays Your Community Week" (May 20–25).

Field Museum was represented at the Exhibition of Persian Art in New York, sponsored by the Iranian Institute of America from April 15 to June 15. The exhibit was the largest of its kind ever attempted in this country, and illustrated the development of Persian art through six thousand years. Field Museum's part in it consisted of a display of stucco and pottery of the Sasanid period from a palace of King Shapur II (fourth century A.D.) excavated by the Field Museum-Oxford University Joint Expedition to Kish. The Board of Trustees agreed to send certain specimens only because they were available nowhere else, and were needed to fill a gap in the otherwise well rounded display.

Especially fine examples of the arts and crafts of North American Indians, selected from the collections of the Department of Anthropology, were lent to the Museum of Modern Art, New York, for inclusion in a special exhibit to be held at that institution from January to April, 1941. Deviating from their established policy of many years, the Trustees consented to this loan at the special and urgent request of the United States Department of the Interior, which was interested in making this exhibit all-inclusive.

Commerce, the magazine published by the Chicago Association of Commerce, accorded recognition to the Museum's many services for business and industry by assigning Mr. Richard Lyon Brown, a special writer, to prepare a comprehensive article on this subject, published in the August issue.

In accordance with the spirit of co-operation existing among the various museums of Chicago, Field Museum presented to the Museum of Science and Industry twenty-seven volumes of Mining World and twelve volumes of the Brick Magazine. These fall more directly within the scope of the library of the industrial museum than that of this institution.

Dr. Otto Haas, a well-known vertebrate paleontologist from Vienna, worked for several weeks as a volunteer, in collaboration with members of the staff of the Departments of Geology and Zoology, on a research project based upon the Museum's collection of vertebrate fossils.

Members of the Museum staff were honored in various ways during the year:

The degree of Doctor of Philosophy was conferred on Mr. Alexander Spoehr, Assistant Curator of American Archaeology and Ethnology, by the University of Chicago at its quarterly convocation held December 17.

Dr. Paul S. Martin, Chief Curator of Anthropology, was elected President of the Central Section of the American Anthropological Association, and was appointed a member of the Committee on the Conservation of Archaeological and Historical Sites of the Illinois State Academy of Science.

Mr. Bryant Mather, Assistant Curator of Mineralogy, was elected to membership in the Johns Hopkins Chapter of the Society of Sigma Xi, honorary natural history society. Dr. Julian A. Steyermark, Assistant Curator of the Herbarium, was elected Vice-President of the Chicago Aquarium Society. Mr. Emmet R. Blake, Assistant Curator of Birds, was appointed chairman of the field committee of the Chicago Ornithological Society. Mrs. Leota Gregory Thomas, of the Raymond Foundation staff, was appointed chairman of the Chicago Committee for the Museum School Branch of the Progressive Education Association.

Various members of the Museum staff were active, both in Chicago and outside the city, on local field trips, in special studies in other institutions, in meetings held by various learned societies, as guest speakers for organizations of many kinds, or on radio programs. Among those who figured prominently as lecturers and radio speakers were Mr. Emmet R. Blake, Assistant Curator of Birds; Mr. Loren P. Woods, of the Raymond Foundation staff; Major Clifford C. Gregg, Director; Mr. C. Martin Wilbur, Curator of Chinese Archaeology and Ethnology; Mr. Karl P. Schmidt, Curator of Amphibians and Reptiles; Dr. Julian A. Steyermark, Assistant Curator of the Herbarium; Mr. John W. Moyer and Mr. C. J. Albrecht, Staff Taxidermists; Mr. Rudyerd Boulton, Curator of Birds, and Mr. Bryant Mather, Assistant Curator of Mineralogy.

Mr. Bryan Patterson, Assistant Curator of Paleontology, read two scientific papers at the annual meeting of the vertebrate section of the Paleontological Society of America, held in Pittsburgh. Mr. Henry Herpers, Assistant Curator of Geology, attended meetings of the American Institute of Mining and Metallurgical Engineers in New York. Mr. Emmet R. Blake, Assistant Curator of Birds, made a field trip to study colonies of nesting egrets at Avery Island, Louisiana, as the guest of Mr. John A. Holabird, Mr. Holabird's son Christopher, and Mr. E. A. McIlhenny. By this trip he was

enabled also to bring the Museum a representative collection of Gulf Coast vertebrates. Mr. Blake later attended the meeting of the American Ornithologists' Union at Boston, and presented a paper on "The Brazilian Frontier of Guiana," outlining the work of the Sewell Avery Expedition to British Guiana. Dr. B. E. Dahlgren, Chief Curator of Botany, collected plants during a vacation trip to Brazil. Mr. Karl P. Schmidt, Curator of Amphibians and Reptiles, made a visit of several weeks to Rochester, New York, to compile data on the history of Ward's Natural Science Establishment, an organization which had an important influence on the development of science and scientific museums in this country. Dr. Henry Field, Curator of Physical Anthropology, collected several hundred specimens for the Museum's Departments of Botany, Geology, and Zoology on a field trip in southern Georgia and northern Florida.

Mr. Henry W. Nichols, Chief Curator of Geology, Mr. Elmer S. Riggs, Curator of Paleontology, Mr. Bryant Mather, Assistant Curator of Mineralogy, and Mr. Henry Herpers, Assistant Curator of Geology, attended the meetings of the American Association of Petroleum Geologists, the Society of Exploration Geophysicists, and the Society of Economic Paleontologists and Mineralogists. Field Museum was represented at the Eighth American Scientific Congress at Washington, D.C., by Dr. Wilfred H. Osgood, Chief Curator of Zoology. This notable scientific meeting was held as part of the program commemorating the fiftieth anniversary of the founding of the Pan American Union, and was attended by leading scientists from countries of North, Central, and South America, and the West Indies. Dr. Osgood was honored by being appointed to preside at one of the sessions of the Section of Biological Sciences. Dr. Osgood also attended the meetings of the American Society of Mammalogists at Denver. Miss Miriam Wood, Chief of the Raymond Foundation, Mrs. Emily M. Wilcoxson, Librarian, and Mr. James H. Quinn, of the Division of Paleontology, represented Field Museum at the annual meeting of the American Association of Museums in Detroit. Mr. Quinn presented a paper on a phase of museum technique.

Mr. Rudyerd Boulton, Curator of Birds, attended the meeting of the American Ornithologists' Union in Boston, and presented a paper, "Sea Birds of the West Indies," recounting observations made on the Leon Mandel Caribbean Expedition. Dr. Paul Martin, Chief Curator of Anthropology, presented a paper on the only two known

systems of writing that originated in the New World—those of the Mayas and the Aztecs—before a symposium of epigraphers and other scholars held at the Oriental Institute of the University of Chicago.

In recognition of the excellence of the radio follow-up programs of the Raymond Foundation, Miss Miriam Wood, Chief of its staff, was invited to present a demonstration of this type of work for the benefit of radio educational experts from all over the country who attended the Fourth Annual Broadcast Conference in December.

Field Museum was represented at the Sixth Annual City-wide Recreation Conference, held November 8, by the Director and by Mrs. Leota G. Thomas of the Raymond Foundation staff. The conference was sponsored by the Chicago Recreation Commission. Its theme was "Recreation and Preparedness," discussion being directed upon recreation as an aid to civilian morale in time of emergency.

Many of the noted scientists, and persons distinguished in other fields, who had occasion to visit Chicago during the year made a point of including Field Museum among the institutions they considered of outstanding interest. It is possible to list here only a few of these. Among the many to whom the Museum was host were: Lord Lothian, British Ambassador to the United States; Dr. Julian S. Huxley, Secretary, London Zoological Society; Mr. Arthur Upham Pope, Director, Iranian Institute of America, New York; Dr. William B. Pettus, President, College of Chinese Studies, Peking; Dr. Adolfo D. Holmberg, Director, Zoological Gardens, and professor in the University of Buenos Aires; Count Jerzy Potocki, Ambassador of Poland to the United States; Mr. Alfred M. Bailey, Director, Colorado Museum of Natural History; Mr. Frederic Douglass, Acting Director, Denver Art Museum; Dr. James G. Needham, Emeritus Professor of Entomology, Cornell University; Dr. Aleš Hrdlička, Curator, Physical Anthropology, United States National Museum; Mr. David Finley, Director, National Gallery of Art, Washington, D.C.; and His Beatitude, Eshai Shimun, Patriarch of the Church of the East.

The Museum Cafeteria served meals to 97,225 persons during 1940. The rooms provided for children and others bringing their own lunches were used by 75,738 persons. A special lunch counter supplied to the larger part of the latter group supplementary refreshments such as hot beverages, soft drinks, sandwiches, ice cream, etc., but the tables and benches in these rooms are available to visitors regardless of whether they make such purchases or not.

Detailed accounts of activities in the various Departments and Divisions of the Museum will be found in the pages that follow:

DEPARTMENT OF ANTHROPOLOGY

RESEARCH

During the year work on various research problems was underaken by members of the Department of Anthropology staff, and atisfactory progress was made.

Dr. Paul S. Martin, the Chief Curator, and Mrs. Elizabeth S-Willis published their long-awaited book, *Anasazi Painted Pottery n Field Museum of Natural History* (Anasazi is a Navaho term used by archaeologists to denote all Pueblo and Basket Maker ulture periods of the Southwest).

Most of the pottery illustrated in this memoir was collected in he 1890's by various Field Museum expeditions to the Southwest. The collection, about 5,000 pieces, includes many rare and even inique items, most of which had never been exhibited to the public nd none of which had been studied by experts. The volume illusrates about one-fifth of the entire collection, both typical and rare pieces, and contains descriptions and pertinent data as to locality, ype, and chronology. This study, which took more than two years o complete, makes the collection available to all interested persons -laymen, artists, teachers, and students, as well as archaeologists. The work exemplifies the manner in which present-day methods of cholarship and research can be applied to make useful various naterials collected in the haphazard fashion of fifty years ago. t shows how such methods can extract new details from a hitherto lead and useless collection, and how they can vivify it for all to se and enjoy.

Mr. Richard A. Martin, Curator of Near Eastern Archaeology, ompleted the research necessary for the installation of material rom the ancient city of Kish in the Hall of Babylonian Archaeology Hall K), which was opened to the public in August. A preview of he hall was held for the press, special guests, and members of Field Museum. Further details concerning this hall will be found in this Report under Installations and Rearrangements. Mr. Martin also prepared a leaflet entitled Ancient Seals of the Near East, which describes in detail the frieze in this hall, and gives translations of inscriptions appearing on the seals. The specimens in Hall K were excavated by the Field Museum-Oxford University Joint Expedition to Mesopotamia (1923–33).

The Etruscan, Egyptian, Roman, Syrian, and Arabian jewelry in the Gem Room. H. N. Higinbotham Hall. Hall 31) was also catalogued by Curator Martin.

Dr. Wilfrid D. Hambly, Curator of African Ethnology, devoted the early part of the year to preparation of Craniometry of New Guinea, published by Field Museum Press. The book was released in February. This volume contains a full record of measurements on 195 skulls brought to Field Museum by the late Dr. Albert B. Lewis, leader of the Joseph N. Field Anthropological Expedition to the South Sea Islands 1909 13. This is the largest collection of crania from New Guinea that has yet been studied and the resulting data made public. The report contains a comparative study of Melanesian, Polynesian, Australian aborigines, and African Negro skulls.

This report is the forerunner of a series of publications on craniometry, based on collections which have accumulated in Field Museum since 1893. Research during 1940 was concentrated on approximately 100 skulls from the islands of Melanesia and Polynesia. The plan of work is to produce a series of brief reports on various regions of the Pacific, and in summation a succinct, comparative study of racial types of the whole Pacific region.

Mr. C. Martin Wilbur, Curator of Chinese Archaeology and Ethnology, conducted research upon and directed installation of many newly acquired specimens. A lacquered wooden grille for a coffin, probably dating from the third century B.C., archaic bronzes, pottery, and porcelain from several periods, two monumental stone lions, and Chinese peasant embroideries were put on exhibition. Mr. Wilbur also studied Chinese texts for information concerning social and economic conditions during the last two centuries before Christ. This work was done in preparation for a forthcoming book on Slavery in China During the Former Han Period.

Dr. Alexander Spoehr, Assistant Curator of North American Archaeology and Ethnology, prepared for publication a report for Field Museum Press on Skidi Pawnee Society, by the late George A. Dorsey and the late James R. Murie. The notes for this publication were collected from 1903 to 1907 by Dr. Dorsey, aided by Murie, a Pawnee Indian. Dorsey later prepared a rough draft for this report from his notes. Dr. Spoehr used this first draft as the basis for the book in its final form. This publication was released in September. In addition, Dr. Spoehr supervised checking, sorting, and cleaning of Middle American and South American specimens



Stucco decoration from a royal building constructed by Shapur II (Fourth Century A.D.) at Kish Excavated by Field Museum-Oxford University Joint Expedition, and reconstructed in the Hall of Babylonian Archaeology (Hall K)



in the archaeological storeroom, and worked on plans for reinstallation of Hall B (American Archaeology).

Up to the time of his death on October 10, 1940, Dr. Albert B. Lewis, Curator of Melanesian Ethnology, supervised the reinstallation of many cases in Hall G (Malaysian Ethnology). This entailed writing more comprehensive labels, selecting suitable photographs to illustrate the specimens, and rearranging the material on the screens in a more attractive manner.

During the year, Dr. Henry Field, Curator of Physical Anthropology, completed Part I, No. 1, of *The Anthropology of Iraq—The Upper Euphrates*. The manuscript on *The Anthropology of Iraq*, Part I, No. 2—*The Lower Euphrates—Tigris Region*—has been turned over to the Museum Press. Dr. Field spent several weeks at Harvard University completing a research project on the physical anthropology of the modern peoples of Iraq.

Mrs. Rose Miller continued volunteer work in studying and arranging the collection of 3,000 rubbings of Chinese historical monuments.

Mr. John Rinaldo, Associate in Southwestern Archaeology, worked on *The Su Site*, *Excavations at a Mogollon Village*, *Western New Mexico*, 1939, a report of the 1939 Field Museum Expedition to the Southwest, led by Dr. Paul S. Martin. He helped also in preparation of a case showing the growth and development of stone tools in the Southwest, and a case of pottery and artifacts from Lowry Ruin (Hall 7). The latter embodies the latest ideas for exhibiting materials, the uses of which are vividly illustrated by means of four paintings by Miss Anne Harding. Mr. Rinaldo also helped in cataloguing several collections.

Miss Marjorie Kelly, who is likewise an Associate in Southwestern Archaeology, worked on skeletal material for the report of the 1939 Field Museum Expedition. Her report was included in *The Su Site*, *Excavations at a Mogollon Village*, *Western New Mexico*, 1939, published in June, 1940. Miss Kelly also cleaned and sorted pottery.

Miss Anne Fuller, Volunteer Assistant, aided in the arrangement of archaeological materials.

Miss Margaret Ross, Volunteer Assistant, rendered valuable assistance in drawing layout sketches in color for the reinstallation of Hall B (American Archaeology). She also verified accessions and catalogue numbers for a periodic inventory.

Miss Virginia Coward, Volunteer Assistant, gave valuable help in checking specimens and records in connection with the cataloguing of gems and the recataloguing of pottery from the Southwest. She also mounted many photographs, verified accessions and catalogue numbers for check lists, labeled a study collection of Southwestern pottery, and did much clerical work.

Miss Anne Harding, Volunteer Assistant, painted several water colors depicting Pueblo life. These are exhibited in Hall 7 (Archaeology and Ethnology of the Southwestern United States). She also completed layout sketches for the proposed reinstallation of Hall B.

Miss Jane Darrow, Volunteer Assistant, who began work in November, has typed more than 500 cards for the geographical subject index of specimens in this Department. In addition, she has been helpful in editing and revising manuscripts.

The Department of Anthropology contributed fifteen articles to Field Museum News, and data for many articles published in newspapers.

During the year, members of the staff of the Department devoted many hours to preparation of scripts for "How Do You Know?" a series of Museum radio programs. Several members of the Department likewise participated in experimental television programs sponsored by the Zenith Radio Corporation.

ACCESSIONS ANTHROPOLOGY

The Department of Anthropology listed 28 accessions, comprising 1,014 specimens, of which 437 were gifts, 116 were acquired by exchange, one was purchased, and 460 were among previously uncatalogued material in departmental storerooms.

As a result of an outstanding gift received in 1940 from the General Electric X-ray Corporation, Chicago, this Department will be enabled in 1941 to add a most unusual and spectacular exhibit to the Hall of Egyptian Archaeology Hall J. The gift includes all the X-ray equipment and accessories required for installation in the Museum of the exhibit featured by General Electric for two seasons at the New York World's Fair 1939 40 in which a mummy teent to the Fair on loan from Field Museum's collections) was X-rayed before the public view at intervals of less than one minute throughout the exposition visiting hours. This interesting exhibit will no doubt attract the same widespread attention at the Museum that it did at the Fair.

Notable gifts of Chinese specimens during the years included two monumental stone lions from Peking, now exhibited in George T.

and Frances Gaylord Smith Hall (Hall 24). They came from Mrs. Frederick S. (Grace Studebaker) Fish, of New York, and probably date from the eighteenth century. In recognition of this valuable gift, the Trustees of the Museum elected Mrs. Fish a Contributor, an honor which continues in perpetuity.

A collection of carved ivories was received from the Estate of Louis L. Valentine, Chicago; and eleven ceramic specimens, ranging in date from the Han to Ch'ing dynasties, were given by the firm of Grow and Cuttle, of Chicago.

The Cenozoic Research Laboratory of Peking Union Medical College presented a colored cast of the reconstruction of the "Peking Man," one of the oldest representatives of the human race. This most welcome gift has been placed on exhibition in the Hall of the Stone Age of the Old World (Hall C).

The Estate of Mrs. A. L. Fisher, of Colorado Springs, presented to the Museum 1,200 negatives and prints forming a pictorial survey of Iraq. Five albums of these prints were added to the Department files. The Museum now possesses one of the finest existing series of photographs of Iraq and her peoples.

Dr. Henry Field, of Chicago, contributed ethnological specimens from Syria and Iraq, pottery from Petra, Trans-Jordan, and prehistoric artifacts from the type Mousterian station at Spy, Belgium.

CATALOGUING, INVENTORYING, AND LABELING—ANTHROPOLOGY

During the year, 20 of the 27 new accessions were entered, as well as all or part of 55 previous accessions.

The number of catalogue cards prepared during the year totaled 7,974, and 7,500 cards were entered. Since the opening of the first inventory book, the total number of catalogue cards entered is 226,495.

For the current year, the distribution of catalogue cards was as follows: North and South American archaeology and ethnology, 294; Chinese, Japanese, Tibetan, and Korean archaeology and ethnology, 212; African ethnology, 49; Near Eastern archaeology, 194; Melanesian and Polynesian ethnology, 361; physical anthropology, 6,864.

From copy prepared by members of the Department, the Division of Printing issued 962 labels (1,985, if duplicates are included) for use in exhibition cases. Distribution was as follows: North and South American archaeology and ethnology, 176; African ethnology, 2;

Melanesian and Polynesian ethnology, 516; Near Eastern archaeology, 197; Chinese archaeology, 52; European archaeology, 19.

The Division of Printing also supplied 119 captions for photographs, 64 maps, 8,485 catalogue cards, and 228 shelf labels for storerooms.

In the Departmental albums, 5,263 additional photographs were mounted. This necessitated opening new albums. About 8,074 prints in the library of racial type photographs of the peoples of the world were checked.

Cataloguing and rearranging of ethnological specimens from Europe and southwestern Asia were completed.

A collection of jewelry and ornamental stones, chiefly from the Kabyles of North Africa, was catalogued. New labels were prepared, and about one hundred of the best samples are now ready for incorporation in a larger collection which will be installed in a room showing gems and personal ornaments from many parts of the world (H. N. Higinbotham Hall—Hall 31).

INSTALLATIONS AND REARRANGEMENTS--ANTHROPOLOGY

Hall K, the new Hall of Babylonian Archaeology, was completed and opened in August under the direction of Mr. Richard A. Martin, Curator of Near Eastern Archaeology.

The exhibits are made up of thousands of objects excavated from Kish, for four thousand years an important city of ancient Babylonia. It is located in Iraq, east of Babylon. The excavation was done over a period of ten years by the Field Museum Oxford University Joint Expedition to Mesopotamia. The staff of the late Professor Stephen Langdon, of Oxford, composed of archaeologists from Great Britain, France, and the United States, supervised the excavating and laboratory research. Hundreds of native laborers performed the actual digging. Ever since the termination in 1933 of ten years of field work, efforts and time have been directed towards reconstruction and preparation of the material selected for exhibition. This hall represents the longest period of civilization which has been reconstructed by Field Museum. From the pottery, sherds, statuary, tablets, bronze work, and building materials recovered it has been possible to identify this ancient city and recount its history.

One of the important exhibits is the reconstructed gateway of the Sasanid period. Curator Martin reconstructed this portal at

the Museum, using wherever possible the original stucco from the royal buildings. Other interesting and valuable features are the earliest chariot wheels ever found; the miniature reconstruction of a chariot complete with horses and riders; and a frieze of seal reproductions. The frieze illustrates the high attainments of the glyptic artists of the Near East. In order to illustrate the history of this art from 3200 B.C. to A.D. 350, Curator Martin selected, for enlarged reproduction, impressions from eighteen cylinder seals and six These impressions, magnified twenty-five times by stamp seals. projection, were modeled in clay from the projections, and then cast in plaster with the help of the Federal Art Project of the Work Projects Administration. The resultant reproductions have been made into the frieze, for which special illumination is provided. The scale for these reproductions is such that the most minute details are clearer (even when viewed at a distance of twenty feet) than they are on the originals when examined with a hand lens. The impressions depict nearly all of the life of the times, with emphasis on the mythological aspects.

During the year it was decided to dismantle the old installation of jewelry in H. N. Higinbotham Hall (Hall 31) in order to catalogue and rearrange some 2,500 specimens. These include materials from Peru, India, Arabia, North Africa, Egypt, Rome, and Syria. The plan is to install them in new, well-lighted cases. When completed in 1941, this will be one of the leading exhibits of its kind in the country.

A case of archaeological specimens from the Lowry Ruin, Colorado, was prepared by Mr. John Rinaldo, Associate in Southwestern Archaeology, under the direction of Dr. Paul S. Martin, and placed in the Hall of Archaeology and Ethnology of the Southwestern United States (Hall 7). One side of the case shows the artifacts from Lowry Ruin in Southwestern Colorado. They are grouped in panels, each panel illustrating a different activity of the prehistoric inhabitants, such as building houses, hunting, and holding a ceremony. The objects in each panel are grouped around a water color picture illustrating the activities in which they were used. The other side of the case shows the progressive development, in stone and bone artifacts, of the Pueblo culture from Basket Maker times to historic times. The objects are grouped together on a panel, period by period, thereby showing the lineal sequence or "life history" of each type of artifact shown.

The Department prepared a case of materials illustrating the growth and development of writing for a special event at the Rotary

Club. In this display were an early Babylonian contract and other documents written in hieroglyphics on clay.

The Egyptian mummy of a man named Harwa was prepared for the second season of display in the General Electric X-ray Corporation's exhibit at the New York World's Fair. A representative collection of Sasanian material was sent to the Exhibition of Persian Art in New York.

A case of rare wooden figures was lent to the American Negro Exposition which was held in the Coliseum in Chicago from July 1 to September 1. The specimens were collected by Curator Wilfrid D. Hambly.

The Museum lent a small fragment of a Roman iron scythe dated as first century after Christ—to the Republic Steel Corporation for the purpose of helping that company to find out whether case hardening was known to the Romans and, if so, how it was accomplished.

At the request of the Department of Arts and Crafts of the United States Department of the Interior, the Museum lent to the Museum of Modern Art, New York, eighteen rare specimens representing excellent examples of Indian Art.

A collection of North American ethnological specimens was lent for three months to the University of Minnesota Art Gallery for a special exhibit of primitive art.

The total number of specimens restored and repaired during the year is 286. Two skilled technicians, Mr. Tokumatsu Ito and Mr. John Pletinckx, have restored Southwestern pottery specimens excavated by the last expedition to New Mexico, a Chinese coffin grille, and many pieces of pottery that have been placed on exhibition in Hall K.

Cases have been readjusted and relabeled where necessary. Four storerooms have been checked and many thousands of specimens identified. Glass in the exhibition cases of Hall J, the Hall of Egyptian Archaeology, has been thoroughly washed.

In addition, work on the geographical-subject index of this Department's specimens has continued throughout the year. Two-thirds of the North American ethnological material is now in its final index-form and is available for use. The utilitarian value of the index has already been proved by its efficiency in supplying information to members of the Departmental staff. Furthermore, representatives from other museums have pronounced it a definite advancement in the field of scientific cataloguing.

DEPARTMENT OF BOTANY

EXPEDITIONS AND RESEARCH

In continuation of the Museum's botanical exploration in Guatemala, reported in 1939, Dr. Julian A. Steyermark, Assistant Curator of the Herbarium, who arrived there in October, 1939, remained until May, 1940. He was accompanied by Mr. William H. Coibion, a University of Illinois student, as volunteer assistant. They visited a great number of localities in which botanical collections had never been made. Dr. Stevermark succeeded in amassing some 11,000 numbered collections containing 25,000 specimens which, though vet imperfectly studied, have shown conclusively that the flora of Guatemala is still inadequately known. The Museum's efforts to contribute to the knowledge of it are proving decidedly valuable: several new genera, hundreds of new species and, especially, new extensions in the known distribution of hundreds of plants, not only of Guatemala but of North and South America as well, point to the far-reaching scientific importance of this endeavor. Typical of such "range" extensions, and of interest to many readers of this Report. was the discovery of the partridge berry—a plant of the northern and eastern United States and familiar in the Indiana Dunes-for the second time south of the United States.

The wealth of plants in Guatemala is not altogether surprising, for conditions in some of the regions where Dr. Steyermark collected practically duplicate those of other lands. Thus, for example, extensive cloud forests in the Sierra de las Minas, never before ascended by a botanist, proved to be a natural habitat for some high Andean as well as North American plants.

Making its headquarters in strategic places, the party explored many types of terrain, including several volcanoes, notably the magnificent Tajumulco, which rises to 11,000 feet above San Sebastian. The slopes of these great mountains are cut by hundreds of streams. Associated with them are steep thousand-foot gorges and cliffs which make exploration very difficult, for frequently one has to travel several miles in order to ascend or descend. Through the generosity of Professor Ulisses Rojas, of Guatemala City, excellent headquarters were provided at Finca Pirineos for collecting the flora of this volcanic region. Likewise, through the courtesy of Don Erich Zoller, of the Central American Plantations, hospitality was provided at Finca El Porvenir. Dr. Steyermark explored the jungles along the Atlantic coast and the mountains adjacent. These areas contributed largely to the knowledge of the relationship of

floras of other Central American countries Honduras, British Honduras, and Costa Rica. The expedition yielded an unusually large number of specimens of palms, orchids, bromeliads, and ferns. In addition, several hundred collections of seeds and living specimens of ornamental or interesting plants were brought back as a contribution to the Garfield Park and other Chicago Park District conservatories. Some of these plants have already been displayed or have been used otherwise to supplement the botanical collections there.

The botanical exploration in Guatemala is being continued into 1941 by Mr. Paul C. Standley, Curator of the Herbarium, who left Chicago late in September. During the three months already passed in the field, he has made extensive collections in eastern Guatemala. These have resulted thus far in more than 5,000 numbered collections, with some 10,000 specimens. The rainy season made conditions unusually favorable for collecting.

Mr. Llewelyn Williams, Curator of Economic Botany, was granted an extension of his leave of absence to permit the continuation of his botanical explorations in Venezuela as aide to Dr. Henry Pittier, Chief of the Botanical Service of the Venezuelan Ministry of Agriculture. During 1940 Mr. Williams made excursions to the coast range above Caracas, where a large tract of forest land in the state of Aragua is set aside as a national park. He also visited many other areas along the north coast. However, as in the previous year, his principal investigations were in the region south of the Orinoco. At the end of October Mr. Williams returned to resume his work at Field Museum. An article based on his observations of last year, entitled "Botanical Exploration in the Middle and Lower Caura, Venezuela," was published in the June number of Tropical Woods.

Material and data on inter-tidal vegetation, tide pools, and other details necessary for the preparation of a north Atlantic coast habitat group of marine algae were collected by Emil Sella, Chief Preparator of Botanical Exhibits, on a field trip to the Maine coast. The collections supplement those made by a previous expedition to Maine and the Bay of Fundy. A number of localities were visited, some as far south as Bar Harbor, but most of the collecting was done on the shore of Quoddy Head near Lubec in the Bay of Fundy. This is the easternmost point within the borders of the United States. The tidal range on this coast is from twenty-three to twenty-five feet, and Mr. Sella found the low tide period ideal for working during the best part of the day.



POTATO PLANTING IN PERU

The ground is prepared by turning the sod by means of the handplow, a primitive agricultural implement still in common use in the Andes One of the series of murals by Julius Moessel in the Hall of Food Plants (Hall 25)



In the phanerogamic herbarium there have been mounted and distributed 38.431 sheets of specimens and photographs. More than 2,680 typewritten descriptions of plant species, prepared in the Department or received in exchange, also have been added. These descriptions, when available in the study series, facilitate determination and study of new or old material. Work of mounting current collections has been kept well up to date, and at the end of 1940 only a relatively small quantity of material awaited preparation. The filing of new accessions to the Herbarium kept pace with the mounting, making new collections immediately available for use. Many hundreds of new covers for genera and species were prepared. and the alphabetical and geographical filing was checked and corrected in many groups. The purchase of twenty new metal herbarium cases provided considerable space for expansion and for some desirable rearrangement. In the cryptogamic herbarium the addition of two new eight-door metal cases furnished much needed space for filing the material recently acquired. New specimens were mounted as soon as they were received. An inestimable amount of help in writing labels, packeting specimens, filing herbarium sheets, determining species, and preparing duplicate material for exchange was given by Mr. Donald Richards, of the Hull Botanical Laboratory, University of Chicago. Other assistance in determination of specimens, chiefly in the collections of fungi and lichens, was given by Mrs. G. B. Stifler, also of the Hull Botanical Laboratory, and Dr. V. O. Graham, President of the Illinois Academy of Sciences. The project of repacketing the older specimens and of mounting each upon a single sheet has been continued from previous years, and at the end of 1940 the entire algal and moss collections had thus been renovated.

During the past year, 9,496 prints, from the negatives of plant type specimens obtained in European herbaria by Associate Curator J. Francis Macbride, were supplied to botanists of North and South America at cost, or in exchange for similar type photographs or for specimens desired by Field Museum.

As usual, many plants were submitted to the Department during the year for study and determination. Numerous local specimens were brought to the Museum for naming by residents of the Chicago region, and hundreds of inquiries regarding the most varied aspects of botanical science were answered by letter, telephone, and interview.

Throughout the year the collections of the Department were consulted by visiting botanists from near and remote parts of the

United States, and from several foreign countries. Much use has been made of them by scientists and students from the educational institutions in or near Chicago, or elsewhere in Illinois and neighboring states. A number of students of the algae and bryophytes thus worked in the cryptogamic herbarium for periods of a week or more each during 1940. Mr. Donald Richards, of the University of Chicago, spent a considerable part of the year studying the collections of bryophytes. Mr. J. C. Strickland, of the University of Chicago and the University of Virginia, devoted the period from March until June to a study of the Nostocaceae. Mr. Richard Wood, of Northwestern University, was engaged in work on the Characeae. Dr. G. W. Prescott, of Albion College, visited the Museum for ten days in October to consult the cryptogamic herbarium in his work on the plankton algae of Wisconsin. Miss Cécile Lanouette, of the University of Montreal, studied the Myxophyceae during the month of December. Mr. William A. Daily, of the University of Cincinnati, was at the Museum for ten days in August working jointly with Dr. Francis Drouet, Curator of Cryptogamic Botany, on a revision of the Chroococcaceae.

Publications of the Department of Botany during 1940 were as follows: Botanical Series, Volume 9, No. 4, Flora of the Aguan Valley and the Coastal Regions near La Ceiba, Honduras, by T. G. Yuncker, and No. 5, Studies of the Vegetation of Missouri I, by Julian A. Steyermark; Botanical Series, Volume 21, Travels of Ruiz, Pavón, and Dombey in Peru and Chile (1777-1778), by Hipólito Ruiz, with an Epilogue and Official Documents added by Agustín Jesús Barreiro translation by B. E. Dahlgren; Volume 22, six numbers (all devoted to flowering plants most of which were recently collected in Guatemala, respectively, Nos. 1, 2, and 3, Studies of American Plants—IX, X, and XI, by Paul C. Standley; Nos. 4 and 5, Studies of Central American Plants—I and II, by Paul C. Standley and Julian A. Steyermark, and No. 6, A New Genus of Compositae from Northwestern Alabama, by Earl Edward Sherff.

Early in the year, the Spring Flora of Missouri, by Assistant Curator Stevermark, was published jointly by the Missouri Botanical Garden, of St. Louis, and Field Museum. It includes descriptions and illustrations of each of the 1,400 species of plants which bloom before June 1. Most of the keys to families, genera, and species are illustrated, thus facilitating their use. About two-thirds of the drawings were made by artists of the Work Projects Administration. The staff contributed numerous signed articles and brief notes to Field Museum News and to Tropical Woods, and supplied informa-

cion for numerous newspaper articles. Curator Standley and Assistant Curator Steyermark published during the year many short papers dealing with plants of the United States and tropical America.

Botany Leaflet No. 25, published toward the end of the year, is entitled *The Story of Food Plants*, and contains plates reproducing the seventeen mural paintings in Hall 25 by Julius Moessel (text of the leaflet is by Chief Curator B. E. Dahlgren).

ACCESSIONS-BOTANY

In 1940 there were received in the Department of Botany 345 accessions, comprising about 80,000 items. The accessions included material for the wood and the economic collections, as well as for the exhibits and the Herbarium. Classified by sources, 14,057 came as gifts, 16,936 in exchanges, 8,057 as purchases, and 41,173 were obtained by Museum expeditions. Included also are 554 photographic prints transferred from the Museum's Division of Photography.

Of the total receipts, items for the herbaria amounted to more than 76,545, including plant specimens, photographs, typed descriptions, and type negatives. The largest accession of the year consisted of approximately 25,000 specimens collected in Guatemala by Assistant Curator Steyermark, as described upon a preceding page. Among other material gathered by members of the Department staff were 2,538 specimens from Missouri, obtained by Assistant Curator Steyermark; 15,000 plants of the United States and Mexico, collected by Curator Drouet and Mr. Donald Richards; 752 Florida and Illinois plants, collected by Curator Standley, and 455 Venezuelan plants, collected by Curator Williams.

The largest of the exchanges received during the year consisted of 2,958 specimens forwarded from the Herbarium of Arnold Arboretum at Harvard University. This collection consists of woody plants from many parts of the world.

Other important exchanges received during 1940 include 1,470 specimens of Bolivian plants, from Mr. B. A. Krukoff, of the New York Botanical Garden; 1,273 plants of the southwestern United States and Lower California, from the National Arboretum, Washington, D.C.; 1,024 plants of North and South Carolina, and 440 of Virginia, from the Gray Herbarium of Harvard University; 555 specimens of Chinese plants from the Arnold Arboretum, Jamaica Plain, Massachusetts; 100 specimens of Argentinian plants from Universidad Nacional de La Plata, Instituto del Museo, La Plata, Argentina; 346 specimens of plants from the western United States

and Panama, from the Missouri Botanical Garden, St. Louis; 248 South American plants from the United States National Museum, Washington, D.C., and 261 Mexican plants from the Dudley Herbarium, Stanford University, California.

Gifts of phanerogamic material consisted of 11,212 items, and included much of the most valuable material that reached the Herbarium during the year. Outstanding among them was a series of 2,200 specimens of Peruvian and Bolivian plants, presented by Dr. T. W. Goodspeed, of the Department of Botany, University of California, at Berkeley. This collection consisted of plants collected on the University of California's Second Botanical Expedition to the Andes. Other South American collections received by gift included 484 Venezuelan plants collected by the Rev. Padre Cornelio Vogl, Caracas; 248 specimens of Venezuelan and Colombian plants from Brother Elias, Caracas; 171 Colombian plants from Brother Apolinar-María, Bogotá; 87 specimens of Brazilian plants from Professor José Badini. Minas Geraes; and 88 specimens of Argentinian plants collected by Mr. Arturo E. Ragonese, Santa Fé. A large amount of Central American and Mexican material was received during 1940. Among gifts may be mentioned 960 Mexican plants presented by the collector, Mr. Ernest G. Marsh, Jr., Victoria, Texas; 55 Suatemalan specimens from Dr. J. R. Johnston, Chimaltenango; 123 Guatemalan specimens from Don José Ignacio Aguilar G., Guatemala City; 138 specimens from British Honduras and Puerto Rico, from Mr. B. A. Krukoff, New York Botanical Garden; 70 Guatemalan specimens from Mrs. B. B. Lewis, Guatemala City; 189 Costa Rican specimens from Museo Nacional, San José, presented through the Director, Professor Juvenal Valerio Rodríguez; and 125 Mexican plants from the Department of Botany, University of Texas, Austin. Among gifts of plants collected in other areas are 217 specimens, chiefly Hawaiian, from Dr. Earl E. Sherff, Chicago; 67 specimens of Panamanian plants, from Miss Dotha Seaverns, Bennington, Vermont; 214 Tennessee and Ohio plants from Mrs. Alice S. Roberts, Chicago; 140 Indiana and Minnesota plants from Mr. Donald Richards, Chicago; 129 Texas plants from Mr. George L. Fisher, Houston, Texas; 239 Illinois plants from the Illinois State Museum, Springfield; 121 New Mexican specimens from Sister M. Marcelline Horton, Grand Rapids, Michigan; 108 Illinois and Wisconsin plants from Mr. Hermann C. Benke, Chicago; and 626 Illinois and Missouri plants from Mr. Bill Bauer, Webster Groves, Missouri.

To the cryptogamic herbarium 23,871 specimens were added during 1940. These consist largely of algae and mosses, partially



BEE SWARM ORCHID

(Cyrtopodium punctatum)

A reproduction of a large epiphytic orchid of the American tropics, recently added to the exhibits in Martin A. and Carrie Ryerson Hall (Hall 29, Plant Life)



of hepatics, fungi, and lichens. The largest accession was of about 12,500 cryptogams collected by Curator Drouet and Mr. Donald Richards in the Mexican state of Sonora, and in New Mexico, Arizona, and California on the Field Museum Expedition to Sonora and Southwestern United States (1939–40). Some 2,000 mosses and algae came from the Sewell Avery Expedition to Guatemala (1938–39), and from Florida in 1940, all collected by Curator Standley. Further collections were made by members of the staff in the vicinity of Chicago. Several thousand cryptogams, mostly algae, collected by Dr. Drouet in Massachusetts and Maryland in July, have not yet been accessioned.

Many gifts came from individuals. Mr. Donald Richards, of Chicago, contributed 945 specimens, mainly bryophytes of Minnesota, Illinois, and Indiana. From Mr. William A. Daily, of Cincinnati, came 373 specimens of the Chroococcaceae of Ohio, Indiana, and Kentucky. Dr. M. J. Groesbeck, of Porterville, California, who is engaged in a survey of the hot springs and alkali flats and lakes of eastern California and western Nevada, sent 253 specimens of algae. An additional 225 specimens of the algae of Burma were accessioned from Dr. L. P. Khanna, of Rangoon. From Professor William Randolph Taylor, Ann Arbor, Michigan, were received 138 specimens of Myxophyceae. Dr. George J. Hollenberg, Redlands, California, sent 107 specimens of Myxophyceae of California. Eighty-eight specimens of Canadian Myxophyceae from the Province of Quebec came from Dr. Jules Brunel, of Montreal. Mr. Hermann C. Benke, Chicago, contributed 83 specimens of cryptogams of Wisconsin. Dr. G. W. Prescott, Albion, Michigan, made a gift of 76 algae of the Canal Zone and Wisconsin. Mr. Lawrence J. King, of Richmond, Indiana, presented 69 algae of Wayne County, Indiana: Dr. Herman Kleerekoper, of São Paulo, 45 algae of Brazil; Mr. James R. Hurt, of Columbia, Missouri, 44 algae of Missouri; and Miss Barbara Willis, of Bennington, Vermont, 42 mosses of the Canal Zone.

The largest collection received by gift, but not yet prepared for accessioning, is a complete set of the several thousand numbers of Myxophyceae in the herbarium of the late Professor Nathaniel Lyon Gardner, of the University of California. One set of specimens of this collection is to remain at the university, and the duplicate sets are to be distributed from Field Museum.

A considerable portion, containing about 5,000 specimens, of the algal herbarium of the late Professor K. Okamura, of Hokkaido

University, was purchased in December from Dr. Shigeo Yamanouchi. It is hoped that these specimens, collected by the first great Japanese phycologist, will be made available for study at Field Museum some time in 1941. A large part of Kryptogamen Badens, of Jack, Leiner and Stizenberger, along with certain smaller sets of exsiccatae of cryptogams, was also purchased in 1940.

The algal herbarium of the late Professor W. A. Kellerman, of Ohio State University, consisting of 227 specimens from Guatemala, Ohio, and Europe, was placed in the cryptogamic herbarium of Field Museum through the courtesy of Dr. Clarence E. Taft and Mr. William A. Daily. This was acquired partially by gift and partially by exchange.

In exchanges, 291 specimens of algae and mosses were received from the New York Botanical Garden; 257 algae and bryophytes of California and the Pacific Islands from Dr. F. Raymond Fosberg, Arlington, Virginia; 252 Myxophyceae of the Philippines, collected by Dr. G. T. Velasquez, from the herbarium of the University of the Philippines; 145 algae of Montana, collected by Messrs. Fred A. Barkley and Stanley A. Ames, from the herbarium of Montana State University; and 110 Myxophyceae of Virginia, from Mr. J. C. Strickland, Charlottesville, Virginia. Field Museum sent in exchanges to various institutions, 1,471 specimens of cryptogams.

The study series of woods was increased considerably by material acquired mostly through exchange. The largest item, numbering close to 2,400 specimens, was received from Mr. B. A. Krukoff, of New York, as part payment for a complete set of photographs of type herbarium specimens. This includes more than seven hundred samples collected by Mr. Krukoff on his fifth expedition to the Brazilian Amazonia in 1934–35; approximately eight hundred numbers assembled in the same general region during 1936–37; a set of 385 specimens from the Bolivian Amazonia; 261 hand samples from the Sultanate of Asahan, Sumatra, Dutch East Indies; and a duplicate set of the material collected in 1929 by Mr. G. Proctor Cooper III in Liberia, West Africa, for Yale University School of Forestry.

Several hundred study specimens were received from the Botanical Service of the Ministry of Agriculture of Venezuela. These were collected by Curator Llewelyn Williams during his botanical explorations of the National Park, State of Aragua, and on his recent expedition to the region south of the Orinoco. Through the generosity of Señor Joaquin Avellan, of Caracas, the Museum received

nine panels suitable for exhibition purposes, representing some of the most widely used woods of Venezuela.

Mr. F. A. McClure, Curator of Economic Botany for the Lignan Natural History Survey and Museum, contributed 85 hand specimens of Chinese wood. Mrs. B. B. Lewis, of Guatemala City, gave 22 samples.

To the economic collections Dr. Elizabeth Bacon, of Seattle, Washington, and Captain W. J. Moody, of the British Legation at Peshawar, India, contributed 107 specimens of plant drugs sold in the markets of Meshed, Persia, and Kabul, Afghanistan. Other material received included samples of beans from Mr. Clayborn Wayne, State College of New Mexico; fruits of the ivory palm (Hyphaene) from Victoria Falls, Southern Rhodesia, donated by Mr. Robert B. Dickinson of Lake Forest, Illinois; and 73 specimens of fruits, seeds, oils, and palm material collected in Venezuela by Curator Williams.

The total of numbered specimens in the botanical collections at the end of the year 1940 was 1,067,247.

CATALOGUING, INVENTORYING, AND LABELING-BOTANY

During 1940 there were distributed in exchange to institutions and individuals in North and South America, and Europe, 91 lots of materials, totaling 9,917 items, including herbarium specimens, wood specimens, photographs, and typed descriptions of plants. Fifty-four lots of material, comprising 2,429 separate items, were received on loan for study or determination, and 119 lots, comprising 14,876 specimens, were lent for determination or for use in monographic studies.

Hundreds of index cards were typed for the study collection of woods, and all the wood specimens received during the year were stamped with the collector's catalogue number. Typed copies were also made of field notes to accompany herbarium specimens.

For convenience in reference, specimens of economic plant material, fruits, seeds, fibers, etc., were selected from the large quantity of material stored in the lockers under the cases in the exhibition halls. When properly classified and arranged for convenient access they will constitute a ready reference collection.

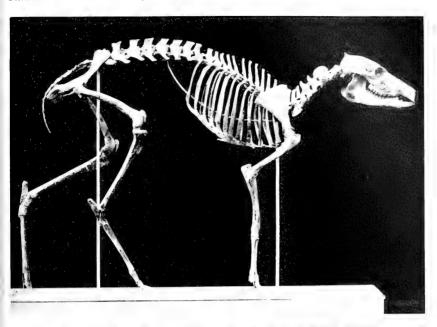
INSTALLATIONS AND REARRANGEMENTS—BOTANY

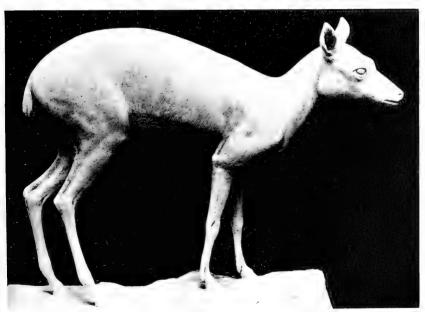
In the exhibition halls of the Department of Botany the most notable additions were made in the Hall of Food Plants (Hall 25), and in the Hall of North American Woods (Hall 26). In the former, ten new murals were added to those reported in 1939, increasing the total number to seventeen and completing the series now decorating three sides of the hall.

These paintings depict human activities concerned with the gathering, planting, and cultivation of Man's more important types of vegetable food, and the preparation, transportation, and commerce of foodstuffs. Two of the new murals are maps. One shows the ancient trade routes over which the products of the East were formerly brought to the Western World. The other shows the areas of origin of the principal cultivated food plants in the Old and New Worlds. The entire series thus constitutes a pictorial story of food plants and serves to enhance the interest of the botanical exhibits in this hall. These new murals, like those mentioned and figured in the previous year's Report of the Director, are the work of Mr. Julius Moessel, Chicago artist, well-known for his decorative paintings. Reproductions of the whole series have been published, with an accompanying text, in Botany Leaflet No. 25, The Story of Food Plants. An example is shown in Plate 16 of this Report.

The exhibits of North American trees and woods in C. F. Millspaugh Hall Hall 26 have been supplemented by the addition of many photographic transparencies showing forest types and woodland formations. Most of the photographs from which these have been made were obtained by loan and represent a selection from the vast number of negatives in the files of the United States Forest Service. A few are from the Museum's own files, and others have been obtained from individuals and associations such as the Save the Redwood League, American Lumberman, etc. Here, as in Hall 25, the presence of colored out-door scenes contributes greatly to the appearance of the hall and to the interest of the related specimens. A few of the installations of conifers in the northwest quarter of the hall were rearranged recently to provide a more orderly sequence.

In the Hall of Foreign Woods Hall 27 several additions were made to existing installations. These include a splendid plank of "ipil," a Philippine wood, donated several years ago by Mr. Ralph A. Bond of Chicago, and a fine specimen of West Coast mahogany Swietenia humilis, the gift of Mr. L. Lind Petersen, of Escuintla, Guatemala. From material received in 1937 from the Mexican government, and other sources, the exhibit of woods from Mexico was increased by the addition of an assortment of eleven species, mostly from the Isthmus of Tehuantepec. Other installations were Central





A SMALL FOSSIL DEER-LIKE MAMMAL

Skeleton and restoration of *Leptomeryx*, which attained only the size of a large jack rabbit. Collected from Oligocene deposits in the Bad Lands of South Dakota by a Museum expedition of 1905

Ernest R. Graham Hall (Hall 38)



American woods and four panels of East Indian woods. contributed by Ichabod T. Williams and Sons, New York, by Russel Fortune. Inc., Indianapolis, and by R. S. Bacon Company, Chicago: several full length panels of West African woods; and four European woods. Slavonian and Austrian oak, pearwood, and Turkish boxwood. In Martin A. and Carrie Ryerson Hall (Hall 29, Plant Life) the only additions made during the year were a ginger plant, reproduced by Artist-Preparator Milton Copulos, from a specimen of ginger grown in the Museum, and a large fruiting branch of a rose to illustrate a type of fruit hitherto lacking in the exhibit of the rose family. To the palm exhibits in Hall 25 there was added a reproduction of a handsome cluster of dates received a few years ago from the government experiment station at Tucson, Arizona. This reproduction is in large part the work of craftsmen working with the aid and under the supervision of Mr. Emil Sella, Chief Preparator of Exhibits, and Mr. Milton Copulos. The time and effort of the preparators of botanical exhibits have been devoted throughout the year mainly to work on new plant habitat groups for Ryerson Hall.

DEPARTMENT OF GEOLOGY

EXPEDITIONS AND RESEARCH

An expedition led by Mr. Paul O. McGrew, Assistant in Paleontology, spent four months collecting fossil mammals from the lower Miocene deposits of South Dakota and western Nebraska. The extensive series of specimens secured include two skeletons of a small gazelle-like camel, *Stenomylus*, and ten skulls and a large number of other bones of the primitive deer *Aletomeryx*. A rich microfauna of extinct rodents (Aplodontoidea, Geomyidae, and Heteromyidae), containing at least two new genera and several new species, was also obtained.

Bones of the giant fossil sloth *Megalonyx* were collected by Mr. Bryan Patterson, Assistant Curator of Paleontology, and Mr. James H. Quinn, Assistant in Paleontology, at London Mills, Illinois. Although far from a complete skeleton, and not to be compared in this respect with the giant sloths collected by the Marshall Field Expeditions to South America, it is much more complete than any of the other specimens of the genus found in Illinois.

Mr. Sharat K. Roy, Curator of Geology, spent three months collecting specimens relating to physical geology. During this time, eighty-five localities in nine states—Nebraska, South Dakota, Colorado, Wyoming, Virginia, New Jersey, Connecticut, New York,

and Massachusetts were visited, and several hundred specimens were collected. The specimens were carefully selected as to size and shape so that every one is usable for exhibition, if needed. They represent the work of ground water, the erosional work of running water, rock weathering, many forms of deformation of the rocks of the earth's crust, and various phases of metamorphism. During the last week of September Mr. Roy was assisted by Mr. Henry Herpers, Assistant Curator of Geology.

Mr. Bryant Mather, Assistant Curator of Mineralogy, spent about three months in the field in Maryland, Pennsylvania, Virginia, and West Virginia, making geological studies with special reference to structural analysis. The area studied contains the geological unit that forms the transition from the highly metamorphosed rocks of the Piedmont to the east and the more gently folded sedimentary rocks of the Shenandoah or Cumberland Valley and the Appalachians to the west. In connection with his studies, Mr. Mather made a sizable collection representing structural and dynamic geology. Most of these specimens are for study purposes, but some are suitable for exhibits and will be used in the reinstallations of physical geology exhibits in Clarence Buckingham Hall (Hall 35) now under way.

Assistant Curator Patterson spent three weeks in the American Museum of Natural History, New York, the United States National Museum, Washington, D.C., and the Museum of Princeton University, making studies and comparing specimens. In Museum publications there appeared two papers on South American fossil mammals by Mr. Patterson, and he is preparing five others. An article of his on fossil collecting appeared in the Chicago Naturalist.

Mr. McGrew wrote a paper, now in press, on a Miocene lagomorph for the Museum publications. Also, in collaboration with Dr. Everett C. Olson, of the University of Chicago, he prepared a paper on a Pliocene mammalian fauna from Honduras which will appear in the Bulletin of the Geological Society of America.

A paper describing a fossil turtle from Arkansas, by Karl P. Schmidt, Curator of Amphibians and Reptiles, was published in the Geological Series.

An article by Mr. Quinn, describing the use of rubber molds for making casts of fossils as perfected in the vertebrate paleontology laboratory, appeared in the Museum's Technique Series. Other articles on the subject by Mr. Quinn appeared in Rubber Age and Museum News, the latter a periodical published by the American Association of Museums. A leaflet on Collection and Preservation of

Fossil Vertebrates was prepared by Mr. Elmer S. Riggs, Curator of Paleontology, and is ready for publication.

Curator Roy spent the greater part of the year upon the completion of his memoir, The Upper Ordovician Fauna of Frobisher Bay, Baffin Land, which is now in press. This paper, based on his field work as a member of the Rawson-MacMillan Subarctic Expedition for Field Museum (1927–28) consists of the description and illustration of 116 species and the determination of their stratigraphic range. Of the species described, forty-two are new. The memoir is supplemented by a chapter, "Narrative of the Expedition with Notes on the Coastal Geology of Labrador and Baffin Land." This chapter has been introduced to maintain continuity of geological observations and to give the reader a bird's-eye view of the expedition as a whole.

The study of the fossils upon which the memoir is based reveals that no Black River or Trenton time is represented at the head of Frobisher Bay as previously reported, but all the strata therein present are of late Ordovician or Richmondian time. This conclusion clarifies a long-standing controversial phase of Arctic Ordovician stratigraphy.

The National Museum of Costa Rica, at San José, sent Field Museum a collection of varied geological specimens to be identified. All of these, except six fossil leaves which are now being studied by Dr. Ralph Chaney, of the University of California, were identified. The invertebrate fossils were identified by Dr. Otto Haas, formerly of Vienna, acting temporarily as a volunteer assistant. A paper by Dr. Haas, describing the fauna, is undergoing some revision and amplification before publication.

In the chemical laboratory four meteorites were analyzed by Assistant Curator Herpers. He also treated eighteen bronzes for the Department of Anthropology by the Fink process for curing malignant patina. None of the many specimens sent in for examination as possible meteorites proved to be meteorites. Numerous necessary qualitative analyses and microscopic studies were performed as usual. Also, 585 gallons of alcohol were purified for the Department of Zoology, and distilled water was provided as needed.

The equipment for sawing and polishing stone was, until August, in constant use, cutting and polishing the agates, fossil wood and other ornamental stones obtained by the Expedition to the Pacific Northwest (1938). When a supply of finished specimens ample for several years' needs had been accumulated, this work was discontinued, and the saw was put to use cutting to exhibition

size and shape the many specimens illustrating physical geology collected in 1940.

In the vertebrate paleontology workrooms molds were made from a plastic rubber mixture introduced and perfected by Assistant Quinn, and series of casts were made by this method from specimens of Mesembriornis, Barylambda, Haplolambda, Sparactolambda, Bathypsoides, Hippidium and Aepyornis. Copies of these casts were sent to ten museums by exchange, sale or gift. In return for the exchanges, many casts valuable for study and research were secured.

Plaster models were made of the primitive deer-like animal Leptomeryx, of the Miocene camel Oxydactylus, of the armored mammal Glyptodon, and of the great sloth Megatherium. These figures, all but one in miniature, are intended to supplement exhibits of fossils.

ACCESSIONS -- GEOLOGY

The Department of Geology recorded during the year seventytwo accessions which included 890 specimens. Classified by sources, 516 came as gifts, 50 were from exchanges, 298 were from expeditions or were otherwise collected by members of the staff, and 26 were purchased. These figures do not include the three collections. estimated to contain more than a thousand specimens, from the expeditions conducted by Curator Roy, Assistant Curator Mather, and Assistant McGrew. The unpacking and classifying of these is under way, but has not advanced to the stage of accessioning and cataloguing. No large collections were received by gift or purchase. Additions to the mineral collection, while not numerous, were important because they added many mineral species previously either lacking or poorly represented. Of these, the following are worthy of special mention: mazapilite and dussertite from Mapimi, Durango, Mexico, the gift of Mr. Francis Wise, of Colorado Springs, Colorado; dahllite, presented by Mr. O. J. Salo, of Red Lodge, Montana; shortite from Wyoming, the gift of Mr. Bryant Mather, of Chicago; ferritungstite, presented by Miss Ann Trevett, of Caspar, Wyoming; clinozoisite and thinolite, received from Dr. M. J. Groesbeck, of Porterville, California; chiastolite in the form of two plaques of transparent sections of crystals from Australia and Massachusetts, the gift of William B. Pitts, of Sunnyvale, California; and a small gem opal of fine quality, mounted in a silver band, presented by Mr. H. W. Plantz, of Chicago.

The meteorite collection was increased by the purchase of twentythree specimens of meteorites not before represented. Another interesting addition was a meteorite which came from near the Odessa meteorite crater, presented by Professor Lincoln La Paz, of Columbus, Ohio. It has special interest because it was excavated from a bed of limestone. The tektite collection, temporarily placed with the meteorites until the true nature of these puzzling objects is determined, was increased by the addition of seven specimens. Six of these are tektites presented by Mr. R. Schaap, of Batavia, Netherlands East Indies, and one is a fragment of Darwin glass obtained by an exchange with Mr. John D. Buddhue, of Pasadena, California.

The more important additions to the vertebrate fossil collection came from the Expedition to South Dakota and Nebraska, and are mentioned elsewhere.

Professor Arnim D. Hummel, of Richmond, Kentucky, owner of the ground near London Mills, Illinois, in which a partial skeleton of the giant sloth *Megalonyx* was buried, presented the fossil to the Museum. It was excavated by members of the staff. Other gifts of vertebrate fossils included nine fossil mammals, from Assistant James H. Quinn; a lower jaw of a fossil raccoon, from Mr. Grayson E. Mead, of Chicago; eighteen groups of fish teeth, from Dr. R. R. Becker, of Gainesville, Florida, and a skull of a fossil dog, from Mr. Robert G. Schmidt, of Homewood, Illinois.

The collections of rocks and physical and economic geology material were increased by important additions estimated to contain several hundred specimens from two expeditions conducted by Curator Roy and Assistant Curator Mather. These expeditions were not only eminently successful in their primary objective of obtaining specimens for the improvement of the physical geology exhibit, but they also obtained many specimens for the other collections of the Department. Forty-six miscellaneous specimens came from expeditions conducted by other Departments. Other accessions to the collections, which were fewer than usual, include eighty-nine specimens from fourteen donors.

CATALOGUING, INVENTORYING, AND LABELING—GEOLOGY

During 1940, there were 890 specimens catalogued in the Department's twenty-eight record books. All classified card catalogues have been kept up to date. The map catalogue, begun in 1939, is completed. A classified card catalogue of the gem collection in H. N. Higinbotham Hall (Hall 31) was made, and proved useful

in the preliminary stages of reinstallation of this hall. In all, the classified catalogues were increased by the addition of 4,258 cards.

Copy for 1,125 labels was prepared and sent to the Division of Printing. Labels installed numbered 1,264.

INSTALLATIONS AND REARRANGEMENTS - GEOLOGY

Changes in the mineral installation in Hall 34 were limited to some replacements of inferior specimens by better ones, and the addition of miscellaneous specimens received during the year. This collection, with its 32,000 specimens, now covers almost the entire range of mineral species and varieties. In the nearly forty-eight years of Field Museum's existence the number of specimens in the mineral collection has quadrupled, largely through the efforts of the late Dr. Oliver C. Farrington, former head of the Department, and the goal of complete representation has been ever more closely approached. Of the 824 distinct mineral species known in 1892, the original collection purchased at the time of founding the Museum included 491, and up to the beginning of 1940 there had been added 120 more. In 1940, examples of five more of these "original" mineral species, as well as of four other species not before represented, were added to the collection.

The meteorite collection was enlarged by the addition of twenty-four meteorites and eight tektites. Much of the interest in iron meteorites lies in the Widmanstätten figures, which are interlacing patterns of bands and lines developed on polished surfaces of the meteorites by etching with acid. Old methods of etching meteorites produced results much inferior to those obtained by applying the technique more recently developed in the laboratories of the United States National Museum. The figures on many of the older specimens are dull, often imperfect, and sometimes spotted with rust. A program of re-etching such meteorites as inspection shows can be improved, has been started, and twenty-four have been treated.

Revision and reinstallation of the exhibits of physical and economic geology and paleontology in Halls 35, 36, 37, and 38 continued. As this involves transfer of exhibits between the halls, reinstallation of all four is proceeding simultaneously. None of the halls have been closed, and although many cases have been emptied, it has been possible so to conduct the work that the major part of the exhibits always remains on display.

Installation of the improved physical geology collection which occupies the east half of Clarence Buckingham Hall (Hall 35) was

interrupted when early reports from collecting parties in the field indicated that material superior to any now in the collections will soon be available. These collections were received late in the year and the work of preparing them for exhibition was started. Many of the new specimens require cutting on the stone saw to a size and shape suited for exhibition. The large model of the Natural Bridge of Virginia was moved from Hall 34 to a better location in the corridor connecting Halls 35 and 36.

Reinstallation of the industrial mineral exhibit in Hall 36 continued during the first part of the year as fast as reconditioned exhibition cases became available. As the new installation includes much material transferred from Frederick J. V. Skiff Hall (Hall 37), a necessary condensation was made by transferring to the study collections specimens primarily of interest to specialists. There they remain available to those competent to profit by their study. It is believed that the new installation, although holding fewer specimens of most groups, will be of more general interest. Three and one-half cases of fluorite, barite, and sulphur were installed. Further installation was postponed to allow closer attention to preparations for reinstallation of the gem collection.

Removal from Hall 36 of overflow material from the industrial mineral exhibit (which formerly filled the west half of Hall 37) is nearly completed. This change provides space for the invertebrate paleontology exhibit, which is to be moved from Hall 38. Some of the exhibits were reinstalled in Hall 36, others were taken to the workrooms for revision before reinstallation, and still others were transferred to the study collection. The marbles and building stones for which no space could be found in the new installation were retired.

In the ore collection (east half of Hall 37) one case of tin and antimony, and one case of rare metals were reinstalled.

The conversion of Ernest R. Graham Hall (Hall 38) from a hall of general paleontology into a hall of vertebrate paleontology, for which plans were made in the preceding year, was actively prosecuted throughout 1940. This required, besides preparation of new specimens and of specimens not before shown, remounting and refinishing many of the older exhibits.

New exhibits include a skull of the large horned dinosaur Anchiceratops, and an unusually large skull of the swimming reptile, Tylosaurus. Skulls of the extinct mammals Achaenodon, Dolichorhinus, Daphaenus, and Desmathyus were prepared for exhibition, and a large number of other mammalian specimens were added to

the study collection. A skull of the fossil amphibian Buettneria, and shells of two large fossil turtles, were prepared and mounted for exhibition. More notable specimens are a skeleton of the giant beaver, Castoroides, and a skeletal restoration of the great South American carnivorous bird, Mesembriornis (Plate 20), both mounted by Assistant James H. Quinn. A large section from the famous bone deposit at Agate, Nebraska, was prepared under his supervision. A skeleton of the Pliocene camel Procamclus was prepared and mounted under the supervision of Assistant Paul O. McGrew.

Fossil skeletons remounted include one of the great South American armored mammal, Glyptodon clavipes, to which leg bones and pelvis were added to make an essentially complete specimen. The older collections of fossil fish-lizards, crocodiles, and plesiosaurs of the European Jurassic were refurbished; seven of the specimens were remounted, and all were installed in two cases with new labels. A case of Paleozoic and Jurassic fishes, and one of Cretaceous and Eocene fishes, were likewise gone over and reinstalled, as were two cases of Cretaceous swimming reptiles and flying reptiles, all under the supervision of Curator Elmer S. Riggs.

A new type of case without shelving, and with lower base and consequent enlarged exhibition space, has been adopted for Ernest R. Graham Hall (Hall 38). A new type of lighting also provides much more effective illumination for exhibits. In this new type of case, the exhibits enumerated above were installed.

Preparation for a complete reinstallation of the gem collection in H. N. Higinbotham Hall (Hall 31) occupied much of the time of the staff during the last four months of the year. The new installation will be in especially designed cases with improved illumination. Methods of display have been adopted which will bring out the full beauty of the gems in a manner impossible in the old installation. As no catalogue of the gems was available, and as many of the specimens are of great value and so small as to be easily mislaid, extraordinary means were taken to prepare and check a list of all specimens and to safeguard them from the time of dismantling the old collection until reinstallation.

Before the cases were opened a check list was made containing a description of each specimen with a copy of its label and such data as could be found in the records. All cut stones which could not be numbered without impairing their appearance were measured and weighed to the nearest milligram, and these figures recorded against the catalogue numbers assigned to them. It will always be possible



ALASKAN FUR SEAL ROOKERY
Seene at the breeding grounds on the Pribilof Islands
Taxidermy by C. J. Albrecht. Background by Arthur G. Rueckert
Hall of Marine Mammals (Hall N)



from these records to identify any gem that at some future time might accidentally become separated from its label. All other specimens were numbered and the numbers recorded. A card catalogue has been prepared from the check list, and as the cards contain records of the size of every specimen, it has been possible to mark on blue prints of the interior of the cases the place each specimen is to occupy in the new installation. The use of these plans will greatly expedite the actual installation when the cases are ready, and will allow the installation to proceed with a minimum of handling specimens.

Thirty-five sections of steel tray racks were placed in rooms 108 and 116 to provide increased accommodation for the study collections of physical geology and mineralogy. Over-crowding of the study collection has been relieved, and the collection is now in as good order as is possible until the contemplated increase of storage facilities becomes available.

DEPARTMENT OF ZOOLOGY

EXPEDITIONS AND RESEARCH

The Magellanic Expedition of Field Museum, sponsored by President Stanley Field, in 1940 completed the work in South America which it began in 1939. The party, led by Dr. Wilfred H. Osgood, Chief Curator of Zoology, included Mr. Colin C. Sanborn, Curator of Mammals, and Mr. John M. Schmidt, field assistant. The Chilean city of Punta Arenas, on the north side of the Strait of Magellan, was reached about the middle of December, 1939. Punta Arenas, head-quarters for the expedition from December 15 to March 15, is the southernmost continental city in the world. Far removed from other parts of South America, and with a population of about 30,000, it is the metropolis of a little world of its own in a region devoted mainly to large scale sheep raising.

A two-ton Ford truck, purchased for the work in the Magellanic region, proved invaluable in transporting the party with its equipment and collections. A representation of the mammals from the great island of Tierra del Fuego (the "Land of Fire"), which is cut off from the mainland of South America by the Strait of Magellan, was the main objective of the expedition. Various collecting stations were established on the island, two in the far south on Lakes Fagnano and Yewin. Headquarters for a considerable stay were generously provided at the Reynolds' Ranch at Via Monte, and a short stop was made at Estancia Cullen, to the north. A very satis-

factory collection of mammals and birds was made at these localities, including series of the rare Scoresby's gull and of the sheathbill.

On the mainland, collecting was carried on at nine localities to the north and east of Punta Arenas, and within a radius of 200 miles. A comprehensive collection of all of the small mammals of the region was obtained, including all the forms known with the exception of a burrowing rodent, now apparently extinct. However, two specimens of a new species, representative of the form thought to be extinct on the mainland, were obtained on Riesco Island. In all, the collection includes 472 mammals, and is much the most extensive ever made in the Magellanic region, now especially important in view of the trend toward extinction of many forms under the alterations of soil and vegetation produced by the vast flocks of sheep. The collection includes also 155 birds and a few lizards of the southernmost form in South America.

Work ended the middle of March at the end of the brief Antarctic summer. Mr. John Schmidt returned to New York with the collections via the west coast. Dr. Osgood and Mr. Sanborn proceeded by steamer to Buenos Aires, whence Dr. Osgood returned to Chicago via the east coast of South America, visiting São Paulo, Brazil, en route, for a conference with Dr. Oliverio Pinto, Director of the Museu Paulista in that city.

Curator Sanborn spent two weeks in further collecting in Argentina, at Dorrego, near Bahia Blanca, and at Chimpay on the Rio Négro. Returning to Buenos Aires, he took the train for Cochabamba, Bolivia, to examine collections offered for sale. After a short stop in La Paz, he crossed Lake Titicaca to Puno, Peru.

The work of the Magellanic Expedition in Peru during 1939 had defined certain geographic problems in the distribution of small mammals, and indicated desirable additional collecting stations in southern Peru. Collections of mammals, birds, and reptiles were made at Yunguyu and at Pocosani in the Lake Titicaca region, at Baños de Jésus above Arequipa, and at Chucurapi, a sugar plantation near the coast. At the latter place a remarkable bat, hitherto extremely rare in collections, was obtained in good series. The mammals collected in Peru in 1939 and 1940 total 633. The total number of mammals collected by the expedition is 1,419. Birds collected number 334, and reptiles and amphibians 1,694.

The Museum is greatly obliged to the personnel of the American embassies and consulates in Peru, Chile, Argentina, and Bolivia, for aid and advice to the Magellanic Expedition. In addition,

important assistance was rendered by Dr. Carlos Nicholson and Señor Fernando Lopez de Romano, of Arequipa, Peru; by Mr. George Hodgson, of Talca, Mr. Fred Turner, of Osorno, Mr. William Fell and his son, of North Arm Station, Mr. John Dick and Messrs. Greer and McLean, of Punta Arenas, all in Chile; by the Bridges, Reynolds, and Goodall families of Tierra del Fuego; and by Mr. Hal Hodges, of Buenos Aires, Señor José Maria Perez Bustos, of Bahia Blanca, and Señor Gaston Pawley of Chimpay, Argentina.

The Mandel Caribbean Expedition, led by Mr. Leon Mandel, of Chicago, and conducted aboard his yacht, the *Buccaneer*, was in the Caribbean region from January 1 to February 9, 1940. Messrs. Rudyerd Boulton, Curator of Birds, and D. Dwight Davis, Assistant Curator of Anatomy and Osteology, accompanied the expedition. By means of the *Buccaneer*, they were able to make collections of birds, mammals, and reptiles on remote and little visited islands, together with considerable collections of fishes, numerous invertebrates, a specimen of the rodent genus *Capromys* embalmed for anatomical study, and a specimen of the relatively rare Cuban crocodile.

The party visited Swan Island and the Bay Islands off Honduras, various islands off the coast of British Honduras, including Glover's Reef, Half Moon Cay and Turneffe Island, and Mujeres, Cancun, and Contoy Islands, off Yucatan. No opportunity was lost to obtain collections from these little-visited islands. The expedition, in addition to various lots of invertebrates, collected more than 500 fishes, 350 reptiles and amphibians, 150 birds, and 36 mammals.

A motion picture record of the Mandel Caribbean Expedition, in color film, was made by Messrs. Boulton and Davis. This includes especially interesting views of the nesting rookeries of sea birds on the islands visited, and slow motion flight pictures of various birds, especially of the frigate bird.

The year's publications in the Museum's Zoological Series include A Tentative Classification of the Palearctic Unionids, by Dr. Fritz Haas, Curator of Lower Invertebrates; Notes on Texan Snakes of the Genus Salvadora, by Karl P. Schmidt, Curator of Amphibians and Reptiles; A New Toad from Western China, by Curator Schmidt and C. C. Liu, of West China Union University; A New Venezuelan Honey Creeper, by Emmet R. Blake, Assistant Curator of Birds; A New Savannah Sparrow from Mexico, by Sidney Camras, former aid in the Division of Birds; Notes on the Anatomy of the Babirusa, by D. Dwight Davis, Assistant Curator of Anatomy and Osteology; and Studies of the Anatomy of the Extrahepatic Biliary

Tract in Mammalia, by Stewart Craig Thomson, of Loyola University, Chicago. "Mammals from Iraq," by Colin C. Sanborn, Curator of Mammals, appeared as an appendix in Anthropology of Iraq, by Dr. Henry Field, of the Department of Anthropology.

Publications outside the Museum by the Department staff include seasonal reports on the bird life of the Chicago region in Bird Lore, by Rudyerd Boulton, Curator of Birds, and Assistant Curator Blake; a technical report on the amphibians of China, by Clifford H. Pope, Assistant Curator of Amphibians and Reptiles, and Dr. Alice M. Boring of Peking, and a book by Mr. Pope, China's Animal Frontier, an account in popular style of his travels as a museum collector. Dr. Fritz Haas published a paper, Ecological Observations on the Common Mollusks of Sanibel Island, resulting from Field Museum's Florida Expedition of 1939.

Thirteen signed articles were written for Field Museum News by various members of the Department.

Research activities of the staff not reflected in published work include continued studies on bats by Curator Sanborn, who has a taxonomic monograph of the family Rhinolophidae in preparation; a technical report on various malacological collections and specimens, by Curator Fritz Haas, ready for publication in the Museum's Zoological Series at the end of the year, and studies on Peruvian mollusks by Dr. Haas. In the Division of Birds, in addition to Curator Boulton's continued studies on African birds and especially on the birds of Angola, Assistant Curator Blake completed preliminary studies for his report on the birds of British Guiana based on the results of his expeditions in 1937 and 1938. He also collaborated with Mr. Harold Hanson, of the University of Wisconsin, in the preparation of a report on a collection of birds from Mexico.

The third and last part of Dr. Reuben Myron Strong's monumental compilation, A Bibliography of Birds, was submitted for publication in 1940, and should soon be available to students. Part III contains the subject index, with an average of three references to each title in the author catalogue.

Dr. Charles E. Hellmayr, Associate Curator of Birds, now resident in Geneva, Switzerland, continued his research on New World birds. The manuscript of that part of the Catalogue of Birds of the Americas dealing with game birds, completed in co-operation with Mr. Boardman Conover, Research Associate in Ornithology, is in press, and the completed manuscript of the last volume of the series has been received by the Museum.





GIANT CARNIVOROUS BIRD

Collected from Pliocene deposits of Catamarca, Argentina, by the Marshall Field
Paleontological Expeditions (1922–27)

Ernest R. Graham Hall (Hall 38)

contention of the for

In the Division of Amphibians and Reptiles, Curator Schmidt continued studies on the amphibians and reptiles of Central America and southwestern Asia, and the fossil representatives of the living orders of reptiles, preparing a paper for the Museum's Geological Series on a fossil turtle from Arkansas, with another publication well advanced on a Miocene alligator from Nebraska. In the Division of Insects, two papers by Assistant Curator Rupert L. Wenzel were ready for the press at the end of the year, and two further papers based on Field Museum material had been accepted for publication, one on termitophilous Diptera by Dr. Charles H. Seevers of the Central YMCA College, Chicago, and one on Mallophaga by Miss Theresa M. Clay, of the British Museum. In the Division of Fishes, Curator Alfred C. Weed agreed to prepare an account of the mullets for a comprehensive work on the fishes of the northwestern Atlantic, and made some studies in preparation. In the Division of Anatomy and Osteology, Assistant Curator Davis continued the accumulation of drawings and manuscript toward a comprehensive account of the anatomy of the giant panda based on the dissection of the famous "Su-Lin."

Various members of the staff attended scientific meetings during the year and engaged in studies at other museums. Chief Curator Osgood attended the Eighth American Scientific Congress in Washington in May, as the representative of the Museum. Curator Boulton and Assistant Curator Blake attended the meetings of the American Ornithologists' Union in Boston, and Mr. Boulton was re-elected treasurer and business manager of the Union. He gave an illustrated lecture on the Mandel Caribbean Expedition, and Mr. Blake read a paper on the birds of the Brazilian frontier of British Guiana. Curator Haas attended the meeting of the American Malacologists' Union in Philadelphia in June. Assistant Curator Davis visited several eastern museums in October to examine anatomical exhibitions, and to discuss his important work on the anatomy of the giant panda with colleagues engaged in similar studies.

ACCESSIONS—ZOOLOGY

The accessions for the year numbered 482, comprising a total of 41,756 specimens. Classified, these consisted of 1,621 specimens of mammals, 7,463 birds, 10,525 birds' eggs, 4,936 amphibians and reptiles, 6,487 fishes, 7,384 insects and related forms, and 3,340 lower invertebrates, the last mostly mollusks. Included in the above figures are 337 specimens of mammals, birds, and reptiles preserved for anatomical study or prepared as skeletons.

The accessions received as gifts include 21,775 specimens; by exchange, 435; from Museum expeditions, 12,021; and by purchase, 7,525. Notable gifts of mammals include two lots of Mexican mammals, 94 from Mr. E. Wyllys Andrews, of Cambridge, Massachusetts, and 47 from Mr. Harry Hoogstraal, of Champaign, Illinois. Important also are gifts of 39 specimens from the Chicago Zoological Society, and three from the Lincoln Park Zoo.

Gifts accessioned in the Division of Birds include 11,923 specimens, of which 1,398 are birds and 10,525 are eggs. These come from thirty-eight individuals and institutions. The two large gifts of eggs include 9,869 from the Estate of C. K. Knickerbocker, Chicago, and 657 from Mr. Joseph M. Wells, of Chicago. Important gifts of birds include 272 specimens from the Chicago Zoological Society; 64 from Mr. Boardman Conover, Chicago; 732 from Mr. Melvin A. Traylor, Jr., Chicago; 26 from Mr. John A. Holabird, Chicago; and 44 from Mr. Bernard Bartnick, Chicago.

Gifts of reptiles and amphibians include an important collection from Yucatan made by Mr. E. Wyllys Andrews and Mr. Melvin A. Traylor, Jr., resulting from an expedition financed mainly by them. Dr. Henry Field, Chicago, and Mrs. Robb White, Jr., Thomasville, Georgia, presented 115 specimens from Georgia and Florida. Numerous specimens were presented by the Chicago Zoological Society and the Lincoln Park Zoo.

The most important gifts among the accessions of fishes were a mounted Pacific black marlin, and a model of a large thresher shark, received from Mr. Michael Lerner, of New York. These specimens were collected in the course of an expedition to New Zealand and Australia.

A notable gift of insects, spiders, and scorpions was made by Padre Cornelio Vogl, of Caracas, Venezuela; 733 specimens, from both North and South America, were presented by Mr. Henry Dybas, of Chicago; 413 specimens of neotropical histerid beetles including six types and ten paratypes were added to the collection by Mr. Rupert L. Wenzel, Chicago; and Dr. Charles Seevers, of Chicago, presented 52 specimens, which include six types and six paratypes of new species of termitophilous flies from the neotropics.

A considerable gift of mollusks and other marine invertebrates came from Mr. Ben Cascard, of Gary, Indiana.

The study collections of the Division of Anatomy and Osteology have grown chiefly through the gift of specimens from the Chicago Zoological Society. The Division co-operates closely with the Society's Brookfield Zoo, taking charge of animals after they die, and arranging for their best scientific use.

The collections received through Museum expeditions, including collecting of insect parasites from the collections of birds and mammals in the Museum's existing collections, amount to 12,021 specimens. Of these, the most important are the mammals, birds, reptiles, fishes, and various invertebrates from Chile, Argentina, and Peru, obtained by the Field Museum Magellanic Expedition. The Museum bore a minor share of the expense of an expedition to Yucatan by Messrs. E. Wyllys Andrews and Melvin A. Traylor, Jr., whose large collections have been credited as gifts. The collections of birds, mammals, reptiles, fishes, and marine invertebrates made by the Mandel Caribbean Expedition amount to more than 1,000 specimens.

Exchanges were made during 1940 with the British Museum (Natural History), the Museum of Comparative Zoology, Cambridge, Massachusetts, and with various individuals. Purchases include noteworthy specimens from Mexico, the United States, and Bolivia for addition to the reference collection.

Through the fund established in memory of the late Leslie Wheeler, former Trustee of the Museum and Research Associate in the Division of Birds, 85 specimens of birds of prey were added to the collection. An additional 5,133 study skins from the Bishop Collection were received from Dr. Louis B. Bishop, of Pasadena, California, supplementing the 35,076 specimens received from this source in 1939.

CATALOGUING, INVENTORYING, AND LABELING—ZOOLOGY

The entries in the departmental catalogues for 1940 number 26,559, of which 2,127 are for mammals, 19,371 for birds, 2,565 for reptiles and amphibians, 157 for fishes, and 2,339 for lower invertebrates.

Storage space for the reference collection of mammals was increased by forty-one cases, eighteen in Room 76 and thirty-three in Room 78. A complete rearrangement of the collection, made possible by these additional cases, has been undertaken, and about half the work of relabeling the drawers and cases completed. The reattachment of the original labels to specimens received before 1908 has continued, and 975 such specimens have been relabeled. Other specimens labeled total 8,548 skins and 4,298 skulls in bottles and boxes. New index cards typed and old ones retyped total 5,647.

The catalogue entries for birds represent 19,086 skins, 220 skeletons, 19 alcoholic specimens, and 46 sets of eggs. The organization of the reference collection, involving the incorporation of the Bishop Collection and other recent large accessions, was a major activity of the Division of Birds in 1940. The assignment of ninety-four large specimen cases on the west gallery of the fourth floor to birds makes possible a complete rearrangement. The families of birds listed in the first two volumes of the Check-list of Birds of the World (Struthionidae to Alcidae) have been arranged in this space, while the remaining families (Pteroclidae to Fringillidae) occupy the cases on the third floor in Room 76.

The work of the Division was greatly advanced through the services of four volunteer assistants. Miss Sally Lawson, of Vassar College, worked full time from July to mid-September and finished sorting the Bishop Collection for the catalogues. Mrs. Herman Dunlop Smith, of Lake Forest, averaged two days a week in the Division throughout the year. Mrs. John A. Holabird and Miss Florence Cluett, both of Chicago, devoted several days each week to routine work during the latter part of the year.

A complete rearrangement of the reptile collection was undertaken by Assistant Curator Clifford H. Pope upon his arrival to join the staff of the Museum in June. This was made possible by the expansion of the storage and laboratory space of the Division of Reptiles mentioned in the 1939 Report. Many new labels for the cases, drawers, and bottles were made during the course of this work.

Newly catalogued specimens in the Division of Fishes were numbered, labeled, and placed on the storage shelves, together with a considerable number which were identified by Dr. Carl L. Hubbs, of the University of Michigan, during his several visits to the Museum.

In the Division of Insects, besides pinning, spreading when necessary, pin labeling, and distributing most of the specimens received, a number of butterflies, moths, and flies were transferred to new drawers. Much needed attention was given to specimens in alcohol, which were sorted, labeled, placed in more suitable containers, and arranged in systematic order, making them more accessible and useful. Spread and respread were 1,457 butterflies and moths, the old brass pins being replaced with japanned pins.

In the Division of Lower Invertebrates the principal activity for the year was also the arrangement of the collection in new cases on the fourth floor. In addition to the cataloguing of new material,



NORTH ISLAND KIWI

Nest with two eggs and attendant female at the base of Mount Egmont, New Zealand
Taxidermy by John W. Moyer. Background by Arthur G. Rueckert
Accessories by WPA workers under direction of Frank H. Letl of Museum Staff
Hall of Birds (Hall 20)



with 2,128 entries in the catalogue of mollusks and 211 in that for other invertebrates, 1,158 older entries were checked and the lots of specimens relabeled. In the course of unpacking the collections from storage in the basement of the building, several collections of scientific importance have come to light, such as the Sonshine collection of mollusks from California, and the uncatalogued Elihu Hall collection from various parts of the United States. A capable volunteer worker, Mrs. M. J. Taylor, classified, catalogued, and labeled most of the collection of echinoderms, but was compelled to relinquish her work in May on account of ill health.

INSTALLATIONS AND REARRANGEMENTS—ZOOLOGY

The habitat group of northern fur seal (Plate 19) is a notable addition to the Hall of Marine Mammals (Hall N). The scene depicted is on St. Paul's Island, one of the Pribilof group in the Bering Sea. Forty mounted seals are included, showing old bulls with their "harems" of females and many small pups. A herd of young seals is shown in the background. Among these are some of the three-year-old males called "bachelors," the surplus of which supplies the market with sealskin furs. Various sea-birds such as the auklets and puffins, which nest in the seal rookery, are also shown. The materials and studies for the group were collected by Staff Taxidermist C. J. Albrecht in 1937, and he prepared them himself, aided by Assistant Taxidermist Frank C. Wonder. The background, in which the foggy atmosphere of the Pribilofs is captured with extraordinary realism, is by Staff Artist Arthur G. Rueckert.

Additions to the systematic collection of mammals in Hall 15 include a Mongolian wild ass mounted by Staff Taxidermist Julius Friesser. The case of South American monkeys was revamped by Staff Taxidermist W. E. Eigsti, seven new specimens being added; it now includes all but one genus of the South American primates. Mr. Eigsti also mounted specimens of the Guinea baboon, wombat, and Tasmanian devil for the systematic series.

Mr. Friesser completed the mounting of six African forest hogs for a group, to be completed in 1941, with accessories to show their African forest habitat. He also mounted a Philippine pig, a river hog, and a bush pig for the systematic case of pigs. These were supplemented by a reproduction of a babirusa, prepared by Staff Taxidermist Leon L. Walters. This was made in celluloid, by the special process originated and developed at the Museum by Mr. Walters more than twenty years ago, and increasingly used ever since that time.

A new habitat group in Hall 20 has its scene laid at the base of snow-capped Mount Egmont in New Zealand, to provide a setting for Mantell's kiwi. The kiwis are remarkable flightless birds characteristic of New Zealand. The mother bird in the group stands beside a nest which contains its two disproportionately large eggs. The group Plate 21, was prepared by Staff Taxidermist John W. Moyer, with accessories by Preparator Frank H. Letl, and background by Staff Artist Rueckert.

In the systematic collection of birds in Hall 21, the introduction of a case near the east entrance under the heading "What is a bird?" forms a step toward the more subjective and educational type of exhibit which has become of increasing importance to a logical growth of the Museum's public displays. This case shows the place of birds among their vertebrate relatives, and demonstrates some of the major peculiarities of the bird group, such as the modification of the arms into wings, the elaborate feather structure, and the system of air-sacs which pervade the body. Much care was expended on the preparation of the models for this screen, and on the accompanying explanatory labels, by Miss Nellie B. Starkson, Artist-Preparator, under Curator Boulton's supervision. The systematic series was amplified further by the installation of two screens of the ducks of the world, one of the eagles, hawks, and vultures, and one of the herons, storks, and ibises, all the work of Mr. Moyer.

A temporary exhibit of eggs, based upon the recently acquired Knickerbocker Collection, was prepared for exhibition in Stanley Field Hall at the Easter season. It attracted much favorable attention, and was later removed to the southwest corner of Hall 21.

A considerable number of celluloid models of reptiles and amphibians was finished during the year, but none were placed on exhibition, pending rearrangement of the cases. Staff Taxidermist Walters was engaged in the completion of the habitat group of the loggerhead turtle, shown laying its eggs at night on a Florida sea beach. This group will not be opened until the individual lighting of the adjacent systematic cases and the opposite crocodile group, planned for completion in 1941, makes possible the solution of a serious problem of reflections. Two cases of enlarged models of tadpoles were in an advanced stage at the end of the year. These are the work of Preparator Frank H. Letl and Mr. J. B. Krstolich, and embody much research in the use of plastics suitable for this purpose.

Much progress was made in the preparation of fish exhibits in 1940. The specimens exhibited in Hall 18 were transferred to new cases in Hall O on the ground floor. New individual labels were ordered prepared for the entire collection, and experiments were made in the style of the large case labels. The new built-in cases with fluorescent lighting are a great improvement over anything previously used in the Museum for fishes. The habitat group of fishes of the Texas coast was enlarged and improved for its permanent installation in Hall O. It shows the fishes of the sandy bottom and their association with the "oyster lumps" which develop in such situations. A colorful habitat group of the New England fishes, exhibiting the marine life of a tidepool on the rocky coast of Maine, was completed during the year. Installation and preparation of both systematic collections and groups was the work of Staff Taxidermist Leon L. Pray. Accessories for the groups were produced under Mr. Letl's direction. Hall O requires only finishing touches and the completion of labels, and is scheduled for opening in 1941.

Experiments were made by the Division of Insects to decide on a style of case, and on labels and other details, for the exhibit of insects planned for Hall 18. A small group of Florida tree snails was installed among the lower invertebrate exhibits in Hall M.

The construction of a workroom for the Division of Birds on the fourth floor is an especially important improvement in conjunction with the establishment of a large share of the bird collection in the new cases in the west gallery on that floor, as it provides adequate working space accessible to the collections.

N. W. HARRIS PUBLIC SCHOOL EXTENSION

Because of the reserve of material acquired in preceding years, no extensive collecting was necessary during 1940 to enable the work of the Harris Extension to proceed at an active rate. Nevertheless, ten days were spent by staff members in local field work to procure specimens needed for immediate use or to add to reserve collections. Forty-seven birds were obtained, of which thirty-one were mounted for exhibition purposes, and the remainder added to reserves. Twenty-seven bird skins were purchased to replace an equal number destroyed while on loan at an elementary school. Numerous plant specimens, particularly common trees, were collected for inclusion in the loan herbarium now maintained by this Department.

During the year twenty-four exhibits were prepared, of which sixteen were installed in standard-sized cases, and eight in a new type of hand case. Worthy of special comment among these exhibits are six relating to the life of the honeybee in which effective use was made of photomacrographs to show those details of the insect's anatomy which are ordinarily pointed out in elementary science instruction as remarkable instances of adaptation. Also, in four cases containing realistic models of a poison ivy plant, tinted photographs were used to portray a typical case of ivy poisoning. The original illustration, also a tinted photograph, was supplied by Dr. A. W. Stillians, of Northwestern University Medical School.

The new type of hand case was designed as a container for small specimens which are best examined at close range. It is approximately $4 \times 13 \times 18^{+}2$ inches, is constructed of plywood, and has metal-bound corners, a hinged lid and suitcase latches. The bottom of the case may or may not be covered with glass, depending on the nature of the material, and the inside of the lid is suitable for descriptive matter, charts, or photographs. Four such cases were installed with synoptic collections of insects to illustrate the principal common orders, two were installed with insects directly or indirectly beneficial to man's economy, and two were installed with injurious insects.

The remaining six of the twenty-four cases were in a sense reinstallations because the original mounted animal specimens were retained. However, since revisions were radical and extensive, with much new material added, they have been counted as new exhibits. The subjects thus treated were the prairie dog, prairie chicken, tree sparrow, and hummingbird, of which two cases were prepared.

Scenic backgrounds painted by a Work Projects Administration artist, were added to ten cases. The marked superiority of painted backgrounds over the tinted enlarged photographs extensively used heretofore greatly improved the effect of realism in these habitat groups. Considerable work also was done to the specimens and foregrounds when the new paintings were placed.

A hand-powered hydraulic press with electrically heated platens, capable of exerting a pressure of thirty tons, was purchased to facilitate the production of celluloid or other plastic casts from metal molds. With this machine, the Harris Extension now employs a technique in which high temperatures and great pressures are used to produce artificial foliage with the quality of good wax leaves, yet with the greater strength and durability to be had in plastic materials.

Many highly complimentary letters of appreciation were received from teachers and principals who find that the portable Museum exhibits aid materially in the teaching of science in the schools. Fourteen additions were made to the list of those receiving Harris Extension cases, and three recipients were removed. The net gain of eleven brings the total served at the end of the year to 485. Since the lending service of the Museum includes practically all of the public schools, increase in the number reached is to be expected only through the gradual growth of the public school system and the inclusion of more denominational schools and social service agencies such as the six Chicago Boys' Clubs and three hospital schools added in 1940.

Thirty-four cases each were delivered during the year to 481 schools and other Chicago institutions. In addition to the 962 cases thus kept in constant circulation, twenty-four loans totaling sixty cases were made in response to special requests. Thirteen of these requests included unattached objects such as bird study skins, herbarium sheets, or geological specimens, all of which could be handled by pupils, and nine were for standard cases only. Various exhibits and specimens were supplied for the elementary school science teacher conferences held in the Lecture Hall of the Museum under the auspices of the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures.

A metal stand with casters was designed to increase the usefulness of the portable Museum cases in special schools where many pupils are confined to beds or wheelchairs, and a trial stand was constructed in the Museum shops. It supports two Harris Extension cases in a way which enables them to be wheeled into position at bedsides, or to be viewed conveniently by a seated person. This type of stand will be used by at least ten special schools, and there are prospects of its being adopted by many other schools using Harris Extension cases.

The two Museum trucks traveled a total of 11,865 miles in the distribution of cases. Such work as was necessary to keep the trucks in good mechanical condition, and preserve their appearance, was completed during the summer months.

With a certain minimum of material required to maintain the pattern of service which has developed over a period of years, the efforts of the Harris Extension staff have been devoted in a large degree to the task of re-working old exhibits as well as creating new ones. After a few years, damaged or obsolescent material tends to accumulate at a rate faster than the preparation of new exhibits to replace it. Repairs must be made quickly and continuously in order that no deficiency of loan material may be experienced.

Nevertheless, there was a marked reduction in the amount of damage to cases directly attributable to accident or misuse in any particular school. The front glasses were broken in twenty cases. 31 per cent less than the previous year; fifteen label frames were damaged, a reduction of 75 per cent; and the woodwork of nine cabinets was injured as against ten in the preceding period. These figures lose significance, however, in view of the total repairs made necessary through wear and tear accumulated over a period of time. Exclusive of complete reinstallations, repairs were made to installations in sixty-nine cases, cabinet repairs to eighty-one cases, and label frame repairs in 125 instances. New bottoms were fitted to eighty cases, hanger strips were added to ninety-two cases, and auxiliary label guides to 108 cases. The two latter items were strengthening members calculated to reduce the amount of damage suffered by the case assembly. The gray or soiled interiors of 123 cabinets were painted buff to conform to the standard color in general use in the Museum.

An additional 116 feet of shelving was constructed in the new ground floor storeroom to accommodate those Harris Extension cases which have been withheld from circulation for some time but which are gradually being restored to usefulness or replaced.

The usual annual cleaning, polishing, and inspection of cases were accomplished in July and August when all of them were in storage in the Museum.

THE JAMES NELSON AND ANNA LOUISE RAYMOND FOUNDATION FOR PUBLIC SCHOOL AND CHILDREN'S LECTURES

In 1940 the James Nelson and Anna Louise Raymond Foundation continued the presentation of various programs of motion pictures, lectures, tours, and other activities to supplement the educational work of the schools and to provide enjoyable and educational hours of entertainment for the children.

Included were the regular spring, summer, and fall series of motion picture programs for children shown in the James Simpson Theatre, and two special patriotic programs; guide-lecture tours in the exhibition halls; four series of special science programs; radio follow-up programs; extension lectures given in the classrooms and auditoriums of schools; a special course for leaders of recreational groups "Recreation Through Nature"—given in co-operation with

the Leaders' Training School of the Work Projects Administration; a series of five talks arranged for the guidance of science teachers in the elementary grades, and a series of twelve experimental educational programs by television in co-operation with the Zenith Radio Corporation.

Special efforts have been made to fulfill the increasingly great number of requests for lectures and tours in the Museum. These demands are heaviest during April, May, June, October, and November, when good weather makes it possible for groups to travel hundreds of miles. During January, February, and March, when groups find it difficult to come to the Museum, the extension lecture service is stressed.

ENTERTAINMENTS FOR CHILDREN—RAYMOND FOUNDATION

The programs in the three series of motion picture entertainments, and the two special patriotic events arranged for boys and girls were as follows:

SPRING COURSE

March 2-Animals at Home.

Including animal cartoon.

March 9—The Ups and Downs of the Earth's Crust. Including cartoon feature.

March 16-The World of Trees.

March 23—The Home of the Dinosaurs. Including dinosaur cartoon.

March 30—Far Flying Feathered Friends.
Including Silly Symphony on birds.

April 6-Life Under Water.

April 13—Spring Comes to the Woodlands. Including Aesop's fables.

April 20—Plant and Insect Partnerships.

April 27-First Aid to Nature.

Summer Course

July 11-An Hour in Mexico.

Mexican dancers and motion pictures.

July 18-Vacationing in the Open.

July 25-Elephant Boy.

Featuring Sabu, a boy from India.

August 1-Nanook of the North.

The story of an Eskimo boy; also a cartoon.

August 8-In the South Seas with Gifford Pinchot.

August 15—Animals of the Polar Regions.

Including a cartoon.

AUTUMN COURSE

October 5—Our North American Indians. J

250 FIELD MUSEUM OF NATURAL HISTORY REPORTS, Vol. 12

October 19 Along the Amazon in South America. Color movie by Henrietta Mertz.

October 26 From Jungle to Desert in Africa. Including a cartoon.

November 2 -- Asia's Southeast Corner. Including a cartoon.

November 9 China and Her People. Including a cartoon.

November 16 Through the Islands of the South Seas. Including a cartoon.

November 23 - Why a Thanksgiving? Including a cartoon.

November 30 - Our National and State Parks.

In addition to the above-mentioned series of entertainments the following two special patriotic programs were offered:

February 12-"Abraham Lincoln."

February 22-George Washington program-"Betsy Ross."

The total number of motion picture programs offered in the James Simpson Theatre was twenty-six. Twenty of these were repeated at a second showing, which makes the total of programs given forty-six. The attendance at these children's entertainments was 29,110. Of this number 9,525 attended the spring course, 5,876 the summer course, 10,400 the fall series, and 3,309 the special patriotic programs.

Publicity was given to the programs by the Chicago Daily News, Chicago Tribune, Chicago Herald-American, Chicago Daily Times, Downtown Shopping News, and many neighborhood and suburban papers.

FIELD MUSEUM STORIES-RAYMOND FOUNDATION

Two series of Field Museum Stories for Children were prepared by members of the staff of the Raymond Foundation. They were illustrated with line drawings and photographs, each illustration being selected to add information as well as to make the story more attractive. The subjects of the stories correlated with films shown in the programs given in the Theatre, and were of seasonal interest to the children. Following are the titles of the stories in each series:

Series XXXIV The Bengal Tiger: Rivers as Sculptors of the Land; Mahogany Green Gold of the Tropics; Dinosaurs; The Red Winged Blackbird; Ocean Sponges; The Plants in a Woodland Community; Insect Mimicry and Protective Coloration; The Importance of Conservation.

Series XXXV Pueblo Houses: The Pyramids of Mexico; Humpless Camels of South America: Mummies from Egypt; The Taj Mahal; Rice Cultivation in China; Volcanoes; The Wild Turkey—a Vanishing Game Bird; Plants Are Natural Protectors of the Hills.



PORTABLE NATURAL HISTORY EXHIBIT FOR CHICAGO SCHOOLS Prepared by the N. W. Harris Public School Extension of Field Museum One-sixth actual size



Some 25,000 copies of *Museum Stories* were distributed to those ttending the Saturday morning programs.

LECTURE TOURS FOR CHILDREN—RAYMOND FOUNDATION

By means of conducted tours, the use of exhibition halls for lassroom work was extended to the following groups:

| Tours for children of Chicago schools: | Number of groups | Attendance |
|---|---------------------|-------------------------|
| Chicago public schools | 446 | 19,146 |
| Chicago parochial schools | | 1,709 |
| Chicago private schools | | 322 |
| Tours for children of suburban schools: Suburban public schools Suburban parochial schools Suburban private schools | 21 | 11,704 821 127 |
| Tours for special groups of children: Children's clubs Special science programs Miscellaneous | 112 | 2,609 5,858 2,615 |

Thus guide-lecture service was given to 1,079 children's groups, and the aggregate attendance was 44,911, an increase in number of 3,736 over 1939.

In a number of instances, the schools and groups receiving such service were also given illustrated talks and discussions in the lecture hall preceding the tour in the exhibition halls. These talks and discussions provided the background for a better understanding of the exhibits in the Museum halls. The total number of these supplementary lectures was 165, and they were attended by 11,693 children.

As in years past, many groups came in from outside the state, especially during the months of April, May, September, and October. The principal influx of such groups came from communities in Wisconsin, Michigan, and Indiana.

The Museum was host on December 3 and 5 to parties of 4-H Club boys and girls who were delegates to the National Congress of 4-H Clubs held in Chicago. These groups numbered 772 girls and 750 boys. A flood of letters has been received from these fine young citizens expressing their appreciation for Field Museum's part in their entertainment.

SCIENCE PROGRAMS—RAYMOND FOUNDATION

In the last few years a greater emphasis has been placed on science in the schools of the Chicago region. To meet the greater need thus engendered for lectures, tours, and supplementary materials, special science programs were offered in Field Museum to the schools of the area.

The programs offered were as follows:

September and October:

Conservation Taking Care of Our Natural Wild-Life Friends (5th and 6th grades three programs). The Preservation and Restoration of Natural Resources 7th and 8th grades—three programs.

Trees Common Trees of Chicago Area What Tree Is That? (5th and 6th grades two programs); Trees and How They Grow (7th grade two programs). Trees as Members of the Plant Kingdom (8th grade one program).

November and December:

Animals of the World (4th grade four programs); Rocks, Minerals, and Fossils (6th grade six programs).

These programs consisted of illustrated lectures in the Museum Lecture Hall or the James Simpson Theatre, followed by directed study in the exhibition halls. Sheets of questions and suggestions were given to the students, and with the help of Raymond Foundation staff members the answers were obtained from the exhibits.

These programs proved so successful, and the demand for them became so great that besides the twenty-one programs offered, fourteen additional ones were given, making a total of thirty-five special science programs. One hundred and fourteen schools brought groups into the Museum for these programs. Of these, ninety-seven were Chicago public schools, ten Chicago parochial, one Chicago private, three suburban public, and three suburban parochial.

The total attendance at the thirty-five lectures was 6,584. Of this number, 5,858 were divided into 112 groups for supervised study and work with the exhibits and question sheets.

RADIO FOLLOW-UP PROGRAMS RAYMOND FOUNDATION

The staff of the Raymond Foundation again co-operated with the Chicago Public School Broadcasting Council by presenting two series of programs which followed radio broadcasts given by the Council. These programs were based upon Museum exhibits which correlated with the subjects of the broadcasts. Meetings were held in the Lecture Hall where slides were used and actual objects were available for the students to handle. Mimeographed information sheets were distributed and questions were answered as informal discussion progressed. The meetings were followed by tours in the exhibition halls. The subjects were as follows:

Conservation, Plant Pirates, Summer Science Hobbies; Trees and Their Products: Trees Prepare for Winter.

Four of the six programs were repeated, making a total of ten programs with an attendance of 849.

The program on "Trees and Their Products" was repeated by request at the Fourth Annual Broadcast Conference held at the Congress Hotel early in December for the benefit of the 1,200 visiting delegates. This demonstration was made as similar as possible to the original program in Field Museum.

EXTENSION LECTURES—RAYMOND FOUNDATION

Groups in educational institutions were offered extension lectures as in the past. These lectures, illustrated with slides, were given in classrooms, laboratories, and assemblies. At the conclusion of lectures, if time permitted, an open discussion followed in which teachers and students were invited to ask questions and participate in the discussion led by the Field Museum speaker. The following subjects were offered to high school groups:

The Dynamic Earth and Its Meaning to Man; The Story of Rocks and Minerals That Are of Economic Importance; Plants and Animals of Prehistoric Ages; Prehistoric Man; The Natural Fauna of the Chicago Area (mammals, birds, reptiles, amphibians, fishes, insects); Mammals of the Chicago Area; Birds of the Chicago Area; North American Mammals; Amphibians and Reptiles; Insects; The Natural Flora of the Chicago Area (algae, fungi, flowering plants, trees); Wild Flowers of Swamp, Sand-Dune, and Prairie in Chicago; Trees of the Chicago Area; What Will the Great Out-of-Doors Be Like 100 Years from Now? (Conservation); The Adventures of a Great Museum of Natural Science; Ancient Egyptian Customs; North American Indians.

The following subjects were offered to elementary school groups:

FOR GEOGRAPHY AND HISTORY GROUPS

North American Indians; Indians of the Woodlands and Plains; The Navajo and Pueblo Indians; Migisi, the Indian Lad; Mexico, Land of the Feathered Serpent; Caribbean Lands; South America; The Egyptians; China and Her People; Prehistoric Peoples; Clothing from Cave Man to Civilization.

FOR SCIENCE GROUPS

Trees of the Chicago Region; Flowers of the Chicago Region; Our Outdoor Friends; Nature in City Yards and Parks; The Changing Earth; The Work of Wind and Water; Geography of the Chicago Region; Plants and Animals of Long Ago; A Rock May Be a Treasure Chest; Insects: Friends and Enemies; Animals of the World at Home; Birds of the Chicago Region; Mammals of the Chicago Region; What Will the Great Out-of-Doors Be Like 100 Years from Now? (Conservation); The Adventures of a Great Museum.

The Raymond Foundation staff gave a total of 405 extension lectures, and the aggregate attendance was 139,286. This service was divided as follows:

| 1 | Number of groups | Attendance |
|----------------------------------|---------------------|------------|
| Chicago elementary school groups | . 352 | 120,369 |
| Chicago high school groups | . 39 | 16,970 |
| Special schools | . 5 | 787 |
| Other organizations | | 1,160 |

RECREATION LEADERS' TRAINING COURSE RAYMOND FOUNDATION

During the months of April, May, and June, Field Museum participated in the Leaders' Training School of the Work Projects Administration. A course, "Recreation through Nature," given at the Museum, consisted of ten sessions during which ways of teaching nature through recreation were discussed and demonstrated. Museum exhibits and slides were used in these demonstrations. The total attendance at the ten meetings was 508.

In the Sixth Annual Recreation Conference sponsored by the Chicago Recreation Commission, a member of the Raymond Foundation staff, Mrs. Leota G. Thomas, was invited to participate in "Information Please." This quiz program, with a board of experts to answer the questions, was modeled on a well-known radio feature produced under the same title.

TEACHERS' TRAINING COURSE-RAYMOND FOUNDATION

As in 1939, the science supervisors and science consultants of the Chicago Public Schools co-operated with Field Museum in preparing a series of talks and tours for teachers conducting science courses in grades from the third to the eighth inclusive. These teachers were particularly interested in knowing what the Museum had to offer them and their students in supplementary material, and how to make use of it. The following five programs were offered:

| March 2—Grade V | Bird Study. |
|-------------------|--|
| March 9-Grade III | Trees. |
| March 16—Grade VI | Plant Families. Animals of Our Forest Preserves. |
| | Spring Flowers and Bird Migration. |
| March 30—Grade IV | Spring Wild Flowers. |

Talks and discussion in the lecture hall were followed by tours and demonstrations in the exhibition halls. As a result, many of these teachers returned to the Museum with their students to study the materials at the times when they were being discussed in the classrooms. The total number of teachers attending the five sessions was 339.

TELEVISION PROGRAMS—RAYMOND FOUNDATION

During the months of January, February, and March, Field Museum again participated in a series of experimental programs over the Zenith Radio Corporation's television station, W9XZV. Members of the Raymond Foundation staff planned the programs and experimented with various methods of presenting educations.

material by television. Guest speakers from other departments of Field Museum were invited to participate. The following programs were presented:

January 12-Introduction.

What a Museum Is and Its Purpose—Miss Miriam Wood. Introduction to Geology Series—Mrs. Leota G. Thomas.

January 19—The First Two Billion Years Are the Hardest—Assistant Curator Bryant Mather.

January 26-Rocks and Minerals-Curator Sharat K. Roy.

February 2—Hunting the Dinosaur—Curator Elmer S. Riggs.

February 9—Paleontology—What and Why—Assistant Curator Bryan Patterson and Assistant Paul O. McGrew.

February 16-Turtles-Large and Small-Curator Karl P. Schmidt.

February 23—Making the Dead Appear to Live—Staff Taxidermist John W. Moyer.

March 1-The Story of Man-Curator Henry Field.

March 8—Melanesian Life—Assistant Curator Alexander Spoehr.
People of Africa—Curator Wilfrid D. Hambly.

March 15—Pueblo Religion—Assistant Curator Alexander Spoehr.

March 22—Spring Wild Flowers—Miss Sophia Prior. Miss Marie B. Pabst.

March 29—Skeletons—Assistant Curator Dwight Davis. Conclusion—Director Clifford C. Gregg.

ACCESSIONS—RAYMOND FOUNDATION

For use in the Theatre and Lecture Hall, and in extension lectures, the Raymond Foundation acquired 629 stereopticon slides made by the Division of Photography, and 16 prints. The Museum Illustrator and assistants colored 1,693 slides.

The use of 2x2 inch natural color slides was started with a collection of 134. A special projector was purchased for use with these, and a slide viewer was also obtained.

Forty-five records of fifteen "How Do You Know?" Field Museum radio broadcasts were received from the National Broadcasting Company. Five phonograph record albums and a phonograph were purchased.

LECTURE TOURS AND MEETINGS FOR ADULTS-RAYMOND FOUNDATION

To clubs, colleges, church groups, other organizations, and Museum visitors in general, guide-lecture service was made available without charge. Regular public tours were given on weekdays (except Saturdays) at 2 P.M. During July and August additional morning tours were given at 11 A.M. Monthly schedules of the tours offered were printed and distributed at the entrances of the Museum, and standards announcing each day's tour were placed at the north and south entrances of the Museum. Inaugurated also was a policy

of offering special lecture tours for adults at the time of opening outstanding new exhibits such as the Hall of Babylonian Archaeology, and the "World's Food Plant" murals. Tours for the public included 144 of a general nature and 139 on specific subjects. In the 283 groups which participated the gross attendance amounted to 5,377 persons.

There were also special tours for sixty-nine colleges with 2,179 persons attending, eleven clubs with attendance of 254, and fifty-nine other organizations with attendance of 1,733. Thus a total of 422 tours for adults were given with a total attendance of 9,543.

The James Simpson Theatre was made available to the Board of Education for the commencement exercises held on June 13 for 1,280 foreign-born adults. The Raymond Foundation assisted in handling this program.

SUMMARY OF ATTENDANCE AT ENTERTAINMENTS, LECTURES, ETC. RAYMOND FOUNDATION

In all, the various activities of the Raymond Foundation provided services for a grand total of 2,163 groups with an aggregate attendance of 243,256 persons.

The effort to bring the greatest possible number of people to the Museum, and reduce the number reached extra-murally resulted in an increase of 157 groups and 21,882 persons served at the Museum and a decrease of 99 in the number of extension lectures and 47,391 in the number of persons reached outside.

LECTURES FOR ADULTS

During the spring and autumn months the Museum's seventy-third and seventy-fourth courses of free lectures for adults were presented in the James Simpson Theatre on Saturday afternoons They were illustrated, as in past years, with motion pictures and stere option slides. Following are the programs of both series.

SEVENTY-THIRD FREE LECTURE COURSE

March 2-Springtime in the Rockies.

Alfred M. Bailey.

March 9—Social Insects.
Dr. Alfred Emerson.

March 16—Penthouse of the Gods.
Theos Bernard.

March 23—Threshold of a New World. Vincent Palmer.

March 30-Our Attic Stairs-Southeastern Alaska. Karl Robinson. April 6—Snow Peaks and Flower Meadows in the Canadian Rockies.

Dan McCowan.

April 13—Africa Smiles. Herbert S. Ullmann.

April 20—Birds of America. Dr. Arthur A. Allen.

April 27—Return to Malaya. Carveth Wells.

SEVENTY-FOURTH FREE LECTURE COURSE

October 5—With the Snow Cruiser in Antarctica.
Dr. Thomas C. Poulter.

October 12—Pacific Northwest. Karl Robinson.

October 19—At Home in the Union of South Africa. Dr. Michail Dorizas.

October 26—Undersea Life of the Caribbean. René Dussaq.

November 2—Birds That Haunt the Waterways. Dr. Olin Sewall Pettingill, Jr.

November 9—The Hawaiian Islands. Hal Corey.

November 16—Old Ghost Falls. Harold D. Fish.

November 23—Springtime in the South. Dr. John B. May.

November 30—If Marco Polo Had a Camera. Harrison Forman.

At these eighteen lectures the total attendance was 20,197 persons, of whom 9,908 attended the spring series and 10,289 the fall series. Included in the aggregate attendance were 2,313 Members of the Museum.

LAYMAN LECTURES

During 1940 the Sunday afternoon lectures presented by Mr. Paul G. Dallwig, The Layman Lecturer, attained the highest point of attendance since their inauguration in October, 1937. Thirty regular lectures were given, with an aggregate of 2,784 persons attending, or an average of 93 to each party. In addition, one special lecture was given for a group of 67 out-of-town visitors. Because of necessary restrictions on the size of the groups, to make it practicable to conduct them through the halls containing exhibits illustrating Mr. Dallwig's lectures, the number actually attending was far below the number applying for reservations. In most instances reservations had to be made several weeks in advance. Even though the permitted size of the parties was somewhat increased over previous years, it was impossible to meet more than a portion of the requests for reservations.

Mr. Dallwig continued this work on the same basis as in previous years—without compensation from either the Museum or his audiences, but purely from his interest in disseminating scientific information in a popular and dramatized form. His interpretations of science from the layman's point of view have a quality distinguishing them from other methods of approach employed at the Museum. They have won him a large following among intelligent groups of laymen, and also wide acclaim in the press, including not only the daily newspapers but important national magazines.

Mr. Dallwig's subjects, during the seven months of 1940 in which his lectures were presented, follow:

January four Sundays
February four Sundays
March (five Sundays)
April four Sundays
May (four Sundays)
November (four Sundays)
The Romance of Diamonds from Mine to Man.
Digging Up the Cave Man's Past.
The Romance of Diamonds from Mine to Man.
The Parade of the Races.
The Parade of the Races.

December (five Sundays) Mysterious "Night-Riders" of the Sky.

SUMMARY OF ATTENDANCE AT LECTURES, ETC.

In all, the Museum rendered instruction or similar services during 1940 to a total of 2,212 groups aggregating 266,304 individuals. These figures include all those reached in 2,163 groups comprising 243,256 children and other persons who participated in the various activities under the auspices of the James Nelson and Anna Louise Raymond Foundation, plus the 20,197 who attended the Saturday lectures for adults in the James Simpson Theatre, and the 2,851 who participated in the Sunday afternoon lectures presented by the Layman Lecturer.

LIBRARY

During 1940 the Library continued to make progress both in expanding its collections and increasing its services to scientists and the public in general. Approximately 120,000 books and pamphlets, divided among the General Library and the four departments, now make up the collection.

The Library depends for its growth to a large extent on the exchanges of publications with other institutions, and in 1940, as in previous years, many important additions have been made through this medium. However, because of war in Europe and Asia, exchanges from foreign countries have been curtailed, and in many instances suspended entirely, to the great detriment of this and

LIBRARY 259

other reference libraries. But in this country, at least, some new arrangements for valuable exchanges have been negotiated with mutual benefit to Field Museum and the co-operating institutions.

Some 2,800 books were accessioned, and for these, as well as 2,172 pamphlets received, there have been written 23,966 cards. These include cards which have been distributed in the files of the General Library and also in the departmental libraries.

It has been noted with gratification that more and more students each year are using the resources of Field Museum's Library for assistance in their studies. In 1940 more than twice as many availed themselves of the opportunities presented as in 1939. Some of the Library's visitors have come from as far as the east and west coasts of the country, to consult books not available in other libraries.

The Union List of Serials, an almost indispensable reference aid, is in process of revision, and all libraries participating (of which this is one) have been assisting in the task by work on their individual lists. This has taken a good deal of the Library staff's time, but it is one of the "musts" for successful reference work. Publication of the new Union List is anticipated some time in 1941.

The disposition of duplicate material in an advantageous manner is always an important problem for libraries, and requires much attention. The Museum Library during the past year considerably reduced such material in its collections, both by sales and by exchanges. Much satisfaction is derived from this accomplishment because the material has thus been placed where it can be of use in completing files in other libraries.

For a long time it has been desired that the reading room should be located where it would be more convenient to visitors arriving on the passenger elevator. Such relocation is now being accomplished by reconstructing and refurnishing the stack room as a reading room, and moving the book stacks into the present reading room, a task which will be completed early in 1941. The new reading room, in addition to being more conveniently arranged, will be provided with an entirely new system of fluorescent lighting much nore effective and agreeable for readers. The fluorescent lights are being installed in both the reading room and in the stacks. Revision of the arrangement of the Library rooms has provided opportunity to replace the wooden stacks with modern steel ones (grained and tained like mahogany), and to improve working conditions in a nanner which will increase efficiency of all operations.

It has been the aim of the Library each year to fill out a few of its incomplete files of periodicals, and in 1940 it had the good fortune to obtain some desiderata of long standing. The Zoologist, completed by the purchase of seventy-four volumes, is perhaps the outstanding example. The much needed Special Papers of the Geological Society of America were also purchased. A subscription was entered for Cultured Indic, beginning with the first volume. Subscriptions were taken also for the National Horticultural Magazine, the Bulletin of the American Association of Petroleum Geologists, the Journal of Geomorphology, and the Botanical Review. Among interesting purchases of books were: Kern Institute, Annual Bibliography of Indian Archaeology; Reeve, Conchologia Iconica 20 vols.; Institut Français Damas, Mémoires (4 vols.), and Documents d'Etudes Orientales 7 vols.; Encyclopardia of Islam; a reprint of Andreas Vesalius. Icones Anatomicae; the completing volume of Witherby's Handbook of British Birds; Fontana, Sur le Vénin de la Vipère; Cuvier, Rèane Animal, Les Vipères (2 vols.); Le May, Buddhist Art in Siam: Cordillera Expedition 1901 1902, and also the popular account of the last.

Mr. Stanley Field, President of the Museum, again presented the year's issues of the weekly Illustrated London News, a periodical of value for its scientific articles and pictures, especially in the field of archaeology. The Director presented numerous publications. including the files of various periodicals. From time to time through most of the year Dr. Albert B. Lewis, Curator of Melanesian Ethnology, presented books of travel, and after his death in October the Museum purchased a collection of works from his library, many of which concerned countries he had visited on the Joseph N. Field South Pacific Expedition (1909-13). Dr. Henry Field, Curator of Physical Anthropology, regularly contributed several current periodicals as well as many books that were of interest to members of the staff. Dr. Field also presented a fine collection of books, many of them rare and beautifully bound volumes of the seventeenth and eighteenth centuries. These include books of travel, science, history, and some of the classics. Dr. Wilfred H. Osgood, Chief Curator of Zoology, presented a copy of Mis Viajes a la Tierra del Fuego, by Alberto M. de Agostini. This book has a wealth of excellent illustrations, and is a comprehensive account of what is known of the Chilean and Argentinian island at the extreme southern tip of South America.

Mr. Emil Liljeblad, former Assistant Curator of Insects, presented 175 books and pamphlets on Coleoptera. Many of these were of

LIBRARY 261

early date, and they form a notable addition to the entomological division. Mr. Bert E. Grove, of the Raymond Foundation staff, gave eleven scrapbooks containing historical records of Chicago's Century of Progress Exposition (1933–34). He also gave several scientific books of the early nineteenth century. Dr. E. E. Sherff, Research Associate in Systematic Botany, as in previous years generously contributed many botanical monographs as well as parts of botanical periodicals. Among these were a copy of Dr. Sherff's Labordia printed on special paper, a copy of DeCandolle's Origine des Plantes Cultivées (fourth edition), and works on the flora of different parts of the world.

Mr. Karl P. Schmidt, Curator of Amphibians and Reptiles, presented many maps secured on expeditions to South America. He also contributed current periodicals, and various books on Reptilia. Mr. Henry W. Nichols, Chief Curator of Geology, presented files of periodicals, including many complete sets, which are difficult to obtain. The *Chemical Abstracts* of the American Chemical Society are among those especially well represented—the first two volumes are exceedingly rare, and this set contains Volume 2. Mr. Paul C. Standley, Curator of the Herbarium, and Dr. Julian A. Steyermark, Assistant Curator of the Herbarium, also presented desirable books. Among Dr. Steyermark's gifts were copies of two new books of his own authorship, *Spring Flora of Missouri*, and *An Annotated List of the Flowering Plants of Missouri*.

The Carnegie Institution of Washington continued to send its valuable publications which are of much use for reference in connection with work conducted here. Several years ago Mr. Kojiro Abe, of Mikage-Hyogoken, Japan, presented the Library with Volume 1 of Soraikwan-kinsho, a much appreciated work, and in 1940 he gave Volume 2. The publishers of the Naturaliste Canadien sent many of the numbers of this useful periodical. Other friends of the Museum have given many valuable works which add greatly to the usefulness of the Library. The Museum gratefully acknowledges all these.

The Library is indebted to various learned institutions for the loan of publications needed for special consultation. Among these are the John Crerar Library, Chicago; the Libraries of the University of Chicago; the Library of Congress; the United States Department of Agriculture; Harvard University (Libraries of the Peabody Museum, of the Museum of Comparative Zoology, and of the Gray Herbarium); the Missouri Botanical Garden; Rochester University Library, and Columbia University Library. The Museum

has in turn been glad to help research workers from all parts of the country by the loan of material not found in other libraries.

The Library adopted a new bookplate for use in the volumes on its shelves. The design, showing the Museum building, the "lamp of knowledge," and sketches symbolizing the four scientific departments of the institution, is the work of Staff Illustrator Carl F. Gronemann.

PUBLICATIONS AND PRINTING

As is customary each year, the publications of Field Museum were generously distributed during 1940. The Museum sent to institutions and individual scientists on its domestic exchange list, and to about half of its foreign exchanges, 11,782 copies of scientific publications, 1,142 leaflets, 984 miscellaneous publications and pamphlets, and 500 copies of large maps relative to tribal distribution in the Near East. Shipment to the other portion of the foreign exchanges various European, Asiatic, and African institutions, museums, libraries, and scientists was of necessity withheld because of unsettled conditions abroad. However, the publications in these consignments have been prepared for transmittal and stored to await more favorable shipping conditions.

To Members of the Museum 3,759 copies of the Annual Report of the Director for 1939, and 602 copies of leaflets were sent.

Sales during the year totaled 1,923 scientific publications, 7,093 leaflets, and 13,321 miscellaneous publications and pamphlets, such as Guides, Handbooks, and Memoirs.

An increase of twenty-one was made in the number of names of institutions and scientists on the Museum's exchange lists.

Twenty-two large boxes and three cartons containing 4,458 individually addressed envelope parcels, 354 wrapped packages of publications, and 135 tubes containing maps, were shipped to the Smithsonian Institution at Washington, D.C., for distribution to those foreign countries to which it was possible to forward consignment during 1940. Field Museum gratefully acknowledges the cordia co-operation of the international exchange bureau in effecting deliveries.

The publications held for the present time, but destined for foreign distribution at the end of the war, total 6,899. These books together with 156 maps, have been packed in 2,229 addressed envelopes and 383 wrapped packages, and are stored in eighteen large boxes.

For future sales and other distribution, 21,989 copies of various publications and leaflets, and 768 maps, were wrapped in packages, labeled, and stored in the stock room.

One new leaflet was added to the Botany Series—The Story of Food Plants, by Dr. B. E. Dahlgren, Chief Curator of Botany, as illustrated in Field Museum by a series of murals painted by Julius Moessel. Reproductions of the murals appear in the leaflet, one of them from a photograph in natural colors by Mr. Clarence B. Mitchell, the Museum's Research Associate in Photography.

To the Anthropology Series of Leaflets was added Ancient Seals of the Near East, by Richard A. Martin, Curator of Near Eastern Archaeology. The leaflet contains collotype plates of certain exhibits in the new Hall of Babylonian Archaeology (Hall K).

The sales of *The Races of Mankind* and *Prehistoric Man* totaled 1,410 copies, again exceeding the number of sales of any other two leaflets, as has been the case each year since these two booklets first were published in 1933.

The total number of post card sales during 1940 was 83,050, of which 8,904 were grouped into 506 sets.

The year's production of the Division of Printing included twenty-five new numbers in the Museum's regular publication series. These comprised 2,096 pages of type composition. Five of these were anthropological in subject matter, nine botanical, three geological, seven zoological, and one was the Annual Report of the Director for 1939. The aggregate number of copies of these printed by Field Museum Press was 25.426. One botanical index consisting of 26 pages (827 copies) and one new number in the Museum Technique Series consisting of 22 pages (927 copies) also were printed. Two new leaflets were issued, one on a botanical and one on an anthropological subject, and one botanical leaflet was reprinted. The number of pages in these three leaflets was 108 and the copies aggregated 6,460. A reprint of the nineteenth edition, and a revised edition (the twentieth) of the General Guide, consisting of 56 pages and ten illustrations each, were issued, followed by a reprint of the latter, the three printings totaling 11,000 copies. A reprint of the eighth edition and printing of the ninth edition of the Handbook of Field Museum, each containing 76 pages, totaled 3,590 copies. An anthropological Memoir consisting of 284 pages was issued. total number of pages printed in all books was 2,856, and the total of copies issued was 48.051.

Miscellaneous job work, the total of which exceeded that of any previous year, consumed a large part of the time in the Division. Of major importance was the printing of twelve issues of Field Museum News, which is eight pages per issue, with an average of 5,200 copies a month. Exhibition labels printed for all Departments of the Museum during the year reached a total of 5,473. Increased efficiency and improved quality in the printing of labels was obtained by the purchase during the year of a new and modern type-casting machine. Other impressions, including Museum stationery, posters, lecture schedules, post cards, etc., brought the total for the year to 1.174.799.

A detailed list of publications follows:

PUBLICATION SERIES

- 463. Botanical Series, Vol. 22, No. 1. Studies of American Plants—IX. By Paul C. Standley. January 26, 1940. 62 pages. Edition 829.
- 464.—Zoological Series, Vol. 24, No. 11. A Tentative Classification of the Palearctic Unionids. By Fritz Haas. January 30, 1940. 28 pages. Edition, 867.
- 465. Anthropological Series, Vol. XXV, No. 3. Craniometry of New Guinea. By Wilfrid D. Hambly. February 29, 1940. 210 pages, 44 plates, 15 text-figures, 9 drawings, 1 map. Edition 629.
- 466.- Botanical Series, Vol. IX, No. 4. Flora of the Aguan Valley and the Coastal Regions Near La Ceiba, Honduras. By T. G. Yuncker. March 22, 1940. 104 pages, 8 text-figures. Edition 838.
- 467.—Botanical Series, Vol. 21. Travels of Ruiz, Pavón, and Dombey in Peru and Chile (1777-1788). By Hipólito Ruiz, with an epilogue and official documents added by Agustín Jesús Barreiro. Translation by B. E. Dahlgren. March 28, 1940. 372 pages, 2 maps. Edition 815.
- Report Series, Vol. 12, No. 1. Annual Report of the Director for the Year 1939. January, 1940. 174 pages, 12 plates. Edition 5,631.
- 469. Anthropological Series, Vol. 30, Part I, No. 1. The Anthropology of Iraq. The Upper Euphrates. By Henry Field. May 31, 1940. 224 pages, 10 text-figures, 48 plates, 1 map. Edition 662.
- Zoological Series, Vol. 24, No. 12. Notes on Texan Snakes of the Genus Salvadora. By Karl P. Schmidt. May 31, 1940. 8 pages, 3 text-figures. Edition 939.
- 471. Zoological Series, Vol. 24, No. 13. A New Toad from Western China. By Karl P. Schmidt and Ch'eng-Chao Liu. May 31, 1940. 4 pages, 1 textfigure. Edition 967.
- 472.— Botanical Series, Vol. 22, No. 2. Studies of American Plants—X. By Paul C. Standley. June 12, 1940. 68 pages. Edition 839.
- 473.—Geological Series, Vol. 8, No. 1. A New Turtle of the Genus Podocnemis from the Cretaceous of Arkansas. By Karl P. Schmidt. June 29, 1940. 12 pages, 5 text-figures. Edition 976.
- 474.--Zoological Series, Vol. 24, No. 14. A New Venezuelan Honey Creeper. By Emmet R. Blake. June 29, 1940. 4 pages. Edition 825.
- Zoological Series, Vol. 24, No. 15. A New Savannah Sparrow from Mexico. By Sidney Camras. June 29, 1940. 2 pages. Edition 860.
- 476.—Anthropological Series, Vol. 32, No. 1. The Su Site. Excavations at a Mogollon Village, Western New Mexico, 1939. By Paul S. Martin. June 29, 1940. 98 pages, 42 text-figures and 11 maps. Edition 732.

- 477.—Zoological Series, Vol. XXII, No. 5. Notes on the Anatomy of the Babirusa. By D. Dwight Davis. August 6, 1940. 52 pages, 24 text-figures. Edition 795.
- 478.—Botanical Series, Vol. 22, No. 3. Studies of American Plants—XI. By Paul C. Standley. September 10, 1940. 88 pages. Edition 841.
- 479.—Anthropological Series, Vol. 27, No. 2. Notes on Skidi Pawnee Society. By George A. Dorsey and James R. Murie. Prepared for publication by Alexander Spoehr. September 18, 1940. 54 pages, 1 text-figure. Edition 639.
- 480.—Botanical Series, Vol. 22, No. 4. Studies of Central American Plants—I. By Paul C. Standley and Julian A. Steyermark. September 30, 1940. 104 pages, 2 text-figures. Edition 816.
- 481.—Zoological Series, Vol. XXII, No. 6. Studies of the Anatomy of the Extrahepatic Biliary Tract in Mammalia. By Stewart Craig Thomson. October 31, 1940. 18 pages. Edition 902.
- 482.—Botanical Series, Vol. 22, No. 5. Studies of Central American Plants—II.

 By Paul C. Standley and Julian A. Steyermark. October 31, 1940. 74
 pages. 1 plate. Edition 842.
- 483.—Botanical Series, Vol. 22, No. 6. A New Genus of Compositae from Northwestern Alabama. By Earl Edward Sherff. December 24, 1940. 8 pages. Edition 897.
- 485.—Botanical Series, Vol. IX, No. 5. Studies of the Vegetation of Missouri.
 —I. Natural Plant Associations and Succession in the Ozarks of Missouri.
 By Julian A. Steyermark. December 31, 1940. 130 pages, 45 textfigures. Edition 825.
- 486.—Geological Series, Vol. 8, No. 2. An Adianthine Litoptern from the Deseado Formation of Patagonia. Results of the Marshall Field Paleontological Expeditions to Argentina and Bolivia, 1922–27. By Bryan Patterson. December 31, 1940. 8 pages, 2 text-figures. Edition 875.
- 487.—Geological Series, Vol. 8, No. 3. The Status of Progaleopithecus Ameghino. By Bryan Patterson. December 31, 1940. 6 pages, 2 text-figures. Edition 875.
 - Botanical Series, Vol. XVII. Index. April 2, 1940. 26 pages. Edition 827.

MEMOIR SERIES

Anthropology Memoir, Vol. 5. Anasazi Painted Pottery in Field Museum of Natural History. By Paul S. Martin and Elizabeth S. Willis. December 31, 1940. 284 pages, 125 plates, 1 map. Edition 648.

MUSEUM TECHNIQUE SERIES

No. 6.—Rubber Molds and Plaster Casts in the Paleontological Laboratory. By James H. Quinn. April 27, 1940. 22 pages, 7 text-figures. Edition 927.

LEAFLET SERIES

- Botany, No. 16. Fifty Common Plant Galls of the Chicago Area. By Carl F. Gronemann. 30 pages, 1 colored plate, 51 zinc etchings. (Reprint.) March 13, 1940. Edition 1,070.
- Botany, No. 25. The Story of Food Plants. By B. E. Dahlgren. 32 pages, including 15 text-figures, 1 colored plate, 2 maps. September, 1940. Edition 3.855.
- Anthropology, No. 34. Ancient Seals of the Near East. By Richard A. Martin. 46 pages, including text and text-figures with legends. June, 1940. Edition 1,535.

HANDBOOK SERIES

Handbook. Information concerning the Museum—its history, building, exhibits, expeditions, endowments, and activities. Eighth edition. (Reprint.) February, 1940. 76 pages, 8 plates, 1 cover design. Edition 509.

Handbook. Information concerning the Museum—its history, building, exhibits, expeditions, endowments, and activities. Ninth edition. June, 1940. 76 pages, 8 plates, 1 cover design. Edition 3,081.

GUIDE SERIES

General Guide to Exhibits in Field Museum of Natural History. Nineteenth edition. 1938-39. (Reprint.) 56 pages, 9 text-figures, 1 cover design. Edition 1,500.

General Guide to Exhibits in Field Museum of Natural History. Twentieth edition. 1940. 56 pages, 9 text-figures, 1 cover design. Edition 7,000.

General Guide to Exhibits in Field Museum of Natural History. Twentieth edition. (Reprint.) 56 pages, 9 text-figures, 1 cover design. Edition 2,500.

PHOTOGRAPHY AND ILLUSTRATION

The production of the Division of Photography during 1940 totaled 21,738 items, which includes negatives, prints, bromide enlargements, lantern slides, transparencies, etc. A very small percentage of these were prints, enlargements, and slides for sales on orders received from the public, from publishers, and from other institutions, but well over 97 per cent were to fulfill requirements of the various departments and divisions of the Museum.

Of the total production, the Museum staff photographer and his assistant were responsible for 10,760 items. Workers assigned by the federal Work Projects Administration were responsible for the remainder, consisting chiefly of the making of prints of a routine character. These were largely prints of type specimens of plants for the Herbarium from negatives secured in Europe through the recently concluded ten-year project of the Department of Botany. Photographic work requiring special skill and attention was done by the Museum's own staff men.

The photographic files of the Museum now contain nearly 90,000 negatives, and the task of classifying, indexing, and numbering negatives and prints has become a major one, and a very urgently necessary one in order that a systematic order and full usefulness of this material may be maintained. This work, as for several years past, has been continued by clerical helpers furnished by the WPA, and during 1940 it involved approximately 80,000 items handled or operations performed.

A total of 720,378 prints was produced by the Museum Collotyper during 1940. These included illustrations for publications and leaflets, covers for books and pamphlets, picture post cards headings for lecture posters, and miscellaneous items.

The Museum Illustrator and his assistant performed a great amount of miscellaneous work, including the drawing of 74 illustra-

tions for publications, slides, labels, transparencies, etc.; the drawing, lettering, and coloring of 57 maps; the coloring of 279 stereopticon slides; the retouching of 134 photographs; the blocking of 127 photographic negatives, and such items as rough sketches for a book of colored photographs, cutting stencils, etching negatives, lettering, tinting photographs, tooling cuts, etc.

MAINTENANCE AND CONSTRUCTION

Comment has been made, in the Introduction to this Report, upon some of the most outstanding tasks undertaken during the year towards proper maintenance of the Museum building. Following is a summary of other principal accomplishments:

Seventeen window sashes and frames on the fourth floor were replaced. The entire third and fourth floor roofs, and the greater portion of the first floor covered skylights, were re-coated with fibered asphalt roofing. Worn linoleum in the Cafeteria and the passenger elevator was replaced. The Cafeteria floor and the rubber tile floor in Chauncey Keep Memorial Hall (Hall 3) were cleaned and rewaxed.

Walls were repaired and redecorated, general cleaning, painting, and repairs carried out, and new equipment was supplied in the office of the secretary to the President, the offices of the Director and his secretary, the Raymond Foundation office, the Lecture Hall, and various other parts of the building. The sashes and frames of the boiler room windows were repaired and painted, and the roof of this room was caulked. An area adjacent to Hall J was reconditioned for use as a children's cloak room.

Cases and screens were prepared for various special exhibits. The Museum's large information signs outside the building were repaired, cleaned, and reset. The flagpoles in front of the north terrace of the Museum were thoroughly reconditioned; the cast bronze balls surmounting them, 19 inches in diameter, and weighing 195 pounds apiece, were removed for the application of new gold leaf, after which they were reinstalled. The west pole, which had developed a slight lean, was straightened and reset; checking of the timber in both poles was "pointed up"; and both were repainted and equipped with new sheave bushings and halyards.

In the heating plant all four boilers were thoroughly cleaned, and necessary repairs made. Sixteen new tubes were installed in one boiler to comply with the insurance inspector's recommendations. The stoker control unit was overhauled. Dampers were gone over,

and the breeching and ash vent pipes were cleaned. New steel sheets and angles were purchased to rebuild the lower portion of the coal conveyor, and sixty feet of trough were replaced. Four new hoppers for the stokers were also built. A new ash pack elbow was installed in the ash conveyor. Under the contracts in force for some years, a total of 13,125,368 pounds of steam was furnished to the John G. Shedd Aquarium, 9,751,581 pounds to Soldier Field, and 11,526,884 pounds to the Chicago Park District Administration Building.

All motors were checked over and cleaned, and the steam pumps and vacuum pumps were repacked. Repairs involving replacements of parts were made where necessary.

The passenger elevator was equipped with a new control board, car switch, and door closers; similar equipment, and counterweight cables also, were installed on the freight elevator. The hydraulic elevator at the shipping and receiving room entrance was repacked, and a new rack and pinion were installed in its operating valve.

Fourteen radiators on the third floor were replaced to increase the heating efficiency in offices and work rooms. Hot water lines were extended to the wash rooms of the curators and to the taxidermy shop, a total of 300 feet of pipe and the necessary fittings being used for this purpose. Much other new plumbing was installed as a result of changes in office arrangements, or the deterioration of old equipment in lavatories, offices, and working quarters. Included are four new drinking fountains on the first floor. Gas lines and air lines also were extended to new areas, and outlets and equipment installed. Extensive changes made in the Plant Reproduction Laboratories necessitated the rerouting of twenty-five feet of steam main.

The program, instituted in 1939, of improving illumination in exhibition halls, offices, and workshops by application of techniques employing the new types of tubular fluorescent lights, was continued during 1940 in various parts of the building. Altogether, 1,316 fluorescent lighting units were installed during the year. Of these, 468 were used in the Hall of Egyptian Archaeology (Hall J), 429 in Ernest R. Graham Hall (Hall 38), and 207 in George T. and Frances Gaylord Smith Hall (Hall 24). This change made possible the removal of the old ceiling fixtures and resulted in much improvement in the appearance of the halls.

Fluorescent lighting was provided also for the friezes and the Kish gateway in the Hall of Babylonian Archaeology (Hall K).

the built-in case in Hall L (Asiatic Ethnology), the new fur seal case in Hall N, four new cases in Joseph N. Field Hall (Hall A—Melanesian Ethnology), the water buffalo case in Carl E. Akeley Memorial Hall (Hall 22), ten floor cases for Frederick J. V. Skiff Hall (Hall 37), and the alpine flora case in Martin A. and Carrie Ryerson Hall (Hall 29).

The new reading room in preparation for the Library was completely rewired, and provided with floor outlets and base plugs. Fluorescent lights were installed in coves around the ceiling. Provision was also made for stack lighting. Nine fluorescent units were installed in Room 87 on the third floor, and six portable lamps were made for the Department of Zoology. The Division of Printing was equipped with fluorescent lights, and a number of individual installations were made throughout the building.

Frederick J. V. Skiff Hall (Hall 37) was completely rewired to provide outlets for individually lighted cases. A total of 600 feet of new raceway and 1,500 feet of wire were required for this purpose.

A new power feeder and distributing panel box were installed in the Division of Printing to care for the additional load required by a new typecasting machine purchased during the year. Various repairs and improvements were made on presses and other machinery used in the Division.

The mezzanine storage space on the fourth floor was wired for lights, 150 feet of conduit and thirty outlets being installed. Ten fixtures in the Lecture Hall were replaced with a more efficient type. New circuits were run into several work rooms to supply current required for new equipment. Twenty-eight drop cords were installed throughout the third floor.

Work was begun on the necessary equipment for the "X-raying a mummy" exhibit planned for Hall J. One hundred and fifty feet of drain pipe, 80 feet of water pipe, and 350 feet of conduit and feeder cables for electricity are required for this project.

Included among special services performed for the Department of Anthropology were completion and installation of four cases in Joseph N. Field Hall (Hall A) for exhibits of tall carved ancestral figures and drums from Melanesia. A new exhibition case was constructed for the Hall of Babylonian Archaeology (Hall K), and shields for light tubes were placed on case tops to illuminate the stucco ornaments near the ceiling. Construction was begun on a new storage room on the third floor. Three hundred and fifteen steel storage

Public Relations Counsel prepared, in all, 345 news releases. These were distributed through the usual channels, and were published in the several great metropolitan dailies of Chicago, and in many other media. All releases with more than local interest were carried in the wire and mail services of such national and international news agencies as the Associated Press, United Press, International News Service, Science Service, Wide-World Photos, etc. In many cases photographs accompanied news releases; in other cases, editors assigned their staff writers and photographers to follow up the stories submitted by the Museum and expand upon them. Occasionally a Museum story was even made the subject of an editorial.

Attention was given in the Museum's publicity efforts not only to the metropolitan newspapers and nation-wide news agencies, but also to reaching the many groups who read several hundred community papers published for the populations of distinct neighborhoods within the city, foreign language newspapers circulating among Chicagoans of a wide variety of national origins, and the principal papers published in medium-sized cities of Illinois and neighboring states, particularly those within the Chicago suburban area. News releases from the Museum covered all such subjects as expeditions. research, new exhibits, lectures, children's programs, and miscellaneous activities of the institution. For their co-operation in keeping the public informed regarding the Museum, special appreciation is due to the Chicago Daily News, Chicago Daily Times, Chicago Tribune, Chicago Herald-American, Chicago Journal of Commerce. and Downtown Shopping News. Among local weekly periodicals giving the Museum much desirable publicity were the Downtown Free Press, National Corporation Reporter, and This Week in Chicago.

The monthly bulletin, Field Museum News, published for the Members of the Museum, was continued in the enlarged form inaugurated in the preceding year, and every effort was made constantly to improve the quality of articles and illustrations. Two issues, September and December, were graced by four-color illustrations of selected mural paintings from the series by Julius Moessel Mexican Market Scene, and Camel Caravan North of the Persian Gulf. This was made possible by use of some of the special process plates generously presented by Mr. Clarence B. Mitchell, the Museum's Research Associate in Photography, who was responsible also for making the artistic color photographs. Such plates, provided by Mr. Mitchell, had made possible previous color work in the News in 1938 and 1939.

The 1940 volume of the *News* constituted the eleventh since publication of the periodical was begun and, as in past years, copies were distributed to all Members promptly and regularly at the beginning of each month. This bulletin, in addition to keeping the membership informed about Museum activities, supplements the mimeographed news releases circulated by the Division of Public Relations, and many of the articles in it are reprinted or quoted in newspapers and magazines. It also serves as an exchange medium in the Museum's relations with similar institutions all over the world.

The arrangements with the General Electric X-ray Corporation whereby an Egyptian mummy was lent for display in that company's fluoroscopic exhibit at the New York World's Fair, were renewed for the second year of the fair. The exhibit was improved, and the Museum was featured more prominently by the addition of a lecture which was heard by millions of visitors to the fair from special records automatically transmitted by a sound machine synchronized with the operation of the X-ray apparatus. Following the close of the fair, the General Electric Company presented the fluoroscopic equipment to the Museum, and it will be installed with the mummy as a feature of the Egyptian Hall (Hall J) next year. It alternately shows the mummy's exterior and the skeleton inside.

Notable as a publicity project, as well as for its educational value, was the series of radio programs presented by the Museum under the title "How Do You Know?" This series of weekly dramatized broadcasts on scientific subjects, which ran from January 25 to June 13, was made possible by the co-operation of the National Broadcasting Company and the University Broadcasting Council. The series was presented from coast to coast over stations on the Blue Network of that company. Members of the Museum staff contributed the scientific data upon which the programs were based, and expert radio technique in presentation of the programs was furnished by the National Broadcasting Council, which provided a skilled script writer, Mr. William C. Hodapp, and actors and actresses for the casts required in the various dramatizations. programs were expertly produced under the supervision of Miss Judith Waller, Chicago Educational Director for the National Broadcasting Company.

The Museum received further publicity through other broadcasts on various stations and networks, and through a series of television programs presented in co-operation with the Zenith Radio Corporation. Attention was directed to this institution likewise, as in past years, by placards advertising Museum lectures and exhibits. These were displayed in cars and stations of various transportation companies, and in hotels, department stores, libraries, travel bureaus, office buildings, schools, and other public institutions. Through these same organizations, many thousands of folders announcing the Sunday afternoon lectures presented by Mr. Paul G. Dallwig, the Layman Lecturer, and other folders containing information about Museum exhibits, were distributed both to residents of Chicago and travelers visiting the city. Special appreciation for their co-operation in advertising the Museum is due to the Chicago, Aurora and Elgin Railroad, the Chicago, North Shore and Milwaukee Railroad. the Chicago Rapid Transit Lines, the Chicago and North Western Railway, the Illinois Central System, and the Chicago Surface Lines. Following its custom of many years, the Museum sent invitations and folders to the delegates attending several hundred conventions held in Chicago.

The Museum was represented during the year by its Public Relations Counsel at the meetings of the newly formed Chicago Conference on Association Publicity. This is an organization whose purpose is to promote better press and radio relations for civic, educational, public health and welfare, and other non-commercial institutions.

DIVISION OF MEMBERSHIPS

It is most gratifying again to report an increase in the number of Museum Members. During 1940 there were 411 new Members enrolled, as against a loss of 362 Members incurred through transfers, cancellations, and deaths. The total net number of memberships as of December 31, 1940, was 4,225. An expression of deep appreciation and gratitude is due the many Members who have continued their loyal support of the institution, and also to the new Members who have become associated with the cultural activities of the Museum. The increasing burdens of taxation imposed on citizens today present an important difficulty, and make all the more laudable the contributions of those who continue their support of civic activities such as museums. The continuance and expansion of the educational program of this institution is in large part dependent upon the support of Members.

For their past support and interest, an expression of appreciation is due those Members who found it necessary to discontinue their memberships, and an invitation is extended to them to avail themselves of the opportunities afforded by membership whenever they may again find it convenient to enroll as Members of Field Museum.

The following tabulation shows the number of names on the list in each of the membership classifications at the end of 1940:

| Deneracions | 23 |
|--|----|
| nonorary Members | .2 |
| Patrons | 7 |
| Corresponding Members | 7 |
| Contributors 12 | |
| Corporate Members | 18 |
| Life Members | |
| Non-Resident Life Members | |
| Associate Members | 98 |
| Non-Resident Associate Members | 8 |
| Sustaining Members | |
| Annual Members |)5 |
| Proceedings of the Control of the Co | _ |
| Total Memberships | 25 |

The names of all persons listed as Members during 1940 will be found on the pages at the end of this Report.

In the pages which follow are submitted the Museum's financial statements, lists of accessions, et cetera.

CLIFFORD C. GREGG, Director

COMPARATIVE ATTENDANCE STATISTICS AND DOOR RECEIPTS

FOR YEARS 1939 AND 1940

| | 1940 | | 1939 |
|---|--|---|--------------------------------------|
| Total attendance | 1,450,685 | | 1,410,454 |
| Paid attendance | 80,888 | | 83,518 |
| Free admissions on pay days: | | | |
| Students. School children Teachers. Members | 76,722 85,249 3,181 1,039 | | 76,651 92,946 3,084 1,156 |
| Admissions on free days: | | | |
| Thursdays (52) Saturdays (52) Sundays (52) | | (52) (52) (52) | 212,455 379,337 561,307 |
| Highest attendance on any day (June 4) Lowest attendance on any day (March 13) Highest paid attendance (September 2) Average daily admissions (361 days) Average paid admissions (210 days) | 51,247 121 3,291 3,963 3×5 | (June 2) (January 30) (September 4) (363 days) (207 days) | 58,002 8 2,442 3,885 403 |
| Number of guides sold | 10,002 23,616 83,050 | | 8,607 22,874 92,325 |
| Sales of publications, leaflets, handbooks, portfolios, and photographs | \$5,504.33 | | \$4,819.18 |

COMPARATIVE FINANCIAL STATEMENTS

FOR YEARS 1939 AND 1940

| INCOME | 1940 | | 1939 | |
|-----------------------------------|--------------|--------------|--------------|--------------|
| Endowment Funds | \$203,608.49 | | \$198,455.79 | |
| Funds held under annuity agree- | | | | |
| ments | 27,807.92 | | 25,728.52 | |
| Life Membership Fund | 11,530.05 | | 10,659.18 | |
| Associate Membership Fund | 12,927.91 | | 11,697.08 | |
| Chicago Park District | 58,130.33 | | 86,093.85 | |
| Annual and Sustaining Member- | | | | |
| ships | 12,085.00 | | 11,555.00 | |
| Admissions | 20,222.00 | | 20,879.50 | |
| Sundry receipts | 17,835.43 | | 20,012.66 | |
| Contributions, general purposes. | 1,015.00 | | 298.65 | |
| Contributions, special purposes | | | | |
| (expended per contra) | 28,061.45 | | 55,399.14 | |
| Special Funds—part expended | | | | |
| this year for purposes | | | | |
| designated (included per | | | | |
| contra) | 11,822.93 | | 14,457.31 | |
| • | | \$405,046.51 | | \$455,236.68 |
| | | | | |
| 77 | | | | |
| EXPENDITURES | 00.400.40 | | 0005000 | |
| Collections | 26,490.19 | | 38,256.62 | |
| Operating expenses capitalized | 11 =01 01 | | 10 = 10 11 | |
| and added to collections | 41,701.84 | | 43,749.41 | |
| Expeditions | 9,983.95 | | 14,549.75 | |
| Furniture, fixtures, etc | 69,666.12 | | 18,247.70 | |
| Wages capitalized and added to | | | | |
| fixtures | 7,645.21 | | 8,766.55 | |
| Pensions and Group Insurance | 43,078.64 | | 49,281.28 | |
| Pensions—past service liability. | | | 220,096.71 | |
| Departmental expenses | 40,994.29 | | 42,019.41 | |
| General operating expenses | 319,212.39 | | 318,676.76 | |
| Building repairs and alterations | 66,328.76 | | 37,311.66 | |
| Annuities on contingent gifts | 29,870.60 | | 29,506.39 | |
| Paid on bank loans | | | 26,600.00 | |
| Reserve for repairs and deprecia- | | | _0,00000 | |
| tion | 35,000.00 | | 25,000.00 | |
| - | | \$689,971.99 | | \$872,062.24 |
| | D.C 2 | | | |
| Contribution has Mr. Mr. 1 11 T | Dencit | \$284,925.48 | | \$416,825.56 |
| | | | | |
| Contribution by Mr. Marshall F. | ield | 283,895.94 | | 415,138.78 |

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION

| | 1940 | 1939 |
|---------------------------|-----------|-------------|
| Income from Endowment \$3 | 20,376.62 | \$18,158.00 |
| Operating Expenses | 17,205.21 | 16,509.32 |
| Balance \$ | 3,171.41 | \$ 1,648.68 |

LIST OF ACCESSIONS

DEPARTMENT OF ANTHROPOLOGY

BUNNELL, DWIGHT W., Puyallup, Washington: skull from a "burial ground"—Parksville, Vancouver Island, British Columbia (gift).

CENOZOIC RESEARCH LABORATORY, Peking, China: colored cast of Sinanthropus pekinensis, in two pieces-Peking, China (gift).

CURACAO COMMISSION OF 1893 WORLD'S FAIR: 1 bracelet made of German coins, 1 solid silver bracelet, 1 charm "gold heart," 1 fob chain made of German coins (gift).

EASTMAN, SIDNEY C., ESTATE OF, Chicago: 1 beaded pipe bag (Sioux), 1 pipe bag, 1 large pitch-covered basket (Great Basin Tribes) (gift).

FIELD, DR. HENRY, Chicago: 50 pottery specimens (16 sherds)-Trans-Jordan: 24 ethnological specimensnorthern Iraq; 60 artifacts and animal bones-Spy, Belgium (gift).

FIELD, STANLEY, Chicago: 17 photographs of Ward African bronzes-

Africa (gift).

FISH, MRS. FREDERICK S., New York: 2 stone lions, eighteenth century-Peking, China (gift).

GENERAL ELECTRIC X-RAY CORPORA-TION, Chicago: Complete X-ray equipment, fluoroscopic screen and accessories for an exhibit in which an Egyptian mummy will be publicly X-rayed.

GILA PUEBLO, Globe, Arizona: 8 stone artifacts, Cochise types; 72 stone, bone and pottery artifacts from Hohokam culture, all periods; some pottery in sherd form-Snaketown, Arizona (exchange); 20 stone artifacts-handstones, blades, scrapers, handaxes, knives-near Lake Cochise, Arizona (exchange).

GROW AND CUTTLE, Chicago: 2 Sung and 2 Ch'ing porcelains, and 1 piece of Ming or early Ch'ing lacquer-China; 7 ceramic specimens China (gift).

LAPHAM, DR. ANNA Ross, Chicago: I wooden comb, I wooden ladle or stirrer-Djukas, Dutch Guiana (gift).

LINDGREN, DR. ETHEL-JOHN, Cambridge, England: 1 pair "elk-akin" leather gloves Manchuria, China (gift).

MACALLISTER, T. H., Chicago: 2 metates without grooves, and 4 manos—Chaco Canyon, New Mexico (gift).

MUSEUM OF SCIENCE AND INDUSTRY, Chicago: 1 kayak Eskimo, Alaska gift .

SCHAAP, R., Batavia, Netherlands East Indies: 2 palaeolithic scrapers, chalcolithic beads, neolithic artifacts and unfinished stone rings (7)—West Java, Netherlands East Indies (exchange).

UNIVERSITY OF ILLINOIS, College of Dentistry, Chicago: 1 skull of male, white American (gift).

VALENTINE, LOUIS L., ESTATE OF, Chicago: 220 ivories—China, Japan. Europe, Alaska (gift).

WELLS, C. EDWARD, New York bronze jar-Peking, China (purchase)

WILLETT, DR. R. C., Peoria, Illinois a cast of a child's mandible from buria mound, and cast of an Aztec figurine— Fulton County, Illinois, and Mexico (gift).

WILSON, SAMUEL E., Chicago: 36 neolithic sherds—central Ahansi province, China, near T'ai-ky and Yu-tahu (gift): 6 Chinese neolithic stone implements—central Shansi province China, near T'ai-ky (exchange).

DEPARTMENT OF BOTANY-ACCESSIONS

ACKERMANN, EVAN, Chicago: 1 plant specimen (gift).

ADCOCK, CAPTAIN THOMAS A., College Station, Texas: 3 wood specimens

AGUILAR G., JOSÉ IGNACIO, Guatemala City, Guatemala: 123 specimens of Guatemalan plants (gift).

ALLEN, DAVID, Chicago: 1 plant specimen (gift).

ALLEN, PAUL H., Balboa, Cana Zone: 31 specimens of Panama plant (gift).

APOLINAR-MARÍA, REV. BROTHER Bogotá, Colombia: 171 specimens o Colombian plants (gift).

ARNOLD ARBORETUM, Jamaica Plain Massachusetts: 3,513 plant specimen (exchange).

AVELLAN, JOAQUIN, Los Caobos, Caracas, Venezuela: 9 boards of Venezuelan woods (gift).

BADINI, PROFESSOR JOSÉ, Ouro Preto, Minas Geraes, Brazil: 87 specimens of Brazilian plants (gift).

BAILEY, DR. LIBERTY HYDE, Ithaca, New York: 3 plant specimens (gift).

BATES, GLEN F., Fort Lauderdale, Florida: 3 fruits, 3 plant specimens (gift).

BAUER, BILL, Webster Groves, Missouri: 626 plant specimens (gift).

Beal, Dr. J. M., Chicago: 3 plant specimens (gift).

Benke, Hermann C., Chicago: 191 specimens of plants from Illinois and Wisconsin, 83 cryptogamic specimens (gift).

BEUTTAS, JOSEPH H., Chicago: 1 fungus specimen (gift).

BOLD, DR. HAROLD C., New York: 3 algal specimens (gift).

BOTANICAL MUSEUM, HARVARD UNI-VERSITY, Cambridge, Massachusetts: 10 specimens of Mexican plants (exchange).

BRACELIN, MRS. H. P., Berkeley, California: 8 specimens of Mexican plants (gift).

BRINKER, REV. ROBERT, St. Louis, Missouri: 1 algal specimen (gift).

BRUNEL, DR. JULES, Montreal, Canada: 88 specimens of algae (gift).

BUTCHER, DEVEREUX, New York: 1 photograph, 17 cryptogamic specimens (gift).

CABRERA, PROFESSOR ANGEL L., La Plata, Argentina: 129 specimens of plants from Argentina (exchange).

CALDERON, DR. SALVADOR, San Salvador, El Salvador: 11 plant specimens

CALIFORNIA ACADEMY OF SCIENCES, San Francisco, California: 100 specimens of American plants (exchange).

CHANDLER, A. C., St. Louis, Missouri: 3 plant specimens (gift).

CHANEY, DR. RALPH W., Berkeley, California: 1 plant specimen (gift). CLAYTON, J. PAUL, JR., Winnetka,

Illinois: 2 specimens of fungus (gift).

CLOKEY, IRA W., South Pasadena, California: 342 plant specimens (exchange).

COOKE, W. B., Cincinnati, Ohio: 9 cryptogamic specimens (gift).

COOPER, I. C. G., Westerleigh, Staten Island, New York: 6 cryptogamic specimens (gift).

CORNELL UNIVERSITY, Department of Botany, Ithaca, New York: 69 specimens of Washington plants (ex-

CUATRECASAS, DR. JOSÉ, Bogotá, Colombia: 1 plant specimen (gift).

DAHLGREN, DR. B. E., Chicago: 2 specimens of Brazilian plants (gift).

DAILY, WILLIAM A., Cincinnati, Ohio: 441 cryptogamic specimens (gift).

DANIEL, REV. BROTHER H., Medellín, Colombia: 41 specimens of Colombian plants (gift).

DAVIS, PROFESSOR RAY J., Pocatello, Idaho: 5 plant specimens (gift).

DEAM, CHARLES C., Bluffton, Indiana: 65 plant specimens (gift).

DICKINSON, ROBERT B., Johannesburg, South Africa: 1 economic specimen (gift).

DIXON, ROYAL, Houston, Texas: 1 plant specimen (gift).

DREW, WILLIAM B., Columbia, Missouri: 8 specimens of algae (gift).

EDMONSTON, W. T., New Haven, Connecticut: 6 cryptogamic specimens (gift).

EISENBERG, WILLIAM V., Washington, D.C.: 2 plant specimens (gift).

ELIAS, REV. BROTHER, Caracas, Venezuela: 248 specimens of plants from Venezuela and Colombia (gift).

FARLOW HERBARIUM, Cambridge, Massachusetts: 2 algal specimens (gift).

FIELD, DR. HENRY, Chicago: 22 specimens of plants from Georgia, 21 cryptogamic specimens (gift).

FIELD MUSEUM OF NATURAL HISTORY: Collected by Donald Richards and Dr. Francis Drouet (Field Museum Expedition to Sonora and Southwestern United States, 1939-40): 12,500 specimens of cryptogamic plants, 2,500 specimens of vascular plants.

by Colin C. Sanborn Collected (Magellanic Expedition of Field Museum): 1 plant specimen from Chile.

Collected by Paul C. Standley, Dr. Francis Drouet, and Dr. Julian A. Steyermark: 86 specimens of cryptogamic plants.

Collected by Dr. Julian A. Steyermark (Field Museum Expedition to Guatemala, 1939-40): 25,551 specimens of Guatemalan plants, 1 plant specimen from Illinois.

Collected by Llewelyn Williams: 455 specimens of Venezuelan plants, 65 wood specimens, 14 specimens of cryptogamic plants.

Transferred from the Department of Anthropology: 13 economic specimens.

Transferred from the Division of Photography: 70 photographic prints.

Transferred from the Department of the N. W. Harris Public School Extension: 3 plant specimens.

Purchases: 5,900 cryptogamic specimens; 326 plant specimens—Costa Rica; 948 plant specimens—Ecuador; 339 plant specimens—Panama; 544 plant specimens—South America.

FISHER, GEORGE L., Houston, Texas: 118 specimens of Texas plants (gift).

FLORISTS' PUBLISHING COMPANY, Chicago: 1 plant specimen (gift).

Fosberg, Dr. F. Raymond, Arlington, Virginia: 85 plant specimens, 257 cryptogamic specimens (exchange).

FREY, A., Chicago: 1 fungus specimen (gift).

FULLER, DR. GEORGE D., Chicago: 67 specimens of Illinois plants (gift).

FULTON, W. H., Rockford, Illinois: 5 plant specimens (gift).

GARFIELD PARK CONSERVATORY, Chicago: 48 specimens of cultivated plants (gift).

GARRETT, PROFESSOR ARTHUR O., Salt Lake City, Utah: 83 plant specimens (gift).

GENTRY, HOWARD SCOTT, Tucson, Arizona: 54 specimens of Mexican plants (gift).

GILES, GEORGE H., Wilsonville, Nebraska: 75 specimens of algae (exchange).

GRAHAM, DR. V. O., Chicago: 7 specimens of fungi (gift).

GRAY HERBARIUM, Cambridge, Massachusetts: 1,740 plant specimens, 11 photographic prints (exchange).

GROESBECK, DR. M. J., Porterville, California: 253 specimens of algae (gift).

California: 253 specimens of algae (gift). GRONEMANN, CARL F., Elgin, Illinois:

1 plant specimen (gift).

GUARRERA, S. A., Buenos Aires,
Argentina: 14 specimens of algae (gift).

GUEST, EDWIN, Kuala Lumpur, Federated Malay States: 10 economic specimens (gift).

Hambleton, Miss Elizabeth McM., Chicago: 2 algal specimens (gift).

HERMANN, Dr. F. J., Washington, D.C.: 93 plant specimens (exchange).

HILLS, MISS ALICE L., Chicago: 1 plant specimen (gift).

HINCKLEY, L. C., Marfa, Texas: 81 specimens of Texas plants (gift).

Hodge, Dr. Charles, Philadelphia,

Pennsylvania: 2 algal specimens (gift). HOLLENBERG, DR. G. J., Redlands, California: 85 specimens of algae (gift); 22 specimens of algae (exchange).

HORTON, SISTER M. MARCELLINE, Grand Rapids, Michigan: 121 specimens of plants from New Mexico (gift).

HUDSON, MRS. A. E., White Plains, New York: 106 economic specimens from Persia and Arabia (gift).

HUPP, E. R., Indianapolis, Indiana: 2 fungus specimens (gift).

HURT, J. R., Columbia, Missouri: 44 specimens of algae (gift).

HUTCHINSON, J. B., Trinidad, British West Indies: 1 plant specimen (gift).

ILLINOIS STATE MUSEUM, Springfield, Illinois: 239 specimens of Illinois plants (gift).

Instituto Botánico, Bogotá, Colombia: 163 specimens of Colombian plants (exchange).

Instituto de Botânica Darwinion, San Isidro, Argentina: 2 plant specimens (exchange).

JOHNSTON, DR. JOHN R., Chimaltenango, Guatemala: 55 specimens of plants from Guatemala (gift).

JOHNSTONE, DR. G. R., Los Angeles, California: 1 algal specimen (gift).

JUNGE, DON CARLOS, Concepción, Chile: 1 plant specimen (gift).

KEARNEY, DR. T. H., Washington, D.C.: 9 plant specimens (gift).

Kelly, Miss Isabel, Villa Obregon, Mexico: 2 plant specimens (gift).

KENDALL, MRS. B. A., Elburn, Illinois: 1 plant specimen (gift).

KHANNA, DR. L. P., Rangoon, Burma: 225 specimens of algae (gift).

KING, LAWRENCE J., Richmond, Indiana: 69 specimens of algae (gift).

KLEEREKOPER, DR. HERMAN, São Paulo, Brazil: 45 specimens of algae (gift).

KOCH, HERBERT L., Princeton, Missouri: 7 plant specimens (gift).

KRUKOFF, BORIS A., Bronx Park, New York: 138 plant specimens (gift); 1,470 plant specimens, 3,078 wood specimens (exchange).

LACKEY, DR. JAMES B., Cincinnati, Ohio: 3 algal specimens (gift).

LANGLOIS, A. C., Nassau, Bahamas:

1 specimen of palm (gift).

LANKESTER, C. H., Cartago, Costa

Rica: 1 plant specimen (gift).

LANOUETTE, MISS CÉCILE, Montreal,

Canada: 1 algal specimen (gift).

LEWIS, MRS. B. B., Guatemala City, Guatemala: 70 plant specimens, 22 wood specimens (gift).

LINDAUER, DR. V. W., Keri Keri, Bay of Islands, New Zealand: 8 specimens of algae (gift).

aigae (giit).

LOUISIANA STATE UNIVERSITY, Department of Botany, University, Louisiana: 2 plant specimens (gift).

McCann, Dr. L. P., Bogalusa, Louisiana: 1 specimen of lichen (gift).

McClure, F. A., Canton, China: 85 wood specimens (exchange).

McInteer, Dr. B. B., Lexington, Kentucky: 14 specimens of algae (gift).

Mannov P. S. Lefforson City Mis.

MADDOX, R. S., Jefferson City, Missouri: 2 plant specimens (gift).

MAGUIRE, DR. BASSETT, Logan, Utah: 14 specimens of algae (gift); 505 photographic prints (exchange).

MALDONADE, DR. ANGEL, Lima, Peru: 11 specimens of algae (gift).

Mann, Louis K., Chicago: 16 specimens of algae (gift).

MARSH, ERNEST G., Jr., Victoria, Texas: 960 specimens of Mexican plants (gift).

MARTÍNEZ, PROFESSOR MAXIMINO, Mexico City, Mexico: 16 specimens of Mexican plants, 2 specimens of algae (gift).

MATUDA, EIZI, Escuintla, Chiapas, Mexico: 20 specimens of Mexican plants (gift).

MELBOURNE BOTANIC GARDENS, South Yarra, Australia: 40 specimens of Australian plants (exchange).

MEYER, PROFESSOR TEODORO, Tucumán, Argentina: 9 plant specimens (gift).

MILLAR, JOHN R., Chicago: 10 specimens of algae (gift).

MISSOURI BOTANICAL GARDEN, St. Louis, Missouri: 481 plant specimens (exchange).

MONTANA STATE UNIVERSITY, Herbarium, Missoula, Montana: 145 specimens of algae (exchange).

Moore, George, Sullivan, Missouri: 25 specimens of Missouri plants (gift).

Munz, Dr. P. A., Claremont, California: 41 specimens of South American plants (gift).

Museo Nacional, San José, Costa Rica: 189 specimens of Costa Rican plants (gift).

NEW MEXICO STATE COLLEGE, New Mexico: 2 economic specimens (gift).

NEW YORK BOTANICAL GARDEN, New York: 68 plant specimens, 242 cryptogamic specimens, 38 photographic prints (exchange).

OHIO STATE UNIVERSITY, Herbarium, Columbus, Ohio: 203 specimens of algae (exchange).

PACHECO H., MARIANO, Guatemala City, Guatemala: 4 plant specimens (gift).

PENLAND, PROFESSOR C. WILLIAM, Colorado Springs, Colorado: 41 specimens of plants from Ecuador (gift).

PETERSEN, OSCAR, St. Louis, Missouri: 10 plant specimens (gift).

POMONA COLLEGE, Claremont, California: 90 plant specimens (exchange).

Ponce, Professor José M., Chapultepec, Mexico: 60 specimens of Mexican plants (gift).

PRESCOTT, DR. G. W., Albion, Michigan: 76 specimens of algae (gift).

PRINCIPIA, THE, Elsah, Illinois: 76 specimens of plants from New Mexico (gift).

RAGONESE, ARTURO E., Santa Fe, Argentina: 88 plant specimens from Argentina (gift).

REEVES, Dr. R. G., College Station, Texas: 5 plant specimens (gift).

REHBEIN, MRS. C. C., Chicago, Illinois: 1 specimen of cultivated plant (gift).

REKO, DR. BLAS P., Tacubaya, Mexico: 14 plant specimens (gift).

RICHARDS, DONALD, Chicago: 140 specimens of plants from Indiana and Minnesota, 805 cryptogamic specimens (gift).

ROBERTS, MRS. ALICE S., Chicago: 214 plant specimens from Tennessee and Ohio (gift).

ROSENGURTT, PROFESSOR BERNARDO, Montevideo, Uruguay: 17 specimens of Uruguayan plants (gift). Schipp, W. A., Darwin, Australia: 1 plant specimen (gift).

SCHNEIDER, RICHARD A., Kankakee, Illinois: 336 specimens of Illinois plants (exchange).

Schultes, Richard Evans, Cambridge, Massachusetts: 1 plant specimen, 1 photographic print (gift).

SEAVERNS, MISS DOTHA, Bennington, Vermont: 67 specimens of plants from Barro Colorado Island (gift).

SERVICIO BOTÁNICO, Ministerio de Agricultura y Cría, Caracas, Venezuela: 279 wood specimens, 73 economic specimens (exchange).

SETCHELL, PROFESSOR WILLIAM A., Berkeley, California: 13 specimens of algae (gift).

SHERFF, DR. EARL E., Chicago: 217 plant specimens (gift).

STANDLEY, PAUL C., Chicago: 752 plant specimens (gift).

STANFORD UNIVERSITY, Dudley Herbarium, California: 261 specimens of Mexican plants (exchange).

STEYERMARK, MRS. CORA SHOOP, Chicago: 8 cryptogamic specimens (gift).

STEYERMARK, DR. JULIAN A., Chicago: 2,538 plant specimens, 6 cryptogamic specimens (gift).

STIFFLER, MRS. C. B., Chicago: 9 specimens of algae (gift).

STRICKLAND, J. C., Charlottesville, Virginia: 14 cryptogamic specimens (gift); 91 cryptogamic specimens (exchange).

TAFT, DR. CLARENCE E., Columbus, Ohio, and WILLIAM A. DAILY, Cincinnati, Ohio: 27 specimens of algae (gift).

TAYLOR, DR. WILLIAM R., Ann Arbor, Michigan: 101 specimens of algae (gift).

TRYON, R. M., JR., Cambridge, Massachusetts: 24 plant specimens (gift); 82 plant specimens (exchange).

UNITED STATES DEPARTMENT OF AGRICULTURE, National Arboretum, Washington, D.C.: 1,273 plant specimens (exchange).

UNITED STATES NATIONAL MUSEUM, Washington, D.C.: 551 plant specimens, 5 typed descriptions of new species of plants (exchange).

University of California, Department of Botany, Berkeley, California: 2,200 specimens of plants from Peru and Bolivia (gift): 258 specimens of California plants (exchange).

UNIVERSITY OF CALIFORNIA AT LOS ANGELES, California: 12 plant specimens (exchange).

University of Georgia, Department of Botany, Athens, Georgia: 1 plant specimen (gift).

UNIVERSITY OF IDAHO, Department of Botany, Moscow, Idaho: 1 branch of Idaho white pine (gift).

UNIVERSITY OF IDAHO, Southern Branch, Department of Botany, Pocatello, Idaho: 34 specimens of Idaho plants (gift).

UNIVERSITY OF MICHIGAN, University Herbarium, Ann Arbor, Michigan: 230 plant specimens (exchange).

UNIVERSITY OF MINNESOTA, Department of Botany, Minneapolis, Minnesota: 50 specimens of Minnesota plants (exchange).

UNIVERSITY OF TEXAS, Department of Botany, Austin, Texas: 125 specimens of Mexican plants (gift).

UNIVERSITY OF THE PHILIPPINES, Manila, Philippine Islands: 252 specimens of algae (exchange).

UNIVERSITY OF WISCONSIN, Department of Botany, Madison, Wisconsin: 33 plant specimens (exchange).

Vogl., Rev. Padre C., Caracas, Venezuela: 484 specimens of plants from Venezuela (gift).

VOTH, DR. PAUL D., Chicago: 15 plant specimens, 13 cryptogamic specimens (gift); 50 cryptogamic specimens (exchange).

WALP, DR. LEE, Marietta, Ohio: 19 specimens of algae (gift).

WALPOLE, MRS. ROBERT H., Winnetka, Illinois: 1 plant specimen (gift).
WELCH, MISS HELEN H., Terre

Haute, Indiana: 2 algal specimens (gift).
WELCH, DR. WINONA H., Greencastle, Indiana: 35 specimens of mosses (exchange).

WILLIS, MISS BARBARA, Bennington, Vermont: 42 specimens of mosses (gift). WITTE MEMORIAL MUSEUM, San

WITTE MEMORIAL MUSEUM, San Antonio, Texas: 34 specimens of Texas plants (gift).

WOLLE, PHILIP W., Princess Anne, Maryland: 2 algal specimens (gift).

YALE UNIVERSITY, School of Forestry, New Haven, Connecticut: 14 plant specimens (gift).

Young, Mrs. Russell, Chicago: 1 specimen of semipetrified wood (gift). Zetek, James, Balboa, Canal Zone 30 specimens of Panama plants (gift)

DEPARTMENT OF GEOLOGY—ACCESSIONS

AMERICAN MUSEUM OF NATURAL HISTORY, New York: casts of fossil vertebrates (exchange).

ARTAMONOFF, GEORGE, Chicago: 4 specimens of soils—Venezuela and Colombia (gift).

AUSTRALIAN MUSEUM, Sydney, New South Wales, Australia: fragment with rust of Barratta No. 3 meteorite—New South Wales (exchange).

BALESTERIA, A. A., Chicago: 1 specinen of chert with shrinkage cracks—north of Rockford, Illinois (gift).

BARBER, C. M., Hot Springs, Arkansas: 2 incomplete carapaces of fossil urtles—Devil's Backbone, Saratoga, Arkansas; plesiosaur vertebrae—Deight, Arkansas (gift).

BARKER, JAMES M., Honolulu, Hawaii: 24 specimens of volcanic sands —Hawaii and Oahu (gift).

BECKER, R. R., Gainesville, Florida: 18 groups of fish teeth, 1 echinoid—Gainesville, Florida (gift).

BLUM, CHARLES E., New York: 1 stylolite—Lannon, Wisconsin (gift).

Bradley, Worthen, San Francisco, California: 7 specimens of ore—various localities (gift).

· Brady, Professor L. F., Flagstaff, Arizona: 21 volcanic specimens—Arizona (gift).

BRYANT, W., Parlier, California: 16 teeth and 2 fragments of tusks of Desmonstylus—Oregon; 1 specimen of rhodonite—Tulare County, California (gift).

BUDDHUE, JOHN D., Pasadena, California: 1 fragment of Darwin glass—Tasmania (exchange).

CARDIOS, MICHAEL, Chicago: 2 stylolites—near Bedford, Indiana (gift).

CARNEGIE MUSEUM, Pittsburgh, Pennsylvania: casts of 4 vertebrate fossils (exchange).

CROPAS, JULIUS, St. Johns, Arizona: 1 specimen of concretionary barite—St. Johns, Arizona (gift).

Eunson, M. J., Murfreesboro, Arkansas: 5 specimens of cinnabar—Murfreesboro, Arkansas (gift).

FIELD, DR. HENRY, Chicago: 1 specimen of residual soil—Huntingdon, Pennsylvania; 4 specimens of sand—Florida and Georgia.

FIELD MUSEUM OF NATURAL HISTORY: Collected by Colin C. Sanborn and Karl P. Schmidt (Field Museum Magellanic Expedition, 1939): 1 specimen of hematitic rock, and 1 specimen of limonitic rock—Lima, Peru.

Collected by Dr. Henry Field (Field Museum North Arabian Desert Expedition, 1928): 39 specimens of rocks— Iraq and Trans-Jordan.

Collected by Elmer S. Riggs (First Marshall Field Expedition to Argentina and Bolivia, 1922–24): part of collection of invertebrate fossils—Punta, Casamayor, Argentina.

Collected by Paul O. McGrew (Field Museum Paleontological Expedition to South Dakota, 1940): 4 specimens of vertebrate fossils—Nebraska and South Dakota.

Collected by Sharat K. Roy (Rawson-MacMillan-Field Museum Subarctic Expedition, 1927-28): 110 invertebrate fossils—Frobisher Bay, Baffin Land.

Purchases: 2 mineral specimens— Lehi, Utah; 23 specimens of meteorites—United States; individual of "Ozono" (Crockett County, Texas) meteorite.

(Crockett County, Texas) meteorite. GOODMAN, R. J., Chicago: 16 geological specimens—United States (gift).

Gretton, R. N., Minneapolis, Minnesota: 1 specimen of chatoyant goethite-bearing quartz—Cayuna, Minnesota (gift).

GROESBECK, DR. M. J., Porterville, California: 17 geological specimens— Nevada and California (gift).

HERPERS, HENRY, Chicago: 16 specimens of rocks and minerals—various localities; 3 micro-slides of minerals—Pennsylvania (gift); 2 mineral specimens—Utah and California (exchange).

Hummel, Arnim D., Richmond, Kentucky: part of skeleton of Megalonyx—London Mills, Illinois (gift).

JEANNISSON, MRS. L., Park Ridge, Illinois: 1 specimen of azurite and malachite—Arizona (gift).

JENKINS, MRS. CORA, Chicago: 16 barite roses—near Norman, Oklahoma (gift).

JENNINGS, JOHN W., Eureka Springs, Arkansas: 1 specimen of marcasite, 1 specimen of percussion cone on chert —Eureka Springs, Arkansas (gift).

Jones, William, Lake City, Florida: 1 specimen of botryoidal hematite locality unknown (gift). KEMPFER, KARL, Chicago: 1 specimen of specular hematite on hematite-Guernsey, Wyoming (gift).

Kester, John H., Easton, Maryland: 1 specimen of manganese ore: McCurtain County, Oklahoma (gift).

La Paz, Professor Lincoln, Columbus, Ohio: 1 meteorite Ector County, Texas (gift).

LOOK, ALFRED, Grand Junction, Colorado: upper jaw with dentition of Barylambda faberi Grand Junction, Colorado (gift).

Los Angeles Museum of History, Science and Art, Los Angeles, California: cast of skull and jaws of Camelops cransi (exchange).

McGrew, Patt. O., Chicago: 8 specimens of precious opal. Department of Gracias, Honduras (gift).

MATHER, BRYANT, Chicago: 2 mineral specimens California and Wyoming (gift).

MEAD, GRAYSON E., Chicago: jaw of Cynarctos acrillens Marshland, Nebraska (gift).

MELLINGER, J., Longmont, Colorado: 10 specimens of fossil mammals near Gault, Colorado (gift).

MENZEL, WILLIAM E., Chicago: 1 specimen of onyx marble Lower California, Mexico (gift).

MUSEO NACIONAL DE COSTA RICA, San José, Costa Rica: 13 minerals, 2 fossil teeth, 15 specimens of fossil wood, 6 specimens of fossil coral, and 154 invertebrate fossils Costa Rica (gift).

Myers, George T., Jamestown, Tennessee: 12 specimens of barite Jamestown, Tennessee (gift).

NICHOLS, HENRY W., Chicago: 2 mica condensers (gift).

PALKOVICH, BASIL, East Chicago, Indiana: I tooth of cave bear. Hungary (gift).

PALMER, DR. R. H., Havana, Cuba: 13 fossil crinoids Havana, Cuba (exchange).

PAPE, JOHN C., Mullan, Idaho: 6 specimens of lead-gine-silver ore Mullan, Idaho (gift).

PEABODY MUSEUM, New Haven, Connecticut: 6 casts of vertebrate fossils (exchange).

PEYTON, W. T., Morton, Wyoming: 1 septarium—near Morton, Wyoming (gift). PITTS, WILLIAM B., Sunnyvale, California: 2 plaques of chiastolite—Massachusetts and Australia (gift).

PLANTZ, H. W., Chicago: 1 precious opal Honduras(?) (gift).

QUINN, JAMES H., Chicago: 15 specimens of vertebrate fossils—Ainsworth, Nebraska (gift).

SALO, O. J., Red Lodge, Montana: Sspecimens of dahllite—Montana (gift).

SCHAAP, R., Batavia, Java, Netherlands East Indies: 6 tektites, 2 obsidian bombs—Java and Philippines (gift).

SCHMIDT, ROBERT, Homewood, Illinois: skull of fossil dog, Daphaenus— Bad Lands, South Dakota (gift).

Schneider, E. E., Chicago: 2 specimens of blue "opaline" quartz porphyry-near Babyhead Mountain, Texas (gift).

SHOLER, C. H., Minneapolis, Minnesota: 1 specimen of cross bedded sandstone—near Missoula, Montana (gift).

STANDARD OIL COMPANY (Indiana:, Chicago: 2 photographs (gift).

SUNSHINE MINING COMPANY, Kellogg, Idaho: 1 specimen of silver ore-Kellogg, Idaho (gift).

THIESMAYER, PROFESSOR LINCOLN R., Appleton, Wisconsin: 6 dreikanters and ventifacts—Cape Cod, Massachusetts (gift).

TREATCH, W. M., Hennepin, Illinois: piece of copper boulder - Hennepin, Illinois (gift).

TREVETT, MISS ANN, Casper, Wyoming: 1 specimen of ferritungstite— Wyoming (gift).

United States National Museum. Washington, D.C.; cast of skull of Desmostylus hesperys (exchange).

Von Drasek, Frank, Cicero, Illinois: 14 geological specimens—Murfreesboro, Arkansas (gift).

WINTERROTHAM, JOHN R., III, Chi cago. 2 fossil plants Florissant, Colo rado gift.

Wise, Francis, Colorado Springs Colorado: 4 minerals - Durango, Mexico gift :

Wise, VAUGHN, Logansport, Indiana 1 specimen of granite xenolite in basal Logansport, Indiana (gift).

WORTH, F. C., Chicago: 28 specimen of ores and rocks various localitie

ZIEGLER, EDWARD, Chicago: 1 spec men of fossil spruce—near Adel, low gift.

DEPARTMENT OF ZOOLOGY—ACCESSIONS

ACADEMY OF NATURAL SCIENCES, Philadelphia, Pennsylvania: 7 bird skins—various localities (exchange).

Adams, William J. R., Wayland, Kentucky: 43 salamanders, 15 toads—

Kentucky (exchange).

ALLEN, DAVID, Highland Park, Illinois: 2 salamanders, 1 snapping turtle— La Porte County, Indiana (gift).

ALLEN, E. Ross, Silver Springs, Florida: 1 panther skull—Collier County, Florida (gift).

ALLEN, PAUL H., Balboa, Canal Zone: 1 quetzal skin—Panama (gift).

Alwart, Paul J., Chicago: 5 beetles—Chetek, Wisconsin (gift).

Andrews, E. Wyllys, Cambridge, Massachusetts: 82 bats in alcohol, 7 rodent skins and skulls, 5 small mammal skulls, 2 salamanders, 197 frogs, 328 lizards, 431 snakes, 8 turtles, 66 fishes, 1 crab, 3 scorpions—Yucatan and Campeche, Mexico (gifts).

Anonymous Donor: 5,153 bird skins

-various localities (gift).

Anonymous Donor: 63 fishes—various localities (gift).

ARIZONA GAME AND FISH COMMISSION, Phoenix, Arizona: 1 river salmon—California (gift).

ARMOUR AND COMPANY, Chicago: 2 domestic animals and parts of 2 others (gift).

ARNOLD, GUSTAV E., San Augustine, Texas: 9 lizards, 7 snakes, 1 turtle—Texas (gift).

ARTAMANOFF, GEORGE, Chicago: 1 land snail, 31 insects—Venezuela and Colombia (gift).

BARBER, CHARLES M., Hot Springs, Arkansas: 1 bat in alcohol, 1 lizard, 1 snake, 1 cleaned turtle skeleton—Arkansas and Brazil (gift).

BARTEL, KARL, Blue Island, Illinois: 1 western sandpiper—Wolf Lake, Indi-

ana (gift).

BARTNICK, BERNARD, Chicago: 12 hummingbirds, 1 parrot—Venezuela and Colombia (gift); 31 bird skins—Europe and South America (exchange).

Bass Biological Laboratory, Englewood, Florida: 2 shark jaws, 1 young ray and egg—Florida (gift).

BECKER, MRS. VIOLET, Wooddale, Illinois: 1 rattlesnake—Wooddale, Illinois (gift).

BEECHER, WILLIAM J., Chicago: 2 young rabbit skins and skulls—Fox Lake, Illinois (gift).

BEST, MISS ELIZABETH, Glencoe, Illinois: 1 beetle—Nashville, Indiana (gift).

BRITISH MUSEUM (NATURAL HISTORY), London, England: 88 bats in alcohol—West Indies, Trinidad, and Dutch Guiana (exchange).

Bromund, E. Fred, Mount Pleasant, Michigan: 108 shells—various localities; 1 scorpion-fly—Michigan (gift).

Brown, Mrs. A. W., Spirit Lake, Iowa: 2 marine shells—Texas (gift).

BUCHSBAUM, DR. RALPH, Chicago: 2 lizards—Barro Colorado Island, Canal Zone (gift).

Buck, Frank, Chicago: 1 jaguar (gift).

Burton, Robert A., Evanston, Illinois: 2 salamanders, 87 frogs, 47 toads, 24 snakes, 4 turtles—Mount Pleasant, Iowa (gift).

Burton, Robert A. and Donald Kemp, Evanston, Illinois: 1 tadpole, 13 frogs, 4 snakes, 2 turtles—Grundy County, Illinois (gift).

CAMPBELL, J. E., Graham, Texas: 1 hog moth—Graham, Texas (gift).

CASCARD, BEN, Gary, Indiana: 458 lower invertebrates—San Pedro, California (gift).

CHICAGO ZOOLOGICAL SOCIETY, Brookfield, Illinois: 39 mammals, 285 birds, 3 salamanders, 18 frogs, 3 lizards, 2 birds' eggs, 111 snakes, 3 turtles, 1 alligator, 1 tick, 1 peripatus—various localities (gift).

CONOVER, BOARDMAN, Chicago: 36 birds, 11 eggs—various localities (gift); 17 birds—various localities (exchange).

COWLES, DR. RAYMOND B., Los Angeles, California: 3 sand lizards—Arizona (gift).

DAGGY, THOMAS, Evanston, Illinois: 3 beetles—Laporte County, Indiana (gift).

DAMPF, DR. ALFONSO, Mexico City, Mexico: 7 bats in alcohol—Mexico and

Guatemala (gift).

DAVIS, D. DWIGHT, Naperville, Illinois: 1 raccoon—Naperville, Illinois (gift).

DE CLEMENTS, FRANK, Chicago: 1 spider—Chicago (gift).

DEITMER, CARL, Chicago: 1 wasp—Chicago (gift).

DROPKIN, V. H. and I. ROSSMAN, Chicago: 1 bird Chicago (gift).

DROUET, DR. FRANCIS, Chicago: 2 slides of freshwater sponges (gift),

DUCKWORTH, N. H., Manila, Philippine Islands: 1 flying lizard Lake Bulasan, Philippine Islands (gift).

DUNN, DR. E. R., Haverford, Pennsylvania: 2 coral snake heads. Puerto Armuelles, Panama (gift).

DYBAS, HENRY S., Chicago: 733 insects and allies various localities (gift).

EFF, DONALD, Sylvania, Ohio: 1 butterfly Wallace, Idaho (gift).

EMERSON, DR. ALFRED E., Chicago: 25 termites British Honduras (gift).

ENZENBACHER, ANDREW, Chicago: 2 turtles, 3 snakes Dunes, Indiana (gift).

FIELD, DR. HENRY, Chicago: 1 mammal, 11 salamanders, 11 tadpoles, 16 frogs, 11 toads, 3 lizards, 6 snakes, 29 turtles, 229 fishes, 315 insects and allies, 230 lower invertebrates—various localities in United States (gift).

FIELD MUSEUM OF NATURAL HISTORY: Collected by Emmet R. Blake: 14 sets of birds' eggs Illinois.

Collected by Rudyerd Boulton and D. Dwight Davis Leson Mandel Caribbean Expedition of Field Museum): 11 mammal skins, 23 bats in alcohol, 97 bird skins, 62 bird skeletons, 7 sets of birds' eggs, 9 frogs, 329 lizards, 31 snakes, 7 turtles, 2 crocodilians, 118 fishes, 63 insects and allies, 227 lower invertebrates. Caribbean region, Yucatan, and Honduras.

Collected by Sidney Camras: 230 bird lice various localities.

Collected by D. Dwight Davis (Leon Mandel Caribbean Expedition of Field Museum): 329 lizards, 31 snakes, 2 crocodilians, 7 turtles, 9 frogs. Caribbean region.

Collected by Dr. Henry Field and Richard A. Martin (Field Museum Anthropological Expedition to the Near East, 1934): 5 ticks Iraq and Syria.

Collected by Juan Heider (Marshall Field Brazilian Expedition): 2 scorpions - Monte Carlo, Argentina.

Collected by Dr. Wilfred H. Osgood, Colin C. Sanbern, Karl P. Schmidt, and John M. Schmidt Field Museum Magellanic Expedition: \$40 small mammal skins and skulls, 59 small mammals in alcohol, 7 large mammal skins, 23 mammal skeletons, 14 separate mammal skulls, 182 birds, 18 bird skeletons, 152 tadpoles, 8 lots of toad eggs, 1,002 frogs and toads, 454 lizards, 52 snakes, one turtle skull, 278 fishes, 977 insects and allies, 347 lower invertebrates—Colombia, Peru, Chile, Argentina, and Tierra del Fuego.

Collected by Martin Ribniker: 8 birds Chicago area.

Collected by Paul C. Standley (Sewell Avery Expedition to Guatemala, 1938-39): 5 fresh-water shells—Escoba, Guatemala

Collected by Dr. Julian A. Steyer-mark (Field Museum Botanical Expedition to Guatemala, 1939-40): 2 bats and 1 mouse in alcohol, 26 frogs, 11 lizards, 4 snakes, 14 fishes, 4 insects and allies, 3 crabs, 16 shells--Guatemala.

Third Asiatic Expedition (1926)
-American Museum of Natural History): 2 bat skulls--China.

Collected by Edward C. Tobiase: 3 frogs, 5 snakes, 7 hair-worms Du Page County, Illinois.

Transferred from Department of Geology: 1 elephant skeleton.

Transferred from Department of N. W. Harris Public School Extension: 4 birds - Illinois and Wisconsin (exchange).

Collected by Rupert L. Wennel: 50 biting-lice- San Diego County, Callfornia; 1,149 external bat parasites—various localities.

Collected by Loren P. Woods (Field Museum Expedition to Southeastern Missouri): 5,385 fishes—southeastern Missouri.

Purchases: 3 tadpoles, 7 from, lizards, 5 snakes Africa and South America; 35 small mammal skins and skulls, 183 snakes Bolivia; 98 mammals Brazil; 10 bat skins and skulls-California; 13 mammal skins and skulls, 16 small mammals in alcohol Chile: 6 bat skins and skulls, 16 bats in alcohol—Colombia; 18 birds—East Africa: 1 lizard, 6 snakes, 5 fishes, 182 insects, 15 crabs Florida: 44 mammal skins and skulls, I mammal skull, 16 hats in alcohol, 363 birds, 59 salamanders, 85 frogs, 562 lizards, 130 snakes, 1 turtle, 37 fishes - Mexico; 26 mammal skins and skulls, 1 mammal skeleton Nebraska and South Dakots: 304 insects and allies New Guines: 25 small mammal skins and skulls-North Manchuria; 36 mammal skins and skulls Oregon; 6 small mammal

skins and skulls—Peru; 26 birds— Utilla Island; 84 hawks and owls, 1 other bird skin—various localities (Leslie Wheeler Fund); 7 mammals-Vermont; 2 caecilians, 8 frogs, 10 lizards, 5 snakes—West Indies and South America.

FOGLE, DR. F. LESTER, South Bend, Indiana: 2 bats in alcohol, 1 centipede

-West Africa (gift).

FRANZ, HERMAN, Bensenville, Illinois: 2 snakes-McHenry, Illinois (gift).

Franzen, Albert J., Chicago: 1 snake—Calumet Lake, Illinois (gift).

Friesser, James, Chicago: 1 newt—Ashland County, Wisconsin (gift).

Friesser, Julius, Chicago: 1 jaguar skull-Brazil; 1 fish specimen-Illinois (gift); 1 white rhino skull-Africa; 1 pair deer antlers-Asia (exchange).

FRIZZELL, MRS. DON L., Negritos,

Peru: 4 snakes—Peru (gift).

Funk, T. L., Chicago: 1 beetle-Louisville, Kentucky (gift).

GENERAL BIOLOGICAL SUPPLY HOUSE, Chicago: 1 injected frog-Chicago area; 6 small bivalve shells-Englewood, Florida (gift).

GERHARD, WILLIAM J., Chicago: 23 insects-New Jersey and Colorado.

GRANT, GORDON, Los Angeles, California: 1,137 insects and allies, 436 lower invertebrates—Los Angeles, California (gift).

GREEN, J. A., Chicago: 1 loggerhead turtle skull-Key West, Florida (gift).

GREEN, DR. N. BAYARD, Huntington, West Virginia: 12 salamanders-Huntington, West Virginia (exchange).

GRONEMANN, CARL F., Elgin, Illinois: 6 beetles—Province of Hanover, Ger-

many (gift).

GUERET, EDMOND N., Chicago: 2 birds; 3 freshwater clams—Barron County, Wisconsin (gift).

GUILLAUDEU, ROBERT, Chicago: 1 snake—Deerfield, Illinois (gift).

HAAS, DR. FRITZ, Chicago: 18 freshwater shells—Chicago (gift).

HAAS, DR. GEORG, Jerusalem, Palesine: 1 salamander, 1 frog, 15 lizards, 1 snakes—Palestine (exchange).

HARGROVE, J., Chicago: 6 book-lice-

Chicago (gift).

HERPERS, HENRY, Chicago: 2 land shells—Ogdensburg, New Jersey (gift).

HERTIG, BRUCE, Lima, Peru: 1 toad, blind snake—Lima, Peru (gift).

HERTIG, DR. MARSHALL, Lima, Peru: 1 snake—Surco, Peru (gift).

HIBLER, C. D., Kingsville, Texas: 15 frogs and toads, 9 lizards, 19 snakes, 7 turtles—Kingsville, Texas (exchange).

HILL, J. L., Berwyn, Illinois: 2 insects-Colorado and South Dakota (gift).

HOBGOOD, Dr. W. C., Monticello, Arkansas: 1 short-tailed shrew in alcohol, 1 salamander, 3 frogs, 3 lizards, 3 snakes, 1 turtle-Monticello, Arkansas (gift).

HODGSDON, DONALD, Pochuta, Guatemala: 1 tarantula-Pochuta, Guate-

mala (gift).

HOLABIRD, JOHN A., Chicago: 1 raccoon skin and skeleton, 2 woodrat skins and skulls, 2 young woodrats in formalin, 20 bird skins, 6 bird skeletons. 28 frogs, 15 lizards, 20 snakes, 2 turtles, alligator, 204 fishes-Avery Island, Louisiana (gift).

HOLABIRD, MRS. JOHN A., Chicago: 1 hummingbird—Illinois (gift).

HOLLEY, FRANCIS E., Lombard, Illinois: 8 insects-various localities (gift).

HOOGSTRAAL, HARRY, Champaign, Illinois: 28 small mammal skins and skulls, 16 bats in alcohol, 3 separate mammal skulls-Mexico (gift).

Hubricht, Leslie, St. Louis, Missouri: 10 small marine shells-Port St. Joe, Florida (gift).

IGLER, MISS SOPHIE, and MISS EDITH HAAS, Chicago: 10 freshwater mussels-Loon Lake, Illinois (gift).

Iowa Wesleyan College, Mount Pleasant, Iowa: 1 snake—Mount Pleasant, Iowa (gift).

Janecek, John J., Cicero, Illinois: 55 insects, 2 spiders—Illinois (gift).

JEWETT, STANLEY G., Portland, Oregon: 2 rabbit skins and skulls—Oregon (gift).

JOERN, MISS MARIE, River Forest, Illinois:

(gift).

KEMP, DONALD, Evanston, Illinois: 21 salamanders, 74 tadpoles, 41 frogs, 5 lizards, 15 snakes, 8 turtles, 7 snails— Illinois and Missouri (gift).

KNICKERBOCKER, C. K., ESTATE OF, Chicago: 223 birds—North America; 9,869 birds' eggs—various localities (gift).

KNOWLTON, PROFESSOR G. F., Logan, Utah: 60 flies—Utah (exchange).

Kraft, Everett E., Chicago: 2 beetles Chicago (gift).

KURFESS, JOHN F., Hinsdale, Illinois: 1 melanistic young garter snake Hinsdale (gift).

LAKE, WILLIAM, Chicago: 1 bat in alcohol Chicago (gift).

LAMB, ROBERT A., Hammond, Indiana: 1 walking stick -- Hammond, Indiana (gift).

LAMBERT, RONALD, Zion, Illinois: 1 freshwater shell (gift).

Lambert, Dr. S. M., Utica, New York: 1 crocodile skull—New Guinea (gift).

LERNER, MICHAEL, New York: 1 black marlin, 1 thresher shark—New Zealand (gift).

LETL, FRANK, Homewood, Illinois: 1 bird, 1 water snake—Illinois (gift).

LEVY, SEYMOUR, Chicago: 1 bird—Chicago (gift).

LILJEBLAD, EMIL, Willow Park, Illinois: 43 insects—Pentwater, Michigan (gift).

LINCOLN PARK Zoo, Chicago: 3 mammals, 1 frog, 5 lizards, 11 snakes, 1 turtle, 1 young crocodile, 2 tongue worms (gift).

LOEWEN, MRS. S. L., Sterling, Kansas: 1 Great Plains lizard—Kansas (gift).

LUTZ, THOMAS, Downers Grove, Illinois: 1 insect—Aurora (gift).

McCloud and Company, W. B., Chicago: 1 beetle—Chicago (gift).

McIlhenny, Edward A., Avery Island, Louisiana: 1 mammal skin and skull, 1 mammal skin and skeleton, 1 shrew in formalin, 1 three-legged mallard duckling in formalin—Avery Island (gift).

MARK, HARRIETT, Chicago: 1 bird—Chicago (gift).

Mazur, Anthony, Chicago: 1 spider —Oswego, Illinois (gift).

MOCK, DR. HARRY, Evanston, Illinois: 1 mountain lion skeleton—New Mexico (gift).

Moran, Morton, San Diego, California: 76 insects—Phoenix, Arizona: 6 fishes, 256 insects and allies, 1,200 lower invertebrates—Coronado and San Diego, California (gift).

Morrison, Clifton B., Chicago: 1 bird—Chicago (gift).

MUSEO NACIONAL DE COSTA RICA, San José, Costa Rica: 4 corals—Costa Rica (gift). MUSEUM OF COMPARATIVE ZOOLOGY, Cambridge, Massachusetts: 1 solenodon skin and skeleton—San Domingo; 1 bat in alcohol—Java; 1 caecilian, 7 frogs, 30 lizards, 12 snakes, 2 turtles—various localities (exchange); 52 lizards—British West Indies (gift).

NELSON, BERNE, Wooddale, Illinois: 2 snakes—Wooddale, Illinois (gift).

Neuman, Herbert, Elgin, Illinois: 1 fire-fly larva—Elgin, Illinois (gift).

Osgood, Dr. Wilfred H., Chicago: 1 prairie dog skin and skull, 3 night hawks, 3 birds' eggs—Colorado; 1 tick Mississippi (gift).

OWENS, DAVID W., Flossmoor, Illinois: 18 frogs, 7 snakes, 1 turtle—Illinois (gift).

PAQUETTE, DONALD J., Mantene, Illinois: 1 insect—Mantene, Illinois (gift).

PARK, ANDREW R., Evanston, Illinois: 2 moths—Urbana, Illinois (gift).

PATTERSON, BRYAN, Chicago: 103 insects and allies, 1 land shell—Indiana and Nebraska (gift).

Pearsall, Gordon, Maywood, Illinois: 1 screech owl—River Forest, Illinois (gift).

PERSKY, MRS. B., Chicago: 2 marine shells—Miami Beach, Florida (gift).

PFLUEGER, AL, Miami, Florida: 2 ducks—Florida (gift).

PHILBY, HAROLD ST. JOHN, Jidda, Arabia: 3 arachnids—Arabia (gift).

PILSBRY, DR. HENRY A., Philadelphia, Pennsylvania: 3 paratypes of land shells—Miranda, Cuba (gift).

POHRTE, WILLIAM C., Laporte, Indiana: 8 salamanders, 2 tree frogs, 1 snake Laporte County, Indiana (gift).

POLLAK, MRS. H. H., Chicago: 3 marine shells—Rio de Janeiro, Brazil (gift).

Pope, Clifford H., Winnetka, Illinois: 1 injected turtle—Chicago area (gift).

Popov, Miss Susan R., Freeport, Illinois: 1 crab spider—Freeport, Illinois (gift).

POULTER, DR. THOMAS, Chicago: 2 penguin skeletons—Little America (gift).

QUINN, JAMES H., Harvey, Illinois: 1 soft-shelled turtle—Ainsworth, Nebraska (gift).

REED, CARLOS S., Santiago, Chile: 5 fly-catchers—Chile (gift).

REED, FRANK, Monticello, Arkansas: shrew skin and skull-Monticello, Arkansas (gift).

RETONDO, JOHN, Chicago: 101 inects—Chicago area (gift).

RIBNIKER, MARTIN, Chicago: 2 birds -Hinsdale, Illinois (gift).

RICKARDS, A. R. M., Bagdad, Arabia: ! ticks-Aden, Arabia (gift).

ROMANA, WILLIAM, Chicago: 1 frog, snake—Ludington, Michigan (gift).

ROSENBERG, W. F. H., Middlesex, England: 1 albatross—New Zealand exchange).

ROYAL ONTARIO MUSEUM OF ZOOL-GY, Toronto, Ontario: 1 cleaned marten keleton, 1 fisher skeleton-Ontario (ex-

RUECKERT, ARTHUR, Chicago: 1 Cooper's hawk-Florida (gift).

SANBORN, COLIN C., Highland Park, llinois: 1 beetle, 1 crayfish—Highland Park, Illinois (gift).

SANIBEL SCHOOL, Sanibel, Florida: coach whip snake-Sanibel Island, Florida (gift).

SCHMIDT, JOHN M., Homewood, Illihois: 16 lizards, 6 snakes, 6 insects and illies—various localities (gift).

SCHMIDT, KARL P., Homewood, Illinois: 3 snakes, 3 lizards, 20 beetles-Illinois, Nebraska and Florida (gift).

SCHREIBER, JACK, Chicago: 1 tick—Michigan; 1 bird parasite—Chicago gift).

SEEVERS, DR. CHARLES H., Chicago: 52 insects and allies—various localities gift).

SEGOVIA, PASTORA, Rio Anzu, Ecualor: 28 beetles—Ecuador (gift).

SHEDD AQUARIUM, JOHN G., Chicago: tropical fish—Amazon region (gift).

SHOEMAKER, DR. HURST, Urbana, Illinois: 19 insects—various localities gift).

SHUEMAN, MARTIN, Bensenville, Illinois: 2 snakes—Wooddale, Illinois (gift).

SIGISMUND OF PRUSSIA, PRINCESS, Barranca, Costa Rica: 1 bat in alcohol, frogs, 2 snakes, 1 boa head, 1 lizard, 3 insects and allies, 7 land shells—Barranca, Costa Rica (gift).

SLATER, DR. J. R., Tacoma, Washingon: 7 snakes-Tacoma, Washington gift).

SMITH, DR. C. S., San Marcos, Texas: lizard, 1 snake—Texas (gift).

SMITH, DON, Chicago: 3 butterflies-Badger Mountains, Washington (gift).

SMITH, MRS. H. D., Lake Forest, Illinois: 1 snake—Desplaines River, Illinois (gift).

Sorensen, Harvey, Waukegan, Illinois: 1 pseudo-scorpion-Waukegan, Illinois (gift).

STEYERMARK, DR. JULIAN A., Chicago: 1 painted turtle-Lake County. Illinois (gift).

STOREY, MISS MARGARET, Stanford University, California: 51 fishes-Florida (gift).

TEXAS CO-OPERATIVE WILD LIFE RE-SEARCH UNIT, College Station, Texas: 1 spotted skunk skeleton—Colorado County, Texas (gift).

Tobiasz, Edward C., Chicago: 1 salamander, 2 toads, 5 frogs, 5 snakes, 40 lower invertebrates-DuPage County, Illinois (gift).

TODD, JOSEPH D., Chicago: 124 marine shells-Anna Maria Key, Florida (gift).

Traylor, Melvin A., Jr., Chicago: 731 bird skins, 1 bird skeleton—Yucatan and Campeche, Mexico (gift).

United States National Museum. Washington, D.C.: 1 bat in alcohol— Celebes; 15 samples of shark skins, 3 crustaceans—various localities (exchange).

University of California Museum OF VERTEBRATE ZOOLOGY, Berkeley, California: 1 snake—Arabia (exchange).

University of Maine, Orono, Maine: 2 land-locked salmon—Maine (gift).

University of Michigan, Museum OF ZOOLOGY, Ann Arbor, Michigan: 2 rabbits-Ecuador (exchange).

Vatter, Albert, Glenview, Illinois: 1 cicada—Glenview, Illinois (gift).

VIOSCA, Dr. Percy, New Orleans, Louisiana: 1 salamander—Louisiana (gift).

Vogl., Padre Cornelio, Caracas, Venezuela: 11 frogs, 1 lizard, 6 fishes, 686 insects and allies—Venezuela (gift).

Vogt, William, Lima, Peru: 1 tern head in alcohol, 50 mollusks—Peru (gift).

VON IHERING, RUDOLPH, Recife. Brazil: 5 birds—Brazil (gift).

WADE, MISS ELIZABETH, Thomasville, Georgia: 6 salamanders—Thomasville, Georgia (gift).

Wade, Farley H., Park Ridge, Illinois: 1 wasp Chicago (gift).

Walton, Miss Clara, Highland Park, Illinois: 1 bird- eastern North America; 10 birds Highland Park, Illinois (gift).

WEED, ALFRED C., Chicago: 34 freshwater snails -- Lake Ontario, New York (gift).

Wells, Joseph M., Chicago: 657 birds' eggs-North America (gift).

WENZEL, RUPERT L., Chicago: 10 salamanders, 406 insects and allies, 5 slugs—various localities (gift).

WHITE, MISS BECKY, Thomasville, Georgia: 30 insects--Trinidad, British West Indies (gift).

WHITE, MRS. ROBB, Thomasville, Georgia: 1 mole in alcohol, 1 lizard, 9 snakes, 2 turtles, 46 insects—Florida and Georgia; 62 insects—Kentucky (gift).

WHITE, MRS. ROBB, JR., Thomasville, Georgia: 3 salamanders, 1 siren, 8 frogs, 6 snakes—Thomasville, Georgia (gift).

WOLCOTT, ALBERT B., Downers Grove, Illinois: 1 salamander—Downers Grove, Illinois; 24 beetles—various localities (gift).

Wonder, Frank, Chicago: 1 weasel Butternut, Wisconsin (gift).

WOOD, GENERAL R. E., Chicago: 3 bear skulls—Alaska (gift).

WOODCOCK, H. E., Chicago: 7 butterflies—New Mexico; 1 spider—Chicago (gift).

Woods, Loren P., Chicago: 2 salamanders, 6 frogs, 1 lizard, 5 snakes, 3 crayfish various localities (gift).

WYATT, ALEX K., Chicago: 11 insects—various localities (gift).

RAYMOND FOUNDATION—ACCESSIONS

FIELD MUSEUM OF NATURAL HISTORY: Made by Division of Photography: 629 slides, 16 prints Mandel-Caribbean Expedition, 67 colored slides.

Purchase: 1 slide projector, 1 phonograph, 5 phonograph record albums,

1 slide viewer, 60 slides in colors.

National Broadcasting Company: 45 records of 15 "How Do You Know?" radio programs (gift).

WOOD, MIRIAM, Chicago: 10 colored slides (gift).

DIVISION OF PHOTOGRAPHY—ACCESSIONS

FISHER, MRS. ANNE, ESTATE OF, New York: 1,404 negatives, 3,022 prints, 75 enlargements, and 35 post card views of racial types and general scenes in Iraq (gift).

FIELD MUSEUM OF NATURAL HISTORY: Made by Division of Photography: 6,848 prints, 1,897 negatives, 1,155 lantern slides, 612 enlargements, 42 large transparencies, 62 transparent labels.

Developed for expeditions: 144 negatives.

Made by Paul O. McGrew: 150 negatives (35 mm.) of general views and landscapes on the Pine Ridge Indian Reservation, South Dakota.

LIBRARY—ACCESSIONS

List of Donors of Books

INSTITUTIONS

Agencia Geral das Colonias Lisbon, Portugal.

El Agricultor Venezolano, Caracas, Venezuela.

Aluminum Company of America, Pittsburgh, Pennsylvania.

American Institute of the City of New York.

American Museum of Natural History, New York.

American Society for Testing Materials, Philadelphia, Pennsylvania.

American Society of Legion of Honor, New York.

Amerind Foundation, Dragoon, Arizona.

Anti-Cruelty Society, Chicago.

Art Institute of Chicago.

Atchison, Topeka and Santa Fé Railway Company, Topeka, Kansas.

Boonton Molding Company, Boonton, New Jersey. trazil, Ministerio da Agricultura, Rio de Janeiro, Brazil.

Carnegie Institution, Washington, D.C. Carolina Biological Supply Company. Elon College, North Carolina.

Colombia, Ministerio de la Economia Nacional, Bogotá, Colombia.

Compañia Argentina de Editores, Buenos Aires, Argentina.

Cook County Forest Preserve District, Chicago.

Dodd Mead and Company, New York.

rederal Security Agency, Washington, D.C.

Food Facts, Chicago.

General Society of Mechanics and Tradesmen, New York.

Golden Gate Exposition, San Francisco. California.

Guatemala, Instituto Químico-Agricola Nacional, Guatemala City, Guatemala.

Holst Publishing Company, Boone, Iowa.

Illinois Coal Strippers Association, Chicago.

Instituto de La Salle, Bogotá, Colombia.

John Crerar Library, Chicago.

Kaffrarian Museum, King William's Town, South Africa.

Lincoln Golden Key Club, Chicago.

Manchukuo, Central National Museum of, Hsinking, Manchukuo.

Marine Studio, St. Augustine, Florida. Mexico, Departamento de la Marina Nacional, Pátzcuaro, Mexico.

Monsanto Chemical Company, Louis, Missouri.

National Association of Manufacturers, New York.

National Soap Sculpture, New York.

Naturaliste Canadien, Quebec, Canada.

New York University, Institute of Fine Arts, New York.

Northeastern University, Boston, Massachusetts.

Victoria Museum and Art Gallery, Tasmania, Australia.

São Paulo, Departmento de Botánica, São Paulo, Brazil.

School of African Studies, Cape Town, South Africa.

Schools of American Research, Santa Fe, New Mexico.

Semana de la Farmacia, La, San José, Costa Rica.

Sondley Reference Library, Asheville, North Carolina.

South Dakota University, Vermillion, South Dakota.

Squibb and Sons, E. R., New York. Standard Oil Company, New York.

Statsbiblioteket, Aarhus, Denmark.

Toledo Museum of Art, Toledo, Ohio. Toledo Naturalists' Association, Toledo, Ohio.

United Brewers Industrial Foundation, New York.

Utah Agricultural Experiment Station, Logan, Utah.

Washington, State Fisheries Department, Washington.

Wood Technic, Chicago.

Work Projects Administration; Illinois Historical Records Survey Project, Urbana, Illinois.

Yikal Maya Than, Mérida, Yucatan.

INDIVIDITALS

Aden, Alonzo J., Chicago.

Aoe, Kojiro Mikage, Hyogoken, Japan.

Baird, Don O., Huntsville, Texas.

Beecher, William J., Chicago.

Behn, Dr. Konrad, Valparaiso, Chile. Bernstorff, Dr. W. H., Calumet City, Illinois.

Bolton, Mrs. Chester C., Cleveland, Ohio.

Borenstein, S., Chicago.

Bowen, Norman L., Chicago.

Brimley, H. H., Raleigh, North Carolina.

Causton, Dr. Gordon, Durban, Natal, Africa.

Coleman, Edith, Blackburn, Victoria, Australia.

Cory, Charles B., Jr., Chicago.

Cummins, George B., Lafayette, Indiana.

292 FIELD MUSEUM OF NATURAL HISTORY REPORTS, Vol. 12

Daniel, H., Medellin, Colombia. Davis, D. Dwight, Chicago. Day, John and Company, New York.

Emerson, Dr. Alfred E., Chicago.

Farley, Malcolm, Chicago.

Fehir, Dr. D., Sopron, Hungary.

Fernandez de Cordoba, Joaquín, Morelia, Mexico.

Field, Dr. Henry, Chicago.

Field, Stanley, Lake Forest, Illinois.

Francesco, Festa, Bitritto, Italy.

Francis, W. D., Brisbane, Australia.

Gerhard, W. J., Chicago.

Gleason, H. A., New York.

Graham, H. L., Dallas, Texas.

Gregg, Clifford C., Flossmoor, Illinois.

Grisecke, Dr. Albert A., Miraflores, Peru.

Grove, Bert E., Chicago.

Gunsaulus, Helen C., Chicago.

Gusinde, Martin, St. Gabriel, Modling, Germany.

Haas, Dr. Fritz, Chicago.

Hambly, Dr. Wilfrid D., Chicago.

Hamlin, Chauncey J., Buffalo, New York.

Hansen, John Conrad, Chicago.

Henderson, M. R., Singapore, Straits Settlements.

Herald, Earl Stannard, Stanford University, California.

Herman, Dr. Carlton M., San Diego, California.

Hermanson, Helen, Chicago.

Herpers, Henry, Chicago.

Herrera, F. L., Lima, Peru.

Heyser, Frank, Chicago.

Hoehne, F. C., São Paulo, Brazil.

Hovanitz, William, Pasadena, California.

Hungerford, H. B., Lawrence, Kansas.

Jeffreys, M. D. W., Port Harcourt, Nigeria.

Jellison, William L., Hamilton, Montana.

Johnston, Dr. John R., Chimaltenango, Guatemala.

Just, Dr. T., Notre Dame, Indiana.

Kelso, Leon, Washington, D.C.

Kinghorn, J. R., Sydney, Australia.

Knickerbocker, Kenneth, Chicago. Knoche, Dr. Walter, Buenos Aires, Argentina.

Lagarrigue, Luis, Santiago, Chile.

Lagler, Dr. Karl F., Ann Arbor, Michigan.

Lasker, Bruno, New York.

Latcham, Ricardo E., Santiago, Chile.

Lewis, Dr. Albert B., Chicago. Liljeblad, Emil, Villa Park, Illinois.

Little, James M., San Francisco, California.

Lundell, C. L., Ann Arbor, Michigan.

McGrew, Paul O., Chicago.

McNair, James B., Los Angeles, California.

Mather, Bryant, Chicago.

Martin, Dr. Paul S., Chicago.

Mayaud, Noël, Nantes, France.

Mazzotti, Dr. Luis, Mexico City, Mexico.

Mead, Dr. Margaret, New York. Moldenke, Harold N., New York.

Nichols, Henry W., Chicago.

Osgood, Dr. Wilfred H., Chicago.

Pabst, Marie, Chicago.

Pachecho Cruz, Santiago, Merida, Yucatan.

Parr, A. E., New Haven, Connecticut. Patterson, Bryan, Chicago.

Pearsall, Gordon, Maywood, Illinois.

Pope, Clifford H., Chicago.

Reynolds, Philip K., New York.

Riggs, Elmer S., Chicago.

Rosenberg, W. F. H., Edgeware, Middlesex, England.

Ruiz Leal, A., Mendoza, Argentina.

Sanborn, Colin Campbell, Chicago. Sanderson, Ivan T., London, England.

Schmidt, Karl P., Chicago.

Sherff, Dr. E. E., Chicago. Standley, Paul C., Chicago.

Standley, Paul C., Chicago. Staner, P., Brussels, Belgium.

Stauffer, Clinton R., Minneapolis, Minnesota.

Stearn, William T., London, England. Stevermark, Dr. Julian A., Chicago.

Stirton, Ruben Arthur, Berkeley, California. apman, Lillian Smith, Jacksonville Beach, Florida.

homson, S. C., Chicago.

Vargas, Dr. Luis, Mexico City, Mexico. Vetlesen, Mrs. Georg, New York.

Walker, Dr. James W., Chicago.

Wasson, Theron, Chicago.

Wenzel, Rupert L., Chicago.

Wilbur, C. Martin, Chicago.

Wise, Jennings C., Charlottesville, Virginia.

Woods, Loren P., Chicago.

Wyatt, Alex K., Chicago.

Zamenhof, Dr. Stephen, New York.

Zingg, Professor Robert M., Denver, Colorado.

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 previsions 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:

 The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

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 McCurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohisaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers,

chomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, ames W. Scott, Geo. F. Bissell, John R. Walsh, Chas. Fitzsimmons, John A. Loche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, oseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. lack, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, obert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Iartin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Ielville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

TATE OF ILLINOIS

COOK COUNTY

SS.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby ertify that the foregoing petitioners personally appeared before me and cknowledged severally that they signed the foregoing petition as their free and oluntary 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 he 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was hanged to FIELD COLUMBIAN MUSEUM. A certificate to this effect was led 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 he 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 f State for Illinois.

CHANGE IN ARTICLE 3

Pursuant to a resolution passed at a meeting of the corporate members held he 10th day of May, 1920, the management of FIELD MUSEUM OF NATURAL HISTORY shall be invested in a Board of TWENTY-ONE (21) TRUSTEES, who hall be elected in such manner and for such time and term of office as may be provided for by the By-Laws. A certificate to this effect was filed May 21, 920, in the office of the Secretary of State for Illinois.

AMENDED BY-LAWS

DECEMBER, 1939

ARTICLE I

MEMBERS

SECTION 1. Members shall be of twelve classes, Corporate Members, Honorary Members, Patrons, Corresponding Members, Benefactors, Contributors, Life Members, Non-Resident Life Members, Associate Members, Non-Resident Associate Members, Sustaining Members, and Annual Members.

SECTION 2. 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 person 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. 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.

SECTION 3. 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.

SECTION 4. 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.

SECTION 5. Any person contributing or devising the sum of One Hundred Thousand Dollars \$100,000,00 in cash, or securities, or property to the funds of the Museum, may be elected a Benefactor of the Museum.

SECTION 6. Corresponding Members shall be chosen by the Board from among scientists or patrons of science residing in foreign countries, who render important service to the Museum. They shall be elected by the Board of Trustees at any of its meetings. They shall be exempt from all dues and shall enjoy all courtesies of the Museum.

SECTION 7. Any person contributing to the Museum One Thousand Dollars (\$1,000.00) or more in cash, securities, or material, may be elected a Contributor of the Museum. Contributors shall be exempt from all dues and shall enjoy all courtesies of the Museum.

SECTION 8. 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, and shall enjoy all the privileges and courtesies of the Museum that are accorded to members of the Board of Trustees. Any person residing fifty miles or more from the city of Chicago, paying into the treasury the sum of One Hundred Dollars (\$100.00) at any one time, shall, upon the unanimous vote of the Board, become a Non-Resident Life Members shall be exempt from all dues, and shall enjoy all the privileges and courtesies of the Museum that are accorded to members of the Board of Trustees.

SECTION 9. Any person paying into the treasury of the Museum the sum of One Hundred Dollars (\$100,000 at any one time, shall, upon the vote of the Board, become an Associate Member. Associate Members shall be exempt from all dues, and shall be entitled to tickets admitting Member and members of family, including non-resident home guests; all publications of the Museum issued during the period of their membership, if so desired; reserved seats for all lectures and enter-

ainments under the auspices of the Museum, provided reservation is requested in idvance; and admission of holder of membership and accompanying party to all special exhibits and Museum functions day or evening. Any person residing fifty niles or more from the city of Chicago, paying into the treasury the sum of Fifty Dollars (\$50.00) at any one time, shall, upon the unanimous vote of the Board, become a Non-Resident Associate Member. Non-Resident Associate Members thall be exempt from all dues, and shall enjoy all the privileges and courtesies of the Museum that are accorded to Associate Members.

SECTION 10. Sustaining 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 Twenty-five Dollars (\$25.00), payable within thirty lays after notice of election and within thirty days after each recurring annual late. This Sustaining Membership entitles the member to free admission for the Member and family to the Museum on any day, the Annual Report and such other Museum documents or publications issued during the period of their mempership as may be requested in writing. When a Sustaining Member has paid the annual fee of \$25.00 for six years, such Member shall be entitled to become an

Associate Member.

SECTION 11. 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 each recurring annual date. An Annual Membership shall entitle the Member to a card of admission for the Member and family during all hours when the Museum is open to the public, and free admission for the Member and family to all Museum lectures or entertainments. This membership will also entitle the holder to the courtesies of the membership privileges of every Museum of note in the United States and Canada, so long as the existing system of co-operative interchange of membership tickets shall be maintained, including tickets for any lectures given under the auspices of any of the Museums during a visit to the cities in which the co-operative museums are located.

SECTION 12. All membership fees, excepting Sustaining and Annual, shall hereafter be applied to a permanent Membership Endowment Fund, the interest only of which shall be applied for the use of the Museum as the Board of Trustees

may order.

ARTICLE II BOARD OF TRUSTEES

SECTION 1. The Board of Trustees shall consist of twenty-one 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 of the Board, by a

majority vote of the members of the Board present.

SECTION 2. Regular meetings of the Board shall be held on the third Monday of the 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.

SECTION 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, any Trustee 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 his 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

Section 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Third 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, the Second Vice-President, and the Third 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 third Monday of January of each year, and shall be called the Annual Meeting.

SECTION 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.

SECTION 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, or any member of the Finance Committee.

SECTION 2. The securities and muniments of title belonging to the cor-poration 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. The President or any one of the Vice-Presidents, jointly with either the Chairman or any one of the other members of the Finance Committee, are authorized and empowered in to sell, assign and transfer as a whole or in part the securities owned by or registered in the name of Field Museum of Natural History, and, for that purpose, to endorse certificates in blank or to a named person, appoint one or more attorneys, and execute such other instruments as may be necessary, and b to cause any securities belonging to this Corporation now, or acquired in the future, to be held or registered in the name or names of a nominee or nominees designated by them.

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

SECTION 4. The Harris Trust & 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, or any member of the Finance Committee.

ARTICLE VI

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 im-

mediate 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.

SECTION 2. There shall be four scientific Departments of the Museum—Anthropology, Botany, Geology, and Zoology; each under the charge of a Chief Curator, subject to the authority of the Director. The Chief 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 Chief Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SECTION 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 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 Report may direct

in such number as the Board may direct.

ARTICLE VII

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 bills rendered for the expenditure of the money of the Corporation.

ARTICLE VIII

COMMITTEES

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

SECTION 2. The Finance Committee shall consist of six members, the Auditing and Pension Committees shall each consist of three members, and the Building Committee shall consist of five members. All members of these four Committees shall be elected by ballot by the Board at the Annual Meeting, and shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairman by the order in which the members are named in the respective Committee; the first member named shall be Chairman, the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession to the Chairmanship being in this order in the event of the absence or disability of the Chairman.

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

Section 4. Four members shall constitute a quorum of the Executive Committee, and in all 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 members of the Board of Trustees to act in place of the absentee.

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

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

SECTION 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 expenditures stated are authorized.

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

have taken place.

SECTION 9. 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.

SECTION 10. The Chairman of each Committee shall report the acts and

proceedings thereof at the next ensuing regular meeting of the Board.

SECTION 11. The President shall be ex-officio a member of all Committees and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

ARTICLE 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 Auditing Committee, and the Pension Committee, and for three members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting and voted upon at the following Annual Meeting in January.

ARTICLE 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.

SECTION 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.

BEQUESTS

Bequests to Field Museum of Natural History may be made in ecurities, money, books or collections. They may, if desired, take he form of a memorial to a person or cause, to be named by the iver. For those desirous of making bequests to the Museum, the ollowing form is suggested:

FORM OF BEQUEST

| I do | hereby | give an | d bequ | ueath t | o F | Field | Museum | of | Natural |
|---------|----------|-----------|--------|---------|-------|--------|--------|----|---------|
| History | of the C | ity of Ch | icago, | State o | f Ill | linois | , | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Contributions made within the taxable year to Field Auseum of Natural History to an amount not in excess of 5 per cent of the taxpayer's net income are allowable as eductions in computing net income for federal income ax purposes.

Endowments may be made to the Museum with the rovision that an annuity be paid to the patron during his r her lifetime. These annuities are guaranteed against actuation in amount and may reduce federal income taxes.

FOUNDER

Marshall Field*

BENEFACTORS

Those who have contributed \$100,000 or more to the Museum

Ayer, Edward E.*

Buckingham, Miss Kate S.*

Crane, Cornelius Crane, R. T., Jr.

Field, Joseph N.* Field, Marshall Field, Stanley

Graham, Ernest R.*

• DECRASED

Harris, Albert W. Harris, Norman W.* Higinbotham, Harlow N.*

Kelley, William V.

Pullman, George M.*

Rawson, Frederick H.* Raymond, Mrs. Anna Louise Raymond, James Nelson* Ryerson, Martin A.* Ryerson, Mrs. Martin A.*

Simpson, James*
Smith, Mrs. Frances
Gaylord*
Smith, George T.*
Sturges, Mrs. Mary D.*
Suarez, Mrs. Diego

HONORARY MEMBERS

Those who have rendered eminent service to Science

Cutting, C. Suydam

Field, Marshall Field, Stanley

Harris, Albert W.

Ludwig, H. R. H. Gustaf Adolf, Crown Prince of Sweden

McCormick, Stanley

Roosevelt, Kermit

Roosevelt, Theodore

Sargent, Homer E. Sprague, Albert A. Suarez, Mrs. Diego

Vernay, Arthur S.

PATRONS

Those who have rendered eminent service to the Museum

Armour, Allison V.

Calderini, Charles J.
Chadbourne, Mrs. Emily
Crane
Chancellor, Philip M.
Cherrie, George K.
Collins, Alfred M.
Conover, Boardman
Cutting, C. Suydam

Day, Lee Garnett

Ellsworth, Duncan S.

Field, Mrs. Stanley

Hack, Frederick C. Hancock, G. Allan

Kennedy, Vernon Shaw Knight, Charles R.

Moore, Mrs. William H.

Probst, Edward

DECEMBED, 1940

Cummings, Mrs. Robert F.

rd Whi

Strawn, Silas H. Suarez, Mrs. Diego Vernay, Arthur S.

Roosevelt, Kermit

Sargent, Homer E.

Sprague, Albert A.

Straus, Mrs. Oscar

Roosevelt, Theodore

Wegeforth, Dr. Harry M. White, Harold A.

CORRESPONDING MEMBERS

Scientists or patrons of science, residing in foreign countries, who have rendered eminent service to the Museum

reuil, Abbé Henri hristensen, Dr. Carl iels, Dr. Ludwig

Hochreutiner, Dr. B. P. Georges Humbert, Professor Henri Keissler, Dr. Karl Keith, Professor Sir Arthur

CONTRIBUTORS

Those who have contributed \$1,000 to \$100,000 to the Museum in money or materials

\$75,000 to \$100,000

hancellor, Philip M.

\$50,000 to \$75,000

eep, Chauncey*

osenwald, Mrs. Augusta N.*

\$25,000 to \$50,000

dams, Mrs. Edith Almy*

lackstone, Mrs. Timothy B.*

oats, John* rane, Charles R.*

ield, Mrs. Stanley ones, Arthur B.*

furphy, Walter P.

orter, George F.*

losenwald, Julius*

ernay, Arthur S. Vhite, Harold A.

\$10,000 to \$25,000

rmour, Allison V. rmour, P. D.*

DECEASED

hadbourne, Mrs. Emily Crane halmers, William J.* conover, Boardman ummings, R. F.* lutting, C. Suydam Everard, R. T.*

Gunsaulus, Dr. F. W.*

Insull, Samuel*

Laufer, Dr. Berthold* Lufkin, Wallace W.

McCormick, Cyrus (Estate) McCormick, Stanley Mitchell, John J.*

Reese, Lewis*
Robb, Mrs. George W.
Rockefeller Foundation,
The

Sargent, Homer E. Schweppe, Mrs. Charles H.* Straus, Mrs. Oscar Strong, Walter A.*

Wrigley, William, Jr.*

\$5,000 to \$10,000

Adams, George E.* Adams, Milward* American Friends of China

Avery, Sewell L.

Bartlett, A. C.* Bishop, Heber (Estate) Borland, Mrs. John Jay*

Crane, R. T.*

Doane, J. W.*

Field, Dr. Henry Fuller, William A.*

Graves, George Coe, II*

Harris, Hayden B. Harris, Norman Dwight Harris, Mrs. Norman W.* Hutchinson, C. L.*

Keith, Edson*

Langtry, J. C.

MacLean, Mrs. M. Haddon Mandel, Leon Moore, Mrs. William H.

Payne, John Barton* Pearsons, D. K.* Porter, H. H.*

Ream, Norman B.* Revell, Alexander H.*

Salie, Prince M. U. M. Sprague, A. A.* Strawn, Silas H.

Thorne, Bruce Tree, Lambert*

\$1,000 to \$5,000

Avery, Miss Clara A.* Ayer, Mrs. Edward E.*

Barrett, Samuel E.* Bensabott, R., Inc. Blair, Watson F.* Blaschke, Stanley Field Block, Mrs. Helen M.* Borden, John

Chalmers, Mrs. William J.* Chicago Zoological Society, The Crane, Mrs. R. T., Jr.

304 FIELD MUSEUM OF NATURAL HISTORY REPORTS, Vol. 12

Crocker, Templeton Cummings, Mrs. Robert F.

Doering, O. C.

Fish, Mrs. Frederick S.

Graves, Henry, Jr. Gunsaulus, Miss Helen

Hibbard, W. G. Higginson, Mrs. Charles M. Hill, James J. Hixon, Frank P.º Hoffman, Miss Malvina Hughes, Thomas S.

Jackson, Huntington W.* James, S. L.

* [13 31 4 13 21

Knickerbocker, Charles K.

Lee Ling Yun Lerner, Michael Look, Alfred A.

Mandel, Fred L., Jr Manierre, George* Martin, Alfred T.* McCormick, Cyrus H.* McCormick, Mrs. Cyrus* Mitchell, Clarence B.

Ogden, Mrs. Frances E.* Osgood, Dr. Wilfred H.

Palmer, Potter Patten, Henry J. Prentice, Mrs.

Clarence C.

Rauchfuss, Charles F. Raymond, Charles E. Reynolds, Earle H. Rumely, William N.*

Schwab, Martin C. Schweppe, Charles H. Shaw, William W. Sherff, Dr. Earl E. Smith, Byron L.* Sprague, Albert A.

Thompson, E. H. Thorne, Mrs. Louise E.

Van Valzah, Dr. Robert Von Frantzius, Fritze

Wheeler, Leslie* Willis, L. M.

CORPORATE MEMBERS

Armour, Allison V. Armour, Lester Avery, Sewell L.

Blair, W. McCormick Block, Leopold E. Borden, John Byram, Harry E.

Calderini, Charles J. Chadbourne, Mrs. Emily Crane Chancellor, Philip M. Chatfield-Taylor, H. C. Cherrie, George K. Collins, Alfred M. Conover, Boardman Cummings, Walter J. Cutting, C. Suydam

Day, Lee Garnett Dick, Albert B., Jr. Ellsworth, Duncan S.

Field, Joseph N. Field, Marshall Field, Stanley Field, Mrs. Stanley

Hack, Frederick C. Hancock, G. Allan Harris, Albert W.

Insull, Samuel, Jr.

Kennedy, Vernon Show Knight, Charles R.

McCulloch, Charles A. Mitchell, William H. Moore, Mrs. William H.

DESTARD, 1940 Cummings, Mrs. Robert F. Probst, Edward

Richardson, George A. Roosevelt, Kermit Roosevelt, Theodore

Sargent, Fred W. Sargent, Homer E. Smith, Solomon A. Sprague, Albert A. Straus, Mrs. Oscar Strawn, Silas H. Suarez, Mrs. Diego

Vernay, Arthur S.

Wegeforth, Dr. Harry M Wetten, Albert H. White, Harold A. Wilson, John P.

LIFE MEMBERS

Those who have contributed \$500 to the Museum

Abbott, John Jay Adler, Max Allerton, Robert H. Ames, James C. Armour, Allison V. Armour, A. Watson Armour, Lester Armour, Mrs. Ogden Asceli, Mrs. Max

Asher, Louis E. Avery, Sewell L.

Babson, Henry B. Bacon, Edward Richardson, Jr. Banks, Alexander F. Barnhart, Miss Gracia M. F.

Barrett, Mrs. A. D. Barrett, Robert L. Bartlett, Miss Florence Dibell Baur, Mrs. Jacob Bendix, Vincent

Bensabott, R.
Bermingham, Edward J.
Blaine, Mrs. Emmons

Blair, Chauncey B.
Block, Leopold E.
Block, Philip D.
Booth, W. Vernon
Borland, Chauncey B.
Brassert, Herman A.
Brewster, Walter S.
Brown, Charles
Edward
Browne, Aldis J.
Buchanan, D. W.
Budd, Britton I.

Burnham, John

Burt, William G.

Butler, Julius W. Butler, Rush C. Byram, Harry E.

Jarr, Walter S.

Cook, Mrs.

Carpenter, Augustus A.
Carpenter, Mrs. Hubbard
Carpenter, Mrs. John
Alden
Carr, George R.
Carr, Robert F.

Casalis, Mrs. Maurice
Chatfield-Taylor, Wayne
Clark, Eugene B.
Clegg, William G.
Clegg, Mrs. William G.
Clow, William E.
Collins, William M.
Conover, Boardman

Daphne Field
Corley, F. D.
Cramer, Corwith
Crossett, Edward C.
Crossley, Lady Josephine
Crossley, Sir Kenneth
Crowell, H. P.
Cudahy, Edward A.
Cudahy, Edward A.
Cudahy, Edward A.
Jr.
Cudahy, Joseph M.
Cummings, Walter J.
Cunningham, Frank S.
Cunningham, James D.

Dawes, Charles G.
Dawes, Henry M.
Decker, Alfred
Delano, Frederic A.
Dick, Albert B., Jr.
Dierssen, Ferdinand W.
Dixon, Homer L.
Donnelley, Thomas E.
Doyle, Edward J.
Drake, John B.
Durand, Scott S.

Cushing, Charles G.

Edmunds, Philip S. Ely, Mrs. C. Morse Epstein, Max Everitt, George B. Ewing, Charles Hull

Farnum, Henry W. Farr, Newton Camp Farr, Miss Shirley Farwell, Arthur L. Farwell, John V. Farwell, Walter Fay, C. N. Fenton, Howard W. Fentress, Calvin Fernald, Charles Field, Joseph N. Field, Marshall Field, Norman Field, Mrs. Norman Field, Stanley Field, Mrs. Stanley

Gardner, Robert A. Gartz, A. F., Jr. Gary, Mrs. John W. Gilbert, Huntly H. Glore, Charles F. Goodspeed, Charles B. Gowing, J. Parker

Hack, Frederick C.
Hamill, Alfred E.
Hamill, Mrs. Ernest A.
Harris, Albert W.
Harris, Norman W.
Hastings, Samuel M.
Hayes, William F.
Hecht, Frank A., Jr.
Heineman, Oscar
Hemmens, Mrs.
Walter P.
Hibbard, Frank
Hickox, Mrs. Charles V.
Hill, Louis W.
Hinde, Thomas W.
Hixon, Robert
Hopkins, J. M.
Hopkins, J. M.
Hopkins, L. J.
Horowitz, L. J.
Hoyt, N. Landon
Hughes, Thomas S.
Hutchins, James C.

Insull, Martin J. Insull, Samuel, Jr.

Jarnagin, William N.
Jelke, John F., Jr.
Johnson, Mrs. Elizabeth
Ayer
Joiner, Theodore E.
Jones, Miss Gwethalyn

Kelley, Russell P. Kidston, William H. King, Charles Garfield King, James G. Kirk, Walter Radcliffe

Ladd, John
Lamont, Robert P.
Lehmann, E. J.
Leonard, Clifford M.
Leopold, Mrs. Harold E.
Levy, Mrs. David M.
Linn, Mrs. Dorothy C.
Logan, Spencer H.
Lowden, Frank O.
Lytton, Henry C.

MacDowell, Charles H.
MacLeish, John E.
MacVeagh, Eames
Madlener, Mrs. Albert F.
Marshall, Benjamin H.
Mason, William S.
McBain, Hughston M.
McCormick, Harold F.
McCormick, Stanley
McCulloch, Charles A.
McCutcheon, John T.
McGann, Mrs. Robert G.
McIlvaine, William B.
McInreney, Thomas H.
McKinlay, John
McLaughlin, Frederic
McLennan, D. R.
McNulty, T. J.
Meyer, Carl
Meyne, Gerhardt F.
Mitchell, William H.
Moore, Edward S.
Morse, Charles H.
Morton, Mark
Munroe, Charles A.
Murphy, Walter P.

Newell, A. B. Nikolas, G. J.

Ormsby, Dr. Oliver S. Orr, Robert M.

Paesch, Charles A.
Palmer, Honore
Palmer, Potter
Patterson, Joseph M.
Payson, George S.
Peabody, Stuyvesant
Pick, Albert
Pike, Charles B.
Pike, Eugene R.
Poppenhusen, Conrad H.
Porter, Gilbert E.
Prentice, Mrs.
Clarence C.

306 Field Museum of Natural History Reports, Vol. 12

Raymond, Mrs. Anna Louise Reynolds, Arthur Reynolds, Earle H. Riley, Harrison B. Rinaldo, Mrs. Philip S. Robinson, Theodore W. Robson, Miss Alice Rodman, Mrs. Katherine Field Rodman, Thomas Clifford Rosenwald, William Russell, Edmund A. Ryerson, Edward L., Jr.

Schweppe, Charles H. Scott, Harold N. Seabury, Charles W. Shaffer, John C. Shirk, Joseph H. Simpson, William B. Smith, Alexander

Abbott, Robert S.

Chalmers, Mrs. William J.

Davies, Mrs. D. C. Dawes, Rufus C.

Smith, Solomon A.
Spalding, Keith
Spalding, Vaughan C.
Sprague, Albert A.
Sprague, Mrs. Albert A.
Stewart, Robert W.
Stirton, Robert C.
Strawn, Silas H.
Stuart, Harry L.
Stuart, John
Stuart, R. Douglas
Sturges, George
Sunny, B. E.
Swift, Charles H.
Swift, G. F., Jr.
Swift, Harold H.

Thorne, Charles H. Thorne, Robert J. Tree, Ronald L. F. Tyson, Russell

DECEASED, 1940

Ferguson, Louis A.

Knickerbocker, Charles K.

Noel, Joseph R. Reynolds, George M. Uihlein, Edgar J. Underwood, Morgan P.

Veatch, George L.

Wanner, Harry C.
Ward, P. C.
Welch, Mrs. Edwin P.
Welling, John P.
Whitney, Mrs. Julia L.
Wickwire, Mrs. Edward L.
Wickwire, Mrs. Edward L.
Wieboldt, William A.
Willard, Alonzo J.
Willits, Ward W.
Wilson, John P.
Wilson, Thomas E.
Winston, Garrard B.
Winston, Garrard B.
Winter, Wallace C.
Woolley, Clarence M.
Wrigley, Philip K.

Yates, David M.

Russell, Edward P.

Sargent, Fred W. Storey, W. B.

Valentine, Louis L.

NON-RESIDENT LIFE MEMBERS

Those, residing fifty miles or more from the city of Chicago, who have contributed \$100 to the Museum

Clas, Miss Mary Louise Coolidge, Harold J., Jr. Copley, Ira Cliff

Ellis, Ralph

Gregg, John Wyatt

Hearne, Knox

Johnson, Herbert F., Jr.

Rosenwald, Lessing J.

Siebel, Emil A.

Stephens, W. C. Stern, Mrs. Edgar B.

Vernay, Arthur S. Zerk, Oscar U.

Bartholomae, Mrs. Emma Bartholomay, F. H. Bartholomay, Henry

Bartholomay, Mrs.

William, Jr.

ASSOCIATE MEMBERS

Those who have contributed \$100 to the Museum

laron, Charles
laron, Ely M.
labott, Donald
Putnam, Jr.
labott, Gordon C.
labott, Guy H.
labott, W. Rufus
labott, William L.
labrahamsen, Miss Cora
labrams, Duff A.
lackerman, Charles N.
ladamick, Gustave H.
ladams, Benjamin Stearns
ladams, Mrs. Charles S.
ladams, Mrs. David T.
ladams, Mrs. Frances
Sprogle
ladams, Miss Jane
ladams, John Q.

Adams, Miss Jane
Adams, John Q.
Adams, Joseph
Adams, Mrs. S. H.
Adams, Mrs. Samuel
Adams, William C.
Adamson, Henry T.
Adcock, Mrs. Bessie
Adler, David
Adler, David
Adler, Mrs. Max
Affleck, Benjamin F.
Ahlschlager, Walter W.
Albee, Mrs. Harry W.
Alden, William T.
Aldis, Graham
Alexander, Mrs. Arline V.
Alexander, Edward
Alford, Mrs. Laura T. C.
Allen, Mrs. Fred G.

Allensworth, A. P. Alsip, Charles H. Alsip, Mrs. Charles H. Alter, Harry

Alton, Carol W.

Ames, Rev. Edward S.
Andersen, Arthur
Anderson, Miss Florence
Regina
Andrewn, Mrs. E. C.
Andrews, Milton H.
Anstiss, George P.
Appelt, Mrs. Jessie E.
Armbrust, John T.
Armbruster, Charles A.
Armour, A. Watson, III
Armour, Laurance H.
Armour, Philip D.
Armstrong, Mrs. Julian
Armstrong, Kenneth E.
Arn, W. G.

Arnold, Mrs. Lloyd Artingstall, Samuel G., Jr. Ascher, Fred Ashby, W. B. Ashcraft, Raymond M. Ashenhurst, Harold S. Atkinson, Charles T. Atwater, Walter Hull Aurelius, Mrs. Marcus A. Austin, E. F. Austin, Henry W. Avery, George J.

Baackes, Mrs. Frank Babb, W. E. Babson, Mrs. Gustavus Bachmann, Mrs. Harrold A. Bachmeyer, Dr. Arthur C. Bacon, Dr. Alfons R. Badger, Shreve Cowles Baer, Mervin K. Baer, Walter S. Baggaley, William Blair Baird, Harry K. Baker, Mrs. Alfred L. Baker, G. W. Baker, Greeley Baldwin, Mrs. Katharine W. Baldwin, Vincent Curtis Balgemann, Otto W. Balkin, Louis Ball, Dr. Fred E. Ball, Sidney Y. Ballard, Mrs. Foster K. Ballenger, A. G. Banes, W. C. Banks, Edgar C. Bannister, Miss Ruth D. Bantsolas, John N. Barber, Phil C. Barbour, James J. Bargquist, Miss Lillian D. Barkhausen, L. H. Barnes, Cecil Barnes, Mrs. Charles Osborne Barnes, James M. Barnett, Otto R.

Barnhart, Mrs. A. M.

Barnum, Harry H.

Bartelme, John H.

Barr, Mrs. Alfred H. Barrett, Mrs. A. M.

Bartlett, Frederic C. Barton, Mrs. Enos M. Basta, George A. Bastian, Charles L. Bateman, Floyd L. Bates, Mrs. A. M. Bates, Joseph A. Battey, Paul L. Bauer, Aleck Baum, Mrs. James E. Baum, Wilhelm Bausch, William C. Beach, Miss Bess K. Beach, E. Chandler Beachy, Mrs. P. A. Beachy, Mrs. Walter F. Beatty, H. W. Becker, Benjamin F.
Becker, Benjamin V.
Becker, Frederick G.
Becker, Herman T.
Becker, James H.
Becker, Louis Becker, Louis L. Beddoes, Hubert Behr, Mrs. Edith Beidler, Francis, II Bell, Mrs. Laird Bender, Charles J. Benjamin, Jack A. Benner, Harry Bennett, Professor J. Gardner Bennett, Reid M. Benson, John Benson, Mrs. Thaddeus R. Bentley, Arthur Bentley, Mrs. Cyrus Benton, Miss Mabel M. Berend, George F. Berger, Dr. John M. Berkowitz, Dr. J. G. Berkson, Mrs. Maurice Berryman, John B. Bersbach, Elmer S. Bertol, Miss Aurelia Bertschinger, Dr. C. F. Besly, Mrs. C. H. Bettman, Dr. Ralph B. Bevan, Dr. Arthur Dean Bichl, Thomas A. Biddle, Robert C.

Bidwell, Charles W. Biehn, Dr. J. F. Bigler, Mrs. Albert J. Billow, Elmer Ellsworth Billow, Miss Virginia Bird, Misa Frances Birk, Miss Amelia Birk, Frank J Birkenstein, George Birthoff, Dr. Fred Rahop, Howard P Bushop, Mrs. Martin V Bistor, James E. Rittel, Mrs. Frank J. Bixby, Edward Randall Blackburn, Oliver A. Blackman, Nathan L. Blair, Mrs. M. Barbour Blair, W. McCormick Blair, Wolcott Blake, Tiffany Blatchford, Carter Blatchford, Dr. Frank Wicks

Blayney, Thomas C. Blessing, Dr. Robert Blish, Sylvester Block, Jeseph L. Block, Philip D., Jr. Bloom, Mrs. Leopold Bloss, Mrs. Sidney M. Blum, David Blum, Harry H. Blunt, J. E., Jr. Bluthardt, Edwin Boal, Ayres Boberg, Niels Boericke, Mrs. Anna Boettcher, Arthur H. Bohasseck, Charles Bolten, Paul H. Bondy, Berth 14 Roomer, Dr. Paul C. Roome, Arthur Rooth, Alfred V Booth, Ge rge E. Borg, George W. Borland, Mrs. Bruce. Borwell, Robert C. Beach, Charles Beach, Mrs. Henry Both, William C Botta Graeme G. Bouss, Dr. Robuslav Bowen, Mrs. Louise

De Kover Braces, William R. Rowey, Mrs. Charles F. Bownan, Johnston A. Boyark, Harry Boyd, Mrs. T. Kenneth Boydon, Miss Ellen Webb Boyden, Miss Resalte. Sturgen Boynton, A J Boynton, Frederick P. Brash, Mrs. F. V. Bradley, Mrs A Ballard Bradley, Charles E. Bradley, Mrs. Natalie Blast Highlytham Brainerd, Mrs. Arthur T. Bramble, Delhi G. C Brand, Mrs. Maude G. Brand, Mrs. Rudolf Brandes, A. G. Brandt, Charles H. Bransfield, John J. Brauer, Mrs. Paul Breckinridge, Professor S. P. Bremer, Harry A. Bremner, Mrs. David F., Jr. Brendecke, Miss June Brennan, Mrs. George E. Brennemann, Dr. Joseph Brennwasser, S. M. Brenza, Miss Mary Brewer, Mrs. Angeline L. Breyer, Mrs. Theodor Bridges, Arnold Briggs, Mrs. Gertrude Bristel, James T. Brook, A. J.
Brook, A. J.
Brook, A. J.
Broome, Thornhill
Brown, A. Wilder
Brown, Christy
Brown, Mrs. Everett C. Brown, John T. Brown, Dr. Joshua M. Br. wn, Mark A. Brown, Scott Brucker, Dr. Edward A. Bruckner, William T. Brugman, John J. Brundage, Avery Brunswick, Larry Brunt, J. P. Bryant, John J., Jr. Buck, Guy R. Buck, Mrs. Lillian B. Buck, Nelson Leroy Buckley, Mrs. Warren Buckha, Mrs. Vail R Budling, Joseph J. Buchler, Mrs. Carl

Builington, Mrs.
Margaret A.
Builmann, Gilbert G.
Bullock, Mrs. James E.

Buchler, H. L.

Buettner, Walter J.

Bunge, Mrs. Albert J.
Bunte, Mrs. Theodore W.
Burbett, E. W.
Burch, Clayton B.
Burdick, Mrs. Alfred S.
Burgess, Charles F.
Burgmeier, John M.
Burgstreser, Newton
Burgweger, Mrs. Meta
Dewes
Burke, Mrs. Lawrence N.
Burke, Webster H.
Burkholder, Dr. J. F.
Burley, Mrs. Clarence A.
Burnham, Frederic
Burns, Mrs. Randall W.
Burry, Mrs. William

Burns, Mrs. Randall W. Burry, Mrs. William Burry, William, Jr. Burtch, Almon Bush, Mrs. Lionel E. Bush, Mrs. William H. Butler, Burridge D. Butler, Mrs. Hermon B. Butler, J. Fred Butler, John M. Butler, Paul Butz, Herbert R. Butz, Robert O. Butz, Theodore C. Butzow, Mrs. Robert C. Byfield, Dr. Albert H. Byrne, Miss Margaret H.

Cable, J. Elmer Cahn, Dr. Alvin R. Cahn, Bertram J. Cahn, Morton D. Caine, John F. Callender, Mrs.
Joseph E. Calmeyn, Frank B. Cameron, Dr. Dan U. Cameron, Will J. Camp, Mrs. Arthur Royce ampbell, Delwin M. 'ampbell, Herbert J. Canby, Caleb H., Jr. Canman, Richard W. Capes, Lawrence R. Capps, Dr. Joseph A. Cardelli, Mrs. Giovanni Carlin, Leo J. Carlson, Mrs. Arthur W. Carney, William Roy Caron, O. J. Carpenter, Mrs. Benjamin Carpenter, Frederic Ives Carpenter, Mrs. George A. Carpenter, George

Sturges Carpenter, Hubbard Carpenter, Miss Rosalie Sturges, II Carpenter, W. W. S. Carqueville, Mrs. A. R. Carr, Mrs. Clyde M. Carroll, John A. Carry, Joseph C. Carter, Mrs. Armistead B. Carton, Alfred T. Cary, Dr. Eugene Casselberry, Mrs. William Evans, Sr. Cassels, Edwin H. Castle, Alfred C. Castruccio, Giuseppe Cates, Dudley Cernoch, Frank Chandler, Henry P. Chapin, Henry Kent Chapin, William Arthur Chappan, Arthur E. Chappell, Mrs. Charles H. Cheney, Dr. Henry W. Cherry, Walter L., Jr. Childs, Mrs. C. Frederick Childs, Mrs. George W. Chinnock, Mrs. Ronald J. Chisholm, George D. Chislett, Miss Kate E. Christiansen, Dr. Henry Chritton, George A. Churan, Charles A. Clark, Ainsworth W. Clark, Miss Alice Keep Clark, Miss Ance Reep Clark, Charles V. Clark, Miss Dorothy S. Clark, Mrs. Edward S. Clark, Edwin H. Clark, Lincoln R. Clark, Dr. Peter S. Clarke, Charles F. Clarke, Harley L. Clay, John Clemen, Dr. Rudolf A. Cleveland, Paul W. Clinch, Duncan L.
Clithero, W. S.
Clonick, Seymour E.
Clough, William H.
Clow, Mrs. Harry B.
Clow, William E., Jr. Cochran, John L. Coffin, Fred Y. Cohen, George B. Cohen, Mrs. L. Lewis Colburn, Frederick S. Colby, Mrs. George E. Coldren, Clifton C. Coleman, Clarence L., Jr. Coleman, Dr. George H.

Coleman, Loring W.

Colianni, Paul V. Collins, Beryl B. Collison, E. K. Colvin, Miss Catharine Colvin, Miss Jessie Colvin, Mrs. William H. Colwell, Clyde C. Compton, Mrs. Arthur H. Compton, D. M. Compton, Frank E. Condon, Mrs. James G. Conger, Miss Cornelia Connell, P. G. Conners, Harry Connor, Mrs. Clara A. Connor, Frank H. Cook, Miss Alice B. Cook, Mrs. David S. Cook, Jonathan Miller Cooke, Charles E. Cooke, Miss Flora Cooke, Leslie L. Coolidge, Miss Alice Coolidge, E. Channing Coolidge, Dr. Edgar D. Coombs, James F. Coomley, John Stuart Coonley, Prentiss L. Cooper, Samuel Copland, David Corbett, Mrs. William J. Cornell, Dr. Edward L. Cosford, Thomas H. Coston, James E. Cowan, Mrs. Grace L. Cox, James A. Cox, James C. Cox, Mrs. Rensselaer W. Cox, William D. Cragg, Mrs. George L. Crane, Charles R., II Crego, Mrs. Dominica S. Crerar, Mrs. John Crilly, Edgar Cromer, Clarence E. Cromwell, Miss Juliette Clara Crowder, Dr. Thomas R. Cubbins, Dr. William R. Cudahy, Edward I. Culbertson, Dr. Carey Cummings, Mrs. D. Mark Cummings, Mrs. Frances S. Cuneo, John F. Cunningham, John T. Curran, Harry R. Curtis, Austin Guthrie, Jr. Curtis, Mrs. Charles S.

Curtis, Miss Frances H. Cusack, Harold Cushman, A. W. Cushman, Barney Cutler, Henry E. Cuttle, Harold E. Dahlberg, Bror G.

Dahlberg, Bror G. Daily, Richard Daley, Harry C. Dalmar, Mrs. Hugo Dalmar, Hugo, Jr. Dammann, J. F. Danforth, Dr. William C. Dangel, W. H. Dantzig, Leonard P. Darlington, Joseph F. Darnow, Paul E.
Darrow, Paul E.
Dashiell, C. R.
Daughaday, C. Colton
Davey, Mrs. Bruce C.
David, Dr. Vernon C.
Davidonis, Dr. Alexander L. Davidson, David W. Davidson, Miss Mary E. Davies, Marshall Davis, Arthur Davis, Brode B. Davis, C. S. Davis, Dr. Carl B. Davis, Frank S. Davis, Fred M. Davis, James Davis, Dr. Loyal Davis, Dr. Nathan S., III Dawes, E. L. DeAcres, Clyde H. Deahl, Uriah S. Deane, Mrs. Ruthven Decker, Charles O. DeCosta, Lewis M. DeDardel, Carl O. Dee, Thomas J. Deery, Thomas A., Jr. Degen, David DeGolyer, Robert S. DeKoven, Mrs. John DeLee, Dr. Joseph B. DeLemon, H. R. Demaree, H. S. Deming, Everett G. Dempster, Mrs. Charles W. Deneen, Mrs. Charles S. Denison, Mrs. John Porter Denkewalter, W. E. Denman, Mrs. Burt J. Dennehy, Thomas C., Jr. Denney, Ellis H. Dennis, Charles H. DesIsles, Mrs. Carrie L. Deutsch, Mrs. Percy L. DeVries, David DeVries, Peter Dick, Edison Dick, Elmer J. Dick, Mrs. Homer T. Dickey, Roy Dickinson, F. R. Dickinson, Robert B. Dickinson, Mrs. Thompson Diehl, Harry L. Diestel, Mrs. Herman Dikeman, Aaron Butler Dimick, Miss Elizabeth Dixon, Alan C. Dixon, George W., Jr. Doctor, Isidor Dodge, Mrs. Paul C. Doering, Mrs. Edmund J., Jr. Doering, Otto C. Doerr, William P., Sr. Doetsch, Miss Anna Dole, Arthur Dolese, Mrs. John Donker, Mrs. William Donlon, Mrs. Stephen E. Donnelley, Gaylord Donnelley, Mrs. H. P. Donnelley, Miss Naomi Donnelly, Frank Donohue, Edgar T. Douglas, James H., Jr. Douglass, Kingman Douglass, Mrs. W. A. Drake, Lyman M.
Dreyfus, Mrs. Moise
Dryden, Mrs. George B.
Dubbs, C. P. Dudley, Laurence H. Dugan, Alphonso G. Dulany, George W., Jr. Dulsky, Mrs. Samuel Dunbaugh, Harry J. Duncan, Albert G. Duner, Dr. Clarence S. Duner, Joseph A. Dunham, John H. Dunham, Miss Lucy Belle Dunham, Robert J. Dunlop, Mrs. Simpson Dunn, Samuel O. Dupee, Mrs. F. Kennett Durbin, Fletcher M.

Easterberg, C. J. Eastman, Mrs. George H. Ebeling, Frederic O.

Eckhart, Mrs. B. A. Eckhart, Percy B. Eckstein, Mrs. Louis Eddy, George A. Eddy, Thomas H. Edwards, Miss Edith E. Edwards, Kenneth P. Egan, William B. Egloff, Dr. Gustav Ehrman, Edwin H. Eichengreen, Edmund K. Eisendrath, Edwin W. Eisendrath, Miss Elsa B. Eisendrath, Robert M. Eisendrath, William B. Eisenschiml, Mrs. Otto Eisenstaedt, Harry Eisenstein, Sol Eitel, Max Elenbogen, Herman Elich, Robert William Ellbogen, Albert L. Ellbogen, Miss Celia Elliott, Frank R. Ellis, Howard Elting, Howard Emery, Edward W. Engberg, Miss Ruth M. Engel, E. J. Engel, Miss Henrietta Engstrom, Harold Erdmann, Mrs. C. Pardee Erickson, Donovan Y. Ericson, Mrs. Chester F. Ericsson, Clarence Ericsson, Dewey A. Ericsson, Henry Ericsson, Walter H. Ernst, Mrs. Leo Erskine, Albert DeWolf Etten, Henry C. Eustice, Alfred L. Evans, Miss Anna B. Evans, Mrs. David Evans, David J. Evans, Eliot H. Evans, Evan A. Ewen, William R. T. Fabian, Francis G. Fabrice, Edward H.

Fabian, Francis G.
Fabrice, Edward H.
Fabry, Herman
Fackt, Mrs. George P.
Fader, A. L.
Faget, James E.
Faherty, Roger
Fahrenwald, Frank A.
Faithorn, Walter E.
Falk, Miss Amy
Farnham, Mrs. Harry J.
Farrell, Mrs. B. J.
Faulkner, Charles J., Jr.

Faulkner, Miss Elizabeth Faurot, Henry Faurot, Henry, Jr. Fay, Miss Agnes M. Fecke, Mrs. Frank J. Feigenheimer, Herman Feiwell, Morris E. Felix, Benjamin B. Fellows, William K. Felsenthal, Edward George Feltman, Charles H. Fennekohl, Mrs. Arthur C. Fergus, Robert C. Fernald, Robert W. Ferry, Mrs. Frank F. Fetcher, Edwin S. Fetzer, Wade Fies, Mrs. E. E. Filek, August Findlay, Mrs. Roderick Fineman, Oscar Finley, Max H. Finnegan, Richard J. Finnerud, Dr. Clark W. Fischel, Frederic A. Fish, Mrs. Isaac Fishbein, Dr. Morris Fisher, Mrs. Edward Metcalf Fisher, Harry M. Fitzpatrick, Mrs. John A. Flavin, Edwin F. Fleming, Mrs. Joseph B. Flesch, Eugene W. P. Flexner, Washington Flood, Walter H. Florsheim, Harold M. Florsheim, Irving S. Florsheim, Mrs. Milton S.
Flosdorf, Mrs. G. E.
Foley, Rev. William M.
Follansbee, Mitchell D. Folonie, Mrs. Robert J. Folsom, Mrs. Richard S. Foote, Peter Forch, Mrs. John L., Jr. Foreman, Mrs. Alfred K. Foreman, Mrs. E. G. Foreman, Edwin G., Jr. Foreman, Mrs. Gerhard Foreman, Harold E. Forgan, James B., Jr. Forgan, Mrs. J. Russell Forgan, Robert D. Forman, Charles Forrester, Mrs. W. W. Forstall, James J. Fortune, Miss Joanna

Foster, Mrs. Charles K.

Foster, Volney Fowler, Miss Elizabeth Fox, Charles E. Fox, Jacob Logan Fox, Dr. Paul C. Fox, Dr. Philip Frank, Arthur A. Frank, Dr. Ira Frank, Mrs. Joseph K. Frankenstein, William B. Frankenthal, Dr. Lester E., Jr. Franklin, Mrs. George De Haven Frazer, Mrs. George E. Freedman, Dr. I. Val Freeman, Charles Y. Freer, Archibald E. Freiler, Abraham J. French, Dudley K. Frenier, A. B. Freudenthal, G. S. Frey, Charles Daniel Freyn, Henry J. Fridstein, Meyer Friedlander, Jacob Friedlich, Mrs. Herbert Friedman, Mrs. Isaac K. Friend, Mrs. Henry K. Friestedt, Arthur A. Frisbie, Chauncey O. Frost, Mrs. Charles Sumner Fuller, Mrs. Charles Fuller, Mrs. Gretta Patterson Fuller, Judson M. Furry, William S. Furst, Eduard A.

Gabathuler, Miss Juanita Gabriel, Adam Gaertner, William Gale, G. Whittier Gale, Henry G. Gall, Charles H. Gall, Harry T. Gallagher, Mrs. John J. Gallup, Rockwell Galt, Mrs. A. T. Gamble, D. E. Gamble, James A. Gann, David B. Gansbergen, Mrs. F. H. Garcia, Jose Garden, Hugh M. G. Gardiner, Mrs. John L. Gardner, Addison L. Gardner, Addison L., Jr. Gardner, Henry A. Gardner, Mrs. James P.

Garrison, Dr. Lester E. Gately, Ralph M. Gates, Mrs. L. F. Gawne, Miss Clara V. Gay, Rev. A. Royal Gaylord, Duane W. Gear, H. B. Gehl, Dr. W. H. Gehrmann, Felix Geiger, Alfred B. Geiling, Dr. E. M. K. Gentz, Miss Margaret Nina George, Mrs. Albert B. George, Fred W. Gerber, Max Gerding, R. W. Geringer, Charles M. Gerngross, Mrs. Leo Gettelman, Mrs. Sidney H. Getz, Mrs. James R. Getzoff, E. B. Gibbs, Dr. John Phillip Gibson, Dr. Stanley Gidwitz, Alan K. Gielow, Walter C. Gifford, Mrs. Frederick C. Gilbert, Miss Clara C. Gilchrist, Mrs. John F. Gilchrist, Mrs. William Albert Giles, Carl C. Giles, Mrs. Guy H. Gillette, Mrs. Ellen D. Gillson, Louis K. Ginther, Miss Minnie C. Girard, Mrs. Anna Glaescher, Mrs. Anna Glaescher, Mrs. G. W. Glasgow, H. A. Glasner, Rudolph W. Godehn, Paul M. Goedke, Charles F. Goehst, Mrs. John Henry Goes, Mrs. Arthur A. Golden, Dr. Isaac J. K. Goldenberg, Sidney D. Goldfine, Dr. Ascher H. C. Golding, Robert N. Goldsmith, Mitchel Goldstein, Nathan S. Goldstine, Dr. Mark T. Goldy, Walter I. Goltra, Mrs. William B. Goode, Mrs. Rowland T. Gooden, G. E.
Goodman, Benedict K.
Goodman, Mrs. Milton F.
Goodman, W. J.
Goodman, William E.

Goodwin, Clarence Norton Goodwin, George S. Gordon, Miss Bertha F. Gordon, Harold J. Gordon, Dr. Richard J. Gordon, Mrs. Robert D. Gorrell, Mrs. Warren Gradle, Dr. Harry S. Graf, Robert J. Graff, Oscar C. Graham, Douglas Graham, E. V. Graham, Miss Margaret H. Gramm, Mrs. Helen Granger, Mrs. Everett J. Grant, James D. Grant, John G. Graves, Howard B. Grawoig, Allen Gray, Dr. Earle Green, Miss Mary Pomeroy Green, Robert D. Greenburg, Dr. Ira E. Greene, Henry E. Greenebaum, James E. Greenebaum, M. E., Jr. Greenlee, Mrs. William Brooks Greenman, Mrs. Earl C. Gregory, Clifford V. Gregory, Mrs. Robert B. Gregory, Stephen S., Jr. Gregory, Tappan Gressens, Otto Grey, Charles F. Grey, Dr. Dorothy Griest, Mrs. Marianna L. Griffenhagen, Mrs. Edwin Ō. Griffith, Mrs. Carroll L. Griffith, E. L. Griffith, Mrs. William Griffiths, George W. Grimm, Walter H. Griswold, Harold T. Grizzard, James A. Gronkowski, Rev. C. I. Groot, Cornelius J. Groot, Lawrence A. Gross, Henry R. Grossman, Frank I. Grotenhuis, Mrs. William J Grotowski, Dr. Leon Gruhn, Alvah V. Grulee, Lowry K. Grunow, Mrs. William C.

Guenzel, Louis

Guest, Ward E. Gundlach, Ernest T. Gunthorp, Walter J. Gurley, Miss Helen K. Gwinn, William R.

Haas, Marrice Hadey, Mrs. Edwin M. Hagen, Mrs. Dame Hagen, Fred J Hagens, Dr. Garrett J. Hagier, Fred L. Haight, George L. Hair, T. R. Hajoek, Rudolph F. Haldeman, Walter S. Hale, Mrs. Samuel Hale, William B. Hall, David W. Hall, Filmard B. Hall, Mrs. J. B. Hallmann, August F Hallmann, Herman F. Halperin, Aaron Hamill, Charles H. Hamill, Mrs. Ernest A. Hamill, Robert W. Hamlin, Paul D. Hamm, Fred B. Hammerschmidt, Mrs. George F Hammitt, Miss Hamm nl. Tl mas S. Hard, Gorge W. Hanley, Berry L. Hann, J. R. derra Harter, Mrs. Carl Harter, Jac b W. Harter, John H. Harter, George F. Hardin, J. J. H. Harding, John Cowden Harding, Richard T. Hardinge, Franklin Harms, Van Deursen Harper, Alfred C. Harris, Mrs. Abraham Harris, David J. Harris, Gordon L. Harris, Hayden B. Hart, Mrs Herbert I. Hart, Max A. Hart, William M. Hartmann, A. O. Hartsberg, Kenneth L. Hartwag, Otto J. Hartz, W. H. mer Harvey, Hillman H. Harvey, Richard M. Harwood, Thomas W.

Haskell, Mrs. George E.

Haugan, Owar II Havens, Samuel M. Hay, Mrs William Sherman. Hayes, Charles M. Hayes, Har II C Hayes, Mus Mary F Haynie, Miss Rachel W. Hays, Mrs. Arthur A. Hayslett, Arthur J. Hazlett, Dr. William H. Healy, Vincent Jerrems Heaney, Dr. N. Spreat Heaton, Harry E. Heaton, Herman C. Heck, John Hedberg, Henry E. Heide, John H., Jr. Heidke, Herman L. Heiman, Marcus Heine, Mrs. Albert Heineman, Oscar Heinzelman, Karl Heinzen, Mrs. Carl Hejna, Joseph F. Heldmaier, Miss Marie Helfrich, J. Howard Heller, Albert Heller, John A. Heller, Mrs. Walter E. Hellman, George A. Hellyer, Walter Hemple, Miss Anne C. Henderson, Thomas B. G. Henkel, Frederick W. Henley, Dr. Eugene H. Hennings, Mrs. Abraham J. Henry, Huntington B. Henry, Otto Henschel, Edmund C. Henshaw, Mrs. Raymond S Herrick, Charles E. Herrick, Miss Louise Herrick, Walter D. Herrick, Walter D. Herrick, Walter D. Herrick, Mrs. Ollie L. Hershey, J. Charence Herrz, Mrs. Fred Herbrierg, Lawrence Herwig, George Herwig, William D., Jr. Heim, Arthur Heverly, Earl L. Hibbard, Mrs. Angus S. Hibbard, Mrs. W. G. Hisks, E. L., Jr. Higgins, John Higinbotham, Harlow D. Higley, Mrs. Charles W. Hildebrand, Eugene, Jr.

Hildebrand, Grant M. Hill, Mrs. E. M. Hill, Mrs. Russell D. Hill, William E. Hille, Dr. Hermann Hillebrecht, Herbert E. Hillis, Dr. David S. Hills, Edward R. Himrod, Mrs. Frank W. Hind, Mrs. John Dwight Hinkle, Ross O. Hinman, Mrs. Estelle S. Hinrichs, Henry, Jr. Hinsberg, Stanley K. Hirsch, Jacob H. Histed, J. Roland Hixon, Mrs. Frank P. Hodgkinson, Mrs. W. R. Hoffmann, Miss Caroline Dickinson Hoffmann, Edward Hempstead Hogan, Robert E. Hohman, Dr. E. H. Hojer, William V. Holden, Edward A. Holland, Dr. William E. Holliday, W. J. Hollingsworth, R. G. Hollis, Henry L. Hollister, Francis H. Holmes, George J. Holmes, Miss Harriet F. Holmes, Mrs. Maud G. Holmes, William Holmes, William N. Holt, Miss Ellen Homan, Miss Blossom L. Honsik, Mrs. James M. Hoover, F. E. Hoover, Mrs. Frank K. Hoover, Mrs. Fred W. Hoover, H. Earl Hoover, Ray P. Hope, Alfred S. Hopkins, Farley Hopkins, Mrs. James M. Horan, Dennis A. Horcher, William W. Horne, Mrs. William Dodge, Jr. Horner, Dr. David A. Horner, Mrs. Maurice L., Jr. Hornung, Joseph J. Horst, Curt A. Horton, George T. Horton, Hiram T. Horton, Horace B. Horween, Arnold Hosbein, Louis H.

Hosmer, Philip B.

Hottinger, Adolph
Howard, Willis G.
Howe, Clinton W.
Howe, Mrs. Pierce
Lyman
Howe, Warren D.
Howe, William G.
Howell, William G.
Howell, William
Howes, Mrs. Frank W.
Howse, Richard G.
Hoyne, Thomas Temple
Hoyt, Mrs. Phelps B.
Hubbard, George W.
Huber, Dr. Harry Lee
Hudson, Mrs. H.
Newton
Hudson, Walter L.
Huey, Mrs. A. S.
Huff, Thomas D.
Hufty, Mrs. F. P.
Huggins, Dr. Ben H.
Hughes, George A.
Hughes, John E.
Hughes, John W.
Hulbert, Mrs. Milan H.
Hume, John T.

Hume, John T.
Humphrey, H. K.
Huncke, Herbert S.
Huncke, Oswald W.
Hunter, Samuel M.
Hurley, Edward N., Jr.
Huston, Ward T.
Huszagh, R. LeRoy
Huszagh, Ralph D.
Hutchinson, Foye P.
Hutchinson, Samuel S.
Hyatt, R. C.

Ickes, Raymond
Idelman, Bernard
Ilg, Robert A.
Inlander, Samuel
Irons, Dr. Ernest E.
Isaacs, Charles W., Jr.
Isham, Henry P.
Ives, Clifford E.

Jackson, Allan
Jackson, Archer L.
Jackson, Mrs. Arthur S.
Jackson, Miss Laura E.
Jacobi, Miss Emily C.
Jacobs, Hyman A.
Jacobs, Julius
Jacobs, Louis G.
Jacobs, Walter H.
Jacobs, Whipple
Jacobson, Raphael
Jaffray, Mrs. David S.
James, Edward P.
James, William R.

Jameson, Clarence W.
Janusch, Fred W.
Jaques, Mrs. Louis
Tallmadge
Jarchow, Mrs. C. E.
Jarchow, Charles C.
Jarratt, Mrs. Walter J.
Jeffries, F. L.
Jenkins, David F. D.
Jenkins, Mrs. John E.
Jenkinson, Mrs. Arthur
Gilbert

Jenks, William Shippen
Jennings, Ode D.
Jennings, Mrs. Rosa V.
Jerger, Wilbur Joseph
Jetzinger, David
Jirka, Dr. Frank J.
Jirka, Dr. Robert H.
John, Dr. Findley D.
Johnson, Alvin O.
Johnson, Arthur L.
Johnson, H. C.
Johnson, Mrs. Harley

Alden
Johnson, Isaac Horton
Johnson, Joseph M.
Johnson, Nels E.
Johnson, Mrs. O. W.
Johnson, Olaf B.
Johnson, Philip C.
Johnston, Arthur C.
Johnston, Edward R.
Johnston, Mrs. Hubert

McBean
Johnston, Mrs. M. L.
Johnstone, George A.
Jones, Albert G.
Jones, G. Herbert
Jones, James B.
Jones, Dr. Margaret M.
Jones, Melvin
Jones, Melvin
Jones, Warren G.
Joseph, Mrs. Jacob G.
Joseph, Louis L.
Joy, Guy A.
Joyce, Joseph
Judson, Clay
Juergens, H. Paul
Julien, Victor R.
Junkune, Stephen

Kaercher, A. W.
Kahn, Gus
Kahn, J. Kesner
Kahn, Louis
Kaine, James B.
Kane, Jerome M.
Kanter, Jerome J.
Kaplan, Nathan D.
Karcher, Mrs. Leonard D.

Kasch, Frederick M. Kaspar, Otto Katz, Mrs. Sidney L. Katzenstein, Mrs. George P. Katzin, Frank Kauffman, Mrs. R. K. Kauffmann, Alfred Kaufmann, Dr. Gustav L. Kavanagh, Clarence H. Kavanagh, Maurice F. Kay, Mrs. Marie E. Keefe, Mrs. George I. Keehn, George W. Keene, Mrs. Joseph Keeney, Albert F. Kehl, Robert Joseph Keith, Stanley Kelker, Rudolph F., Jr. Kellogg, John L.
Kelly, Edward T.
Kelly, Mrs. Haven Core
Kemp, Mrs. E. M. Kemper, Hathaway G. Kempner, Harry B. Kempner, Stan Kendall, Mrs. Virginia H. Kendali, Mis. Vinginia II Kendrick, John F. Kennedy, Mrs. E. J. Kennedy, Miss Leonore Kennedy, Lesley Kennelly, Martin H. Kent, Dr. O. B. Keogh, Gordon E. Kern, H. A. Kern, Trude Kersey, Glen B. Kerwin, Edward M. Kesner, Jacob L.

Karpen, Michael

Kestner, Jacob L.
Kestnbaum, Meyer
Kiessling, Mrs. Charles S.
Kile, Miss Jessie J.
Kimball, Mrs. Curtis N.
Kimball, William W.
Kimbark, Mrs. Eugene
Underwood
Kimbark, John R.

Kingark, John K.
King, Joseph H.
Kingman, Mrs. Arthur G.
Kinsey, Frank
Kinsey, Robert S.
Kintzel, Richard
Kirchheimer, Max

Kirkland, Mrs.
Weymouth
Kitchell, Howell W.
Kittredge, R. J.
Kitzelman, Otto
Klein, Arthur F.
Klein, Henry A.

Klein, Mrs. Samuel Kleinpell, Dr. Henry H. Kleist, Mrs. Harry Kleppinger, William H. Kleutgen, Dr. Arthur C. Kline, Sol Klinetop, Mrs. Charles W. Knopf, Andrew J. Knott, Mrs. Stephen R. Knox, Harry S. Knutson, George H. Koch, Paul W. Koch, Raymond J. Kochs, August Kochs, Mrs. Robert T. Kohl, Mrs. Caroline L. Kohler, Eric L. Kohlsaat, Edward C. Komiss, David S. Konsberg, Alvin V. Kopf, Miss Isabel Kosobud, William F. Kotal, John A. Kotin, George N. Koucky, Dr. J. D. Kovac, Stefan Kraber, Mrs. Frederiska Kraft, C. H. Kraft, James L. Kraft, Norman Kralovec, Emil G. Kralovec, Mrs. Otto J. Kramer, Leroy Kraus, Peter J. Kraus, Samuel B. Krause, John J. Kretschmer, Dr. Herman L. Kropff, C. G. Krost, Dr. Gerard N. Krueger, Leopold A. Krutckoff, Charles Kuehn, A. L. Kuh, Mrs. Edwin J., Jr. Kuh, George E. Kuhl, Harry J. Kuhn, Frederick T. Kuhn, Dr. Hedwig S. Kunka, Bernard J. Kunstadter, Albert Kunstadter, Sigmund W. Kurfess, John Fredric Kurtzon, Morris

Lacey, Misa Edith M. LaChance, Mrs. Leander H. Laffin, Mrs. Louis E. Laffin, Louis E., Jr. Lampert, Wilson W. Lanahan, Mrs. M. J. Landry, Alvar A. Lane, F. Howard Lane, Ray E. Lane, Wallace R. Lang, Edward J. Lang, Mrs. W. J. Lange, Mrs. August Langenbach, Mrs. Alice R. Langhorne, George Taylor Langworthy, Benjamin Franklin Lanman, E. B. Lansinger, Mrs. John M. Lammer, Howard S. Larson, Mrs. George E. Lashley, Mrs. Karl S. Lasker, Albert D. Lau, Max Lauren, Newton B. Lauter, Mrs. Vera Lautmann, Herbert M. Lavezzorio, Mrs. J. B. Lavidge, Arthur W. Law, Mrs. Robert O. Lawless, Dr. Theodore K. Lawton, Frank W. Laylander, O. J. Leahy, Thomas F. Leavell, James R. Leavens, Theodore Leavitt, Mrs. Wellington Lebold, Foreman N. Lebold, Samuel N. Lebolt, John Michael Lederer, Dr. Francis L. Lee, David Arthur Lee, Mrs. John H. S. Lefens, Miss Katherine J. Lefens, Walter C. Lehmann, Miss Augusta E. Leichenko, Peter M. Leight, Mrs. Albert E. Leland, Miss Alice J. Leland, Mrs. Roscoe G. LeMoon, A. R. Lennon, George W. Lenz, J. Mayo Leonard, Arthur G. Leonard, Arthur T. Leslie, Dr. Eleanor I. Letts, Mrs. Frank C. Leverone, Louis E. Levinson, Mrs. Salmon O. Levis, Mrs. Albert Cotter Levitan, Benjamin Levitetz, Nathan Levy, Alexander M. Lovy, Arthur G. Lowy, Dr. Alfred

Liebman, A. J. Ligman, Rev. Thaddeus Lillie, Frank R. Lindahl, Mrs. Edward J. Linden, John A. Lindheimer, B. F. Lindholm, Charles V. Lindquist, J. E. Lingle, Bowman C. Linton, Ben B. Lipman, Robert R. Liss, Samuel Little, Mrs. E. H. Littler, Harry E., Jr. Livingston, Julian M. Livingston, Mrs. Milton L. Llewellyn, Paul Lloyd, William Bross Lobdell, Mrs. Edwin L. Lockwood, W. S. Loeb, Mrs. A. H. Loeb, Hamilton M. Loeb, Jacob M. Loeb, Leo A. Loesch, Frank J. Loewenberg, Israel S. Loewenberg, M. L. Loewenstein, Sidney Loewenthal, Richard J. Logan, L. B. Long, Mrs. Joseph B. Long, William E. Lord, Arthur R. Lord, Mrs. Russell Loucks, Charles O. Louer, Albert E. M. Louer, Albert S. Love, Chase W. Lovell, William H. Lovgren, Carl Lucey, Patrick J. Ludington, Nelson J. Ludlow, Mrs. H. Durward Ludolph, Wilbur M. Lueder, Arthur C. Lufkin, Wallace W. Luria, Herbert A. Lurie, H. J. Lustgarten, Samuel Lutter, Henry J. Lyford, Harry B. Lynch, William Joseph Lyon, Charles H.

Maass, J. Edward MacDonald, E. K. Mackey, Frank J. Mackinson, Dr. John C. MacLeish, Mrs. Andrew MacLellan, K. F.

Madlener, Otto Magan, Miss Jane A. Magerstadt, Madeline Magill, Henry P. Magill, John R. Magnus, Albert, Jr. Magnuson, Mrs. Paul Maher, Mrs. D. W. Main, Walter D. Malone, William H. Manaster, Harry Mandel, Mrs. Aaron W. Mandel, Edwin F. Mandel, Mrs. Emanuel Mandel, Miss Florence Mandel, Mrs. Robert Manegold, Mrs. Frank W. Manierre, Francis E. Manierre, Louis Manley, John A. Mann, Albert C. Mann, John P. Manning, Miss Cordelia Ann Marcus, Maurice S. Mark, Mrs. Cyrus Marks, Arnold K. Marquart, Arthur A. Marquis, A. N. Marsh, A. Fletcher Marsh, John McWilliams, II Marsh, Mrs. John P. Marsh, Mrs. Marshall S. Martin, Mrs. Franklin H. Martin, George F. Martin, Samuel H. Martin, W. B. Martin, Wells Marx, Frederick Z. Marzluff, Frank W. Marzola, Leo A. Mason, Willard J. Massee, B. A. Massena, Roy Massey, Peter J. Masterson, Peter Mathesius, Mrs. Walther Matson, J. Edward Matter, Mrs. John Maurer, Dr. Siegfried Maxwell, Lloyd R. Mayer, Frank D. Mayer, Mrs. Herbert G. Mayer, Herman J., Jr.
Mayer, Isaac H.
Mayer, Oscar F.
Mayer, Oscar G.
Mayer, Theodore S. McAllister, Sydney G. McArthur, Billings M. McAuley, John E.

McBirney, Mrs. Hugh J. McCahey, James B. McCarthy, Edmond J. McCarthy, Joseph W. McClun, John M. McCord, Downer McCormack, Professor Harry McCormick, Mrs. Alexander A. McCormick, Mrs. Chauncey McCormick, Fowler McCormick, Howard H. McCormick, Leander J. ${
m McCormick,RobertH.,Jr.}$ McCoy, Herbert N. McCrea, Mrs. W. S. McCready, Mrs. E. W. McCreight, Miss Gladys Alizabeth McCreight, Louis Ralph McDonald, E. F., Jr. McDonald, Lewis McDougal, Mrs. James B. McDougal, Mrs. Robert McDougall, Mrs. Arthur R. McErlean, Charles V. McGarry, John A. McGraw, Max McGuinn, Edward B. McGurn, Mathew S. McHugh, Mrs. Grover McIntosh, Arthur T. McIntosh, Mrs. Walter G. McKenna, Dr. Charles H. McKinney, Mrs. Hayes McLaury, Mrs. C. W. McMenemy, L. T. McMillan, James G. McMillan, John McMillan, W. B. McMillan, William M. McNamara, Louis G. McNamee, Peter F. McNulty, Joseph D. McQuarrie, Mrs. Fannie McVoy, John M. Mead, Dr. Henry C. A. Medsker, Dr. Ora L. Melcher, George Clinch Melendy, Dr. R. A. Melnick, Leopold B. Merrell, John H. Merriam, Miss Eleanor Merrill, William W. Merz, Edward E. Metz, Dr. A. R. Meyer, Mrs. A. H. Meyer, Abraham W.

Meyer, Albert Meyer, Charles Z. Meyer, Sam R. Meyer, William Meyercord, George R. Meyers, Erwin A. Michaels, Everett B. Midowicz, C. E. Milburn, Miss Anne L. Milhening, Frank Miller, Miss Bertie E. Miller, Charles B. Miller, Mrs. Clayton W. Miller, Mrs. Donald J. Miller, Mrs. F. H. Miller, Hyman Miller, John S. Miller, Mrs. Olive Beaupre Miller, Oscar C. Miller, Mrs. Phillip Miller, R. T. Miller, Walter E. Miller, William S. Mills, Allen G. Mills, Fred L. Mills, John, Sr. Mills, Mrs. William S. Miner, Dr. Carl S. Miner, H. J. Minotto, Mrs. James Minturn, Benjamin E. Mitchell, George F.
Mitchell, John J.
Mitchell, Mrs. John J.
Mitchell, Leeds
Mitchell, Oliver Mock, Dr. Harry Edgar Moderwell, Charles M. Moeling, Mrs. Walter G. Moeller, Rev. Herman H. Moffatt, Mrs. Elizabeth M. Moist, Mrs. Samuel E. Molloy, David J. Moltz, Mrs. Alice Monheimer, Henry I. Monroe, William S. Montgomery, Dr. Albert H. Moore, C. B. Moore, Paul Moore, Philip Wyatt Moos, Joseph B. Moran, Brian T. Moran, Miss Margaret Morey, Charles W. Morf, F. William Morgan, Alden K. Morgan, Mrs. Kendrick E. Morris, Edward H.

Morris, Mrs. Seymour Morrison, Mrs. C. R. Morrison, Mrs. Charles E. Morrison, Mrs. Harry Morrison, James C. Morrison, Matthew A. Morrisson, James W. Morse, Mrs. Charles J. Morse, Leland R. Morse, Mrs. Milton Morse, Robert H. Mortenson, Mrs. Jacob Morton, Sterling Morton, William Morris Moses, Howard A. Moss, Jerome A. Mount, Andrew J. Mowry, Louis C. Moyer, Mrs. Paul S. Mudge, Mrs. John B. Muchlstein, Mrs. Charles Mueller, Austin M. Mueller, Miss Hedwig H. Mueller, J. Herbert Mueller, Paul H. Mulford, Miss Melinda Jane Mulhern, Edward F. Mulholand, William H. Mulligan, George F. Munroe, Moray Murphy, Joseph D. Murphy, Robert E. Musselman, Dr. George H.

Naber, Henry G. Nadler, Dr. Walter H. Naess, Sigurd E. Nahigian, Sarkis H. Nast, Mrs. A. D. Nathan, Claude Nebel, Herman C Neely, Mrs. Lloyd F. Nehls, Arthur L. Neilson, Mrs. Francis Nellegar, Mrs. Jay C. Nelson, Arthur W. Nelson, Charles G. Nelson, Donald M. Nelson, Murry Nelson, N. J. Nelson, Victor W. Netcher, Mrs. Charles Neu, Clarence L. Neuffer, Paul A. Neumann, Arthur E. Newhall, R. Frank Newhouse, Karl Newman, Mrs. Albert A. Newman, Charles H. Nichols, Mrs. George R.

Nichols, Mrs. George R., Jr. Nichols, J. C. Nichols, S. F. Nicholson, Thomas G. Nilsson, Mrs. Goodwin M Nitze, Mrs. William A. Noble, Samuel R. Nollau, Miss Emma Noonan, Edward J. Norman, Harold W. Norris, Mrs. Lester Norton, R. H. Novak, Charles J. Noyes, A. H. Noyes, Allan S. Noves, David A. Noyes, Mrs. May Wells Nusbaum, Mrs. Hermien D. Nyman, Dr. John Egbert

Oates, James F.

Oberfelder, Herbert M. Oberfelder, Walter S. O'Brien, Frank J. O'Brien, Miss Janet Odell, William R. Odell, William R., Jr. Off. Mrs. Clifford Offield, James R. Oglesbee, Nathan H. O'Keefe, Mrs. Dennis D. Olcott, Mrs. Henry C. Oldefest, Edward G. O'Leary, John W. Oliver, Gene G. Oliver, Mrs. Paul Olsen, Miss Agnes J. Olson, Gustaf Olson, Rudolph J. Oppenheimer, Alfred Oppenheimer, Mrs. Harry D. Orndoff, Dr. Benjamin H. O'Rourke, Albert Orr, Mrs. Robert C. Orr, Thomas C. Orthal, A. J. Ortmayer, Dr. Marie Osborn, Mrs. Gertrude L. Osborn, Theodore L. Ostrom, Mrs. James Augustus Otis, J. Sanford Otis, Joseph E. Otis, Joseph Edward, Jr. Otis, Ralph C. Otis, Stuart Huntington

Ouska, John A.

Overton, George W.

Owings, Mrs. Nathaniel A.

Paasche, Jens A. Packard, Dr. Rollo K. Paepeke, Walter P. Pagin, Mrs. Frank S. Pam, Miss Carrie Pardridge, Albert J. Pardridge, Mrs. E. W. Park, R. E. Parker, Frank B. Parker, Dr. Gaston C. Parker, Dr. J. William Parker, Norman S. Parker, Troy L. Parks, C. R. Parmelee, Dr. A. H. Partridge, Lloyd C. Paschen, Mrs. Henry Patrick, Miss Catherine Patterson, Mrs. L. B. Patterson, Mrs. Wallace Pauling, Edward G. Payne, Professor James Peabody, Mrs. Francis S. Peabody, Howard B. Peabody, Miss Susan W. Peacock, Robert E. Peacock, Walter C. Pearl, Allen S. Pearse, Langdon Pearson, F. W. Pearson, George Albert, Jr. Peck, Dr. David B. Peet, Mrs. Belle G. Peirce, Albert E. Pelley, John J. Peltier, M. F. PenDell, Charles W. Percy, Dr. Nelson Mortimer Perkins, A. T. Perkins, Mrs. Herbert F. Perry, Dr. Ethel B. Perry, I. Newton Peter, William F. Peterkin, Daniel Peters, Harry A. Petersen, Jurgen Petersen, Dr. William F. Peterson, Albert Peterson, Alexander B. Peterson, Arthur J. Peterson, Axel A. Peterson, Mrs. Bertha I. Pflaum, A. J. Pflock, Dr. John J. Phelps, Mason Phelps, Mrs. W. L. Phemister, Dr. Dallas B.

Phillips, Dr. Herbert Morrow Phillips, Mervyn C. Picher, Mrs. Oliver S. Pick, Albert, Jr. Pick, Frederic G. Pierce, J. Norman Pierce, Paul, Jr. Pierson, Joseph B. Pink, Mrs. Ira M. Pirie, Mrs. John T. Pitcher, Mrs. Henry L. Pitzner, Alwin Frederick Plapp, Miss Doris A. Platt, Mrs. Robert S. Plunkett, William H. Pobloske, Albert C. Podell, Mrs. Beatrice Hayes Pohn, Jacob S. Polk, Mrs. Stella F. Pollock, Dr. Harry L. Pomeroy, Mrs. Frank W. Pontius, Mrs. Taylor Pool, Marvin B. Poole, Mrs. Frederick Arthur Poole, George A. Poole, Mrs. Ralph H. Poor, Fred A. Pope, Frank Pope, Henry Pope, Herbert Poppenhagen, Henry J. Porter, Mrs. Frank S. Porter, Henry H. Porter, Mrs. Sidney S. Porterfield, Mrs. John F. Post, Frederick, Jr. Post, Mrs. Philip Sidney Pottenger, William A. Pottenger, Miss Zipporah Herrick Prahl, Frederick A. Pratt, Mrs. William E. Prentice, John K. Primley, Walter S. Prince, Rev. Herbert W. Prince, Leonard M. Proxmire, Dr. Theodore Stanley Prussing, Mrs. R. E.
Puckey, F. W.
Pulver, Hugo
Purcell, Joseph D.
Purcey, Victor W.
Purdy, Sparrow E. Putnam, Miss Mabel C. Pyterek, Rev. Peter H.

Quick, Miss Hattiemae

Quigley, William J.

Raber, Franklin Racheff, Ivan Radau, Hugo Radford, Mrs. W. A., Jr. Radniecki, Rev. Stanley Raff, Mrs. Arthur Raftree, Miss Julia M. Railton, Miss Frances Ramis, Leon Lipman Randall, Rev. Edwin J. Randall, Irving Randle, Mrs. Charles H. Raney, Mrs. R. J. Rankin, Miss Jessie H. Raymond, Mrs. Howard D. Razim, A. J. Reach, Benjamin F. Reach, William Redfield, William M. Redington, F. B. Reed, Mrs. Frank D. Reed, Mrs. Kersey Coates Reed, Mrs. Lila H. Reed, Norris H. Reed, Mrs. Philip L. Reeve, Mrs. Earl Reffelt, Miss F. A. Regan, Mrs. Robert G. Regenstein, Joseph Regensteiner, Theodore Regnery, William H. Reich, Miss Annie Reichmann, Alexander F. Reid, Mrs. Bryan Remy, Mrs. William Renshaw, Mrs. Charles Renwick, Edward A. Rew, Mrs. Irwin Reynolds, Harold F. Reynolds, Mrs. J. J. Rice, Arthur L. Rice, Mrs. Charles R. Rice, Laurence A. Rich, Elmer Rich, Harry Richards, J. DeForest Richards, Marcus D. Richardson, George A. Richardson, Guy A. Richter, Mrs. Adelyn W. Rickcords, Francis S. Ricketts, C. Lindsay Ridgeway, Ernest Ridgway, William Riemenschneider, Mrs. Julius H. Rieser, Leonard M. Rietz, Elmer W. Rietz, Walter H. Ring, Miss Mary E. Ripstra, J. Henri

Ritchie, Mrs. John Rittenhouse, Charles J. Roberts, Mrs. John Roberts, John M. Roberts, Dr. S. M. Roberts, Shepherd M. Roberts, Mrs. Warren R. Roberts, William Munsell Robson, Miss Sarah C. Roche, Miss Emily Roderick, Solomon P. Rodgers, Dr. David C. Rodman, Thomas Clifford Roehling, Mrs. Otto G. Roehm, George R. Roesch, Frank P. Rogers, Miss Annie T. Rogers, Mrs. Bernard F. Rogers, Dr. Cassius C. Rogers, Edward S. Rogers, Joseph E. Rogers, Walter A. Rogerson, Everett E. Rolfes, Gerald A. Rolnick, Dr. Harry C. Romer, Miss Dagmar E. Root, John W. Rosborough, Dr. Paul A. Rosen, M. R. Rosenbaum, Mrs. Edwin S. Rosenfeld, M. J. Rosenfeld, Mrs. Maurice Rosenfield, Mrs. Morris S. Rosenthal, James Rosenthal, Kurt Rosenthal, Lessing Rosenwald, Mrs. Julius Rosenwald, Richard M. Ross, Robert C. Ross, Mrs. Robert E.
Ross, Thompson
Ross, Walter S.
Roth, Aaron Roth, Mrs. Margit Hochsinger Rothacker, Watterson R. Rothschild, George William Rothschild, Maurice L. Rothschild, Melville N. Routh, George E., Jr. Rowe, Edgar C. Rozelle, Mrs. Emma Rubel, Dr. Maurice Rubens, Mrs. Charles Rubovits, Theodore Ruckelhausen, Mrs. Henry

Rueckheim, Miss Lillian Ruel, John G. Ruettinger, John W. Rushton, Joseph A. Russell, Dr. Joseph W. Russell, Paul S. Rutledge, George E. Ryan, Mrs. William A. Ryerson, Joseph T.

Sackley, Mrs. James A. Sage, W. Otis Salisbury, Mrs. Warren M. Salmon, Mrs. E. D. Sammons, Wheeler Sample, John Glen Sandidge, Miss Daisy Sands, Mrs. Frances B. Santini, Mrs. Randolph Sardeson, Orville A. Sargent, Chester F. Sargent, John R. W. Sargent, Ralph Sauter, Fred J. Sawyer, Dr. Alvah L. Schacht, John H. Schafer, O. J. Schaffner, Mrs. Joseph Schaffner, Robert C. Scheidenhelm, Edward L. Scheinman, Jesse D. Schermerhorn, W. I. Schmidt, Adolf Schmidt, Dr. Charles L. Schmidt, Mrs. Minna Schmitz, Dr. Henry Schneider, F. P. Schnering, Otto Y. Schnur, Ruth A. Scholl, Dr. William M. Schram, Harry S. Schreiner, Sigurd Schroeder, Dr. George H. Schukraft, William Schulman, A. S. Schulze, Mrs. Mathilde Schupp, Philip C. Schuyler, Mrs. Daniel J., Jr. Schwanke, Arthur Schwartz, Charles K. Schwartz, Charles P. Schwarz, Herbert E. Schwarzhaupt, Emil Sclanders, Mrs. Alexander Scott, Robert L. Scribner, Gilbert Scully, Mrs. D. B. Seames, Mrs. Charles O. Sears, Miss Dorothy Sears, J. Alden

Sears, Richard W., Jr. Seaton, G. Leland Seaverns, George A. Seaverns, Louis C. Sedgwick, C. Galen See, Dr. Agnes Chester Seeberger, Miss Dora A. Seeburg, Justus P. Seifert, Mrs. Walter J. Seip, Emil G. Seipp, Clarence T. Seipp, Edwin A. Seipp, Edwin A., Jr. Seipp, William C. Sello, George W. Sencenbaugh, Mrs. C. W. Seng, Frank J. Seng, V. J. Senne, John A. Shaffer, Carroll Shaffer, Charles B. Shambaugh, Dr. George E. Shanahan, Mrs. David E. Shanesy, Ralph D. Shannon, Angus Roy Shapiro, Meyer Sharpe, N. M. Shaw, Alfred P. Shaw, Mrs. Arch W. Shaw, Theodore A. Sheldon, James M. Shelton, Dr. W. Eugene Shepherd, Mrs. Edith P. Sherman, Mrs. Francis C., Sr. Sherman, Mrs. W. W. Shields, James Culver Shillestad, John N. Shire, Moses E. Shoan, Nels Shorey, Clyde E. Short, J. R. Short, Miss Shirley Jane Shoup, A. D. Shumway, Mrs. Edward DeWitt Sidley, William P. Siebel, Mrs. Ewald H. Sigman, Leon Silander, A. I. Silberman, Charles Silberman, David B. Silberman, Hubert S. Sills. Clarence W. Silverthorne, George M. Simond, Robert E. Simonds, Dr. James P. Sincere, Ben E. Sinclair, Dr. J. Frank Singer, Mrs. Mortimer H. Sinsheimer, Allen Sisskind, Louis

Sitzer, Dr. L. Grace Powell Skleba, Dr. Leonard F. Skooglund, David Sleeper, Mrs. Olive C. Smith, Charles Herbert Smith, Mrs. Charles R. Smith, Clinton F. Smith, Mrs. E. A. Smith, Mrs. Emery J. Smith, Mrs. Frank S. Smith, Franklin P. Smith, Harold Byron Smith, Mrs. Hermon Dunlap Smith, Jens Smith, Jesse E. Smith, Mrs. Katherine Walker Smith, Mrs. Kinney Smith, Miss Marion D. Smith, Paul C. Smith, Samuel K. Smith, Mrs. Theodore White Smith, Walter Bourne Smith, Walter Byron Smith, Mrs. William A. Smith, Z. Erol Smullan, Alexander Snow, Fred A. Snyder, Harry Socrates, Nicholas Solem, Dr. George O. Sonnenschein, Hugo Sonneveld, Jacob Soper, Henry M. Soper, James P., Jr. Sopkin, Mrs. Setia H. Soravia, Joseph Sorensen, James Spencer, Mrs. Egbert H. Spencer, Mrs. William M. Spiegel, Mrs. Arthur H. Spiegel, Mrs. Frederick W. Spitz, Joel Spitz, Leo Spitzglass, Mrs. Leonard M. Spohn, John F. Spooner, Charles W. Spoor, Mrs. John A. Sprague, Dr. John P. Spray, Cranston Squires, John G. Staack, Otto C. Stacey, Mrs. Thomas I. Staley, Miss Mary B. Stanton, Dr. E. M. Stanton, Edgar Stanton, Henry T.

Starbird, Miss Myrtle I. Stark, Mrs. Harold Starrels, Joel Stearns, Mrs. Richard I. Stebbins, Fred J. Steele, W. D. Steffey, David R. Steffey, Benjamin F. Stein, Dr. Irving Stein, L. Montefiore Steinberg, Dr. Milton Stenson, Frank R. Sterba, Dr. Joseph V. Stern, Alfred Whital Stern, David B. Stern, Felix Stern, Gardner H. Stern, Maurice S. Stern, Oscar D. Stevens, Delmar A. Stevens, Edward J. Stevens, Elmer T. Stevens, Harold L. Stevens, Mrs. James W. Stevenson, Dr. Alexander F. Stevenson, Engval Stewart, Miss Agnes Nannie Stewart, Miss Eglantine Daisy Stewart, James S. Stewart, Miss Mercedes Graeme Stibolt, Mrs. Carl B. Stiger, Charles W. Stirling, Miss Dorothy Stockton, Eugene M. Stone, Mrs. Jacob S. Stone, Mrs. Theodore Straus, David Straus, Henry H. Straus, Martin L. Straus, Melvin L. Straus, S. J. T. Strauss, Dr. Alfred A. Strauss, Ivan Strauss, John L. Straw, Mrs. H. Foster Street, Mrs. Charles A. Stromberg, Charles J. Strong, Edmund H. Strong, Mrs. Walter A. Strotz, Harold C. Struby, Mrs. Walter V. Stulik, Dr. Charles Sullivan, John J. Sulzberger, Frank L.

Sutcliffe, Mrs. Gary Sutherland, William

Button, Harold I.

Swan, Oscar H.

Swanson, Joseph E. Swartchild, Edward G. Swartchild, William G. Swenson, S. P. O. Swett, Robert Wheeler Swiecinski, Walter Swift, Mrs. Alden B. Swift, Edward F., Jr. Sykes, Mrs. Wilfred Sylvester, Miss Ada I.

Taft, John H. Taft, Mrs. Oren E. Tarrant, Robert Tatge, Mrs. Gustavus J. Taylor, Frank F. Taylor, George Halleck Taylor, Herbert J. Taylor, J. H. Taylor, L. S. Teagle, E. W. Templeton, Stuart J. Templeton, Walter L. Templeton, Mrs. William Terry, Foss Bell Teter, Lucius Thatcher, Everett A. Theobald, Dr. John J. Thomas, Emmet A. Thomas, Mrs. Florence T. Thomas, Frank W. Thomas, Dr. William A. Thompson, Arthur H. Thompson, Charles E Thompson, Edward F. Thompson, Floyd E. Thompson, Fred L. Thompson, Dr. George F. Thompson, Mrs. John R. Thompson, John R., Jr. Thorne, Hallett W. Thorne, James W. Thornton, Dr. Francis E. Thorp, Harry W. Thresher, C. J. Thulin, F. A. Tibbetts, Mrs. N. L. Tighe, Mrs. Bryan G. Tilden, Averill Tilden, Louis Edward Tilt, Charles A. Titzel, Dr. W. R. Tobey, William Robert Tobias, Clayton H. Torbet, A. W. Touchstone, John Henry Towle, Leroy C. Towler, Kenneth F. Towne, Mrs. John D. C. Trask, Arthur C. Traylor, Mrs. Dorothy J. Trees, Merle J.

Tripp, Chester D.
Trombly, Dr. F. F.
Trude, Mrs. Mark W.
True, Charles H.
Tumpeer, Joseph J.
Turck, J. A. V.
Turner, Alfred M.
Turner, Tracy L.
Tuthill, Mrs. Beulah L.
Tuthill, Gray B.
Tuttle, Emerson
Tuttle, F. B.
Tuttle, Mrs. Henry N.
Tyler, Mrs. Orson K.

Ullman, Mrs. N. J. Ullmann, Herbert S. Upham, Mrs. Frederic W.

Vacin, Emil F. Valentine, Joseph L. Valentine, Mrs. May L. Valentine, Patrick A. VanArtsdale, Mrs. Flora VanCleef, Mrs. Noah VanCleef, Paul Van Deventer. Christopher Vanek, John C VanNess, Gardiner B. VanSchaack, R. H., Jr. VanZwoll, Henry B. VanZwoll, Henry B. Vaughan, Leonard H. Vawter, William A., II Veeder, Miss Jessie Vehe, Dr. K. L. Vehon, Morris Verson, David C. Vial, Charles H. Vial, F. K. Vial, Miss Mary M. Vickery, Miss Mabel S. Victor, Mrs. Jessie K. Vogl, Otto Volicas, Dr. John N. VonColditz, Dr. G. ThomsenvonGlahn, Mrs. August Voorhees, Mrs. Condit Voorhees, H. Belin Voynow, Edward E.

Wager, William
Wagner, Fritz, Jr.
Walgreen, Mrs.
Charles R.
Walker, James
Walker, Mrs. Paul
Walker, Samuel J.
Walker, William E.
Wallace, Walter F.
Waller, James B., Jr.

320 Field Museum of Natural History Reports, Vol. 12

Wallerich, George W. Wallovick, J. H. Walsh, Miss Mary Walther, Mrs. S. Arthur Ward, Edwin J. Ward, Mrs. N. C. Wares, Mrs. Helen Worth Warfield, Edwin A. Warner, Mrs. John Eliot Warren, Allyn D. Warren, Paul C. Warren, Paul G. Warren, Walter G. Washburne, Clarke Washbutter, Hempstead, Jr. Washington, Laurence W. Wassell, Joseph Waterman, Dr. A. H. Watson, William Upton Watts, Harry C Watzek, J. W., Jr. Waud, E. P. Wayman, Charles A. G. Wean, Frank L. Wenver, Charles A. Weber, Mrs. Will S. Webster, Arthur L. Webster, Miss Helen R. Webster, Henry A. Wedelstandt, H. A. Weil, Mrs. Leon. Weil, Martin Weiler, Rud Joh Weiner, Charles Weinstein, Dr. M. L. Weinzelbaum, Loins L. Weis, Samuel W. Weishred, Benjamin H. Weiss, Mrs. Morton Weissenbach, Mrs. Minna K Weisskopf, Maurice J. Weisskopf, Dr. Max A. Welles, Mrs. Donald P. Welles, Mrs. Edward Kenneth Wells, Arthur H. Wells, Harry I. Wells, John E. Wells, Preston A. Wells, Mrs. Thomas E. Wendell, Barrett Wendell, Miss Josephine A.

Alling, Mrs. C. A. Allison, Mrs. Nathaniel Alschuler, Alfred S.

Baumrucker, Charles F.

Wentworth, Mrs. Svivia B Werner, Frank A. West, J. R. y West, Mass Mary Sylvia West, The may H. Westerfeld, Simon Westrich, Miss T. C. Wetten, Albert H. Weymer, Farl M. Whealan, Emmett P. Wheeler, George A. Wheeler, Lee W Wheeler, Leslie M. Wheeler, Mrs. Robert C. Whinery, Charles C. White, Mrs. James C. White, James E. White, Joseph J. White, Richard T. White, Sanford B. White, Selden Freeman Whitehouse, Howard D. Whiting, Mrs. Adele H. Whiting, Lawrence H. Widdicombe, Mrs. R. A. Wieland, Charles J. Wieland, Mrs. George C. Wienhoeber, George V. Wilder, Harold, Jr. Wilder, Mrs. John E. Wilker, Mrs. Milton W. Wilkey, Fred S. Wilkins, George Lester Wilkins, Miss Ruth Wilkinson, Mrs. George L. Wilkinson, John C. Willey, Mrs. Charles B. Williams, Miss Anna P. Williams, Harry Lee Williams, J. M. Williams, Kenneth Williamson, George H. William Parti, Jr. Willis, Thomas II. Willner, Benton Jack, Jr. Wills, H. E. Wilms, Hermann P. Wilson, Mrs. E. Crane Wilson, Harry Deriram Wilson, Mrs. John R. Wilson, Miss Lillian M. Wilson, Morris Karl

DECEASED, 1940

Birk, Edward J. Blome, Rudelph S. Brown, Benjamin R. Burnham, Mrs. Edward Burrows, Mrs. W. F.

Wilson, Mrs. Robert Conover Wilson, Mrs. Robert E. Wilson, William Winans, Frank F Windsor, H. H., Jr. Winston, Mrs. Bertram M. Winston, Hampden Winston, James H. Winter, Irving Witkowsky, Leon Wojtalowicz, Rev. Francis M. Wolf, Mrs. Albert H.
Wolf, Wrs. Albert H.
Wolf, Walter B.
Wood, Mrs. Gertrude D.
Wood, Mrs. Harold F.
Wood, John H.
Wood, Kay, Jr.
Wood, Robert E.
Wood, William G. Woodmansee, Fay Woodruff, George Woods, Weightstill Worcester, Mrs. Charles H. Work, Robert Works, George A. Wright, H. C. Wright, Warren Wrigley, Mrs. Charles W. Wunderle, H. O. Wyeth, Harry B.

Yegge, C. Fred Yerkes, Richard W. Yondorf, John David Yondorf, Milton S. Yondorf, Milton S., Jr. Yorkey, Mrs. Margaret Young, B. Botsford Young, E. Frank Young, George W. Young, Hugh E.

Zabel, Max W.
Zapel, Elmer J.
Zerler, Charles F.
Ziebarth, Charles A.
Zimmerman, Herbert P
Zimmerman, Louis W.
Zinke, Otto A.
Zork, David

Burton, Mrs. Ernest D. Caldwell, C. D.

Davis, Ralph

Dennehy, Thomas C. Dixon, William Warren Dole, Andrew R. Drummond, James J.

Ewell, C. D.

Fuller, Leroy W.

Gallagher, Vincent G. Gary, Fred Elbert Gerts, Walter S. Gillman, Morris Greenlee, James A.

Harding, Charles F., Jr. Harker, H. L. Howe, Charles Arthur Johnstone, Dr. Mary M. S.

Kilbourne, L. B. Kircher, Rev. Julius Kritchevsky, Dr. Wolff Kroehl, Howard

Lamson, W. A. Lawson, Arthur J. Leistner, Oscar Lloyd, Edward W. Lownik, Dr. Felix J. Lydon, Mrs. William A.

Melchione, Joseph

Nash, Charles J.

Powell, Isaac N. Pusey, Dr. William Allen

Reeve, Frederick E.

Schlake, William Sturges, Solomon

Thompson, Mrs. Leverett Thurber, Dr. Austin H.

Ware, Mrs. Charles Ware, Mrs. Charles W. Warren, J. Latham Wells, Thomas E. Wilder, Mrs. T. E. Williams, Dr. A. Wilberforce

NON-RESIDENT ASSOCIATE MEMBERS

Those, residing fifty miles or more from the city of Chicago, who have contributed \$50 to the Museum

Baum, Mrs. James

Colby, Carl

Day, Mrs. Winfield S.

Meevers, Harvey

Mitchell, W. A.

Niederhauser, Homer

Phillips, Montagu Austin

Stevens, Edmund W.

SUSTAINING MEMBERS

Those who contribute \$25 annually to the Museum

Carney, Thomas J. Chinlund, Miss Ruth E.

Kurtz, W. O.

Lassers, Sanford

Louis, Mrs. John J. McInerney, John L.

Peel, Richard H.

Sawyer, Ainslie Y.

Somers, Byron H. Stein, Sydney, Jr. Swigart, John D.

Wade, Walter A.

ANNUAL MEMBERS

Those who contribute \$10 annually to the Museum

Abeles, Jerome G.
Abrahams, Harry E.
Achenbach, William N.
Adamowski, Benjmin S.
Adams, A. J.
Adams, Cyrus H.
Adams, Harvey M.
Adams, Hugh R.
Adams, Dr. Walter A.
Addington, Mrs. James R.

Adler, Sidney Agnew, H. D. Aishton, Richard H. Albert, Mrs. Lloyd G. Alessio, Frank Alexander, John F. Alexander, William J. Alford, Virgil E. Allen, Dr. A. V. Allen, Amos G. Allen, Edwin D.
Allen, Frank W.
Allen, John D.
Allen, W. B.
Allin, Mrs. J. J.
Allman, George D.
Alrutz, Dr. Louis F.
Altheimer, Ben J.
Alton, Robert Leslie
Amberg, Harold V.

Amberg, Miss Mary Agnes Amberson, Dr. Julius M. Am 14, J. A Anderson, Mrs. A. W. Anderson, Mrs. Alma K. Anderson, J. A. Anderson, Miss Sadie Maud Anderson, Wallace H. Antrim, E. M. Applegate, Mrs. Harry R. Arcus, James S. Arndt, Albert Arthur, Miss Minnie J. Arvey, Jacob M. Ashcraft, Edwin M., III Ashum, John H. Atwood, Fred G. Ausman, Mrs. Evan L. Austin, Edwin C. Austin, M. B. Austin, Dr. Margaret Howard Austrian, Mrs. H. S. Auty, K. A.

Babbitt, Mrs. Ross M. Bachrach, Walter Bacon, Wilbur C. Bade, Mrs. William A. Bagby, John C. Baker, C. M. Balaban, Elmer Balderston, Mrs. Stephen V. Balfanz, Henry W. Ballard, Mrs. E. S. Bankard, E. Hoover, Jr. Barber, Charles E. Barber, S. L. Bard, W. A. Barker, Charles P. Barker, James M. Barker, William R. Barnes, Harold O. Barnes, Mrs. Harold Osborne Barnes, John Potts Barnes, William H. Barranco, William S. Barrett, Miss Adela Barrett, Lawrence A. Barthell, Gary Barthelemay, Henry C. Barthelemay, William, Jr. Basile, William B. Bass, Charles Bates, George A. Bates, Harry A. Baughman, R. U. Bauman, Joseph J.

Baumann, Harry P. Bays, Alfred W Bean, Edward H. Beasley, Dr. Edward W. Rearry, Ross J. Jr. Becker, Marthew G Beckler, R. M. Reers-Jones, L. Behrens, Mrs. Herman A. Beifus, Morris Bender, Mrs. Charles Bengtson, J. Ludvig Benjamin, Claude A. Benner, Miss Harriet Bennett, Dwight W. Bennett, Edward H. Bennington, Harold Bensinger, Robert F. Bentley, Richard Berg, Sigard E. Berger, E. M. Berger, R. O. Bergh, Ross F. Berleman, Miss Mildred Berman, Irving Bernstein, George E. Berry, John M. Berry, V. D. Bestel, Oliver A. Biddle, Robert C. Biggio, Mrs. Louise T. Biggs, Mrs. Joseph Henry Binstock, Mrs. Louis Bird, Herbert J. Birdsall, Lewis I. Black, J. Walker Blackburn, John W. Blair, Mrs. W. McCormick Blake, Mrs. Freeman K. Blalock, Miss Josephine Block, Mrs. Joseph L. Blomquist, Alfred Bloom, H. L. Bloom, Sidney Weil Blumberg, Nathan S. Blumenthal, Barre Blundell, William L. Blunt, Carleton Blythe, Mrs. J. W. Boeger, William F. Bogotf, Henry Bokman, Dr. A. F. Bolton, John F. Bond, William A. Bond, William Scott Bonfield, Paul H. Bopp, Andrew R. Borcherding, E. P. Borowitz, David Bothman, Dr. Louis Boyingdon, Mrs. Thorne

Rowes, W. R. Bowman, Jav Boyd, Darrell S. Boyd, E. B. Boyd, Mrs. Henry W. Brachvogel, Mrs. Christiana Bradley, Herbert E. Bradshaw, Robert Y. Brand, Gustave A. Brandel, Paul W. Brandt, Fred T. Brashears, J. W. Braudy, Mrs. Louis C. Breck, Dr. Merrick R. Breen, James W. Bremner, Dr. M. D. K. Brewer, Harry F. Brewster, William E. Briney, Dr. William F. Brooks, Mrs. E. P. Broome, John Spoor Broome, Mrs. Thornhill Brown, Edward D., Jr. Brown, Miss Ella W. Brown, H. A. Brown, Robert C., Jr. Brown, Sydney P. Browning, J. Roy Brucker, Dr. Matthew W. Buchanan, Mrs. Perry B. Budd, Mrs. L. W. Budd, Mrs. Ralph Buik, George C. Bull, L. Perkins Bunn, B. H. Bunnell, John A. Burch, Mrs. W. E. Burchmore, John S. Burdick, Charles B. Burkhardt, Mrs. Ralph E. Burnet, Mrs. W. A. Burridge, Mrs. Howard J. Burrows, Miss Louisa L. Busch, Francis X. Byfield, Ernest L. Byrne, Mrs. M. W. K. Byrnes, William Jerome

Cabell, Mrs. Robert H.
Cable, Arthur G.
Caesar, O. E.
Caine, Leon J.
Callahan, Mrs. A. F.
Callan, T. J.
Campbell, Argyle
Campbell, Donald A.
Campbell, Mrs. John G.
Canavan, J. Newell
Carey, Denis P.
Carl, Otto Frederick

Carlisle, William George Carlson, Mrs. Annetta C. Carlson, John F. Carlton, Mrs. Frank A. Carpenter, John Alden Carpenter, Robert Carr, Henry C. Carter, Mrs. C. B. Carter, Mrs. R. B. Cassady, Mrs. Thomas G. Castle, Sidney Cavanagh, Mrs. Joseph J. Cavenaugh, Robert A. Cervenka, John A. Chandler, Charles H. Chandler, Dr. Fremont A. Chapin, Rufus F. Chapman, Ralph Chapman, Theodore S. Chapman, William Gerard Chase, Carroll G. Chessman, L. W. Childs, Kent C. Chrissinger, Horace B. Christensen, E. C. Christensen, Henry C. Citron, William Clancy, James F. Clark, A. B. Clark, E. L. Clark, Miss Marion Clark, N. R. Clark, Mrs. Ralph E. Clark, Robert H. Clark, Mrs. Robert K. Clark, Miss Rose A. Clark, Willard F. Clarke, Mrs. A. S. C. Clarke, Broadus J. Clarke, David R. Clarke, Mrs. Philip R. Clements, Mrs. Ira J. Clements, J. A. Clifford, Fred J., Jr. Clissold, Edward T. Clizbe, Mrs. F. O. Clow, Kent S. Cobbey, J. A. Coburn, Archie T. Cochran, William S. Coe, Mrs. Schuyler M. Coen, T. M. Cohen, Archie H. Cohen, Harry Cohen, Reuben W. Cole, Samuel Coleman, Hamilton Collins, Arthur W. Collins, Charles W.

Collins, Mrs. Frank P.

Collins, H. W.

Colvin, Miss Bonnie Combs, Earle M., Jr. Condee, Ralph W. Condon, Mrs. Jessie B. Connolly, R. E. Connors, Mrs. Thomas A. Consoer, Arthur W. Consoer, George O. Cook, Louis T Cook, Paul W. Cook, Sidney A. Coombs, Dr. Arthur J. Cooper, Charles H. Cooper, Mrs. Clay C. Coppel, Mrs. Charles H. Corper, Erwin Couse, Arthur J. Coverley, Mrs. Cecile Cowham, Robert Neil Coxe, Miss Winnie Craddock, John F. Cragg, Mrs. George L. Craig, E. C. Cramer, Mrs. Ambrose Crane, Dr. Cyril V. Crawford, Adam W. Creevy, Mrs. Joseph B. Crites. Joe Cronkhite, A. C. Crowell, Dr. Bowman Corning Crowell, Mrs. Lucius A. Cummings, Dr. C. A. Cummings, Mrs. Dexter Cuneo, Frank Cunningham, Robert M. Cunningham, Secor Curran, William Curtis, Al Martin Curtis, D. C. Cuscaden, Fred A. Cushman, Dr. Beulah Cushman, Robert S.

Dallwig, P. G.
Dalzell, Harry G.
Daniel, Norman
Danielson, Miss Ellen T.
Danielson, Reuben G.
Darrow, William Dwight
Daspit, Walter
David, Sigmund W.
Davies, Mrs. H. G.
Davies, William B.
Davis, Mrs. Abel
Davis, Arthur G.
Davis, Arthur G.
Davis, Mrs. Charles P.
Davis, Miss Elease E.
Davis, Mrs. F. Ben
Davis, Paul H.
Davis, Ralph W.

Day, Mrs. Lewis J. Decker, Herbert Deffenbaugh, Walter I. Defrees, Mrs. Joseph H. Degener, August W. Deimel, Mrs. Jerome L. Delph, Dr. John F. de Mars, Miss Anita Denison, John W. Deniston, Mrs. Albert J., Jr. Denson, John H. DePencier, Mrs. Joseph R. Depue, Oscar B. D'Esposito, Joshua Dewey, Mrs. Charles S. Diamond, Louis E. Dick, Mrs. Edison Dillbahner, Frank Dimmer, Miss Elizabeth G. Dinkelman, Harry Dixon, Mrs. Wesley M. Dobricky, Stanley Donahue, Elmer W. Donnelley, Thorne Dorschel, Q. P. Dotson, Heber T. Douglas, Mrs. James H. Douglas, William C. Dovenmuehle, George H. Drake, L. J. Drell, Mrs. J. B. Dressel, Charles L. Dreutzer, Carl Drever, Thomas Drew, Walter W. Drezmal, Max A. Drielsma, I. J. Drummond, John H. Dry, Meyer Dulsky, Louis Dunigan, Edward B. Dunlap, George G. Durbin, Miss N. B.

Easter, Donald W.
Eaton, Norman
Eckhouse, George H.
Eckhouse, Walter L.
Ed, Carl
Edell, Mrs. Fred B.
Edgerly, Countess Mira
Eismann, William
Eitel, Emil
Eitel, Karl
Eitel, Robert J.
Eldred, Mrs. Harriot W.
Elkan, Leo H.
Elliott, Dr. Clinton A.
Elliott, Frank Osborne

Elliott, Mrs. William A.
Elliott, William S.
Ellis, Alfred E.
Ellis, Hubert C.
Ellis, Ralph
Elman, Henri
Elmendorf, Armin
Elmer, Dr. Raymond F.
Elston, Mrs. L. C., Jr.
Elting, Winston
Elmbree, Henry S.
Elmbree, J. W., Jr.
Ligel, Mrs. Cora E.
Lingelhart, Frank C.
Erickson, Hubbard H.
Essley, F. Perter
EtsHokin, Louis
Eulass, E. A.
Evans, Mrs. Arthur T.
Evans, F. B.
Evars, John W., Jr.

Fair, Mrs. Helen E. Fairlie, Mrs. W. A. Fairman, Miss Marian Falls, Dr. F. H. Fantus, Ermest L. Farriam, Mrs. John D. Farnsworth, George J. Farmell, Allert D. Facility, Dr. Gordon B. Farkes, Charles E. Feltman, Reland D. Fermema, Nick Fergus et, Jim G Ferguson, Louis A. Jr. Ferry, Mrs. Frank Fo. or ler, Mrs. M. G. Field, Mrs. J. V. Field, Mrs. War warth G Filson, John D. Finney, Dr. William P. Fracher, Mrs. Louis E. Fish, Mrs. Sigmund C. Fisher, George F. Fisher, James G. Fisher, Stephen J. Fisher, William E. Fish, Mrs. Burnham M. Fitzgerald, Dr. J. E. Plaks, Francis A Florider, R. P. Fler. James Floreen, Mrs. Adolph R. Floraheim, Loonard S. Flory, Owen O. Fire, J W Flynn, Maurice J. Fogler, Mrs R. H. F. Cott, Charles W. Folsom, Mrs. William R.

Foote, Mrs. Harley T. Forbes, Lester II. Forrest, Maulsby Foster, William S Fowler, Mrs. Earle B. Fowler, Edgar C. Fowler, Gordon F. Fowler, Walter E. Frank, Sidney Frankenthal, John V. Fraser, Norman D. Frasee, Seward C. Freeland, Dr. M. R. Fremont, Miss Ruby French, George W. French, Dr. Thomas M. Freund, Erwin O. Freund, Mrs. I. H. Friedberg, Dr. Stanton A. Frieder, Edward Friedlob, Fred M. Fredoo, Fred M. Fredo, Elwer E. Fredor I. John R Fuller, J. E. Fuller, William A. Fulton, Albert B. Fulton, Arthur W.

Gairns, A. H. Gale, Abram. Gallaher, Thomas B. Galloway, Dr. Charles E. Galvin, J. E. Gane, Miss Gertrude Ganz, Mrs. Rudolph Garen, Mrs. D. H. Garnett, Joseph B. Gary, Lee J. Gatzert, Mrs. August Gavin, Mrs. Steve Geagan, E. R. Gessler, Herbert F. Gellert, Donald N. Gengert, Etters Georgen, Leo J. Geraghty, Mrs. Thomas F. Gerwig, Walter A German, Joseph Foard Gibbs, Richard F. Gibbs, Dr. William W. Gilchrist, Miss Harriet F. Giles, Miss A. H. Gillett, W. N. Gillick, J. T. Gingrich, Arnold Ginsburg, Maurice Glade, George H., Jr. Glader, Frank J. Glynn, Mrs John E. Goddard, Mrs. Convers Goergen, Dr. Philip C.

Goldberg, Mrs. Sol H. Goldman, Mrs. Louis Goldsmith, Henry M. Goldstein, Mrs. Benjamin F. Goldstein, Leo A. Gomberg, Dr. Harry Good, Arthur P. Goodall, John C Goodman, Ralph L. Goodman, Mrs. William O. German, John J. German, Rev. William J. Gottlieb, Frederick M. Gottschalk, Albert L. Grabiner, Harry M. Grace, John H., Jr. Grade, Joseph Y. Graths, Herbert Graham, Mrs. William Edward Gramger, Mrs. W. W. Granville, Charles N., Jr. Grauer, Milton H. Grauer, Dr. Theodore P. Gray, Edward Graydon, Charles E. Green, C. M. Green, Mrs. Dwight H. Green, Walter H. Greenhouse, Jacob Greenlee, William B. Grein, Joseph Grell, Louis Grey, Newton F. Griesel, Edward T. Grochowski, Mrs. G. S. Groebe, Louis G. Grossfeld, Miss Rose Groves, Benjamin H. Guilliams, John R. Guinan, James J. Gunnar, Mrs. H. P. Guskay, John W. Guthman, Edwin I. Guthrie, S. Ashley Guzik, Mrs. Manny

Guzik, Mrs. Manny

Hackett, Mrs. James J.

Haffner, Mrs. Charles
C., Jr.

Hagemeyer, Henry F.

Hagey, Harry H., Jr.

Hagley, Miss Olive L.

Hagley, Miss Olive L.

Hall, Arthur B.

Hall, Harry

Hall, Harry

Hall, Henry C.

Hall, Louis W.

Hamilton, Mrs. Chester F. Hamilton, Hugo A. Hamilton, J. R. Hammill, Miss Edith K. Hammond, C. Herrick Hansen, Adolph H. Harbison, Robert B. Hardin, George D. Harding, Mrs. Charles F. Harpel, Mrs. Charles J. Harper, Philip S Harper, Robert B. Harrington, George Bates Harrington, S. R. Harris, Benjamin R. Harris, Frank F. Harris, Mortimer B. Harrison, William H. Harrold, James P. Harshaw, Myron T. Hart, Mrs. G. H. Hart, Mrs. H. G. Hart, Mrs. Harry Hart, Louis E. Hart, Mrs. Rachel Harber Hart, Mrs. Walter H. Harvey, Byron S. Harvey, Mrs. Byron, Jr. Harvey, Mrs. Harold B. Haskell, L. A. Haskins, Raymond G. Hattstaedt, Mrs. John J. Hauser, J. C. Hawkes, Joseph B. Hawkinson, Dr. Oscar Hawley, Mrs. Melvin M. Hawthorne, Vaughn R. Haynes, William H. Headley, Mrs. Ida M. Heald, Mrs. Henry T. Healy, John J. Healy, Vincent E. Heavey, John C. Hebel, Oscar Heckel, Edmund P. Heckel, Dr. Norris J. Hedly, Arthur H. Heed, Mrs. Thomas D. Heg, Ernest Heifetz, Samuel Helebrandt, Louis Helgason, Arni Helland, A. I. Heller, Fred M. Henderson, B. E. Hendry, Chester S. Ienke, Frank X. Ienkle, Charles Zane Henning, Mrs. Helen E.

Henriksen, H. M.

Hersh, Dr. Helen Herz, Alfred Hess, Edward J. Hess, Sol H. Hesseltine, Dr. H. Close Hibbard, Angus S. Hicks, Mrs. Ernest H. High, Mrs. George H. High, Shirley T. Hill, Mrs. Cyrus G. Hill, Miss Meda A. Hill, William C. Hiller, J. A.
Hillyer, John T.
Hilpert, Dr. Willis S.
Hilton, Henry H. Hinckley, Mrs. Freeman Hinds, Fred J. Hirsch, Edwin W. Hirsh, Morris Henry Hitchcock, Mrs. Arthur B. Hixon, H. Rea Hoag, Mrs. Junius C. Hochfeldt, William F. Hodges, L. C. Hoffman, Mrs. Robert M., Jr. Hofman, Charles M. Hollaman, Arthur M. Hollender, S. S. Hollerbach, Joseph Hollingshead, Mrs. A. G. Holmes, Miss Berenice Holt, McPherson Holter, Charles C. Holzheimer, Joseph Hood, H. M. Hooper, A. F. Horton, Mrs. Arthur Horween, Isidore Horwich, Alan H. Horwich, Philip Houston, Mrs. Thomas J. Howard, Charles Lowell Howe, Roger F. Hoyt, Dr. D. C. Hoyt, N. Landon, Jr. Hoyt, William M., II Hubachek, Frank Brookes Huck, Mrs. Irene Huettmann, Fred Huff, Dr. Robert E. Huffman, Frank C. Huguenor, Lloyd B. Hurd, Ferris E. Hurd, Harry B. Huth, Mrs. C. F. Huxley, Henry M. Hyman, Mrs. David A.

Immerwahr, Max E. Ingalls, Allin K. Ireland, Mrs. Charles H. Irish, Dr. Henry E. Isaacs, Lewis J. Ivy, Dr. A. C.

Jack, Dr. Harry T. Jackson, Mrs. Martha F. Jackson, Mrs. Pleda H. Jackson, Mrs. W. A. Jackson, W. H. Jacobs, Nate James, H. H. Jamieson, Norman R. Janata, Louis J. Jarvis, William B. Jeffers, Roy S. Jeffreys, Mrs. Mary M. Jeffries, Dr. Daniel W. Jeffries, Dr. Milo E. Jenner, Mrs. Austin Jennings, Mrs. C. A. Jensen, George P. Jewett, George F. Job, Dr. Thesle T. Johns, Mrs. K. V. Janovsky Johnson, B. W. Johnson, Edmund G. Johnson, Miss Kathryn M. Johnson, Miss Millie C. Johnston, A. J. Johnston, Mrs. Alfred B. Johnston, Mrs. W. Robert Johnstone, Mrs. Bruce Jones, Mrs. C. A. Jones, Charles W. Jones, D. C. Jones, Howard B. Jones, Owen Barton Jordan, Dr. John W. Joseph, Albert G. Joy, James A. Julian, Frederick

Kaczkowski, Dr.
Joseph C.
Kagan, Bernhard R.
Kahlke, Dr. Charles E.
Kahn, Jerome J.
Kahn, Louis
Kahn, Paul J.
Kamin, E. J.
Kampmeier, August G.
Kanter, Dr. Aaron E.
Kapche, William
Kaplan, Benjamin G.
Kaplan, Frank
Karker, Mrs. M. H.

Karpen, Leo Karstens, Norman V. Kart, Samuel Katz, Miss Jessie Katz, Solomon Katzenberger, Mrs. W. B. Kaufman, Mrs. J. Sylvan Kaumeyer, Mrs. E. A. Kay, Dr. Webster B. Keck, Mathew Keene, William J. Keim, Melville Kelley, Mrs. Phelps Kellogg, James G. Kellogg, John Payne Kelly, Charles Scott Kelly, Frank S. Kelly, Miss Katherine Mariorie Kemp, Dr. Jarold Kemper, Miss Hilda M. Kennedy, David E. Kenyon, Mrs. Edward F. Keplinger, W. A. Kerr, Leslie H. Kettering, Mrs. E. W. Keyser, Charles F. Kimball, Mrs. R. M. Kimball, T. Weller King, Clinton B. King, Frank L. King, H. R. King, J. Andrews King, Kenneth R. King, Willard L. Kirshbaum, Harry L. Klein, Mrs. A. S. Klein, Dr. David Kleinschmidt, Edward Kline, A. Kloese, Henry Knapp, Charles S. Knoblock, Byron W. Knode, Oliver M. Knol, Nicholas Knutson, Mrs. George H. Koch, Carl Koch, Mrs. Fred J. Kochnlein, Wilson O. Kohn, Mrs. Frances J. Kohout, Joseph, Jr. Koltz, George C. Koolish, Ellman Koopmann, Ernest F. Koppenaal, Dr. Elizabeth Thompson Korengold, J. A. Kort, George Kostrzewski, Dr. M. J. Kotas, Rudolph J. Kotrba, Frank Kraemer, Leo

Krafft, Walter A.
Kraft, John H.
Krametbauer, Charles F.
Krasberg, Rudolph
Krawetz, Mrs. Johannes
Krebs, Charles E.
Kresl, Carl
Krier, Ambrose J.
Kroch, Adolph
Krol, Dr. Francis B.
Kruesi, F. E.
Kruggel, Arthur
Kuehn, Miss Katherine
Kuehn, Oswald L.
Kuhnen, Mrs. George H.
Kuhns, Mrs. H. B.
Kurth, W. H.

Lachman, Harold

Ladd, John W.

Laird, Robert S Lamb, George N. Landon, Robert E. Lang, Isidor Lange, A. G. Langert, A. M. Langford, Joseph P. Lapp, John A. Larson, Charles E. Larson, Simon P. Lasch, Charles F. Latimer, William L. Lau, Mrs. John Arnold Laud, Sam Law, M. A. Lawrence, Walter D. Lawson, David A. Layden, Michael J. Lazear, George C. Lee, Edward N. Lee, Mrs. William George Lehman, Lawrence B. Lehman, O. W. Leighty, Edgar R. Leslie, John Woodworth Letterman, A. L. Leutz, Miss Marie Levin, Louis Levine, William Levinger, Mrs. David Levis, John M. Levy, Mrs. Arthur K. Lewis, Mrs. Lloyd Lewis, Mrs. Walker O. L'Hommedieu, Arthur Lichtenstein, Walter Lindeman, John H. Lindsay, Mrs. Martin Linebarger, Mrs. Charles E.

Lingott, Richard H. Linn, Mrs. James W. Lipman, Abraham Lippincott, R. R. Lipshutz, Joseph Little, Charles G. Little, F. C. Llewellyn, Mrs. Kenneth Lobdell, Harry H. Loeb, Arthur A. Loewenherz, Emanuel Loewenstein, Emanuel Lofquist, Karl E. Logan, Mrs. Frank G. Loomis, Miss Marie Love, Joseph Kirk Love, Miss R. B. Lynch, Mrs. Cora E.

Lyon, C. E. Lyon, Mrs. Jeneva A. Lyon, Mrs. William H. MacArthur, Fred V. MacChesney, Miss Muriel Macfarland, Mrs. Henry J. Macfarland, Lanning MacKechnie, Dr. Hugh N. Mackie, David Smith MacMillan, William D. MacMurray, Mrs. Donald Macomb, J. deNavarre Maddock, Miss Alice E. Maddock, Thomas E. Madlener, Mrs. Albert F., Jr. Magie, William A. Magner, Rev. F. J. Maling, Albert Malkov, David S. Manaster, Henry Manheimer, Arthur E. Manning, Guy E. Mansfield, Alfred W. Manta, Mrs. John L. Markman, Mrs. Samuel K. Marks, Mrs. Frank H. Marnane, James D. Marquart, Arthur A. Marquart, E. C. Marsch, Mrs. John Marsh, Charles L. Marshall, Edward Marston, Mrs. T. B. Martin, Webb W. Marvin, W. Ross Marwick, Maurice

Marx, Samuel A.

Mason, Dr. Ira M. Mason, Lewis F. Mason, Mrs. Michael L. Mattes, Harold C. Matthews, Francis E. Matthews, J. H. Mawicke, Henry J. Maxwell, William A. May, Sol Mayer, Arthur H. Mayer, Edwin W. C. Mayer, Frederick Mayer, Richard Maynard, Edwin T. McAllister, M. Hall McAloon, Owen J. McArthur, Mrs. S. W. McCarthy, F. J. McClure, Donald F. McConnell, F. B. McCormick, Miss Elizabeth D. McCoy, Charles S. McCreight, Marion Everett McDonnell, Mrs. E. N.
McDonnell, John B.
McDougall, E. G.
McDowell, Miss Ada V.
McDowell, Malcolm
McEwen, William McFadden, Everett R.
McGowen, Thomas N.
McGrain, Preston
McGrew, Mrs. O. V.
McGuire, Simms D.
McKay, Miss Mabel McKeown, Daniel F. McKibbin, Mrs. George B. McKinlock, Mrs. George A.
McKinstry, W. B.
McKisson, Robert W.
McLaughlin, Mrs. George D. McLaughlin, Dr. James H. McLaughlin, Mrs. Jesse L. McManus, James F. McMillan, Mrs. Foster L. McNall, Quinlan J. McNamara, Robert C. McPherson, Donald F. McSurely, Mrs. William H.

Mechem, John C.

Meek, Miss Margaret E. Meeker, Arthur

Mehlhope, Clarence E.

Meier, Mrs. Edward

Melville, Hugh M.

Merchant, Miss Grace M. Meredith, Oscar F. Merritt, Thomas W. Merz, Miss Martha Metzenberg, John B. Metzenberg, Leopold Meyer, Wallace Meyerhoff, A. E. Michaels, Joseph Michel, Dr. William A. Milchrist, Frank T. Millard, Mrs. E. L. Miller, Joseph Miller, William Mills, Mrs. James Leonard Milne, John H. Mitchell, Mrs. George R. Mitchell, Mrs. James Herbert Molay, Marshal D., M.D. Molter, Harold Monroe, Walter D.
Moore, Mrs. Agnes C.
Moore, Dr. Beveridge H.
Moore, Mrs. J. W.
Moore, Nathan G.
Moore, Oscar L. Morgan, Clarence Mork, P. R. Morley, Rev. Walter K. Morris, Ira Nelson Morris, Milton H. Morrow, John, Jr. Morse, Mrs. John B. Morton, Dr. Edward C. Moser, Paul Moss, Alfred J. Moss, Jacob L. Mowrer, Mrs. Paul Scott Mudd, Joseph B. Mueller, Dr. E. W. Mulcahy, Mrs. Michael F. Muller, Allan Murphy, E. T. Murphy, Mrs. Helen C. Murphy, Henry C. Murphy, J. P. Murphy, John C. Murray, William M. Musick, Philip Lee Muter, Leslie F. Myers, Harold B.

Nadelhoffer, Dr. L. E. Nafziger, R. L. Nance, Willis D. Nardi, Mrs. E. W. Nardin, John G. Nash, Fred W. Nast, Mrs. Samuel Nath, Bernard Nau, Otto F.
Nelson, Charles M.
Nelson, Herbert U.
Nelson, Hoogner
Ness, J. Stanley
Nessler, Robert W.
Newman, Charles H.
Newman, Mrs. H. H.
Newman, Mrs. Jacob
Nickerson, J. F.
Noble, Guy L.
Nolte, Charles B.
Norcott, Mrs. Ernest J.
Nordstrum, George W.
Norian, Morris
Norris, Eben H.
North, Mrs. F. S.
Novy, Dr. B. Newton
Nyquist, Carl

Oberhelman, Dr. Harry A. Obermaier, John A. Obermeyer, Charles B. O'Brien, M. J. O'Brien, Miss Theresa J. Ochsner, Dr. Edward H. O'Donohue, Miss Anna Oelkers, Alfred H. Ogilvie, Alexander W. T.
O'Hara, Arthur J.
Oldberg, Dr. Eric
Oleson, John P.
Oleson, Philip H.
Olin, Edward L. Olsen, Mrs. Arthur O. O'Neill, Dr. Eugene J. Oppenheimer, Seymour Orban, Dr. Balint Ormsby, Mrs. Frank E. Orschel, Albert K. Ossendorff, Dr. K. W. O'Toole, John F. Owen, Mrs. W. David

Palmer, Robert F.
Panosh, Roy W.
Pardee, Harvey
Parker, Austin H.
Parkinson, Mrs.
George H.
Parmelee, Dwight S.
Parsons, Bruce
Parker, George S.
Pashkow, A. D.
Patch, Mrs. G. M.
Patterson, Grier D.
Pauley, Clarence O.
Paulsen, Arthur N.
Paulson, Miss Christine
Paulus, Mrs. M. G.

Reavis, William C.

Payne, Mrs. William R. Pebbles, Mrs. Grace M. Peck, William C. Peirce, Mrs. Clarence A. Pencik, Mrs. Miles F. Pentecost, Lewis J. Penticoff, M. C. Perry, Arthur C Petersen, Thorvald Petrie, Dr. Scott Turner Pfaelzer, Mrs. Ellard L. Pfaelzer, Mrs. Monroe Pflager, Charles W. Phelps, Erastus R. Phibbs, Harry C. Phillips, L. A. Phillips, Howard C. Pick, Joseph Richard Pillsbury, Mrs. Charles S. Pirie, Mrs. Gordon L. Pitt, A. A. Place, F. E. Plamondon, Alfred D. Plummer, Comer Plummer, Daniel C., Jr. Pollock, George L. Pollock, Mrs. Lewis J. Pond, George F. Poore, William E. Porter, John H. Portis, Dr. Sidney A. Potter, Mrs. T. A. Powers, Mrs. George W. Poyer, Stephen A. Prentice, J. Rockefeller Preston, Fred A. Pretty, Royden K. Preus, Mrs. J. A. O. Price, Ernest B. Prindle, James H. Pritchard, N. H. Propp, M. H. Prosser, John A. Pruitt, Raymond S. Putnam, Rufus W Puttkammer, E. W.

Quarrie, William F. Quellmalz, Frederick Quisenberry, T. E.

Railton, John R.
Ranney, Mrs. George A.
Ranson, Mrs. S. W.
Rasmussen, Mrs. George
Rathbun, Rex
Ravenscroft, Edward H.
Rawlings, Mrs. I. D.
Raymond, Mrs.
Clifford S.
Rayner, Lawrence
Rea, Miss Edith

Reed, Mrs. Frank C. Reed, Walter S. Regensburg, James Reid, Mrs. Jessie S. Potts Rein, Lester E. Reiser, Miss Irene K. Reiss, William Rembold, Fred W. ReQua, Mrs. Charles H. ReQua, Haven A. Reser, Harry M. Reuss, Mrs. Henry H. Reynolds, Mrs. G. William Reynolds, Joseph Callow Rice, Joseph J. Rice, Mrs. W. W. Richards, James Donald Richards, Oron E. Richardson, Henry R. Richardson, Mrs. W. D. Richert, John C. Richter, Arthur Riddell, John T. Ridley, Clarence E. Riel, George A. Riley, John H. Ritter, Emil W. Ritter, Dr. I. I. Ritter, Miss Lavinia Roadifer, W. H. Robbins, Burr L. Robbins, Charles Burton Robbins, Laurence B. Robinson, Emery Robinson, Miss Nellie Robinson, Reginald Victor Robinson, Theodore W., Jr. Roblin, Mrs. G. S. Robson, Mrs. Oscar Roche, John Pierre

Rollins, Athol E.
Roman, B. F.
Rosenberg, Mrs.
Bernhard
Rosenfels, Hugo H.
Rosenfels, Mrs. Irwin S.
Rosenthal, David F.
Rosenthal, M. A.
Rosner, Max
Ross, Earle L.
Ross, Mrs. Sophie S.
Rostenkowski, Joseph P.

Rockhold, Mrs. Charles W.

Rockwell, Theodore G.

Roden, Carl B. Rodgers, Mrs. John B.

Rogers, Mrs. J. B.

Rowland, James E. Rowley, Clifford A. Rowley, William A. Roy, Mrs. Ervin L. Rubens, Walter L. Rubloff, Arthur Rudin, John Rugen, Fred A. Ryan, C. D. Rynder, Ross D.

Sachse, William R. Salmon, Rudolph B. Sanborn, Mrs. V. C. Sandberg, Harry S. Sang, Philip D. Saslow, David Sawyer, Dr. C. F. Sayers, Mrs. A. J. Sayre, Dr. Loren D. Schaffner, Arthur B. Schaffner, Miss Marion Schaus, Carl J. Scheel, Fred H. Schenker, Ben W Schick, Mrs. W. F. Schiltz, M. A. Schlichting, Justus L. Schlossberg, Max Schmidt, Theodore Schmidtbauer, J. C. Schmitt, Mrs. George J. Schmus, Elmer E. Schneider, Benjamin B. Schneider, D. G. Schram, J. A. Schueren, Arnold C. Schulze, Paul Schuman, Meyer Schupp, Robert W. Schwab, Martin C. Schwartz, Joseph Schwartz, Dr. Otto Schwarz, Mrs. Sidney L. Schweitzer, E. O. Scobie, David P. Scofield, Clarence P. Scott, Frederick H. Scott, George A. H. Scott, George H.
Scott, Miss Maud E.
Scott, Walter A.
Scott, Dr. Walter Dill
Scudder, Mrs. Lawrence W.

Scudder, Mrs.
Lawrence W.
Scudder, W. M.
Sceord, Burton F.
Scehausen, Gilbert B.
Seidenbecker, Mrs. O. F.
Seidenberg, Harry
Selfridge, Calvin F.
Selz, Mrs. J. Harry

Senear, Dr. F. E. Sexton, Mrs. Thomas G. Seymour, Mrs. Flora Warren Shakman, James G. Shaw, John I. Shaw, Mrs. Walter A. Sheahan, Miss Marie Shedd, Mrs. Charles C. Sheridan, Leo J. Sherman, H. C. Sherman, Nate H. Sherwin, Mrs. F. B. Shrader, Frank K. Shultz, Earle Sieck, Herbert Siegfried, Walter H. Sievers, William H. Silbernagel, Mrs. George J. Sillani, Mrs. Mabel W. Simmons, Richard W. Simpson, Dr. Elmer E. Simpson, John M. Sims, Howard M. Sindelar, Joseph C. Sippy, Mrs. Harold L. Siragusa, Mrs. Ross Skeel, Fred F. Skog, Mrs. Ludvig Slavik, James Smart, Alfred Smith, Harold A. Smith, Hawley Les Smith, Hawley Lester Smith, John F., Jr. Smith, Mrs. Kenneth Gladstone Smith, Reynold S. Smith, Robert S. Smithson, Stuart Busby Snydacker, Mrs. James U Sokoll, M. M. Sollitt, Mrs. George Sollitt, Sumner S. Solomon, L. R. Solomon, Mrs. Lewis J. Somerville, Mrs. Helen Sonnenschein, Mrs.

Edward
Souder, Mrs. Robert
Southman, John H.
Spalding, Mrs. Charles F.
Speed, Dr. Kellogg
Speer, Earl D.
Speer, Robert J.
Sperling, Mrs. Grace
Dickinson
Spicer, Mrs. George A.
Spiegel, Modie J.
Spiegel, Mrs. Philip
Spitz, Milton J.

Sprague, Albert A., Jr. Springer, Charles E. Stackler, Sidney Starck, Mrs. Philip T. Starrett, Mrs. June M. Starshak, A. L. Stearns, Fred Steckl, Miss Cornelia C. Steece, F. B. Steffensen, Sigurd Stein, Lawrence M. Steinfeldt, Dr. C. R. Steins, Mrs. Halsey Steinwedell, William Stensgaard, W. L. Stephens, Frank Hall Stern, Jacob S. Sternath, Mrs. Hannah Stevens, Miss Charlotte M. Stevens, Francis O. Stewart, Miss Alma May Stewart, Miss Amiss Stewart, George R. Stewart, William Stier, Willard J. Stifler, Mrs. J. M. Stiles, Charles G. Stiles, J. F., Jr. Steek, Lynt. Stoehr, Kurt Stone, Mrs. John Sheppard Stops, Harry D. Storkan, Mrs. James Stout, Frederick E. Stransky, Franklin J. Straus, Eli M. Strauss, Marshall E. Strigl, F. C. Strubel, Henry F. Stumes, Charles B. Sturla, Harry L. Sturm, William G Sturtevant, Roy E. Sullivan, Grey Sundlof, F. W. Suomela, John P. Swift, T. Philip Swigert, H. A. Sykes, Aubrey L. Symmes, William H. Symon, Stow E.

Talbot, Mrs.
Eugene S., Jr.
Tarrson, Albert J.
Tatge, Paul W.
Taylor, Robert F.
Teare, W. C.
Teller, George L.
Thiebeault, C. J.
Thiffault, A. E.
Thirkield, D. D.

Thomas, James A. Thomas, Thomas J. Thomason, Mrs. S. E. Thompson, Ernest H. Thompson, Paul B. Thorek, Dr. Max Thornton, Randolph Throop, Mrs. George Enos Tieken, Theodore Todd, A. Todd, John O. Tonk, Percy A. Topping, John R. Tracy, S. W. Traver, George W. Treat, Mrs. Dana R. Tremain, Miss Eloise R. Trenkmann, Richard A. Trier, Robert Trude, Daniel P. Truman, Percival H. Tyler, Alfred C.

Uhlemann, William R. Ullmann, Mrs. Albert I. Ulvestad, Dr. E. E. Urban, Andrew Utley, Mrs. Clifton M. Utley, George B. Utter, Mrs. Arthur J.

VanHagen, Mrs.
George E.
VanPelt, H. C.
Varty, Leo G.
Velvel, Charles
Versluis, Mrs. James J.
Vierling, Mrs. Louis
Vogel, Rudolph E.
Vose, Mrs. Frederic P.

Wachowski, Casimir R. Wacker, Fred G. Wadsworth, Robert W. Wagner, Richard Wagonseller, E. A. Waite, Roy E. Walcher, A. Waldeck, Herman Walker, Lee Wallace, Frank M. Wallach, Mrs. H. L. Waller, Mrs. Edward C. Wallgren, Eric M. Walpole, S. J. Walsh, R. A. Warner, Mason Warren, L. Parsons Warren, William G. Wasson, Theron

330 FIELD MUSEUM OF NATURAL HISTORY REPORTS, Vol. 12

Watkins, Frank A. Watkins, Frederick A. Watling, John Waugh, Miss Anna May Webb, Lew H. Weber, James Webster, Harry C. Webster, James Webster, N. C. Wegner, Charles T., Jr. Weidert, William C. Weil, David Maxwell Weil, Edward S. Weiner, Charles Weinraub, Aaron Weiss, Louis A. Weiss, Sigfried Weissbrenner, A. W. Weissenborn, Leo Julius Weist, Milton M. Welch, L. C. Welch, R. T. Wells, Mrs. H. Gideon Welsh, William W. Wentworth, John Wentz, Peter Leland Wescott, Dr. Virgil Westbrook, Ira E. Wetmore, Mrs. Frank O. Wetmore, Horace O. Whedon, Miss Frances E.

Whipple, Miss Velma D. White, Linn White, W. J. Whitecotton, Dr. George Otis Whitelock, John B. Whitmore, Eugene Whitwell, J. E. Wickland, Algot A. Wickman, C. E. Wilder, Emory H. Wilds, John L. Wiley, Edward N Wilhelm, Frank Edward Willard, Nelson W. Willens, Joseph R. Williams, Charles Sneed Williams, Clyde O. Williams, Lawrence Williams, Mrs. Rowland L. Williams, Walter H. Wilson, Arlen J. Wilson, E. L. Wilson, Percival C. Wilson, W. M. Windes, Mrs. Frank A. Winship, Miss Florence S.

Witkowsky, James
Wolosh, George
Wood, Milton G.
Woodson, William T.
Woodyatt, Dr. Rollin
Turner
Woolard, Francis C.
Worthy, Mrs. Sidney W.
Wray, Edward
Wright, William Ryer
Wrisley, George A.
Wulbert, Morris
Wurth, Mrs. William
Wynekoop, Dr.
Charles Ira
Wyzanski, Henry N.

Witham, Miss Marie

Yanofsky, Dr. Hyman Yonce, Mrs. Stanley L. Young, James W. Youngberg, Arthur C.

Zadek, Milton
Zangerle, A. Arthur
Zenos, Rev. Andrew C.
Zglenicki, Leon
Zimmerman, Charles J.
Zimmermann, Mrs. P. T.
Zolla, Abner M.
Zonsius, Lawrence W.

Winterbotham, John R.

DECEASED, 1940

Fox, Mrs. Edward F. Fulton, D. B.

Winston, Mrs. Farwell

Greenebaum, Mrs. Esther

Hawkins, Harold E. Hibler, Mrs. Harriet E. Hodge, Thomas P.

Reed, Rufus M.

Schnadig, E. M. Schwede, Charles W. Selz, Emanuel Smithwick, J. G. Solar, Bernard S. Spencer, J. C.

Wakem, Mrs. Wallace Walton, Lyman A. Ware, Dr. R. A.

Adelbert E.

Davis, R. Edward

Decker, Hiram E.

Alexander, Harry T.

Chandler, George M.

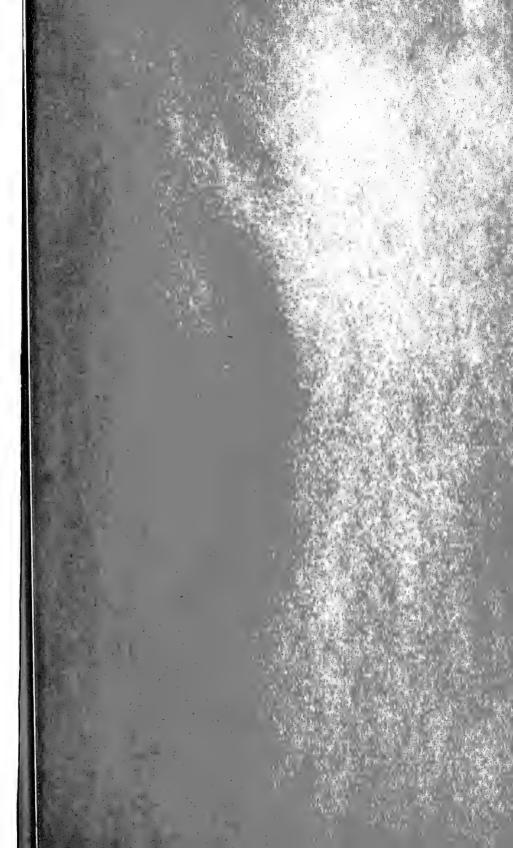
Church, Mrs. Emma

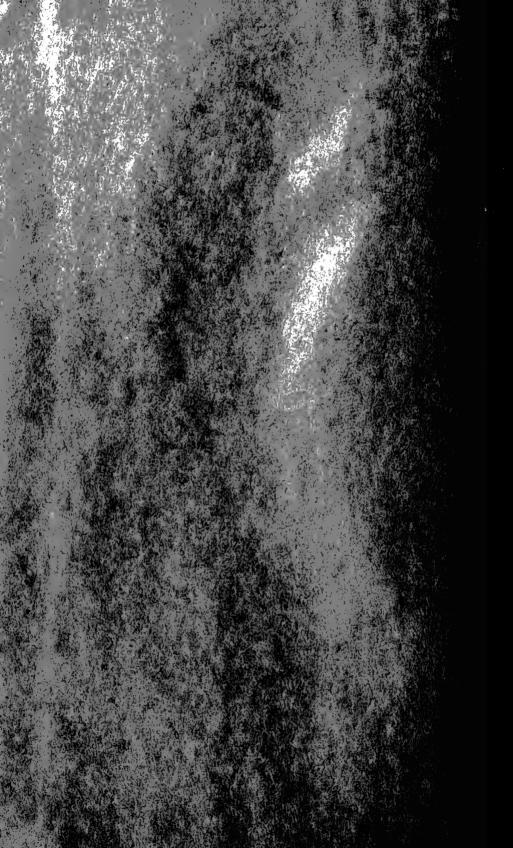
Brown, Mrs. Corabel K.

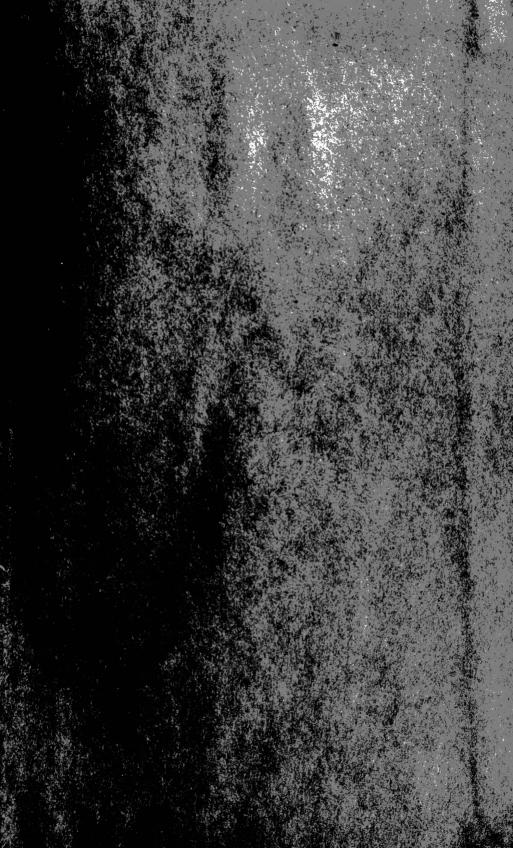
Barbour, Frank

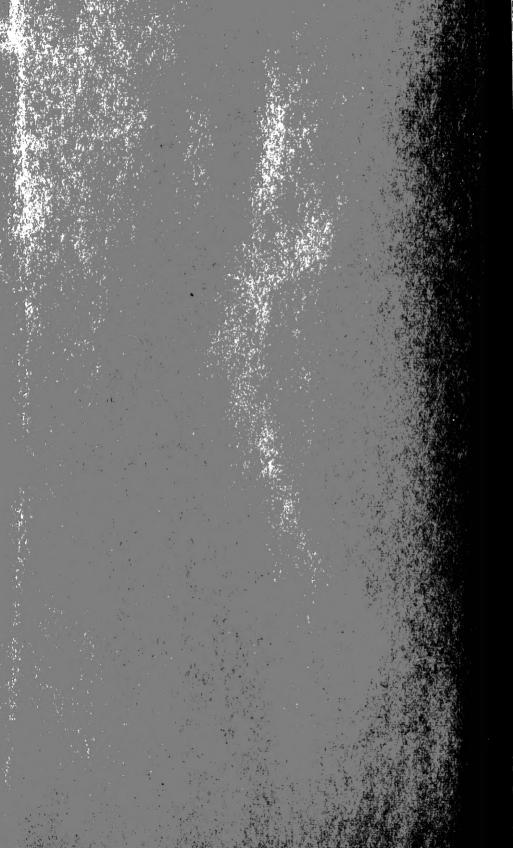
Coleman, Mrs.

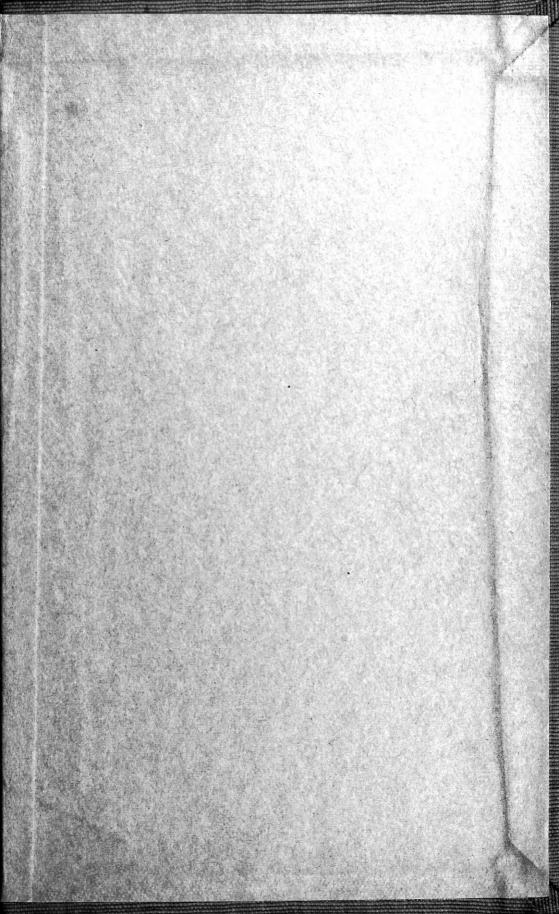
The Challe











3 0112 084204954