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ANNUAL REPORT

1948

Chicago Natural History Museum





DuBois-Drake Studio

BOARDMAN CONOVER

Research Associate, Division of Birds
Member of the Board of Trustees

The final parts of "Catalogue of Birds of the Americas," publication of which was begun in 1918, were completed by Mr. Conover and were ready for the press late in 1948.

CHICAGO NATURAL HISTORY MUSEUM

Report of the Director

to the

Board of Trustees

for the year 1948



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UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

JANUARY 1949

PRINTED IN THE UNITED STATES OF AMERICA
BY CHICAGO NATURAL HISTORY MUSEUM PRESS

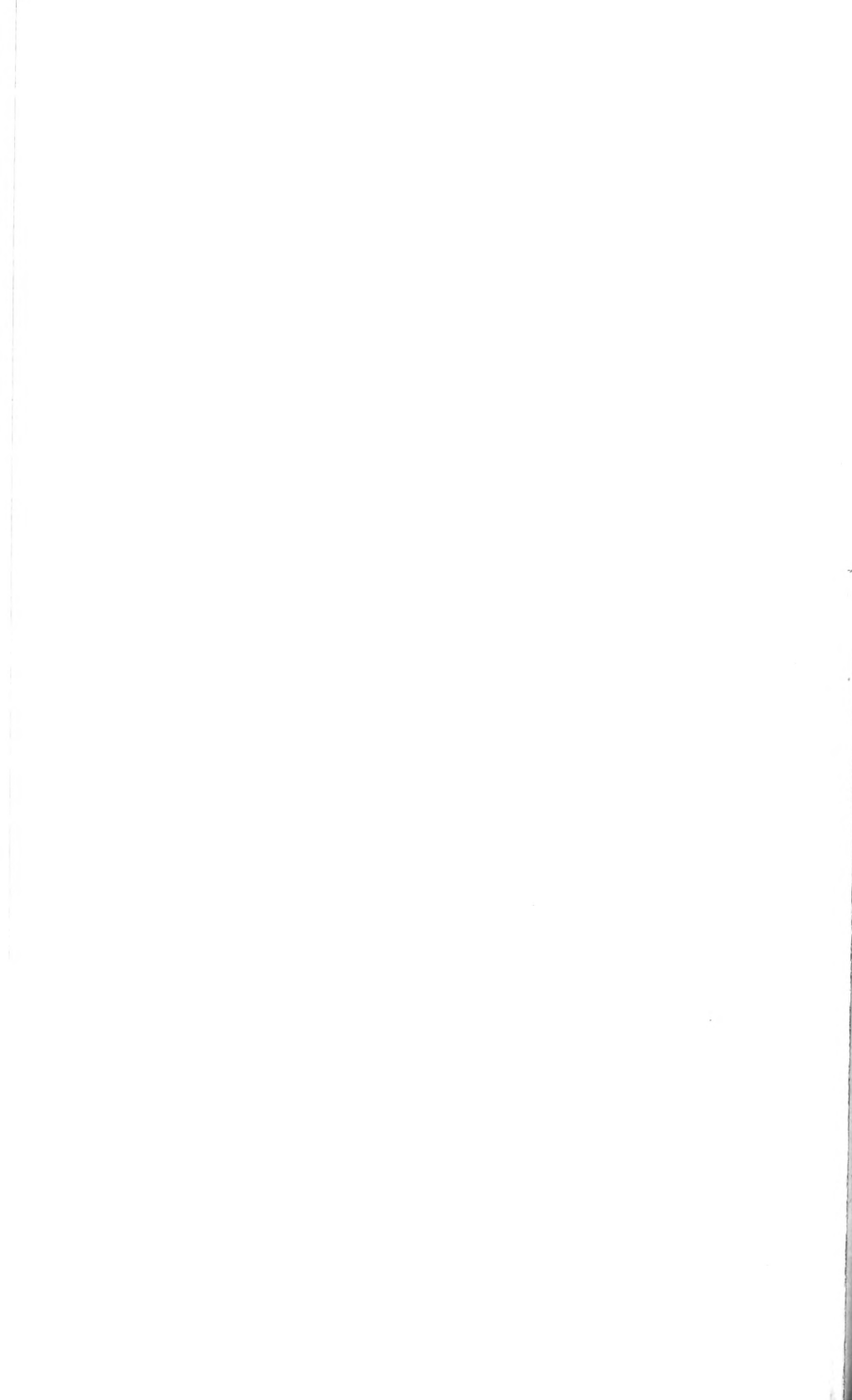
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Chicago Natural History Museum, formerly Field Museum of Natural History, faces Roosevelt Road at Lake Shore Drive. The west entrance leads into The James Simpson Theatre. Hundreds of 4-H Club delegates from all parts of the world are assembling for a program in the Theatre during their annual meeting in Chicago.

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The Museum is open to the public every day of the year except Christmas and New Year's Day. It may be reached by elevated or surface railways, South Shore and Illinois Central suburban trains, or bus. There is ample free parking space near the Museum.

Annual Report

of the Director

To the Trustees:

I have the honor to present a report of the operation of the Museum for the year ended December 31, 1948.

While in most respects this might be considered a year of normal operation, it is appropriate to point out that there has been no return to the operating conditions that existed before World War II. Inflated prices, higher wage and salary levels, and the relatively fixed income yields of corporate securities have brought to the Museum the necessity for careful study of a retrenchment program. Funds that were generously contributed a few years ago for the purpose of rounding out the activities of the Museum into a better-balanced and more-inclusive program have of necessity been used in retaining the organization, with only small increases and with the postponement or abandonment of certain of its progressive plans.

The problem of operating a museum during the period of high inflation is not restricted to this institution but is common to all endowed institutions. High taxes and uncertainties concerning Government policies with relation to business have tended to restrict income from investments, while at the same time commodity prices have risen to exorbitant levels that, in turn, have necessitated increased payrolls in order that loyal workers might be provided with the necessities of life. While the Museum can at the moment restrict its activities without serious difficulty, it is not pleasant to contemplate a projection of the conditions that make such retrenchment necessary. A need of additional endowments is constantly before us, if the high quality of research and educational

program of the Museum is to be maintained. Grateful acknowledgment is made to the many Members whose endowment memberships will help to support the Museum in the future, as well as to the many other Members whose annual fees are supporting the Museum at the present time.

News of the death of Mrs. Anna Louise Raymond on August 1, 1948, was received with deep regret at the Museum. As an outgrowth of her interest in the children of Chicago and her appreciation of the value of the work of the Museum in their education, Mrs. Raymond had established, in 1925, an endowment at the Museum of one-half million dollars titled "The James Nelson and Anna Louise Raymond Public School and Children's Lecture Fund of Field Museum of Natural History." For some years, before her health began to fail, she was a frequent visitor at the Museum, and her continuing interest in the work of the Foundation that she had created was further evidenced by repeated annual gifts in furtherance of that program. Her personal interest lent considerable encouragement to the staff of Raymond Foundation. Subsequent to her death it was learned that she had made the Museum beneficiary of half of her residuary estate. Her contributions to the Museum have established a lasting and living monument to her memory.

TRUSTEES AND OFFICERS

At the Annual Meeting of the Board of Trustees in January, Stanley Field was re-elected President of Chicago Natural History Museum to serve for his fortieth consecutive year. All other officers who served in the preceding year were likewise re-elected. They are: Marshall Field, First Vice-President; Albert B. Dick, Jr., Second Vice-President; Samuel Insull, Jr., Third Vice-President; Solomon A. Smith, Treasurer; Clifford C. Gregg, Secretary; and John R. Millar, Assistant Secretary.

MEMBERSHIP

It is gratifying again to report an increase in the number of Museum Members, since increase in membership indicates growing appreciation by the community of the scientific and educational work of Chicago Natural History Museum. The number of new Members added to the membership roster during the year was 488, and the number of Members lost through transfer, cancellation, and death was 439. The total number of Members recorded on December 31, 1948, including all membership classifications, was 4,777.

The names of all persons listed as Members of the Museum during 1948 will be found on the pages at the end of this Report. The number of Members in each membership classification at the close of 1948 is as follows: *Benefactors*—23; *Honorary Members* 8; *Patrons*—18; *Corresponding Members*—5; *Contributors* 165; *Corporate Members*—41; *Life Members*—177; *Non-Resident Life Members*—15; *Associate Members*—2,378; *Non-Resident Associate Members* 10; *Sustaining Members*—17; *Annual Members*—1,920.

By their support the Museum's many Members help to make possible the continuance and progress of the scientific and educational work of the institution, and, therefore, an acknowledgment of gratitude is here expressed to them and also to those Members who found it necessary to cancel their memberships. It is earnestly hoped that those Members who have discontinued their memberships will again enroll as Members of the Museum and resume their association with its cultural program.

ATTENDANCE

Attendance at the Museum in 1948 exceeded a million for the twenty-second successive year. The total number of visitors for the year was 1,134,643, of which number 1,005,798 were admitted without charge because they came on free admission days or belonged to classifications admitted free on all days—school children, students, teachers, members of the armed forces of the United Nations, and Members of this Museum. (For comparative attendance statistics and door receipts for 1947 and 1948, see page 85.)

During the year the Museum received a great many distinguished visitors from foreign countries. The Museum welcomes this evidence of good will and takes especial pleasure in making available for study by its guests whatever is of interest to them in its vast collections and exhibition halls. The Museum was host also to a number of organizations, among them the eighth annual convention of the Midwest Federation of Geological Societies. Members of the National Congress of 4-H Clubs from all parts of the United States and Canada, who earn their trip to the International Livestock Exposition in Chicago, paid their annual visit to the Museum. The group in 1948 numbered 1,200 teen-age boys and girls. Another group of about 1,200 children from 123 different elementary schools in Allegan County, Michigan, accompanied by their teachers and several parents, came to Chicago by special train for an educational trip that included two of Chicago's museums.

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

In the twenty-three years since its founding by Mrs. Anna Louise Raymond, the James Nelson and Anna Louise Raymond Foundation has grown from a staff of one to seven and from a limited program of tours, motion pictures, and lectures to a diversified program that uses all types of teaching techniques. Printed stories, still and motion pictures, demonstrations with objects, and radio are a few of these methods. All, both old and new, are ways of presenting information requested by students visiting the Museum and of offering opportunities of an educational nature to thousands of children in this Midwestern region.

Extension-lecture work has continued, and several motion pictures have been incorporated into the lectures. Eight new extension lectures have included carefully selected motion pictures. They are: "Amazon to Andes," "Master Farmers," "Marine Invertebrates," "Strange Sea Animals," "From Polar Bears to Penguins," "Close-ups of Three Mammals," "Three Playful Pets," and "Simba." The first four lectures utilize selected still pictures with the movies because it has been found that certain subjects can be presented best with a combination of motion and still pictures. Two series of



Following a radio program on "When Chicago Was a Lake," public school children meet in the Museum lecture hall for an illustrated talk, after which they go to the exhibition halls to study evidence of glaciers (right). Raymond Foundation guides help the children to see and understand what the glacier did in the Chicago region.

Museum Stories were published in connection with the spring and fall series of motion-picture programs for children. As in the past three years, each series is a group of related stories that forms a booklet at the conclusion of the series. The spring series was on foods and the fall series on insects.

For the third consecutive year a course for nature counselors in summer camps was conducted by members of Raymond Foundation staff. Instead of four evening meetings as in past years, the 1948 course was given as a one-day conference of six hours of concentrated work. The program was organized into four discussion sessions developing eleven correlated areas of thought and work that were illustrated and demonstrated by still and motion pictures and by seventeen brief tours using Museum exhibits. The course was summarized and made more useful with mimeographed questions, suggestions, and organized aids for nature counselors. One hundred and seventeen people actively engaged in nature camp work attended.

Raymond Foundation has co-operated with the Radio Council of the Chicago Public Schools for many years. Following certain selected broadcasts, when additional Museum material is available for study by school children, programs have been offered in the Museum. In addition to these regular types of programs, in 1948 two Raymond Foundation staff members were guest-speakers on "Your Science Story-Teller" series. "Migration Mystery" and



“Some Strange Fish Stories” were their subjects, each of which was followed with a program the next day in the Museum. Early in the year, Raymond Foundation was requested to submit brief stories to be told on the “Children’s Corner” over WCFL.

A summary of all activities of Raymond Foundation for the year, with attendance figures, follows:

ACTIVITIES WITHIN THE MUSEUM

	Groups	Attendance	Groups	Attendance
For children				
Tours in Museum halls.....	677	21,751		
Radio follow-up programs.....	7	989		
Lectures preceding tours.....	68	6,108		
Motion-picture programs.....	28	24,120		
TOTAL.....			780	52,968
For adults				
Tours in Museum halls.....	376	6,125		
Nature Course.....	1	117		
TOTAL.....			377	6,242

EXTENSION ACTIVITIES

Chicago Public Schools

Elementary.....	104	35,248		
High School.....	6	4,200		
Special.....	1	185		
Suburban.....	5	1,170		
Miscellaneous.....	1	30		
TOTAL.....			117	40,833

TOTAL FOR RAYMOND FOUNDATION ACTIVITIES..... 1,274 100,043

LECTURE PROGRAMS FOR ADULTS

Approximately 15,000 people took advantage of the lecture programs presented on Saturday afternoons during March, April, October, and November in the James Simpson Theatre. As in former years, an effort was made to bring to the platform outstanding authorities in the various fields of study within the scope of the Museum. Of unusual interest was a presentation by John W. Moyer, of the Museum staff, who gave an inside picture of the preparation of habitat groups at the Museum. One of the more scientific presentations, which attracted wide attention, was that on “Human Evolution” by Dr. Sherwood L. Washburn, of the University of Chicago. The value of the Museum’s lecture programs has been favorably commented upon by leaders in the field of adult education.

SPECIAL EXHIBITS

A special exhibit, "Great Books of Natural History," was held in Stanley Field Hall in September in observance of Great Books Week, a celebration sponsored by Great Books Foundation. Outstanding scientific works from the shelves of the Museum Library, among them rare and historic volumes, were displayed. Other special exhibits in the Museum during the year were the Third Chicago International Exhibition of Nature Photography, held under the auspices of the Museum and the Nature Camera Club of Chicago; a showing of pastels, drawings, and paintings done directly from Museum exhibits by students of the Junior School of the Art Institute of Chicago; and two series of photographs prepared by *Life* magazine, one on atomic energy and the other on Navaho Indians. Additions to the permanent exhibits of the Museum are described in this Report under the headings of the scientific departments.

GIFTS TO THE MUSEUM

Elmer J. Richards and Donald Richards, Research Associate in Cryptogamic Botany, of Chicago, each made an additional gift to the Museum of \$5,000 for the purchase of specimens for the cryptogamic herbarium. Joseph Desloge, of St. Louis, added \$1,000 to The Desloge Peruvian Botanical Expedition Fund; Dr. Maurice L. Richardson, of Lansing, Michigan, added \$1,000 to The Maurice L. Richardson Paleontological Fund; and William S. Street, of Seattle, added \$100 to The Mr. and Mrs. William S. Street Expedition Fund. C. Suydam Cutting, of New York City, a Patron of the Museum, again gave \$500. Peder A. Christensen, of San Francisco, made an additional gift of money. Accretions for the year in various trust funds were: from the estate of Mrs. Abby K. Babcock, \$169.50 for The Frederick Reynolds and Abby Kettelle Babcock Fund; from the estate of Mrs. Joan A. Chalmers, \$1,333.34 for The Joan A. Chalmers Fund; from the estate of Frederick T. Haskell, \$23.18 for The Frederick T. Haskell Fund; from the estate of Oscar E. Remmer, \$44,508.35 for The Oscar E. Remmer Fund; and from the estate of Martin A. Ryerson, \$475.61 for The Martin A. and Carrie Ryerson Fund.

The Museum received \$25,000 from Stanley Field, its President; \$12,000 from Marshall Field, First Vice-President, for the Marshall Field Fiftieth Anniversary Fund; and \$3,625 from Boardman Conover, Trustee and Research Associate in Birds. Other gifts of money were received from Mrs. Hermon Dunlap Smith, Associate,

Division of Birds; Miss Lillian A. Ross, Associate Editor, Scientific Publications; Clarence B. Randall, Trustee; and Colonel Clifford C. Gregg, Director. Under an act of the legislature of the State of Illinois, the Chicago Park District turned over to the Museum \$118,038.05 as its share of taxes levied to aid several museums.

Donors who give or devise to the Museum between \$1,000 and \$100,000 in money or materials are elected by the Board of Trustees to a special membership classification designated as "Contributors" and their names are enrolled in perpetuity (see page 100 for names of Contributors). Contributors elected in 1948 are: Dr. José Cuatrecasas, Curator of Colombian Botany; Harry Hoogstraal, Assistant Curator of Insects; George Langford, Assistant, Fossil Plants; Mrs. Charles V. Riley (posthumously elected); Karl P. Schmidt, Chief Curator of Zoology; and Dr. J. Daniel Willems, of Chicago. Dr. Cuatrecasas gave to the Museum a collection of herbarium and wood specimens and a collection of books; Mr. Hoogstraal, zoological specimens; Mr. Langford, natural-history specimens and books; estate of Mrs. Charles V. Riley, scientific books and eighteen letters written by Charles Darwin; and Dr. Willems, a golden beryl found in Minas Geraes, Brazil. A complete list of gifts of materials from individuals and institutions appears elsewhere in this Report. Some of the collections are described under the headings of the departments in which they have been deposited.

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION

Schools and other institutions receiving portable Museum exhibits on loan through the service of the Department of the N. W. Harris Public School Extension numbered 501 at the close of 1948. Of these, 396 were public schools, 81 were parochial and private schools, and 24 were social-service institutions. Inasmuch as there are available for loan only 1,050 portable exhibits and as each recipient of Harris Extension service has on hand at all times during the school year two exhibits, which are exchanged on a system of regular rotation every tenth school day, registration for service cannot far exceed the present number. Yet requests continue to come in.

In formulating a policy for considering new applications, Harris Extension was faced with two alternatives: immediate preparation of many new exhibits for circulation or restricted service to institutions other than schools and rejection of applications from schools with low pupil-enrollments. Of these two courses, the first is impossible for financial reasons. The second, then, is the one that



Chicago school children become interested in natural phenomena by observation and study of portable exhibits circulated by N. W. Harris Public School Extension.

perforce has been followed. It is believed that the exhibits are less likely to be used merely as display material when in the hands of trained teachers and that service to very small parochial and private schools is not justifiable under the present pressure situation.

The services of John Conrad Hansen, Artist in the Department of Geology, were available to Harris Extension for only a few weeks during the year, and, in consequence, the program, begun some years back, of using painted scenes rather than tinted photographs as backgrounds in habitat settings in new or revised exhibits has been hampered. Work, therefore, has consisted mainly in the preparation of those exhibits that can be made effective by using simple backgrounds painted by the preparators themselves.

Damage to cases in circulation was somewhat higher than in other recent years. A total of forty-six cases was damaged. In only four of the forty-six broken cases was there damage to the exhibit material, but two of these four were so completely demolished that very little of the installations could be salvaged. Four cases — exhibits of the Galápagos penguin, the double-crested cormorant, sunfishes, and mink — were stolen in public schools. In addition to these unusually severe losses in circulation, a great many exhibits

were withdrawn from the circuit as unsatisfactory. Wax installations disintegrate in the course of years, colors are altered, and the subject-matter of certain exhibits becomes obsolete. During the year twelve exhibits were revised, six of them so thoroughly that they are in reality new exhibits. Three hundred and sixty-eight cases were repaired in the shop. Special loans of instructional material other than the routine circulating exhibits totaled thirty.

VOLUNTEER WORKERS

The Museum is grateful to its faithful volunteer workers who, as for many years past, have contributed time and effort in the interests of the Museum and of science. Names of some of these volunteer workers are included in the List of Staff at the beginning of this Report, where they are distinguished from salaried workers by the titles "Research Associate," "Associate," and, in one case, "Layman Lecturer." Other volunteers in 1948, not in that list, are: *Department of Botany*—Carlos Bumzahem, Miss Margaret Feigley, and Dr. Herbert Habeeb; and *Department of Zoology*—Raymond Evenstad, Mrs. Dorothy S. Helmer, Robert MacArthur, Hyman Marx, J. N. Nilles, Miss Constance Peck, Mrs. Clifford H. Pope, Ross Tarrant, and Miss Mary Weaver.

PERSONNEL

Robert Yule, Assistant in the Department of Anthropology until forced to resign because of failing eyesight, returned to the Museum and has been employed in the cryptogamic herbarium, Department of Botany. Dr. Julian A. Steyermark, Assistant Curator of the Herbarium, was promoted to Associate Curator of the Herbarium. Dr. Robert H. Denison, former assistant curator at Dartmouth College Museum, was appointed in August to the staff of the Department of Geology as Curator of Fossil Fishes. Robert Kriss Wyant, Assistant Curator of Economic Geology, was promoted to Curator of Economic Geology, and Harry E. Changnon, Assistant Curator of Geology, was made Curator of Exhibits. Kent Jones was appointed Preparator.

John W. Winn, Assistant Curator of Fishes, Department of Zoology, resigned in June to accept a position with the Fish and Wildlife Service to work on the Missouri River Basin Survey. Loren P. Woods, Curator of Fishes, on leave at the United States National Museum, Washington, D.C., returned to take part in the

Bermuda Deep-Sea Expedition and resumed his duties at the Museum on October 1. L. L. Pray, Taxidermist, who was in charge of preparation in the Division of Fishes, resigned in November to undertake reinstallation of exhibits at the Natural History Museum in San Diego, California. Mrs. Dorothy B. Foss, Assistant in Vertebrate Anatomy, was promoted to Osteologist. Miss H. Elizabeth Story, Assistant in Vertebrate Anatomy, resigned in January, and Carl W. Cotton was appointed Assistant in Vertebrate Anatomy.

Carl W. Hintz, Librarian of the Museum since July 1, 1946, resigned to accept the position of librarian at the University of Oregon. Mrs. Meta P. Howell, Assistant Librarian, formerly librarian of the Museum of Science and Industry, Chicago, was appointed Librarian of the Museum, effective September 1. Mrs. Mary W. Baker, a member of the staff since 1930, retired as Associate Librarian to become Associate Librarian Emerita. Miss Dawn Davey, assistant in the Library, and Miss Louise Boynton, Secretary, were made Assistant Librarians. Two new Assistant Librarians were appointed, Mrs. Winifred E. Weissman, formerly of the First National Bank library staff, Chicago, and Mrs. M. Eileen Rocourt, from the library of Columbia University. Mrs. Winona Hinkley Cosner, guide-lecturer, resigned from the staff of the James Nelson and Anna Louise Raymond Foundation. Miss Mary P. Murray was made Assistant to the Associate Editor of Scientific Publications.

Benjamin Bridge, who joined the staff on February 17, 1897, retired as Auditor of the Museum to take the position of Auditor Emeritus. William A. Bender, Assistant Auditor, was made Auditor, and A. L. Stebbins, Bookkeeper, became Assistant Auditor. Herman Abendroth, Assistant Photographer, was appointed Photographer, to succeed C. H. Carpenter, retired, and John Bayalis, Preparator in the Department of the N. W. Harris Public School Extension, was transferred to the Division of Photography as Assistant Photographer. Leonard Rosenthal was made Preparator in Harris Extension. David J. Conwill, Sergeant of the Guard, became Captain of the Guard upon the retirement of Captain E. S. Abbey.

Three Research Associates were appointed. Research appointments, based upon scientific achievement, are honorary. Miguel Covarrubias, of the School of Anthropology in Mexico City, noted artist, ethnologist, and archaeologist, was appointed Research Associate in Primitive Art, Department of Anthropology. Mr. Covarrubias, an expert in primitive art, is the author of several important books on the ethnology of Bali and of Mexico. In recognition of his



New research equipment includes a sliding microtome for cutting thin sections of plant material and a binocular research microscope with a low voltage light source. Donald Richards, Research Associate in Cryptogamic Botany, demonstrates their use.

long association with the Museum and great assistance rendered in caring for its bryological collections, Donald Richards, of Chicago, was appointed Research Associate in Cryptogamic Botany, Department of Botany. Melvin A. Traylor, Jr., Associate, Division of Birds, was appointed Research Associate in Birds, Department of Zoology, in recognition of his valuable association with the Museum in the field and in the laboratory. Mr. Traylor's main studies have been on birds of tropical and subtropical America.

Julius Friesser, Taxidermist in the Department of Zoology, retired from the service of the Museum after nearly forty-four years on the staff. W. H. Corning, General Superintendent, who came to the Museum on December 26, 1920, as Chief Engineer, also retired from the service of the Museum. The Museum thanks these faithful employees for their long years of service and extends its best wishes to them in the years of their retirement.

It is with regret that I record the death of three Museum employees and two Museum pensioners: Arthur G. Rueckert, Staff Artist; Frank L. Heyser, Bookbinder; Frank Klampferer, Guard; Patrick Walsh, a pensioner, formerly a Guard; and Mrs. Harriet W. Cory, a pensioner, widow of the late Charles B. Cory, Curator of Zoology from 1906 to 1921.

EXPEDITIONS

The Museum sent sixteen expeditions into the field during 1948. Their work is described in this Report under the headings of the scientific departments. Expeditions of 1948 were:

DEPARTMENT OF ANTHROPOLOGY: *Southwest Archaeological Expedition*—conducted by Dr. Paul S. Martin, Chief Curator.

DEPARTMENT OF BOTANY: *Cuban Botanical Field Trip*—conducted by Dr. B. E. Dahlgren, Curator Emeritus; *Desloge Peruvian Botanical Expedition*—conducted by Dr. Hugh C. Cutler, Curator of Economic Botany; *Gulf States Botanical Expedition*—conducted by Dr. Francis Drouet, Curator of Cryptogamic Botany; *Middle Central American Botanical Expedition, 1948-49*—conducted by Paul C. Standley, Curator of the Herbarium.

DEPARTMENT OF GEOLOGY: *Eastern States Geological Field Trip*—conducted by Dr. Sharat K. Roy, Chief Curator; *Pennsylvania Geological Field Trip*—conducted by Eugene S. Richardson, Jr., Curator of Fossil Invertebrates; *Southwest Geological Field Trip*—conducted by Harry E. Changnon, Curator of Exhibits; *Wyoming Paleontological Expedition*—conducted by Dr. Rainer Zangerl, Curator of Fossil Reptiles.

DEPARTMENT OF ZOOLOGY: *Arkansas Zoological Field Trip*—conducted by Colin C. Sanborn, Curator of Mammals; *Bermuda Deep-Sea Expedition*—conducted by Dr. Fritz Haas, Curator of Lower Invertebrates; *Colombian Zoological Expedition, 1948-49*, conducted by Philip Hershkovitz, Assistant Curator of Mammals; *Guatemalan Zoological Expedition*—conducted by Rupert L. Wenzel, Assistant Curator of Insects; *Mexican Zoological Expedition*—conducted by Melvin A. Traylor, Jr., Research Associate in Birds; *Palau Entomological Expedition, 1947-48*—Henry S. Dybas, Assistant Curator of Insects, Museum representative; *University of California African Expedition*—Harry Hoogstraal, Assistant Curator of Insects, Museum representative.



This rare Three Circle Red-on-White pottery bowl was recovered from the floor of a pit house at the Turkey Foot Ridge village site, New Mexico, by the Southwest Archaeological Expedition, 1948. The estimated age of the bowl is 1,000 years.

Department of Anthropology

Research and Expeditions

Excavations in the Apache National Forest, in western New Mexico, were continued by Dr. Paul S. Martin, Chief Curator, under a permit issued to the Museum by the Forest Service, United States Department of Agriculture. The Southwest Archaeological Expedition, 1948, took to the field in June and returned to Chicago in October. The excavations were under the supervision of Dr. Martin and Dr. John B. Rinaldo, Assistant in Archaeology, who were aided by Dr. Ernst Antevs, Research Associate in Glacial Geology, and three students, W. T. Egan, Leonard G. Johnson, and I. J. Wood, Jr.

Research on Mogollon culture was again directed in two main channels: (1) a continuation of the search for more evidence concerning early man in America to supplement that found in 1947 and (2) extensive digging in pit houses, the data from which would help fill the gap between A.D. 500 and A.D. 900 in our knowledge of Mogollon culture.

In seeking to accomplish the first objective, the archaeologists let Nature do their excavating for them. To make this statement clear, it must be borne in mind that the evidence of early man consists of crude, scarcely worked stone tools that are buried to a depth of several feet. Discovering these early tools is difficult and

laborious, for to do so the archaeologist must walk up and down the bed of an ancient stream that is eight to fifteen feet below the present surface. Jutting from the banks of this stream are numerous rocks of all shapes and sizes. It requires trained eyes and years of experience to determine which, if any, of the rocks may be tools of early man. Each stone that appears to bear a resemblance to a primitive tool has to be dug out of the banks so that whether the "suspicious" looking stone is definitely a tool or just another stone can be determined. It was stated above that the archaeologists let Nature excavate for them, and by that was meant the natural erosion that took place between September, 1947, and June, 1948. Obviously, the banks of the stream had been combed and recorded with the greatest care in the summer of 1947. During the winter, rains sloughed off more dirt and thus exposed new bank surfaces, so that once again search could be made for traces of ancient man.

Daily Dr. Antevs studied fresh surfaces of banks and exposures of arroyos in the hope of gleaning more evidence of house sites or tools of early man. His exhaustive quest was rewarded by the finding of two hearths, each containing bits of charcoal that had glowed as embers about six thousand years ago, and several food-grinding stones, choppers, and handstones. One of the grinding stones had been buried to a depth of twelve feet; hence it may be slightly older than others that were not so deeply buried. After further study of the geological and archaeological evidence in Pine Lawn Valley and surrounding country, Dr. Antevs sees no reason for modifying the conclusions that he set forth in the Museum report on the Southwest Archaeological Expedition of 1947.

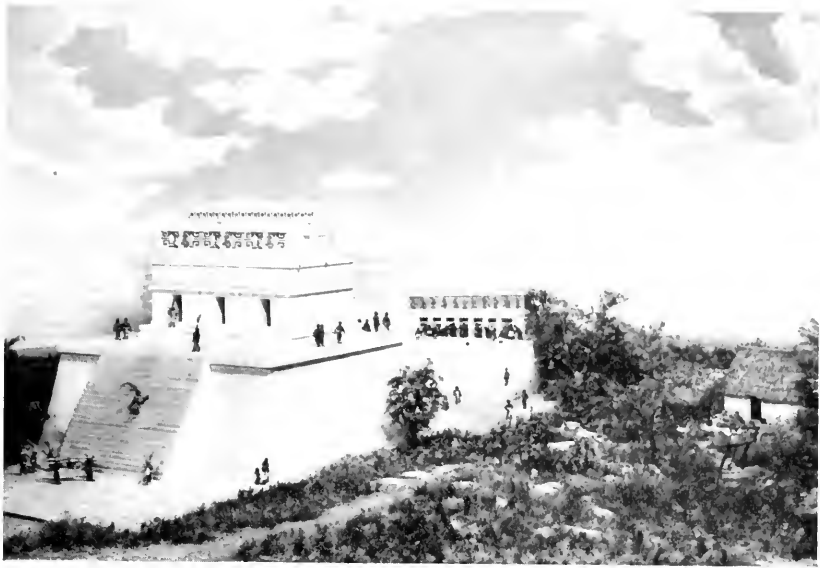
Hallmarks (enlarged) on a silver gorget identify its maker as Luke Kendall and indicate that the place and year of manufacture was London, May 1775 to May 1776. Marked silver objects can be used to date Indian burials with which they are found.



The other phase of the expedition, that of excavating, was successful beyond expectations. Fifteen pit houses were completely excavated, photographed, and mapped. One of these houses, occupied between A.D. 500 and A.D. 700, is classed as belonging to the Georgetown Phase; four, between A.D. 700 and A.D. 900, to the San Francisco Phase; and ten, between A.D. 900 and A.D. 1000, to the Three Circle Phase. These pit houses are different in some respects from those of the earlier Pine Lawn period. They tend to be deep and rectangular, with long, stepped passage-entryways facing the east. Food-stuffs were no longer stored in pits dug into the floor, for fashion now dictated cupboards more conveniently placed in the walls. The long history (three or four hundred years) of plain, undecorated brown pottery was broken, and for the first time in Mogollon history delicate pottery appeared bearing well-executed designs. These consist of rectangular elements set forth with restraint in red on a pleasing, warm background.

During the year Donald Collier, Curator of South American Ethnology and Archaeology, carried out special research on the ancient Peruvians in connection with two exhibits on Peruvian archaeology prepared for the Hall of New World Archaeology (Hall B). The collection excavated by Curator Collier in Peru in 1946 finally reached the Museum in June, and he expects to complete a report on this work in 1949. In connection with the exchange of collections being negotiated with the National Museum of Mexico, he made a survey to determine the types and quantity of specimens needed to round out the Mexican collections of Chicago Natural History Museum, spent several weeks assisting Dr. Daniel Rubin de la Borbolla and Research Associate Miguel Covarrubias, both of the National Museum of Mexico, in the selection of Oceanic and North American duplicate specimens that might be used in the exchange, and compiled data to go with the selected collection.

Curator Collier spent considerable time working with and cataloguing a collection of ethnological specimens from the Rio Vaupés region of southeastern Colombia, purchased from Paul H. Allen at the beginning of the year. Mr. Allen was able, fortunately, to spend several days at the Museum going over the collection with Curator Collier and imparting to him data on provenience, material, and use. It was thus possible to record the manner of assembling the elaborate feather headdresses of the Vaupés Indians, headdresses that contain scores of feathers of many colors and are composed of ten to twelve separate demountable parts ingeniously fitted together. Museum displays generally show these headdresses disassembled,



A new diorama of part of the ancient city, Chichen Itza, Yucatan, Mexico, prepared by Dioramist Alfred Lee Rowell, portrays phases of Mayan life in about A.D. 1000.

with the result that mass and three-dimensional effect are entirely lost. One of the interesting conclusions from the study of the Allen Collection is that there is an extensive native development of tribal specialization in handicrafts and in trade among the Vaupés Indians, which is surprising in these jungle tribes of simple culture. Trade is particularly active in basketry utensils, ceremonial equipment and feather ornaments, blowguns and darts, and curare poison.

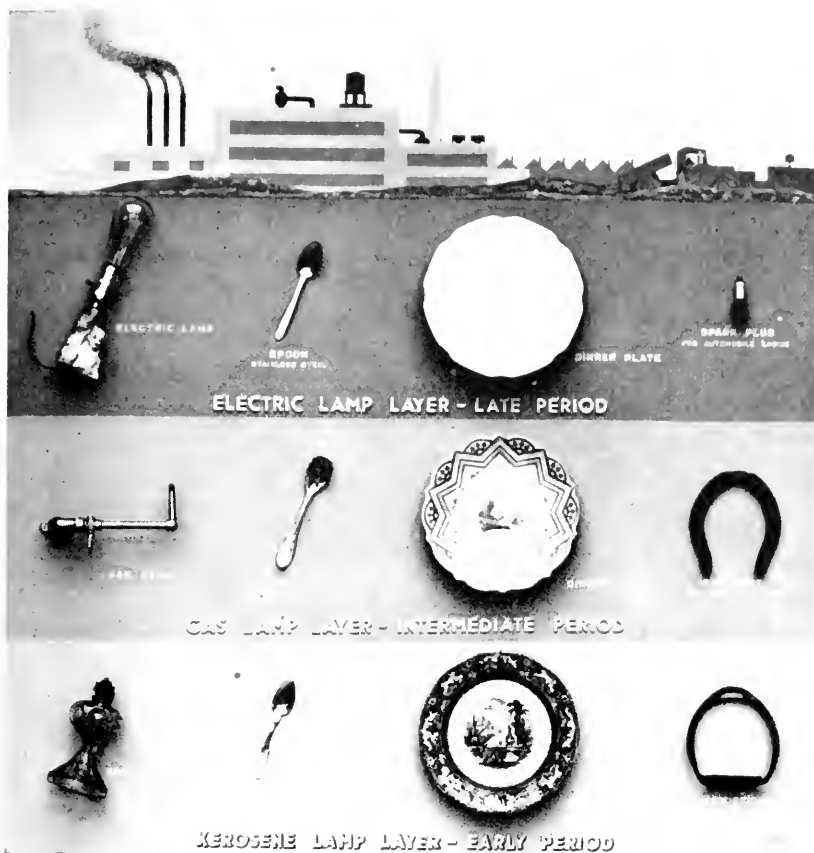
During the year Dr. Wilfrid D. Hambly, Curator of African Ethnology, has continued the research necessary for compilation of a bibliography on African anthropology. This bibliography will include the literature available in a large number of periodicals as well as books and is intended as a supplement to Dr. Hambly's *Source Book for African Anthropology* (Museum Press, 2 vols., 1937), now long out of print. The arrangement of material is under names of authors, subjects, and political regions, with a separate section given to a bibliography of periodical literature. Good progress has been made with research on the craniometry of Melanesia and Polynesia. Most of the data from measurements and descriptions of the large collection of crania in the Department of Anthropology are now assembled, and a manuscript entitled "Craniometry of Malekula



"Dating Layers by Position," a new exhibit, demonstrates simple stratigraphy in an ancient Indian village trash heap in Arizona (section pictured above) and in

and New Caledonia" will soon be ready for the press. The study of deformed skulls of Malekula is of exceptional interest because the Museum has an unrivaled collection of these crania. Publications have included *Craniometry of New Guinea*, *Craniometry of Ambrym Island*, and *Cranial Capacities, A Study in Methods*.

In addition to research for exhibits in American archaeology, George I. Quimby, Curator of Exhibits, completed a report on a Plaquemine period site in Louisiana and began a report on the Natchezan occupancy of the Bayou Goula site in Iberville Parish, Louisiana. He also continued his research on archaeology of the Aleutian Islands. In December the Museum Press issued *Prehistoric*



a modern city trash heap in the Middle West (section pictured above). The top layer is latest, the middle layer, intermediate, and the bottom layer, earliest.

Art of the Aleutian Islands, a brief article by Curator Quimby on Aleut prehistory as revealed by engraved designs and stratigraphy.

During the first four months of the year Dr. Rinaldo collaborated with Dr. Martin in writing a detailed report on excavations in Pine Lawn Valley of west-central New Mexico by the Southwest Archaeological Expedition during the summer of 1947. He also prepared a chart showing the development of Mogollon culture traits, such as architecture, pottery, and stone and bone tools, from 3000 B.C. to A.D. 1000, which is included in that report. From time to time he assisted in the planning and preparation of exhibits for the Hall of New World Archaeology (Hall B). He also continued research on

and cataloguing of the extensive Herzfeld Collection of Persian antiquities. After his return from the field in the fall he made a detailed analysis of the pottery and artifacts recovered from the Turkey Foot Ridge village site in Pine Lawn Valley preliminary to preparation of a report on the summer's field work. As an aid to pottery analysis Dr. Rinaldo made a trip to Logan Museum, at Beloit, Wisconsin, and the University of Minnesota, at Minneapolis, where he studied their extensive Mogollon and Mimbres pottery collections for comparison with pottery collections made in Pine Lawn Valley by our Southwest Archaeological Expeditions.

Dr. Alexander Spoehr, Curator of Oceanic Ethnology, devoted the year to the completion of his report on results of the field work conducted on Majuro Atoll in the Marshall Islands by the Ethnological Expedition to Micronesia, 1947, a Museum expedition that was part of a larger program, the Co-ordinated Investigation of Micronesian Anthropology, sponsored by the Pacific Science Board of the National Research Council. The aim of Dr. Spoehr's work,



This spectacular ceremonial headdress of Vaupes Indians is in the Paul H. Allen Collection of ethnological specimens from the Rio Vaupes region of southeastern Colombia. The elaborate, brilliantly colored headdresses are made of egret, macaw, and toucan feathers, and each one is composed of about 12 demountable parts.

as well as that of the other investigators in the larger program, was to obtain basic ethnographic knowledge of present-day peoples of Micronesia. Dr. Spoehr's report is a study of a single, type community, to show the social, economic, and political organization of contemporary Marshallese life. His material is valuable in clarifying the picture of aboriginal culture. More important, however, is the fact that the knowledge gained contributes to an understanding of those processes of culture change that have been operative in Micronesia and assists in the delineation of the cultural types that are forming in the Pacific area as a result of the impact of Western civilization. This ethnographic information is also essential for the solution of administrative problems in Micronesia, which is now under American control. Dr. Spoehr's report has been forwarded to the National Research Council and will be published at a later date by the Museum Press.

The subject index of specimens in the collections of the Department of Anthropology is nearing completion. Research and organizational work have been proceeding on this project for a number of years. A great deal of time will be saved by users of the subject index. For example, the index will make it comparatively easy to answer inquiries about the quantity and quality of material from a particular region as well as those about one type of object found in several different areas.

In November the Museum Press issued, in the Popular Series of Publications, *Prehistoric Men*, by Dr. Robert J. Braidwood, Research Associate in the Department of Anthropology. This book is written expressly for laymen and beginning students interested in the prehistory of Europe and the Near East. The story of man's earliest cultural beginnings (about 500,000 years ago) is a fascinating one, and Dr. Braidwood tells it in a clear, condensed style. *Prehistoric Men* is attractively illustrated with a large number of drawings, many of them in two colors.

Accessions—Anthropology

The Museum was fortunate to be able to purchase from Paul H. Allen a representative collection of 331 ethnological specimens from the Rio Vaupés region of southeastern Colombia. Mr. Allen, who is a botanist, collected the material during a three-year stay in that region while working on the wartime rubber program. The collection consists of weapons, baskets, pottery, toys, musical instruments, personal ornaments, and a great variety of ceremonial paraphernalia,

including equipment used by medicine men in ceremonies for curing. Most spectacular are the brilliantly colored headdresses constructed of toucan, macaw, and egret feathers. This collection is of great value not only because it is well documented but also because the relatively intact cultures of the Vaupés tribes have just entered a period of rapid change that will witness the loss of many aboriginal crafts and customs in the next few years.

Exhibits—Anthropology

Nine new exhibits and one diorama were completed in the Department of Anthropology under the direction of Curator of Exhibits Quimby, Chief Curator Martin, Curator Spoehr, Curator Collier, and Dr. Rinaldo, with the assistance of Artist Gustaf Dalstrom, Research Associate Covarrubias, Dioramist Alfred Lee Rowell, Ceramic Restorer John Pletinckx, and Preparators Paul J. Warner and Walter C. Reese.

Seven of the new exhibits are on display in the Hall of New World Archaeology (Hall B). These are: "Empire Builders of the Andes—the Incas of Peru" (A.D. 1200–1500); "Pre-Inca Cultures of Peru" (500 B.C. to A.D. 1450); "Indian Civilization during the Burial Mound Period" (A.D. 900–1400); "Some Tools and Weapons of Chipped Stone and How They Were Made by the Indians"; "Quarrying Flint" (rearrangement of a group originally prepared under the supervision of W. H. Holmes, the first Curator of Anthropology); "Dating Layers by Position"; and "Dating Indian Remains by Trade Objects of Known Age." Two of the new exhibits, decorated shields of the Crow Indians, were designed by Artist Dalstrom and Research Associate Covarrubias for installation in Mary D. Sturgis Hall (Hall 5, Indian Tribes of the Great Plains).

The Maya diorama was completed during the year and installed in Hall B, where it takes its place as the last of a series of similar model exhibits that have proved extremely popular with Museum visitors. The Maya diorama is a model of part of the ancient city of Chichén Itzá, in northern Yucatan, Mexico, which, like other Maya cities, was a religious and ceremonial center. The diorama portrays a cross section of life in the city as it must have been in about the year A.D. 1000 and was constructed by Dioramist Rowell, with the co-operation of Ceramic Restorer Pletinckx. The necessary research and planning were done by Mr. Rowell, who was sent by the Museum to Yucatan in 1946, and by Chief Curator Martin, Curator Spoehr, Curator Collier, and other Department members.



Visibility of details in exhibits and murals is aided by new lighting in Hall 29.

Department of Botany

Research and Expeditions

In September, 1948, Paul C. Standley, Curator of the Herbarium, left Chicago for his second expedition to middle Central America to continue the botanical exploration of El Salvador, Honduras, and Nicaragua, the three countries he had previously explored in 1946 and 1947. Reports received from him indicate that he is continuing to find many important new plant records for those countries. Until the end of 1948 he had confined his activities to Honduras.

Dr. Theodor Just, Chief Curator, pursued his studies of the American species of the genera *Chenopodium* and *Gnetum*. He was also occupied with revision for publication of the manuscript on the *Cycadaceae* by the late Professor Charles J. Chamberlain, Research Associate in the Department of Botany, and Professor A. W. Haupt, of the University of California at Los Angeles.

Throughout the year, Dr. B. E. Dahlgren, Curator Emeritus, continued his extensive studies of American palms. He spent several months in Cuba collecting palms and economic plants for the special palm collection and for exhibit purposes. In his field work he enjoyed frequently the company and collaboration of the distinguished Cuban botanist, Brother León, of Colegio de La Salle.

Dr. Julian A. Steyermark, Associate Curator of the Herbarium, continued the study of his large collections made in Ecuador and Venezuela as well as those made in Venezuela by Llewelyn Williams, Associate in Forest Products. The first portion of the manuscript dealing with the new species collected in Venezuela by Dr. Steyermark is scheduled for publication in *Brittonia* early in 1949. Much time was spent on the identification of miscellaneous collections sent to the Museum, especially those from parts of Central and South America, Mexico, and the United States.

J. Francis Macbride, Curator of Peruvian Botany, carried on studies of the flora of Peru at various herbaria in California. Dr. José Cuatrecasas, Curator of Colombian Botany, was occupied with



A new installation in Hall 26 includes wood specimens, distribution map, photograph of typical trees, and model of a branch of western larch, by Emil Sella, Curator of Exhibits, Department of Botany.

organization, identification, and monographic studies of his extensive collections of Colombian plants. Dr. Earl E. Sherff, Research Associate in Systematic Botany, completed for publication in *North American Flora* taxonomic revisions of ten genera of Compositae. In addition, he carried on extensive cultural investigations of critical species of *Dahlia* in conjunction with his monographic studies.

Dr. Francis Drouet, Curator of Cryptogamic Botany, spent much of his time preparing and filing the collections of cryptogams on hand and naming the several thousand algae received for identification. With William A. Daily, of Butler University, he continued work on a revision of the non-filamentous Myxophyceae. Dr. Drouet left in October on an expedition to collect plants along the Gulf of Mexico from Louisiana to Florida. Dr. Walter Kiener, of the Game, Forestation and Parks Commission of Nebraska, visitor on the Museum staff during September, worked on the collection of lichens. Dr. L. H. Tiffany and Donald Richards, Research Associates, pursued their studies of algae and mosses, respectively. Dr. Herbert Habeeb and Miss Margaret Feigley, volunteer workers, determined the species of large numbers of North American mosses and hepatics.

Dr. Hugh C. Cutler, Curator of Economic Botany, continued his studies of American cultivated plants, especially corn and squashes, and their wild relatives. In February he joined Dr. Dahlgren in Cuba to study palms in the field and to gather material for cytological studies of the genus *Copernicia*. April and May were spent on a botanical expedition to the highlands of Peru to study varieties of cultivated plants peculiar to that region. Seeds brought back from this expedition were planted in Chicago, and the plants grown from these were studied throughout the summer. In the Museum, Dr. Cutler worked with the collections made on the expeditions. In addition, he determined several collections of plant fragments sent in by archaeologists of several institutions.

Approximately forty-two thousand specimens and many type photographs of the Linnaean Herbarium were mounted and distributed in the phanerogamic and cryptogamic herbaria, through the efforts of Carl Gervens and Mrs. Effie Schugman and their assistants. During the year the Department of Botany sold more than five thousand photographic prints and sent in exchange to other institutions and to botanists for study purposes or insertion in their herbaria nearly four thousand prints and accompanying labels from its large collection of negatives of type and historical specimens of American plants in European herbaria.



Interesting specimens of South American corn were collected during the Desloge Peruvian Expedition, 1948, by Dr. Hugh C. Cutler, Curator of Economic Botany.

Accessions—Botany

The most important additions to the phanerogamic herbarium during the year were various collections from Central and South America. Among the most noteworthy may be mentioned the following: 2,498 specimens from Central America, mostly Honduran, collected by Dr. Louis O. Williams; 1,919 Argentinian plants sent in exchange by the Instituto Miguel Lillo, Universidad de Tucumán; 769 plants from Chiapas, Mexico, collected by Eizi Matuda; 459 plants of the Guianas, including many species new to science, as well as to the Herbarium, collected by Dr. Bassett Maguire, sent as exchange by the New York Botanical Garden; 1,403 specimens of cultivated plants collected by Mrs. H. P. Bracelin, of the University of California, as exchange; and 717 Peruvian plants collected by Felix Woytkowski and sent as exchange by the University of California. Other important additions, received as exchanges, were sent by the University of Michigan, Allan Hancock Foundation of

the University of Southern California, and Missouri Botanical Garden. Besides the cryptogams collected on Museum expeditions, more than 21,000 specimens were received during the year by the cryptogamic herbarium, of which 3,500 were purchased with funds provided by Elmer J. Richards and Donald Richards. Some 12,000 algae were received in exchange for curatorial services rendered to Yale University in connection with the D. C. Eaton algal herbarium. The remainder were either exchanges or gifts.

The wood collections were increased through various gifts, such as 43 wood specimens from Cuba, collected by Dr. Ramón Gomez and presented by Dr. Dahlgren. A collection of 49 microscope slides of tropical woods was presented by Professor Misael Acosta Solís, of Quito, Ecuador.

The extensive collection of photographs of plants and vegetation has been greatly augmented by recent additions, especially the large gift of several thousand negatives by Dr. Ezra Kraus, Professor Emeritus of Botany, University of Chicago. Prints of all botanical negatives are being made, mounted, labeled, and filed.

Exhibits—Botany

Work on the reconstruction of the fossil cycadophyte *Cycadeoidea ingens* required considerable time of staff members of the Plant Reproduction Laboratory. Additions to the synoptic exhibits in Martin A. and Carrie Ryerson Hall (Hall 29, Plant Life) include a fruiting branch of the Australian or dammar pine (*Agathis* sp.) and small branches of Podocarpus, yew, and white cedar. Shortly, all of these will be installed with the exhibits of other representatives of living conifers. The *Agathis* and Podocarpus branches were assembled by Artist-Preparator Milton Copulos.

Restorations of branches of western larch (*Larix*), noble fir (*Abies*), western red cedar (*Thuja*), and so forth, prepared by Curator of Exhibits Emil Sella, were installed in Charles F. Mills-paugh Hall (Hall 26, North American Trees) with the assistance of Preparator Mathias Dones. During the latter part of the year, Curator Sella was occupied with planning new lighting and with reconditioning the exhibits in Hall 29. The vast improvement in lighting shows to greater advantage the extensive and unique collection of plant models that is the result of many years of unstinting effort and infinite care. Completion of this project will probably require the undivided attention of the entire staff of the Laboratory during most of the coming year.



Eugene S. Richardson, Jr., Curator of Fossil Invertebrates, works on preliminary identification of specimens in the collection of invertebrate fossils made by Dr. Sharat K. Roy, Chief Curator of Geology, at the Salt Range, Punjab, India.

Department of Geology

Research and Expeditions

Dr. Sharat K. Roy, Chief Curator, in collaboration with Robert Kriss Wyant, Curator of Economic Geology, completed studies on the Mapleton meteorite. Dr. Roy also carried on his studies of several other undescribed meteorites, both stony and iron, and made substantial progress in the compilation of a descriptive catalogue of the Museum's collection of meteorites. In addition to his studies on the Mapleton meteorite, Curator Wyant spent considerable time in the calibration of instruments for meteorite analysis and made quantitative analyses, both metal and silicate, of portions of the Houck, the Holbrook, and the Benld meteorites.

Studies by Bryan Patterson, Curator of Fossil Mammals, on the peculiar extinct mammalian order Taeniodonta were essentially

completed during the year. A general paper on the evolution of the group was prepared for inclusion in *Genetics, Paleontology and Evolution*, a volume to be published by Princeton University Press, and a more detailed discussion will shortly be submitted to the Museum Press. Curator Patterson began his work on the determination of the early Oligocene mammals from trans-Pecos, Texas, collected in 1946. In this connection, to make the necessary first-hand comparisons, he visited various eastern Museums during November and December.

Two papers, Part I ("Introduction") and Part II ("The Pleurodiran Turtles") of *The Vertebrate Fauna of the Selma Formation of Alabama*, were completed by Dr. Rainer Zangerl, Curator of Fossil Reptiles, and issued by the Museum Press. Progress was made on the preparation of Part III, which will contain descriptions of the forms belonging to the family Toxochelyidae, a highly aquatic group of turtles. Another research project under preparation by Dr. Zangerl concerns a proposal for a new classification of the order Chelonia, in which living as well as fossil turtles are being considered. Dr. Zangerl has, for many years, been interested in basic concepts of comparative morphological methodology. He completed an essay on this subject, which was published in *Evolution*.

Eugene S. Richardson, Jr., Curator of Fossil Invertebrates, prepared two papers for publication by the Museum Press: a description of eight fossil crustaceans and a discussion of the pre-Cambrian stromatolites of an area in northern Michigan. He also made preliminary identifications of the fossils collected by Chief Curator Roy from the Salt Range in northern India. Dr. Robert H. Denison, Curator of Fossil Fishes, who became a member of the staff in August, is engaged in completing a series of studies on one of the earliest known groups of vertebrates, the Osteostraci. The results of his studies will appear in two papers, both of which are nearly ready for publication. The first is a general study on the evolution and classification of the group; the second is a description of the microscopic structure of the skeleton, particularly of the earliest Osteostraci from the Island of Oesel in the Baltic.

George Langford, Assistant in Fossil Plants, devoted most of his time to new material for his report on the Wilmington coal flora and fauna. All the fossils described have been collected from the strip coal mine area near Wilmington, Will County, Illinois. The manuscript, on which Assistant Langford has been working for more than ten years, covers, to date, 480 species and forms representing 133 genera and sub-genera. Illustrative material con-

sists of over 1,200 photographs and 400 drawings. Completion of the work is delayed by periodic influxes of hitherto undiscovered materials that necessitate revisions and new interpretations.

Preparation of vertebrate materials for study consisted chiefly of specimens collected in Texas by Curator Patterson and James H. Quinn, former Chief Preparator, and by Dr. Zangerl and William D. Turnbull, Preparator, in Alabama. Preparation of a large fish specimen, also from Alabama, has been nearly completed. Thirty-eight specimens of mammals and reptiles from scattered localities also were prepared for study. John Conrad Hansen, Artist, completed a total of 140 pen-and-ink and wash drawings and paintings for publications and exhibits. His services were lent to the N. W. Harris Public School Extension for a month.

During the year several expeditions worked in the field, all of them in the United States. Dr. Roy spent five weeks during September and October in the eastern states, chiefly New York, collecting specimens for the systematic rock collection. Curator Wyant and Harry E. Changnon, Curator of Exhibits, spent a month in several of the mining districts of the Southwest collecting ores and associated minerals, chiefly for use in exhibits under preparation. Included were collections from the bauxite district in Arkansas, the Petaca pegmatite district in New Mexico, the molybdenum deposits in Questa, New Mexico, and several lead, silver, and gold districts of Colorado. An excellent collection of copper and zinc was also obtained from Santa Rita, New Mexico.

Curator Richardson covered nearly six thousand miles in the eastern part of the country during June and July. The fossils collected on this trip are intended for the stratigraphic series and for exhibits in the new Hall of Fossil Invertebrates and Plants. He also collected fossils and gray clay to be used in making a reproduc-



Crystals en masse of such perfection as this group of crystals of manganosiderite from Eagle Mine, Colorado, are rare (one-fourth its natural size).

tion of the famous Miocene fossil beds on the shore of Chesapeake Bay. Local field trips included Grand Tower and Percy, Illinois, where he found some very well preserved Pennsylvanian brachiopods, now added to the study collection.

Dr. Zangerl led an expedition to west-central Wyoming with the specific purpose of searching for nothosaur material in the Alcova limestone, a member of the Chugwater Formation. A single specimen, the only representative of this group of reptiles in the New World, had previously been discovered in this formation. The expedition succeeded in obtaining about a dozen additional partial skeletons as well as another reptile whose identity cannot be determined until the specimen is prepared for study. The Popo Agie Formation, which directly overlies the Alcova limestone, was also searched, and it produced several interesting specimens.

Assistant Langford made several short trips to the strip coal mines, near Wilmington, Will County, Illinois, where he spent a total of thirty days. He was assisted part of the time by Chief Preparator Orville L. Gilpin and by Dr. and Mrs. R. H. Whitfield, both Associates in Fossil Plants. Mr. Langford, a veteran collector, whose knowledge of the Wilmington area is second to none, brought back and added to the fossil collection nearly three thousand specimens, many of which are extremely rare, the outstanding finds being a number of fossil spiders, scorpions, and annelids.

Accessions—Geology

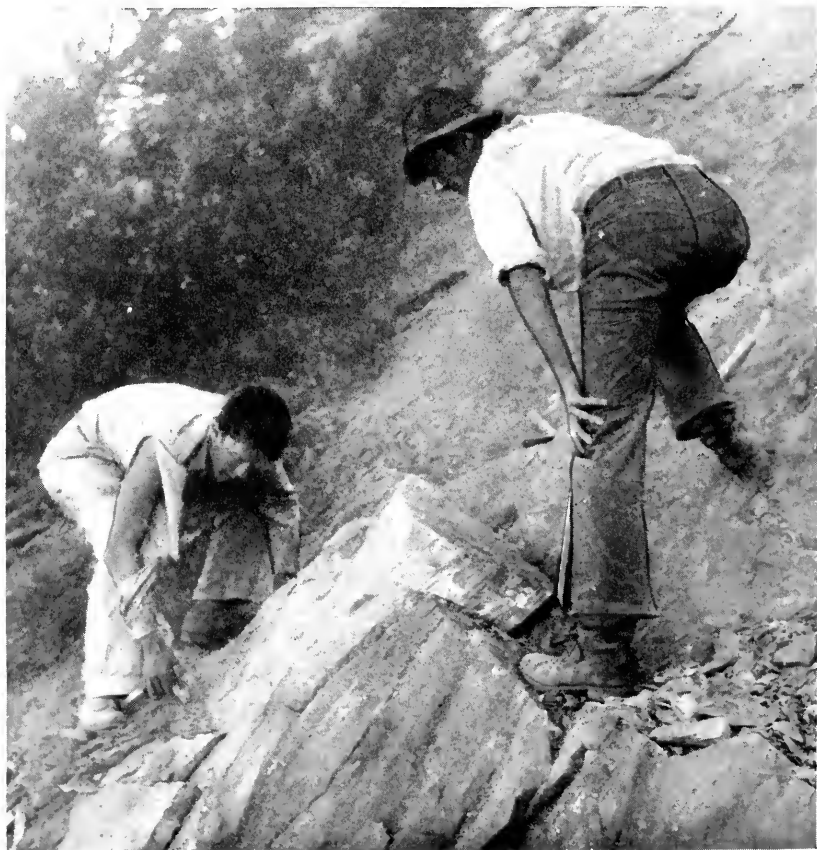
Additions of new materials to the collections during the year were of especial interest, particularly from the standpoint of quality and unrepresented materials. The Division of Fossil Fishes was enriched by a collection of fossil fishes from the Mowry shale (Cretaceous) of Wyoming, collected during the summer by the Wyoming expedition under the leadership of Dr. Zangerl. The Mowry fishes have, hitherto, been known only from scales. Dr. Zangerl's collection of nothosaur materials from the Chugwater Formation of Wyoming is also noteworthy, since this group of reptiles in the New World was heretofore known by a solitary specimen.

Important accessions in the Division of Fossil Invertebrates include a collection of Pleistocene or Pliocene mollusk shells from the Caloosahatchie Canal excavation in Florida, presented to the Museum by A. A. Bakewell, of Solon Springs, Wisconsin, and a gift of 77 fossil insects collected by Dr. and Mrs. Whitfield and Jack Whitfield from the Oligocene beds at Florissant, Colorado. By

exchange with the Academy of Natural Sciences of Philadelphia, the Museum gained 477 specimens of Pleistocene and Tertiary fossils, chiefly mollusks, from the Atlantic coastal plain. Some rare forms were included in this accession. The most important addition to the collection of invertebrate fossils during the year, however, was a collection of about 4,000 specimens of Permian fossils from the Salt Range of northern India, collected in 1945 by Chief Curator Roy while on leave from the United States Army Air Forces.

A splendid collection of onyx, gift of Dr. Carlos A. Friz, of Chicago, and 19 rare minerals, gift of the New Jersey Zinc Company, were added to the economic geology and mineral collections, respectively. The Anaconda Copper Mining Company, the Reynolds

Dr. Rainer Zangerl, Curator of Fossil Reptiles (right), and his assistant quarry nothosaur skeletal material during the Wyoming Paleontological Expedition, 1948.

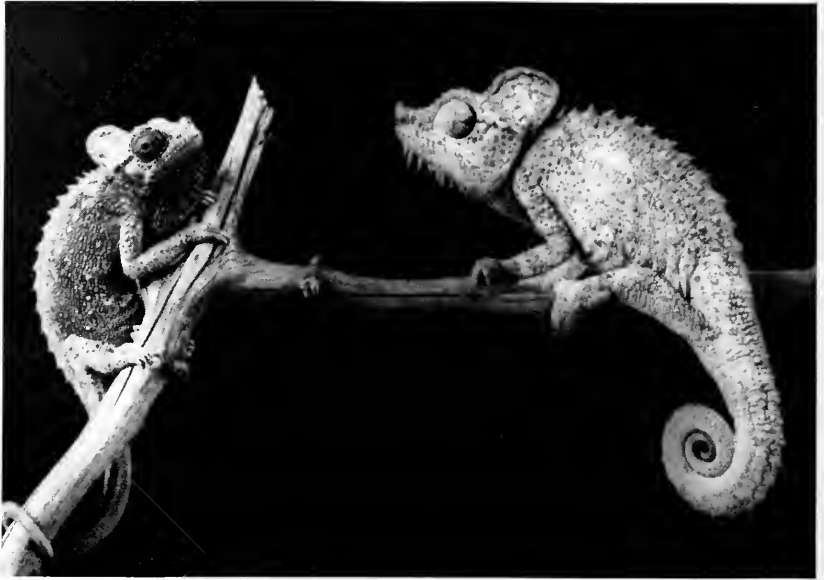


Metals Company, the Republic Steel Corporation, and the American Brass Company donated several series of finished metal products to be applied as "uses" of various ores exhibited in Hall 36 (Economic Geology). At the close of the year the Museum was again fortunate to receive as a gift five meteorites from Stuart H. Perry, of Adrian, Michigan. They form an especially valuable addition, for none was hitherto represented in the Museum's collection of meteorites. A final notable addition to the collections for the year was 34.4 carat step-cut golden beryl, from Dr. J. Daniel Willems, of Chicago.

Exhibits—Geology

In Hall 36 (Economic Geology) eight exhibits of metallic ores were installed under the supervision of Curator of Exhibits Changnon, with the assistance of Preparators Henry Horback and Kent Jones. Included are exhibits of the nonferrous metals (gold, silver, copper, lead, zinc, aluminum, and tin), iron, ferroalloys, and rare and minor minerals of industrial importance. Each exhibit contains the important ore minerals of the metal, typical ores of leading producing deposits, and information regarding their occurrence and production. Two major additions were made in Ernest R. Graham Hall (Hall 38, Fossil Vertebrates). For the first time since their installation in the late '20s and early '30s, the famous Knight murals showing life of the past were adequately captioned. This was accomplished by forty large raised-letter plaques bearing titles and explanations of the prehistoric scenes. The new plaques enable visitors easily to associate the murals with the fossil materials exhibited and thereby gain a clearer view of life and conditions in past geologic ages. Sixteen skeletons of Permian reptiles and amphibians, the cream of the Permian fossils from the magnificent gift of fossil vertebrates received from the University of Chicago in 1947, were placed on temporary exhibit in Hall 38.

Frederick J. V. Skiff Hall (Hall 37, Fossil Invertebrates and Fossil Plants) was completely remodeled during the year to furnish fifty-three new-type built-in wall cases to house the new fossil invertebrate and fossil plant exhibits. Installation of these new exhibits began in September, and four introductory exhibits were installed. Plans call for completion of the hall in 1950. When completed, the hall will represent one of the most comprehensive exhibits—stratigraphic and systematic—of fossil invertebrates and plants ever attempted. Included will be seven underwater invertebrate habitat groups and three plant groups.



Valuable information on the habits of African chameleons was derived from a study of live specimens received from Harry Hoogstraal, Assistant Curator of Insects.

Department of Zoology

Research and Expeditions

Research within the Museum was focused mainly on reports on specific collections, often largely by-products of the basic routine of identification by which all specimens enter the research collections. Segments of the collections made in 1946-47 by the Museum's Philippines Zoological Expedition were reported on in whole or in part by the Divisions of Birds, Mammals, and Reptiles. Colin C. Sanborn, Curator of Mammals, continued his special interest in bats, completing two papers and working on the large manuscript of a revision of the horse-shoe nosed bats of the genus *Rhinolophus*. Philip Hershkovitz, Assistant Curator of Mammals, continued his work on Colombian mammals (begun under the auspices of the Smithsonian Institution), prepared a series of short papers on mammalian nomenclature, and reported on the tropical American mammals that were collected by Ivan T. Sanderson for the British Museum and stored at this Museum during the war.

In the Division of Birds, Curator Austin L. Rand was engaged in studies of faunal, systematic, and ecological aspects of African birds from both sides of the continent. Emmet R. Blake, Associate Curator, and Melvin A. Traylor, Jr., Research Associate, continued work on neotropical birds and prepared a series of papers for publication. The problem of definition of subspecies, a subject of considerable current taxonomic importance, engaged the attention of Dr. Rand and Mr. Traylor. The long-term project of the Division of Birds, *Catalogue of Birds of the Americas*, made large advances during 1948 under the supervision of Boardman Conover, Research Associate, and of Miss Lillian A. Ross, Associate Editor of Scientific Publications. Two sections of the final part of this work, each of volume length, were published; the final section had gone to press at the end of the year. In addition to her work with exhibits, Mrs. Ellen T. Smith, Associate, carried on considerable curatorial work.

In the Division of Reptiles, Robert F. Inger, temporary assistant, made excellent progress on a comprehensive report on Philippine amphibians. Curator Clifford H. Pope continued his studies on North American salamanders and continued also his interest in the operation of snake venom, both as to the mechanics of striking and the effects of venom. The small Burmese python, presented to the Division in 1945, has afforded opportunity for a unique growth-record and for observations of behavior, with a by-product of important practical hints for zoological-garden management. The Division was host during the year to a series of twenty-nine East African chameleons. After being studied by Bernard Greenberg, of Roosevelt College, as to life history and behavior, the specimens remaining were deposited with the Chicago Zoological Society and Lincoln Park Zoo. The chameleon studies, in fact, serve as an example of the large areas of overlapping interest in zoological studies in museums and zoological gardens.

Loren P. Woods, Curator of Fishes, was essentially "on loan" to the United States National Museum for the first part of the year, where he was engaged with Dr. Leonard P. Schultz of that museum on the monumental report on Pacific fishes resulting from the collections made at Bikini Atoll. His work on this project (which results in the accession of a share of the Bikini fish collection by this Museum) is continuing. Preliminary studies of Bermuda shore fishes, in which Curator Woods has been aided by Robert Kanazawa, temporary assistant, have disclosed interesting material. One of the principal objectives of the Bermuda Deep-Sea Expedition, the collection of a representation of the remarkable types of fishes from

the lightless depths of the ocean, has provided a fresh stimulus to the studies on this fauna, the special interest of Mrs. Marion Grey, Associate in the Division of Fishes.

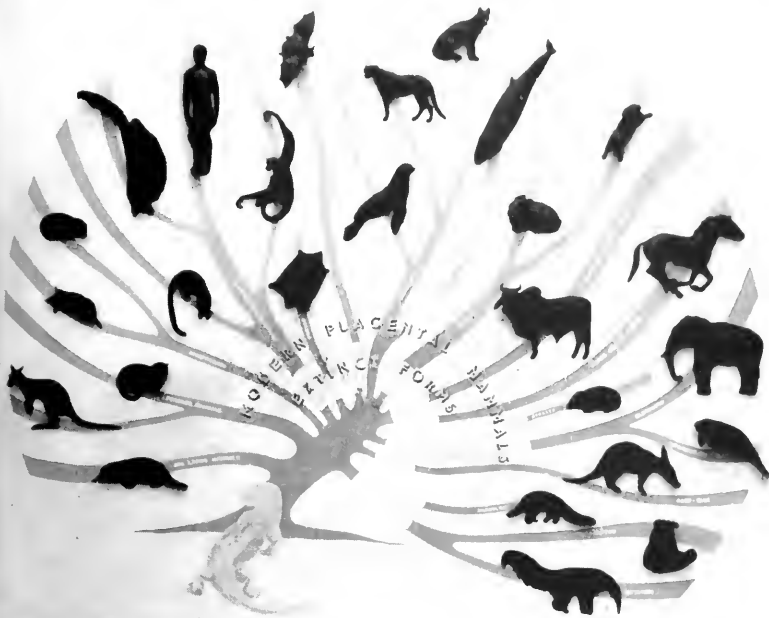
Studies toward a monograph on the giant panda, long the major research interest of D. Dwight Davis, Curator of Vertebrate Anatomy, has disclosed so many serious deficiencies in our knowledge of the allied bears and raccoons and of the flesh-eating mammals in general that their scope has long since been enlarged to a review of the morphology of the Carnivora. However, much progress was made during the year on the manuscript dealing specifically with the giant panda. It is fortunate to find that this creature embodies in almost diagrammatic form many of the most interesting principles of what has been called "functional comparative anatomy." Various studies on locomotion of mammals and reptiles and observations on the remarkable behavior of the brilliantly colored North American mud snake and on the locomotion of geckos were among Curator Davis' accessory interests during the year. Dr. R. M. Strong, Research Associate, continued his research work on the anatomy of the salamander *Necturus*.

The Division of Insects, still largely absorbed in curatorial routine, reports the continuing research on special families of beetles, the Histeridae, by Assistant Curator Rupert P. Wenzel, and the Ptiliidae, by Assistant Curator Henry S. Dybas, together with the studies on Staphylinidae by Research Associate Charles H. Seevers and work on the Mordellidae by Eugene Ray, temporary assistant. In the Division of Lower Invertebrates, Dr. Fritz Haas, Curator, was engaged in studies of the fresh-water mollusks of Lake Titicaca, on loan from the British Museum, and of other Peruvian material received from the Museo Javier Prado, in Lima.

In lieu of original research Chief Curator Karl P. Schmidt was engaged in the revision of *Ecological Animal Geography* (Hesse, Allee, and Schmidt, 1937) for a second edition. The translation of the German original of this work was made by Chief Curator Schmidt during long sea voyages in connection with Museum expeditions, and the American edition has been favorably received. As the year closed he had finished reading galley proof of a second work with university colleagues, *The Principles of Animal Ecology*, begun in 1941 in collaboration with Professors W. C. Allee, Alfred E. Emerson, and Thomas Park, of the University of Chicago, and Orlando Park, of Northwestern University.

The major expedition of 1948 was the Bermuda Deep-Sea Expedition, in which the operation of the oceanographic vessel, the

FAMILY TREE OF LIVING MAMMALS



The evolutionary relationship of the principal types of living mammals is illustrated by models prepared by Joseph B. Krstolich, Artist, Department of Zoology.

98-foot ketch *Caryn*, was made possible by co-operation with the Bermuda Biological Station for Research, Inc. Leader of our Bermuda party was Dr. Haas, Curator of Lower Invertebrates, who was ably seconded by Curator Woods, of the Division of Fishes. Mrs. Grey, Associate in Fishes, accompanied the party, with Ronald J. Lambert, Assistant Taxidermist. Miss Margaret J. Bauer, Departmental Secretary, joined the party as volunteer for five weeks. Dr. Dugald E. S. Brown, Director of the Bermuda Biological Station, through whom the use of the *Caryn* was arranged, maintained a most active interest in the deep-sea trawling operations. The material obtained proved of great interest also to visiting scientists working in the laboratories of the Biological Station.

The Divisions of Insects and Mammals collaborated effectively in the Guatemalan Zoological Expedition, which left New Orleans in April. Assistant Curator of Insects Wenzel was accompanied

by Rodger D. Mitchell, of Wayne, Illinois, and Mr. de la Torre, temporary assistant in the Division of Mammals, who is a student at the University of Michigan. The attachment of Mr. de la Torre to the Guatemala party was especially effective because the Museum's entomological staff maintains an active interest in the ectoparasites of mammals. Illness necessitated the return of Assistant Curator Wenzel at the end of May, but Mr. Mitchell and Mr. de la Torre carried on their respective insect and mammal collecting until October, when Mr. Mitchell returned, leaving Mr. de la Torre to continue the search for mammals, more particularly for bats. One or more members of the party visited the Departments of Chimaltenango, Sacatepéquez, Escuintla, Progreso, Zacapa, Alta Verapaz, and Huehuetenango. A principal focus of interest of the expedition was the collecting of material from the type localities of the species described in the monumental *Biologia Centrali-Americana*, in which the report on beetles alone extends to eighteen bound volumes describing about twelve thousand new species. The fresh material from Guatemala makes possible renewed studies from modern viewpoints on this fascinating and complex fauna.

Under the auspices of the Pacific Science Board of the National Research Council, as part of the scientific surveys of the Pacific islands under United States control, Assistant Curator Dybas, of the Division of Insects, was engaged in the entomological survey of the Palau Islands and of Ponape, in the eastern Carolines. The islands of the western Pacific, long behind a Japanese curtain, are now being actively explored from every scientific aspect. Mr. Dybas returned to the Museum in April. Harry Hoogstraal, attached to the Museum staff as Assistant Curator of Insects, represented the Museum on the University of California African Expedition. He was engaged primarily in the collection of blood samples of mammals and lizards and ectoparasites of mammals for the Naval Research Institute. A share of his host specimens will be assigned to the Museum.

Research Associate Traylor, of the Division of Birds, was accompanied by Mrs. Traylor on a bird-collecting expedition to Veracruz, with special effort directed to the altitudinal zones of the great mountain mass of Orizaba. The party was hospitably entertained at Potrero Viejo, the hacienda of Dyfrig McH. Forbes, host to a long succession of zoological collectors. Mr. and Mrs. Traylor were in Mexico from July 3 to September 11, traveling by means of the Museum's new carryall. At the end of the year Assistant Curator Hershkovitz, of the Division of Mammals, was established in

Colombia for the completion of his mammal survey of that country, where he had worked extensively as Walter Rathbone Bacon Traveling Scholar of the Smithsonian Institution.

Within the United States, Chief Curator Schmidt, accompanied by his son, John M. Schmidt, and by Mr. Inger, of the Division of Reptiles, used the new carryall for a brief trip to western Texas, where specimens of the remarkable "barking frog" and of the interesting neotenus salamanders ("permanent larvae") of the border of the Edwards Plateau were collected. Curator Sanborn made brief field trips to Arkansas for mammals in April and June as part of a continuing program of study in that state, also by means of the carryall. Curator Pope spent July and August at the Mountain Lake Biological Station of the University of Virginia, where the co-operation of staff and students of the graduate summer school greatly promoted his studies on salamander life-histories and distribution. In November he was accompanied by Dr. James Kezer, of Roosevelt College, to southern Missouri, where a collection of living cave salamanders was obtained for Dr. Kezer's studies on chromosome structures and for further investigation of the reduction and loss of eyes in these creatures of darkness.

In October and November Mr. Inger returned to the interesting study of the autumn aggregation of blue racers in the Indiana Dunes. This "hibernating colony," in which the snakes come to a limited area each autumn, was discovered, or perhaps re-discovered, by Chief Curator Schmidt and Taxidermist Leon L. Walters in 1935. In the intervening time, with unfortunately interrupted studies, 103 specimens were marked and released. Mr. Inger was able to mark no less than 92 specimens in the 1948 season, employing a greatly improved marking technique. It is hoped that future studies may yield information on return to the locality, growth, longevity, and population numbers. The carryall served also in an emergency when living mosquitoes were urgently desired in connection with the making of a large model of *Anopheles*, the malaria bearer. Assistant Curators Wenzel and Dybas were promptly successful in finding specimens when other sources had failed.

Accessions—Zoology

The more important gifts of specimens received during the year are the large male Alaska brown bear, intended for exhibition, received from Mr. and Mrs. William S. Street, of Seattle, Washington; the continuing gifts of important anatomical material received from the

Chicago Zoological Society and Lincoln Park Zoo; 71 mammals from British Honduras and Yucatan, collected by Ivan T. Sanderson and presented by the British Museum (Natural History); 77 birds from East Africa, mainly from high altitudes on Mt. Kenya, presented by Walther Buchen, of Chicago; and two ivory-billed woodpeckers (a North American species on the verge of extinction), from Arkansas, presented by Robert Burton, of Chicago.

A notable gift in the Division of Reptiles was the collection of 522 specimens of salamanders of the Appalachian region, from Dr. Nelson G. Hairston, of the University of Michigan; 17 living geckos, from C. B. Perkins, of San Diego Zoological Society; and a series of the beautiful iguanid lizards of the species *Dipsosaurus dorsalis*, from Kenneth S. Norris, of Los Angeles. In the Division of Insects the largest gift of the year was a miscellaneous collection of insects and other arthropods from Assistant Curator Hoogstraal, mainly from New Guinea and the Philippines, collected during the war. Major Howard T. Wright collected and presented 3,252 specimens of insects from Japan, and Dr. C. L. Remington, of New Haven, Connecticut, presented his wartime collection of 1,149 specimens, mostly beetles, from New Caledonia. Of especial interest is the



James E. Trott, Artist-Preparator, works on enlarged model of an anopheles mosquito, one of several anatomical models that will show the life cycle of the malaria organism. Right: Total length of the completed model is approximately 2 feet.

series of 31 named beetles, all remarkable as "ant guests," including 10 paratypes, received as a gift from Colonel Clifford C. Gregg, Director. In the Division of Lower Invertebrates a noteworthy gift of 296 specimens of Amazonian mollusks came from Dr. Harald Sioli, of Belem, Brazil, and of 13 lots of fresh-water shells, from Dr. Walter Biese, of Santiago, Chile, including a number of paratypes of species described by Dr. Biese.

The most important accessions of the year consist of material from the Museum's own expeditions, some still from previous years, and from purchases. The largest single accession in 1948 from one source is the series of 18,247 specimens of insects from the Philippines Zoological Expedition of 1946-47.

Exhibits—Zoology

The program for a series of biological exhibits to supplement and explain the systematic exhibits of birds in Hall 21 was advanced by the installation of four alcove cases prepared by Assistant Taxidermist Kenneth Woehlek, with the co-operation of Miss Norma Lockwood, Staff Illustrator, and of members of the taxidermy staff.



The subjects represented are "Birds as Solar Machines," "Variation Is the Rule in Nature," "Speciation in Galápagos Birds," and "Migration of Some North American Birds." The restorations of fossil birds in Hall 21 were repainted by Taxidermist L. L. Pray. A new model by Mr. Pray of the gigantic predaceous South American *Phororhacos*, which has become known as the "Argentine terror bird," makes it seem evident that we are fortunate that the bird became extinct in Miocene times. An exhibition screen, "Birds in a Chicago Garden," featuring the means of attracting birds in suburban areas, is approaching completion under the supervision of Associate Ellen T. Smith, of the Division of Birds. This screen forms one of the units in a much-needed exhibit of birds of the Chicago area in which the changes with spring and fall migration can be featured.

The principal exhibition work in progress for the Division of Mammals was the mounting of four Alaska brown bears, which was well advanced at the close of the year. In the Division of Reptiles, exhibition work in progress consisted of models made for a Chicago area alcove and of a Central American basilisk lizard, whose bipedal running is of especial interest in connection with the development of bipedal locomotion in the extinct dinosaurs. No new exhibits were installed in the Division of Fishes. Work continued on the improvement of models in the synoptic series of fishes by replacement of shriveled or warped fins of old models with fins of carved celluloid. The Division of Vertebrate Anatomy reports progress on the case reserved for the anatomy of whales in the Hall of Whales, with the preparation of new models by Joseph B. Krstolich, Artist, under the general supervision of Curator Davis. "Family Tree of Living Mammals," an exhibition screen that shows the interrelation of mammals, was prepared by Mr. Krstolich under the direction of Chief Curator Schmidt and installed in George M. Pullman Hall (Hall 13, Horned and Hoofed Mammals).

The staff of the Division of Insects was engaged on plans for a Hall of Insects (the west half of Hall 18), and James E. Trott, Artist-Preparator, has completed several of the anatomical models that will show the life cycle of the malaria organism. The completed enlarged model of an adult anopheles mosquito intended for the malaria case is a triumph of the combination of artistic skill and patience necessary in insect model-making. It incorporates no less than 13,000 separate scales on the legs and 3,400 on the wings, without which details a mosquito model is curiously inadequate. The finished model is composed of about 20,160 parts.



Reclassification and growth of the Library require additional shelving. The new installation in the stackroom (above) accommodates approximately 18,000 volumes.

LIBRARY OF THE MUSEUM

The fundamental objective of the Library is to function as an integral division of the Museum by furnishing the printed-word working tools and supplementary data needed in the ever-expanding specialization of research performed in the scientific departments. The accomplishment of this long-range purpose has been intensified this past year through the fortunate acquisition of a choice number of publications long needed, many unobtainable during the war years or even directly thereafter.

Represented among the new resources of the Library are rare and important volumes made available through the disposal of private libraries, desiderata urgently needed for the projects planned in the newly created divisions of departments as well as for further research in established divisions, recently published works on current scientific developments in allied fields, and foreign periodicals—some new and others that round out incomplete sets. A selective list, illustrative of the items acquired, is given on the following pages.

BOOKS

- Artedi, Peter, *Ichthyologia*, 5 pts. (1738)
- Bellardi, Luigi, and Federico Sacco, *I. Molluschi dei Tereni Terziarii del Piemonte e della Liguria*, 7 v. (1873-1904)
- Blainville, H. M. D. de, *Osteographie, ou description iconographique comparee du Squelette et du systeme dentaire des mammiferes recents et fossiles pour servir de base à la zoologie et à la geologie*, 4 v. (1839-64) [very rare]
- Blume, C. L., *Forae Javæ nec non insularum adjacentium*, 3 v. in 4 (1829)
- Boheman, K. H., *Monographia Cassidarum*, 4 v. (1850-62)
- Bronn, H. G., *Klassen und Ordnungen des Thierreichs, abt. 2, Gastropoda prosobranchia* (1896-1907)
- , *Klassen und Ordnungen des Thierreichs, abt. 3*
- , *Malacozoa*, 2 v. (1862-66)
- , *Mollusca, abt. Amphineura und Scaphopoda* (1892-95)
- , *Klassen und Ordnungen des Thierreichs—Pulmonata* (1908-12)
- Buffon, G. L. L. de, *Histoire Naturelle, générale et particulière, avec la description du cabinet du Roi*, 1st ed., 44 v. (1750-1804)
- Burmeister, Hermann, *Handbuch der Entomologie*, 5 v. and plates (1832-47)
- Curtis, John, *British entomology*, 16 v. (1823-40) [one of the most important works from the standpoint of genotype designations; only set in Chicago]
- Dejean, Comte, *Species general des Coleopteres Cicindelidae and Carabidae*, 5 v. (1825-31)
- Ehrenberg, C. G., *Symbolae Physicae* (1828-33)
- Gmelin, G. Friedrich, *An universal system of natural history, including man, the Orang-Outang, and the whole tribe of Simia* (1744-1810)
- Gronovius, L. T., *Zoophylacii Gronoviani fasciculus primus (et secundus) exhibens animalia quadrupeda amphibia atque pisces enumerationem insectorum* (1763-64) [the Library of Congress has the only other copy of this in its rare book division]
- Handwörterbuch der Naturwissenschaften*, 2nd ed., 10 v. (1931-35)
- Horn, Walther, and Isle Kahle, *Über entomologischen Sammlungen*, v. 1-3 (1935-37) [very rare]
- International Congress of Entomology. *Proceedings and transactions*, first to seventh meetings, 17 v.
- Jablonsky, C. G., and J. F. W. Herbst, *Natursystem aller bekannten in- und ausländischen Insecten der Käfer*, 10 v. (1789-1806)
- Jacquein du Val, Camille, and L. M. H. Fairmail, *Genera des Coleopteres d'Europe*, 3 v. (1857-68) [rare and important work]
- Morley, Claude, *Ichneumonologia Britannica*, 5 v. (1903-14)
- Orbigny, Alcide d', *Voyage dans l'Amerique Meridionale—Mollusques*, 2 v. (1835-43)
- , *Voyage dans l'Amerique Meridionale*, 11 v. (1837-47)

SERIES (new)

- California Zoological Club. *Proceedings*, v. 1, no. 5
- Cavanillesia*, v. 1-8 (complete series)
- Discovery Committee, Colonial Office, London. *Discovery reports*, v. 1-24 (continuation)
- Entomologisk Meddelelser*, 24 v. (1887-1947)
- L'Institut Oceanographique de Monaco. *Annales*, v. 1 (continuation)
- Museum National d'Histoire Naturelle. *Archives*, ser. 2, v. 1-10; ser. 3 v. 1-10; ser. 4, v. 1-10; ser. 5, v. 1-6
- Revue Scientifique*, 1938-41, 1945, 1948 (continuation)

SERIES (purchased to fill gaps in our runs)

- Botanisches Zentralblatt*, v. 33-56, 59, 60, 63, 70, 81-94, 101-103
California Academy of Sciences. *Proceedings*, ser. 1 and 2 (1854-96), 13 v.
Conchological magazine (1907-09)
Genera Insectorum, fasc. 194-196, 199a, 200-207
Geological Society of America. *Memoires*, nos. 9, 11, 21
Geologiska Föreningens, Stockholm. *Förhandlingar*, v. 1-12, 15-52
Indians at work, v. 1-3, 4
Société Botanique de France. *Bulletin*, tomes 1-8, 45, 48-53, 57-58

The Library's holdings have been augmented further through the Museum's policy of exchange of scientific publications with other institutions and by valuable gifts. Outstanding among gifts are the Darwin letters, the Stuart H. Perry photographs of meteoric irons, the twenty-five paintings of birds by Karl Plath, and the Charles V. Riley collection of books on entomology.

The continued growth of the Library has been inevitable. It has come as a corollary of highly selective augmentation along intensive lines and has established Chicago Natural History Museum as one of the foremost sources of specialized information in its field. An indication of this distinction has been shown by the frequency of requests received for interlibrary loans from libraries ranking high in their special fields and from industrial and research organizations throughout the country. The transfer from John Crerar Library to the Museum of the extremely important series, *Palaeontographica* (Volumes 1 to 80, and the Supplements), evidences the prestige achieved by this Library as a center of information on natural history. A point in illustration of the appreciation indicated by the public in the Library facilities may be made by mentioning the group attendance by teachers from the Board of Education for the purpose of compiling bibliographies in the field of natural history to be used in future courses of study.

During the year, 3,585 items were added to the collection. Of this number, 1,166 were secured by gift, 157 by exchange, and the remainder by purchase. The number of accessioned items in the Museum Library now totals 132,610.

The Kardex Visible File, installed in 1947, has grown to the extent that soon a third tier will be in use. Primarily, this file was installed to assemble in one place all the pertinent data dealing with the great volume of material received in the Library in serial form. The shelving ordered in December of 1946 was received and installed during the past year, providing accommodations for approximately 18,000 volumes in the new stackroom.

Upon the resignation on August 31, 1948, of the Librarian, Carl W. Hintz, and the retirement of the Associate Librarian, Mrs. Mary W. Baker, a reorganization of staff personnel was effected, together with a new division of duties and relocation of office arrangements. Mrs. Meta P. Howell, of the cataloguing division, was appointed to the post of Librarian. Mrs. Eunice M. Gemmill, of the reference department, was placed in charge of that department and its personnel, and the services of Mrs. Baker were retained to assist in the important work of reclassification. Mrs. Emily M. Wilcoxson has continued her valuable work as Librarian Emerita. She has completed two special projects—an index to another volume of the Museum *Bulletin* and a bibliography of the works of the late Dr. Berthold Laufer, eminent Sinologist who was on the staff of the Museum for many years.

A severe loss to the Library was occasioned by the death of Frank L. Heyser, the bookbinder. The quality of his work and the service he gave to the Museum Library undoubtedly can never be replaced. His pride and interest in his work was reflected in the meticulous care given to the restoration of rare books, the binding of new material, and the high quality of workmanship in every task.

PHOTOGRAPHY AND ILLUSTRATION

Total production for the Division of Photography for the year was 19,802 items. Output consisted of negatives, prints, enlargements, lantern slides, and transparencies made for the Museum, other institutions, the press, and general sales. There are now in the files nearly 105,000 negatives.

At the time of his sudden death in October, Arthur G. Rueckert, Staff Artist, had just begun preliminary work on background paintings of dioramas for the new hall of paleontology, planning and research for which had occupied his time for a number of months. Earlier in the year he had completed for Charles F. Millspaugh Hall (Hall 26, North American Trees) two large wall maps showing the major zones of soil groups. By his ability as an artist and museum technician Mr. Rueckert contributed much to the development of natural-history exhibition work. The loss to the Museum by his death is great.

Miss Norma Lockwood, Staff Illustrator, furnished drawings, lettering, and miscellaneous art work as required throughout the year by the departments and divisions of the Museum. She also prepared four exhibition screens for the Division of Birds.



Maps of the hemispheres showing the distribution of the zonal great soil groups, on exhibit in Hall 26, are the work of the late Arthur G. Rueckert, Staff Artist.

MOTION PICTURES

During the year approximately eighty-five per cent of the footage was taken for the Museum's educational motion picture, temporarily titled "Museum Activities." This film, in color, with a sound track to be "dubbed" in, will take the public on a behind-the-scenes tour of the Museum's studios, laboratories, and exhibits. It is planned to complete production early in 1949 and to have this film ready by the latter part of the year for screening to all audiences interested in the Museum's over-all program of education. In addition, ten complete motion pictures were re-edited and titled for use by the Museum in programs for schools and the general public. This footage was edited from material purchased or pre-

sented to the Museum and from films taken on Museum expeditions by staff members. There are at present four films, also from desirable material in the Film Library, in the re-editing stages for the coming year. Color transparencies and motion-picture records of natural-history subjects were taken for the scientific departments, work that has become an important function of the Division both for research and general information.

The year's outstanding accession was approximately 12,500 feet of 35mm film presented to the Museum by Rudyerd Boulton, of Washington, D.C., former Curator of Birds, now Research Associate. This footage represents a motion-picture record of numerous expeditions of which Mr. Boulton was a member and contains sequences on bird, mammal, and reptile life as well as travelogue material in both Panama and Africa. It is planned, after selecting the outstanding scenes, to reduce this footage to 16mm so that this film can be used in several Museum productions.

PUBLICATIONS AND PRINTING

Distribution of wartime accumulations and postwar issues of the Museum's publications was made to twenty more of the institutions and individuals on our regular foreign exchange list with which prewar routine exchange had not been restored before 1948. Contact with many of the scientific institutions and individual scientists in Germany also was made, although forwarding of the large quantities of publications that have accumulated for them during the past nine years awaits more favorable shipping conditions to Berlin and other areas. A total of 11,958 copies was sent to individuals and institutions on both the domestic and foreign exchange lists, to which twenty-eight new names were added. Sales during 1948 totaled 3,207 copies in the Scientific Series, 8,235 copies in the Popular Series, and 29,816 copies of miscellaneous publications, such as guides, handbooks, and memoirs (see page 85). For future sales and other distribution an additional 26,700 copies of publications were wrapped, labeled, and stored.

The Museum Press issued during the year seven titles in the Scientific Series of publications, one in the Popular Series, one in the Memoirs Series, one in the Administrative Series, and one reprint. The total number of pages printed in all books, including an index for one completed volume in the Scientific Series, was 1,297, and the total number of copies was 26,641. Twelve numbers of Chicago Natural History Museum *Bulletin* were printed, averaging

6,000 copies an issue. Other work of the Division of Printing included posters, price lists, Museum Stories for Children (Raymond Foundation), lecture schedules, Museum labels, post cards, Museum stationery, and specimen tags, totaling 88,990 impressions.

A list of titles in the publications series issued in 1948 by Chicago Natural History Museum Press follows:

DEPARTMENT OF ANTHROPOLOGY

BRAIDWOOD, ROBERT J.

Prehistoric Men, Popular Series, Anthropology, no. 37, 117 pp., 37 text figures

MARTIN, RICHARD A.

Mummies, Reprint, 18 pp., 10 text figures, 11 plates

QUIMBY, GEORGE I.

Prehistoric Art of the Aleutian Islands, Fieldiana: Anthropology, vol. 36, no. 4, 16 pp., 7 text figures

DEPARTMENT OF GEOLOGY

ZANGERL, RAINER

The Vertebrate Fauna of the Selma Formation of Alabama, Fieldiana: Geology Memoirs, vol. 3, nos. 1 and 2, 56 pp., 4 plates, 16 text figures

DEPARTMENT OF ZOOLOGY

HAAS, FRITZ

Three New Land Shells from Peru, Fieldiana: Zoology, vol. 31, no. 23, 5 pp., 3 text figures

HELLMAYR, CHARLES E., AND BOARDMAN CONOVER

Catalogue of Birds of the Americas, Zoological Series, vol. 13, part 1, no. 2, vii+434 pp.

Catalogue of Birds of the Americas, Zoological Series, vol. 13, part 1, no. 3, vi+383 pp.

RAND, A. L.

Five New Birds from the Philippines, Fieldiana: Zoology, vol. 31, no. 25, 5 pp.

TRAYLOR, MELVIN A., JR.

New Birds from Peru and Ecuador, Fieldiana: Zoology, vol. 31, no. 24, 6 pp.

ZIMMERMANN, ARNOLD A., AND CLIFFORD H. POPE

Development and Growth of the Rattle of Rattlesnakes, Fieldiana: Zoology, vol. 32, no. 6, 61 pp., 25 text figures

ADMINISTRATIVE PUBLICATIONS

Annual Report of the Director to the Board of Trustees for the Year 1947, 141 pp., 32 illustrations

CO-OPERATION WITH OTHER INSTITUTIONS

The Museum continued throughout the year its co-operative educational arrangements with the University of Chicago, Northwestern University, Antioch College, and the School of the Art Institute of Chicago. Frequent use of Museum exhibits was made by students from Roosevelt College, for whom the Museum kept a special record of attendance. The laboratories and research collections of the Museum were open to visiting scientists, as in past years, and through interlibrary loan the resources of the Library of the Museum were available to other institutions.

Every year more and more art students use the Museum exhibits as they seek ideas in their classes in sketching, modeling, and design. They make use of the exhibits in anthropology to study primitive designs in masks, headdresses, African wood carving, and textiles. The animal groups in zoology offer them models for life drawings that are next best to live animals and superior to them in that the students can really get form and line. Botany and geology exhibits are studied and used for natural designs.

The School of the Art Institute sends its adult and junior classes to study in the Museum. These students, in fact, number the largest from any school in groups and attendance at the Museum. Some of them come on weekdays but many more come on Saturdays, when they can be found all through the Museum studying and sketching. The results of their work are exhibited in the Museum for one month in early summer. This selective exhibit shows some delightful and remarkable work, both of young and adult students. Other art schools using the Museum for study are Chicago Academy of Fine Arts, Academy of Applied Art, Institute of Design, and Chicago Technical College. Some of the students from these schools made an objective survey of the design and art of primitive peoples in order to develop their own appreciation of functional art. Other students studied looms, weaving, and textile materials of primitive peoples. Several groups made trips through the halls of trees and woods to study patterns in the grain of the many different species from all parts of the world.

Still another use of Museum exhibits and programs has been made in teacher-training classes by several colleges and universities. These student-teachers are brought to the Museum to see how its exhibits can be used in teaching, to learn how to organize successful field or museum trips, and to find out just how much the Museum can help them in their future teaching. Roosevelt College, Chicago.



The Art Institute of Chicago sends adult and junior classes to sketch in the Museum.

Teachers College, and Pestalozzi Froebel Teachers College make most frequent use of the Museum in this type of education work.

Under the co-operative educational plan adopted in 1946 by this Museum and Antioch College, of Yellow Springs, Ohio, successive groups of undergraduate students, alternating periods of study on the college campus with periods of work with pay, are temporarily employed by the Museum in its scientific departments, its Library, and its administrative offices. This plan brought thirteen young men and women to the Museum in 1948, two of whom accompanied Museum expeditions in the summer months.

A year's course in museology covering complete training in curatorial duties in a museum was given at the Museum by the staff of the Department of Anthropology in co-operation with the Department of Anthropology of the University of Chicago. In the spring Dr. Paul S. Martin, Chief Curator of Anthropology, and Fred Eggan, of the Department of Anthropology of the University of Chicago, conducted a seminar at the Museum for advanced students in anthropology on problems in Southwestern archaeology and ethnology. During the year the curators gave occasional lectures at the University of Chicago in their special fields. Donald Collier,

Curator of South American Ethnology and Archaeology, delivered six lectures on anthropology at the University of Chicago, supervised a research course in South American ethnology and archaeology for students from the University of Chicago, and gave a lecture on the Tairona culture of Colombia at Cranbrook Institute of Science, Bloomfield Hills, Michigan. Dr. Alexander Spoehr, Curator of Oceanic Ethnology, was on leave from the Museum in July and August to teach anthropology in the recently formed department of social relations at Harvard University. At that time he participated in a series of open seminars for foreign students attending Massachusetts Institute of Technology. During the remainder of the year Curator Spoehr taught a course in anthropology at the University of Chicago and also gave a number of lectures to advanced graduate students.

Classes in botany from the University of Chicago and Wheaton College visited the Department of Botany on several occasions and were conducted through the laboratories and herbaria. Dr. Theodor Just, Chief Curator of Botany, Dr. José Cuatrecasas, Curator of Colombian Botany, Dr. Hugh C. Cutler, Curator of Economic Botany, and Dr. Julian A. Steyermark, Associate Curator of the Herbarium, were speakers in a series of five lectures on botanical subjects given early in the spring at Northwestern University. In March Chief Curator Just and Curator Cutler conducted seminars at the University of Chicago and Missouri Botanical Garden, St. Louis, respectively. Curator Cutler gave talks on native American food plants before the Academy of Science of St. Louis and the faculty in botany and graduate students of Washington University and addressed several groups of plant breeders during a trip through Iowa, Minnesota, and South Dakota to study developments in plant science in the Middle West. Associate Curator Steyermark conducted a botanical field trip, through areas of southern Missouri, for graduate students of the Henry Shaw School of Botany, Washington University, and Missouri Botanical Garden.

Advanced courses in vertebrate paleontology offered by the University of Chicago were again held at the Museum under the direction of Dr. Everett C. Olson, Associate Professor of Vertebrate Paleontology, University of Chicago, and Research Associate in Fossil Vertebrates at the Museum. Bryan Patterson, Curator of Fossil Mammals, Dr. Rainer Zangerl, Curator of Fossil Reptiles, and Dr. Robert H. Denison, Curator of Fossil Fishes, participated in the instruction and acted as counselors. In addition to formal classes Curator Zangerl discussed the problem of aquatic specializa-



Dr. Everett C. Olson, Research Associate in Fossil Vertebrates, is lecturing at the Museum to the class in vertebrate paleontology of the University of Chicago.

tion in higher vertebrates, and Curator Denison gave a lecture on early fishes. Curator Patterson took part in a seminar on physical anthropology at the University of Chicago and in continental drift at Northwestern University. Eugene S. Richardson, Jr., Curator of Fossil Invertebrates, talked at Hubbard Woods School, Winnetka, Illinois, on the tidal theory of origin of the solar system. The class in historical geology at the University of Illinois (Navy Pier Branch) met twice at the Museum and examined the study collections of invertebrate fossils.

Undergraduate classes from the University of Chicago made use of the zoological laboratories and exhibition halls as in other years. Classes in mammalogy and wild-life management from the University of Wisconsin visited the Museum in December and were conducted through the preparation laboratories and collection ranges. During January and February Dr. Fritz Haas, Curator of Lower Invertebrates, held a series of demonstrations for the advanced course in invertebrate zoology of the University of Chicago. Karl P. Schmidt, Chief Curator of Zoology, and D. Dwight Davis, Curator

of Vertebrate Anatomy, continued their association with the University of Chicago as Lecturer in Zoology and Lecturer in Paleozoology, respectively. Chief Curator Schmidt presented "The Biotic Environment of the Individual" to the ecology group, and Curator Davis gave a series of three lectures before the seminar in physical anthropology. Clifford H. Pope, Curator of Amphibians and Reptiles, aided in the work of the summer school of the University of Virginia at Mountain Lake, Virginia, in exchange for much counter-aid from students and staff in his studies of salamanders.

Scientists from other institutions have continued to make use of the research materials and laboratories of the Museum. Dr. Robert F. Gray, of the University of Chicago, did research on food habits of the peoples of Africa, Dr. Mafalda Riedel, of the University of Basel, Switzerland, made a complete examination of the Museum's textiles from the New Hebrides, and Bredo Rost, teacher of handicrafts under the Chicago Board of Education, studied African leatherwork. Dr. Richard C. Thometz, of Loyola University, J. K. Woo, of the School of Medicine, Washington University, Dr. E. L. Du Brul, of the College of Dentistry, University of Illinois, and Dr. Margot Ulloa, of the University of Toronto, did research in physical anthropology related to problems of modern dentistry. Dr. Misael Acosta Solis, Director of the Ecuadorian Institute of Natural Sciences, Quito, Ecuador, spent six weeks at the Museum studying tropical timbers in preparation for his book on woods of Ecuador. Dr. Samuel Welles, of the University of California, visited the Museum to study the type specimens of *Araucarioxylon* and the *Plesiosaur* materials in the collections of the Department of Geology. Among those making use of the laboratories and collections in vertebrate anatomy were Dr. C. O. Bechtol, of Oakland, California, Frederick Barth, of the University of Chicago, Philip S. Humphrey, of Amherst College, and Dr. Du Brul. The Museum's Deep-Sea Expedition of 1948 should be especially mentioned in connection with co-operation with other institutions. Through the Bermuda Biological Station for Research, Inc., the expedition material was made available to Dr. Martha Baylor, of Rockefeller Institute, Dr. Ralph Dennell, of the University of Manchester, and Dr. Lyell J. Thomas, of the University of Illinois.

Donald Lehmer, University of Chicago Museum Fellow, spent the autumn months at the Museum studying the Cochise materials in the Department of Anthropology. Miss Ruth Marzano, University of Chicago Museum Fellow, continued her researches on the skeletons of the American Indian. Miss Margaret Murley,

graduate student of Northwestern University, worked on seeds of the Cruciferae of northeastern United States, and Hao-Jan Chu, Northwestern University student, studied blue-green algae. Robert Sokol, University of Chicago Museum Fellow, and William J. Beecher, graduate student at the University of Chicago, carried on studies in the Department of Zoology.

Other special staff activities included lectures before general groups and radio talks. Curator Cutler showed some of the work done on expedition in a television broadcast called "A Scientist Reports on South America," over station KSD-TV, of St. Louis. Curator Cutler and Curator Collier took part in a "Flying Reporter" program on radio station WAIT, telling of expeditionary activities in South America. Curator Spoehr gave a radio interview on a special museum program over station WMBI. In another field of activity, Museum zoologists were consulted in connection with the proposal for the extermination of red foxes in the Cook County Forest Preserve districts. Dr. R. M. Strong, Research Associate in Anatomy, Colin C. Sanborn, Curator of Mammals, and Chief Curator Schmidt attended hearings on the proposal before the committee of the Cook County Board of Commissioners.

Kent Jones, Preparator, is sawing a rock in the laboratories of the Department of Geology, preparatory to making a thin section for microscopic examination.



ACTIVITIES OF STAFF MEMBERS IN SCIENTIFIC SOCIETIES

Dr. Paul S. Martin, Chief Curator of Anthropology, Donald Collier, Curator of South American Ethnology and Archaeology, and Dr. John B. Rinaldo, Assistant in Archaeology, attended a large and important conference on archaeology of the Southwest held in August at Point of Pines, Arizona, the camp of the Archaeological School of the University of Arizona. Dr. Martin was chairman of the meetings on Mogollon problems and served as member of the program committee. In May Dr. Alexander Spoehr, Curator of Oceanic Ethnology, George I. Quimby, Curator of Exhibits, Curator Collier, and Dr. Rinaldo attended the annual meetings of the Society for American Archaeology and Central States Branch of the American Anthropological Association held in Milwaukee, Wisconsin. Curator Quimby was elected secretary of the Society for American Archaeology and first vice-president of the Central States Branch of the American Anthropological Association. In November Curator Quimby took part in a symposium on methods of pottery typology at the Sixth Plains Archaeological Conference in Lincoln, Nebraska. During the year Curator Collier was appointed representative of the American Anthropological Association to the National Research Council. He was appointed also to the Committee on Carbon-14 Dating of the American Anthropological Association.

Dr. Theodor Just, Chief Curator of Botany, Dr. José Cuatrecasas, Curator of Colombian Botany, and Dr. Earl E. Sherff, Research Associate in Systematic Botany, attended the meetings of the Botanical Society of America held in Washington, D.C., in September. Dr. Just was appointed chairman of the Paleobotanical Section of the Botanical Society of America and continued to serve as chairman of its Committee on Paleobotanical Nomenclature. Dr. Sherff was elected president of the American Society of Plant Taxonomists and, during the year, was made an honorary life member of Friends of Native Landscape. Dr. Julian A. Steyermark, Associate Curator of the Herbarium, was appointed Honorary Research Associate of Missouri Botanical Garden, St. Louis. Dr. L. H. Tiffany, Research Associate in Cryptogamic Botany, was elected vice-president of the American Phycological Society.

Eugene S. Richardson, Jr., Curator of Fossil Invertebrates, attended the annual meeting of the Illinois Junior Academy of Science at Benton, Illinois, in May and gave an address on major features of the earth's crust. Bryan Patterson, Curator of Fossil Mammals,

representative of the American Ornithologists' Union and served as vice-president of the Chicago Ornithological Society until June. In November Chief Curator Schmidt and D. Dwight Davis, Curator of Vertebrate Anatomy, attended the meetings in New York City of the Society for the Study of Evolution. Chief Curator Schmidt attended the Council meeting and the business meeting of the Society and presented the treasurer's annual report. He was re-elected treasurer. Both Chief Curator Schmidt and Curator Davis took part in the program.

Dr. Fritz Haas, Curator of Lower Invertebrates, was elected vice-president of the American Malacologists' Union at its meeting in Pittsburgh and, during the year, was made an honorary member of the Sociedad Malacologica "Carlos de la Torre" of Havana, Cuba. Chief Curator Schmidt and Curator Haas were honored by election to membership in the Corporation of the Bermuda Biological Station for Research, Inc. Chief Curator Schmidt was elected to the Board of Governors (Honorary) and to the Board of Trustees of the Chicago Zoological Society. Rupert L. Wenzel, Assistant Curator of Insects, was elected president of the Chicago Entomological Society. Colin C. Sanborn, Curator of Mammals, received notice of his election to corresponding membership in the Zoological Society of London.

This Museum was represented at the annual meeting of the Midwest Museums Conference in Minneapolis in October by its Director, who, as principal speaker, addressed the Conference on "The Museum and Its Relation to the Community." In February the Director delivered the annual address at the Academy of Science of St. Louis. John R. Millar, Deputy Director, attended the education symposium and other sections of the meetings of the American Association for the Advancement of Science held in Washington, D.C., in September. Miss Miriam Wood, Chief of Raymond Foundation, spoke on "Conservation Education at Chicago Natural History Museum" at a meeting in February of the Conservation Council of Chicago. John W. Moyer, Chief of the Division of Motion Pictures, attended the Calvin Motion Picture Workshop in Kansas City in November, when problems of motion-picture production were presented to people from other educational institutions and from commercial companies producing visual aids in several different media. The Librarian represented the Library of the Museum during the year at the monthly meetings of the American Library Association, Special Libraries Association, Chicago Library Club, and Illinois Regional Group of Cataloguers.

Publications of staff members during 1948 other than those issued by the Museum Press included the following titles:

DEPARTMENT OF ANTHROPOLOGY

COLLIER, DONALD

"Peruvian Stylistic Influences in Ecuador," *American Antiquity*, vol. 13, no. 4, pt. 2, pp. 80-86

MARTIN, PAUL S., GEORGE I. QUIMBY, AND DONALD COLLIER

Indians before Columbus, Twenty Thousand Years of North American History Revealed by Archeology, University of Chicago Press, Chicago [1947, second impression 1948], xxiii+582 pages, 122 illustrations

QUIMBY, GEORGE I.

"Archaeology, Western Hemisphere," in *1948 Britannica Book of the Year, A Record of . . . Events of 1947* (Encyclopaedia Britannica, Inc., Chicago [1948]), pp. 59-62

"Culture Contact on the Northwest Coast, 1785-1795," *American Anthropologist*, vol. 50, no. 2, pp. 247-255

Review of *Man in Northeastern North America*, Frederick Johnson, Editor, in *American Anthropologist*, vol. 50, no. 3, pt. 1, pp. 525-527

SPOEHR, ALEXANDER

Review of Abraham L. Gitlow's *Economics of the Mt. Hagen Tribes*, in *Scientific Monthly*, vol. 67, no. 5, pp. 381-382

Review of John Gillin's *The Ways of Men*, in *American Journal of Sociology*, vol. 59, no. 2, pp. 175-176

DEPARTMENT OF BOTANY

CUATRECASAS, JOSÉ

"Studies in South American Plants, I," *Lloydia*, vol. 11, no. 3, pp. 185-225

CUTLER, HUGH C.

"A Comparative Study of *Tripsacum australe* and Its Relatives," *Lloydia*, vol. 10, no. 4 [issued 1948], pp. 229-234

"Studies on the Structure of the Maize Plant," *Annals of the Missouri Botanical Garden*, vol. 35, no. 4, pp. 301-316 [with Marian Cutler]

DROUET, FRANCIS

"Nomenclatural Transfers among Coccoid Algae," *Lloydia*, vol. 11, no. 1, pp. 77-79 [with William A. Daily]

JUST, THEODOR

"Gymnosperms and the Origin of Angiosperms," *Botanical Gazette*, vol. 110, no. 1, pp. 91-103

"Introduction" to "Symposium on Evolution and Classification of Gymnosperms," *Botanical Gazette*, vol. 110, no. 1, pp. 1-2

STEYERMARK, JULIAN A.

"Bluets as Summer Flowers," *Missouri Botanical Garden Bulletin*, vol. 36, no. 5, p. 93

"Hens and Roosters of the Plant World," *Missouri Botanical Garden Bulletin*, vol. 36, no. 8, p. 140

"Lentibulariaceae," *Bulletin of the Torrey Botanical Club*, vol. 75, no. 6, pp. 657-662

"*Orthrosanthus chimboracensis* and Its Varieties," *Lloydia*, vol. 11, no. 1, pp. 14-20

DEPARTMENT OF GEOLOGY

RICHARDSON, EUGENE S., JR.

"Paleogeography and Nomenclature," *Journal of Paleontology*, vol. 22, no. 3, pp. 369-370

TURNBULL, WILLIAM D.

"The Cocoa-Sand Type Locality," *Journal of Paleontology*, vol. 22, no. 3, p. 372

ZANGERL, RAINER

"The Methods of Comparative Anatomy and Its Contribution to the Study of Evolution," *Evolution*, vol. 2, no. 4, pp. 351-374

"The Use of X-Rays in the Study of Fossils," *Non-Destructive Testing*, vol. 7, no. 1, pp. 29-31

DEPARTMENT OF ZOOLOGY

BLAKE, EMMET R.

"Middle Western Season Report," *Audubon Field Notes*, vol. 2, pp. 14-15

"Middle Western Season Report," *Audubon Field Notes*, vol. 2, pp. 142-143

"Middle Western Season Report," *Audubon Field Notes*, vol. 2, pp. 180-181

"Three New Records for British Guinea," *Auk*, vol. 65, pp. 316-317

DAVIS, D. DWIGHT

"Flash Display of Aposematic Colors in *Farancia* and Other Snakes," *Copeia*, 1948, pp. 208-211, 2 figures

HAAS, FRITZ

"On *Margaritifera durrovensis* Phillips and Its Affinities," *Journal of Conchology*, vol. 23, pp. 6-8

HERSHKOVITZ, PHILIP

"Mammals of Northern Colombia, Preliminary Report No. 2: Spiny Rats (Echimyidae), with Supplemental Notes on Related Forms," *Proceedings of the United States National Museum*, vol. 97, pp. 125-140

"Mammals of Northern Colombia, Preliminary Report No. 3: Water Rats (Genus *Nectomys*), with Supplemental Notes on Related Forms," *Proceedings of the United States National Museum*, vol. 98, pp. 49-56

"Names of Mammals Dated from Frisch, 1775, and Zimmermann, 1777," *Journal of Mammalogy*, vol. 29, pp. 272-277

"The Technical Name of the Virginia Deer, with a List of the South American Forms," *Proceedings of the Biological Society of Washington*, vol. 61, pp. 41-48

INGER, ROBERT F.

"The Systematic Status of the Crocodile *Osteoblepharon osborni*," *Copeia*, 1948, pp. 15-19, 2 figures

POPE, CLIFFORD H.

"Geographic Variation and Speciation in Appalachian Salamanders (*Plethodon jordani* Group)," *Evolution*, vol. 2, pp. 266-278, 11 figures [with Nelson G. Hairston]

Island Life, A Study of the Land Vertebrates of the Islands of Eastern Lake Michigan, Cranbrook Institute of Science, Bulletin No. 27 [Bloomfield Hills, Michigan, 1948], xi+179 pages, frontispiece, map, 43 figures [with Robert T. Hatt and others]

"Two New Subspecies of the Salamander *Plethodon shermani*," *Copeia*, 1948, pp. 106-107 [with Nelson G. Hairston]

RAND, AUSTIN L.

"Geographical Variation in the Loon, *Gavia immer* (Brunnich)," *Canadian Field-Naturalist*, vol. 61, p. 193-195

"Mr. W. H. Bryenton's Notes on Manitoba Mammals of the Herb Lake-Flin Flon Area," *Canadian Field-Naturalist*, vol. 62, pp. 140-150

"Note on the Red Crossbills in the Ottawa District," *Canadian Field-Naturalist*, vol. 62, pp. 162-163

"Probability in Subspecific Identification of Single Specimens," *Auk*, vol. 65, pp. 416-432

"Stomach Stone in a Muskrat," *Canadian Field-Naturalist*, vol. 62, p. 41 [with P. A. Orkin]

"Summer Flocking of the Loon, *Gavia immer* (Brun.)," *Canadian Field-Naturalist*, vol. 62, pp. 42-43, 1 photograph

"Variation in the Spruce Grouse in Canada," *Auk*, vol. 65, pp. 33-40

SANBORN, COLIN C.

"Wilfred Hudson Osgood: 1875-1947," *Journal of Mammalogy*, vol. 29, pp. 95-112, 3 plates

SCHMIDT, KARL P.

"Distribution of Animals," in *Encyclopedia Britannica* [1948], vol. 7, pp. 432-443, 9 figures, 4 colored plates [with Richard Hesse and W. C. Allee]

WOODS, LOREN P.

"*Acanthurus triostegus marquensis*, A New Subspecies of Surgeonfish, Family Acanthuridae, with Notes on Related Forms," *Journal of the Washington Academy of Sciences*, vol. 38, pp. 248-251, 1 figure, 1 table [with Leonard P. Schultz]

"A New Name for *Synchiropus altivelis* Regan, with a Key to the Genera of the Fish Family Callionymidae," *Journal of the Washington Academy of Sciences*, vol. 38, pp. 419-420 [with Leonard P. Schultz]

DIVISION OF MOTION PICTURES

MOYER, JOHN W.

"Taxidermy," in *Encyclopedia Britannica* [1948], vol. 21, pp. 850D-850E, 3 plates

"Taxidermy," in *Britannica Junior* [1948], vol. 14, pp. 24-26, 3 plates

Several staff members of the Museum serve in editorial capacities on scientific journals. Curator Spoehr was appointed book-review editor of the *American Anthropologist*, and Curator Collier continued as contributing editor of *El Palacio*. Chief Curator Just is editor of *Lloydia* and member of the editorial board of *Ecology* and *Chronica Botanica*, and Dr. Sherff is on the editorial board of *Brittonia*. Chief Curator Schmidt is herpetological editor of *Copeia*, consulting editor for lower invertebrates for *American Midland Naturalist*, and section editor for amphibians and reptiles for *Biological Abstracts*. Associate Curator Blake was appointed editor of the "Middle Western Season Report" of *Audubon Field Notes*. Curator Zangerl continued as regional editor of the bulletin of the Society of Vertebrate Paleontology.

PUBLIC RELATIONS

The public was kept aware constantly throughout the year of the activities of the Museum through continuance of the long-established policy of maintaining a continuous flow of news stories, feature articles, and pictures covering events that transpired at the institution. In all, the Public Relations Counsel issued 302 news releases, many of them accompanied with photographs, to the metropolitan press of Chicago, to the press of hundreds of other cities all over the country, and through international news agencies to the rest of the world. All news releases were sent also to the community and foreign-language newspapers of Chicago, the dailies and weeklies of the suburbs, and newspapers of upstate and downstate Illinois.

The Museum is indebted to the Chicago newspapers and the national press organizations for their interest and co-operation and for generous space in the news columns. Beyond the routine publication of news from the Museum, there were numerous spreads of pictures not only in the black-and-white of the dailies but also in rotogravure supplements. Acknowledgment of co-operation is made particularly to the *Chicago Daily News*, *Chicago Daily Sun-Times*,



Dr. Hugh C. Cutler, Curator of Economic Botany, is shown collecting flowers of the guano palm of Cuba during Cuban Botanical Field Trip, 1948. The continuing palm project is being carried on by Curator Cutler and Dr. B. E. Dahlgren, Curator Emeritus of Botany.

Chicago Tribune, *Chicago Herald-American*, Associated Press, United Press, International News Service, Acme News Pictures, and Science Service. An especially valuable aid to the Museum was the courtesy of the City News Bureau of Chicago in making available its pneumatic tubes for the transmission of urgent "spot" news.

At the invitation of radio station WCFL, the Museum began in March a series of stories on the "Children's Corner" program. These continued each Saturday and Sunday through the rest of the year, and no cessation was contemplated with the approach of 1949. Material for the programs was supplied by the staff of the Raymond Foundation. Another special series of programs, in which the Director of the Museum and members of the four scientific departments were presented to tell the story of Museum research, was given on radio station WMBI. The Museum continued to receive other radio time, both in news and special-feature programs, on Chicago radio stations and national networks. Among them are WGN, WIND, WMAQ, WBBM, WENR, WLS, WJJD, American Broadcasting Company, Columbia Broadcasting System, National Broadcasting Company, and Mutual Broadcasting System. In the motion picture field, as a follow-up of a similar feature published in rotogravure by the *Chicago Daily News*, a newsreel feature was made in March by Fox-Movietone of models from the Patricia Stevens Studios wearing fur coats of primitive peoples.

Beginning with the February issue, a "new dress" was adopted for the Museum *Bulletin*. The new format, full-page cover pictures, aroused more favorable comment than almost any other innovation during the nineteen years in which the Museum has published this periodical for its membership. The *Bulletin* continued to function not only as an organ for the information of Members but also as an additional publicity medium, for it is circulated to the full list of newspapers, news agencies, and magazines, many of which reprinted its articles.

Miscellaneous publicity activities consisted of the distribution of thousands of Museum folders through available agencies, such as travel bureaus, department stores, libraries, and seven Chicago museums covering other fields of science and art. Display facilities were again made available, without charge, for posters announcing the Museum's lecture course for adults and the Raymond Foundation motion-picture programs for children. Organizations that extended this co-operation included the Chicago Transit Authority, Illinois Central System, the Chicago, Aurora and Elgin Railroad, and the Chicago and North Western Railway.

THE BOOK SHOP

Sales in the Museum's Book Shop amounted to \$24,614.28, which included both over-the-counter transactions and orders received in the mail. There has been no persistent attempt to increase the volume of sales at the Book Shop because it is regarded primarily as a service unit, catering to the needs of the public in fields of study encompassed by the Museum. Careful selection of publications in order to present only authoritative texts necessarily limits the offerings of the Book Shop, but there is no intention of abandoning this policy in favor of greater volume. An increasing demand for souvenir items has been responsible in recent years for an appreciable number of sales.

CAFETERIA

Again the Museum's cafeteria reached a new record in the number of customers served, the total increase for both cafeteria and lunch-room being 3,458 and the grand total for the year being 249,102. The cafeteria is regarded primarily as a service unit because the Museum is located at a considerable distance from any other lunch-room open to the public. Facilities are also available for groups of school children and others who bring their lunches and who may or may not wish to supplement them by additional purchases.

MAINTENANCE, CONSTRUCTION, AND ENGINEERING

Constant vigilance and persistent repair work are needed to maintain the Museum building in good condition and its equipment in working order. During the year two light courts in the east wing of the building were thoroughly tuckpointed and broken terra-cotta sills and lintels were replaced. This work will continue until all six light courts have been reconditioned. Window sills on the ground floor were replaced with reinforced concrete wherever they showed damage, and window frames were protected against termites with a wood preservative. To eliminate condensation of moisture on the glass and to serve as storm protection, double window panes were installed in the offices of the chief curators.

Frederick J. V. Skiff Hall (Hall 37, Fossil Invertebrates and Fossil Plants) was completely remodeled into six sections with a total of fifty-three built-in cases to house the exhibition collections of invertebrate fossils and fossil plants (see page 51). Steel shelving that had been on order for several years was delivered and set up

in the new stackroom of the Library. A storage room for the Department of Botany was constructed in a portion of the corridor on the third floor, and asphalt tile floors were laid in the north corridor of the ground floor and in the children's lunchroom. A new walk-in refrigerator was built for the cafeteria and a larger dish-washing machine was purchased and connected. A multiplicity of expedition boxes, cases, trunks, and crates, storage trays and shelves, bookcases, and exhibition cases were constructed for the scientific departments.

A new type of lighting was designed and installed in Martin A. and Carrie Ryerson Hall (Hall 29, Plant Life) to illuminate the exhibition cases and murals more effectively (see page 45). Installation of fluorescent lighting was continued throughout the building and a total of sixty-seven fluorescent light fixtures was hung. A new press in the Division of Printing necessitated moving the monotype machines to a new location, which move was accomplished with an interruption of but two hours in operation of the machines. The old printing press was moved and reconnected, and power lines were supplied for the new press. A new machine for degreasing bones and other materials was installed in the ground-floor macerating room, and necessary drains, water, gas, and ventilating ducts were provided. A degreaser is essential in a museum because skulls and skeletons intended for permanent storage must be completely free from fats, which decompose and ultimately destroy the bones.

Because of the opening of the Island Airport southeast of the Museum, warning lights were installed on the roof of the Museum building. A new air compressor was installed in the ground-floor pump room and pipe lines were painted. All needed repairs were made during the year in the heating plant, and the four boilers were cleaned. Under contracts in force, a total of 16,358,789 pounds of steam was sold to the John G. Shedd Aquarium and 16,979,460 pounds to the Chicago Park District, a total of 33,338,249 pounds delivered during the year.

In the pages that follow are submitted the Museum's financial statements (1947, 1948), attendance statistics and door receipts (1947, 1948), list of accessions, list of Members, articles of incorporation, and amended by-laws.

CLIFFORD C. GREGG, *Director*
Chicago Natural History Museum

COMPARATIVE FINANCIAL STATEMENTS

FOR YEARS 1947 AND 1948

INCOME	1948	1947
Endowment funds.....	\$655,156.94	\$641,264.02
Funds held under annuity agreement.....	16,250.00	17,839.28
Life Membership fund.....	8,957.65	9,071.61
Associate Membership fund.....	11,739.92	11,729.14
Chicago Park District.....	118,038.05	132,071.98
Annual and Sustaining Memberships.....	18,525.00	17,850.00
Admissions.....	32,211.25	34,420.00
Sundry receipts.....	26,461.23	31,659.80
Contributions, general purposes.....	641.00	634.00
Contributions, special purposes (expended <i>per contra</i>).....	117,590.21	82,968.46
Special funds—part expended for purpose designated (included <i>per contra</i>)....	<u>13,935.24</u>	<u>22,752.47</u>
	\$1,019,506.49	\$1,002,260.76
EXPENDITURES		
Collections.....	\$ 28,478.96	\$ 25,130.65
Operating expenses capitalized and added to collections.....	55,036.99	44,878.63
Expeditions.....	49,178.50	25,998.04
Furniture, fixtures, etc.....	110,036.31	152,803.20
Wages capitalized and added to fixtures.....	2,981.16	6,143.85
Pensions and group insurance.....	68,860.25	59,583.62
Departmental expenses.....	79,212.61	83,087.30
General operating expenses.....	521,897.48	516,766.70
Building repairs and alterations.....	76,672.37	73,311.23
Annuity on contingent gift.....	16,250.00	25,000.00
	<u>\$1,008,604.63</u>	<u>\$1,012,703.22</u>
Deficit.....		\$ 10,442.46
Balance..	<u>\$ 10,901.86</u>	

The N. W. Harris Public School Extension

	1948	1947
Income from endowments..	\$ 17,493.74	\$ 18,142.03
Expenditures.....	<u>19,649.22</u>	<u>21,306.08</u>
Deficit.....	<u>\$ 2,155.48</u>	<u>\$ 3,164.05</u>

COMPARATIVE ATTENDANCE STATISTICS AND DOOR RECEIPTS

FOR YEARS 1947 AND 1948

	1948		1947
Total attendance.	1,134,643		1,183,308
Paid attendance.	128,845		137,680
Free admissions on pay days:			
Students	26,721		26,522
School children	71,285		68,230
Teachers	2,672		2,815
Members	402		474
Service men and women	1,581		1,696
Special meetings	871		6,120
Admissions on free days:			
Thursdays (52)	143,502	(51)	129,586
Saturdays (51)	274,785	(52)	300,990
Sundays (52)	483,979	(52)	509,195
Highest attendance on any day			
(July 4)	14,609	(November 29)	16,789
Lowest attendance on any day			
(March 3)	165	(January 7)	124
Highest paid attendance (July 5)	3,616	(September 1)	4,930
Average daily admissions (364 days)	3,117	(363 days)	3,260
Average paid admissions (209 days)	616	(208 days)	662
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Number of guides sold	23,810		23,329
Number of articles checked	40,836		38,023
Number of picture post cards sold	241,776		245,081
Sales of publications, both scientific and popular, and photographs	\$11,898.41		\$11,832.34

ACCESSIONS, 1948

DEPARTMENT OF ANTHROPOLOGY—ACCESSIONS

BRUEHL, W. A. R., JR., Cincinnati: 2 Eskimo baskets—Port Clarence, Alaska (gift).

CHEO, DR. NEIL H. F., Chengtu, China: 4 Chinese musical instruments—Chengtu, Szechwan Province, China (gift).

CHICAGO HISTORICAL SOCIETY, Chicago: 5 ethnohistorical specimens for exhibit explaining stratigraphy, Hall B (exchange).

CHICAGO NATURAL HISTORY MUSEUM:
Collected by Dr. Paul S. Martin (Southwest Archaeological Expedition, 1948): 252 specimens, including stone and bone artifacts, shell ornaments, pottery vessels and sherds, 1 clay figurine, and 1 skeleton—near Reserve, New Mexico.

Purchases: 331 ethnological specimens from Cubeo, Desano, and other Rio Vaupés tribes in Colombia, South America, and photographic negatives covering same region; 1 vegetable dye Navaho rug from Wide Ruin, Arizona.

CRANBROOK INSTITUTE OF SCIENCE, Bloomfield Hills, Michigan: 3 ethnohistorical specimens for exhibit explaining stratigraphy, Hall B—Michigan and Indiana (exchange).

CUMP, PERCY W., JR., Chicago: model of canoe—Kiriwina, Trobriand Islands (gift).

FIELD, JOSEPH N., Lake Forest, Illinois: 2 beaded yokes, 2 pairs of beaded cuffs for women's costumes—Greenland (gift).

GREGORY, MRS. ALICE H., Chicago: 4 costumed dolls, groups of dolls—Guatemala (gift).

SARGENT, HOMER E., Pasadena, California: 25 pieces of Kabyle jewelry—Algeria (gift).

SPOOR, MRS. JOHN A. (deceased): 1 Greek vase, 1 Egyptian figurine (gift).

UNIVERSITY OF CALIFORNIA, DEPARTMENT OF ANTHROPOLOGY, Berkeley: 10 pottery sherds—Viti Levu, Fiji Islands (gift).

UNIVERSITY OF CHICAGO, DEPARTMENT OF ANTHROPOLOGY, Chicago: 8 archaeological specimens—Illinois (gift).

UNIVERSITY OF ILLINOIS, COLLEGE OF MEDICINE, DEPARTMENT OF ANATOMY, Chicago: 1 male pelvis—Chicago (gift).

WARNER, PAUL J., Chicago: 2 brass bells—North and South Dakota (gift).

DEPARTMENT OF BOTANY—ACCESSIONS

ABBOTT, CHARLES C., West Chester, Pennsylvania: 1 cryptogamic specimen (gift).

ACOSTA SOLÍS, PROFESSOR MISAEL, Quito, Ecuador: 1 cryptogamic specimen, 49 microscope slides of wood sections (gift).

ANDERSEN, SVEND, Copenhagen, Denmark: 1 plant specimen (gift).

ANGULO, DR. NICOLÁS, Trujillo, Peru: 30 specimens of Peruvian plants (gift).

BAILEY HORTORIUM, Ithaca, New York: 1 plant specimen (gift).

BARBOSA, LUIS AUGUSTO GRANDVAUX, Lourenco Marques, Africa: 28 specimens of African plants (gift).

BARKLEY, DR. FRED A., Medellín, Colombia: 10 cryptogamic specimens (gift).

BASCHANT, DR. R., Steyr, Austria: 46 specimens of bryophytes (exchange).

BAUER, BILL, Webster Groves, Missouri: 12 specimens of Missouri plants (gift).

BLUM, DR. J. L., Buffalo: 74 specimens of algae (gift).

BRANNON, DR. M. A., Gainesville, Florida: 86 specimens of algae (gift).

BRITTON, DR. MAX E., Evanston, Illinois: 154 specimens of plants from the Dutch East Indies (gift).

BROWN, DR. WILLIAM L., Johnston, Iowa: 10 ears of corn (gift).

CAIN, DR. STANLEY A., Bloomfield Hills, Michigan: 20 specimens of algae (gift).

CARTER, DR. ANNETTA, Berkeley, California: 9 specimens of fresh-water algae (gift).

CASTAÑEDA, DR. RAFAEL ROMERO, Bogotá, Colombia: 77 specimens of Colombian plants (gift).

CHANDLER, ALBERT, St. Louis: 1 plant specimen (gift).

CHAPMAN, DR. V. J., Auckland, New Zealand: 1 specimen of *Sirocoleum* (gift); 16 specimens of algae (exchange).

CHICAGO NATURAL HISTORY MUSEUM: Collected by Dr. Hugh C. Cutler: 14 plant specimens from Bolivia; 103 plant specimens from Mexico, Texas, and Arizona; (Desloge Peruvian Botanical Expedition, 1948) 22 ears of corn.

Collected by Dr. B. E. Dahlgren (Cuban Botanical Field Trip, 1948): 156 collections (about 600 items) of Cuban palm material, 686 negatives.

Transferred from the Division of Photography: 29 photographic prints.

Purchases: 310 plant specimens—Uruguay; 523 orchid specimens—Brazil; 615 miscellaneous plant specimens; 2,498 specimens of algae—New Brunswick; 100 moss specimens—Japan; 124 specimens and 34 lots (number of specimens not given) of mosses—New Zealand; 197 miscellaneous specimens of bryophytes; 500 cryptogamic specimens—Czechoslovakia; 259 cryptogamic specimens—Europe.

CHU, HAO-JAN, Evanston, Illinois: 36 specimens of algae (gift).

COLEGIO DE LA SALLE, Vedado, Havana, Cuba: 51 cryptogamic specimens (exchange).

COLORADO STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, Fort Collins: 4 plant specimens (gift).

CONARD, DR. HENRY S., Grinnell, Iowa: 27 specimens of bryophytes (exchange).

CONDIT, PROFESSOR IRA J., Riverside, California: 10 specimens of *Ficus* (gift).

CONSERVATOR OF FORESTS, Belize, British Honduras: 5 plant specimens (gift).

CUTLER, DR. HUGH C., Chicago: 69 plant specimens, 10 cryptogamic specimens, 50 ears of corn (gift).

DAILY, WILLIAM A., Indianapolis, Indiana: 143 specimens of algae (exchange).

DALMAT, CAPTAIN HERBERT T., New Orleans: 43 plant specimens from Guatemala (gift).

DARROW, DR. ROBERT A., Tucson, Arizona: 45 specimens of lichens (exchange).

DAWSON, DR. E. YALE, Los Angeles: 90 specimens of algae (gift).

DETONI, DR. GIUSEPPE, Brescia, Italy: 1 cryptogamic specimen (gift).

DILLER, DR. VIOLET M., Cincinnati: 19 specimens of algae in cultures (gift).

DOTY, DR. MAXWELL S., Evanston, Illinois: 104 cryptogamic specimens (gift).

DROUET, DR. FRANCIS, Chicago: 275 cryptogamic specimens (gift).

ECHEVERRIA, DR. JOSÉ ANTONIO, San José, Costa Rica: 97 specimens of Costa Rican plants (gift).

EHRHARDT, ROBERT P., Gambier, Ohio: 2 cryptogamic specimens (gift).

ESCUELA AGRÍCOLA PANAMERICANA, Tegucigalpa, Honduras: 2,498 plant specimens from Central America (exchange).

FACULTAD NACIONAL DE AGRONOMÍA, Medellín, Colombia: 342 specimens of Colombian plants (gift).

FEIGLEY, MARGARET, Wilmette, Illinois: 57 cryptogamic specimens (gift).

FELL, DR. EGBERT W., Rockford, Illinois: 4 plant specimens (gift).

FERREYRA, DR. RAMON, Lima, Peru: 30 specimens of algae (gift).

FISHER, GEORGE L., Houston, Texas: 20 specimens of algae (gift).

FLINT, DR. SAM E., Portland, Oregon: 7 specimens of algae in cultures (gift).

FOGELBERG, DR. S. O., Elon College, North Carolina: 1 cryptogamic specimen (gift).

FOTT, DR. BOHUSLAV, Prague, Czechoslovakia: 39 cryptogamic specimens (exchange).

FRENKEL, DR. A. W., Minneapolis: 1 cryptogamic specimen (gift).

FULLER, DR. GEORGE D., Chicago: 33 plant specimens from Illinois and California (gift).

FULLER, DR. HARRY J., Urbana, Illinois: 2 plant specimens (gift).

GIER, DR. I. J., Liberty, Missouri: 52 specimens of algae (gift).

GOMEZ, DR. RAMON, Havana, Cuba: 43 wood samples (gift).

GRAHAM, DR. VERNE O., Chicago: 1 plant specimen (gift).

GULDNER, DR. LUDWIG F., Davenport, Iowa: 6 plant specimens (gift).

HAAS, DR. T. P., Philadelphia: 1 cryptogamic specimen (gift).

HABEER, DR. HERBERT, Grand Falls, New Brunswick, Canada: 22 specimens of algae (gift).

HAMILL, MRS. ALFRED, Lake Forest, Illinois: 1 plant specimen (gift).

HANKLA, DONALD J., Carbondale, Illinois: 2 cryptogamic specimens (gift).

HEATH, CHARLES A., Chicago: 12 specimens of corn and beans (gift).

HECKER, RICHARD C., Urbana, Illinois: 1 cryptogamic specimen (gift).

HERTER, DR. W. O., Montevideo, Uruguay: 9 specimens of algae (gift).

HUMM, DR. HAROLD J., Beaufort, North Carolina: 56 specimens of algae (gift).

HUMPHREYS, PAUL, Whiting, Indiana: 35 specimens of plants from Norway (gift).

INGER, MRS. ROBERT F., Chicago: 2 cryptogamic specimens (gift).

INSTITUTO DE BOTÁNICA DARWINION, San Isidro, Argentina: 50 specimens of Argentine plants (exchange).

INSTITUTO DEL MUSEO, UNIVERSIDAD DE LA PLATA, La Plata, Argentina: 303 specimens of Argentine plants (exchange).

INSTITUTO MIGUEL LILLO, UNIVERSIDAD DE TUCUMÁN, Tucumán, Argentina: 1,919 specimens of Argentine plants (exchange).

JARDIM BOTANICO DO RIO DE JANEIRO, Rio de Janeiro, Brazil: 48 specimens of Rubiaceae (exchange).

KARLING, DR. JOHN S., New York: 6 cryptogamic specimens (gift).

KIENER, DR. WALTER, Lincoln, Nebraska: 180 specimens of algae (gift); 154 specimens of Juniperus, 73 specimens of cryptogams (exchange).

LACÁS, PROFESSOR M. M., Laredo, Texas: 56 plant specimens, 38 cryptogamic specimens (gift).

LASSER, DR. TOBIAS, Caracas, Venezuela: 208 specimens of Venezuelan plants (exchange).

LEITE, REVEREND BROTHER JOSÉ EUGENIO, Nova-Friburgo, Brazil: 119

specimens of Brazilian plants (exchange).

LEON, REVEREND BROTHER, Havana, Cuba: 30 specimens of Cuban plants (gift); 168 photographs of Cuban palms (exchange).

LEWIN, R. A., New Haven, Connecticut: 2 cryptogamic specimens (gift).

LONG, LEWIS E., Bluefields, Nicaragua: 202 plant specimens and a large collection of seeds from Nicaragua (gift).

MACBRIDE, J. FRANCIS, Palo Alto, California: 87 cryptogamic specimens, 6 samples of breadstuffs (gift).

MANGELSDORF, DR. PAUL C., Cambridge, Massachusetts: 11 ears of corn (gift).

MARKLE, DR. M. S., Richmond, Indiana: 17 specimens of algae (gift).

MATUDA, EIZI, Escuintla, Chiapas, Mexico: 769 specimens of Mexican plants (gift).

MAXON, DR. WILLIAM R., Terra Ceia, Florida: 1 cryptogamic specimen (gift).

MAY, DR. VALERIE, Cronulla, New South Wales, Australia: 16 specimens of algae (gift).

MERRILL, DR. ELMER D., Jamaica Plain, Massachusetts: 2 specimens of Metasequoia (gift).

MISSOURI BOTANICAL GARDEN, St. Louis: 630 plant specimens, 8 ears of corn (exchange).

MITCHELL, RODGER D., Wayne, Illinois: 1 plant specimen (gift).

MOLDENKE, HAROLD N., New York: 6 plant specimens (gift); 49 plant specimens, 133 photographic prints (exchange).

MOORE, GEORGE E., Glencoe, Missouri: 6 plant specimens (gift).

MORTON ARBORETUM, Lisle, Illinois: 1 plant specimen (gift).

MUSEO NACIONAL, San José, Costa Rica: 366 specimens of Costa Rican Plants (gift).

NATIONAL HERBARIUM, BOTANIC GARDENS, Sydney, Australia: 133 specimens of plants from New South Wales (exchange).

NEW YORK BOTANICAL GARDEN, New York: 1 plant specimen (gift); 513 plant specimens, 10 cryptogamic specimens, 10 photographic prints (exchange).

NIELL, GEORGE N., Tarenton, Pennsylvania: 3 specimens of algae (gift).

NIELSEN, DR. CHESTER S., Tallahassee, Florida: 294 specimens of algae (gift).

NIELSEN, DR. JENS E., Chicago: 31 specimens of diatoms (gift).

PALMER, DR. C. M., Calcutta, India: 1 cryptogamic specimen (gift).

PATRICK, DR. RUTH, Philadelphia: 35 cryptogamic specimens (gift).

PETERSEN, OSCAR, Glendale, Missouri: 3 specimens of *Quercus* (gift).

PLAGGE, DR. JAMES, Barrington, Illinois: 70 specimens of Iowa plants (gift).

PRIOR, SOPHIA, Chicago: 4 specimens of plants from New Caledonia (gift).

RAMBO, FATHER B., Porto Alegre, Rio Grande do Sul, Brazil: 125 specimens of Brazilian plants (exchange).

ROBBINS, PROFESSOR G. THOMAS, Ada, Oklahoma: 1 plant specimen (gift).

RODRIGUEZ, DR. A., Madrid, Spain: 1 economic specimen (gift).

ROUSSEAU, DR. JACQUES, Montreal, Canada: 13 specimens of algae (gift).

ROYAL BOTANIC GARDENS, Kew, Surrey, England: 815 plant specimens (exchange).

RUBINSTEIN, DR. JOSEPH, Chicago: 9 cryptogamic specimens (gift).

RUNK, DR. B. F. D., Charlottesville, Virginia: 70 specimens of algae (exchange).

SANBORN, COLIN C., Highland Park, Illinois: 78 specimens of Arkansas plants, 25 cryptogamic specimens (gift).

SCHALLERT, DR. P. O., Orlando, Florida: 11 specimens of algae (gift); 7 specimens of algae (exchange).

SHERFF, DR. EARL E., Chicago: 26 plant specimens, 14 negatives, 15 photographic prints (gift).

SILVA, HERMAN, East Lansing, Michigan: 218 specimens of algae (gift).

SMITH, DR. ALBERT C., Washington, D.C.: 10 specimens of algae (gift).

SOUKUP, PROFESSOR J., Lima, Peru: 117 specimens of Peruvian plants (gift).

STATE UNIVERSITY OF IOWA, DEPARTMENT OF BOTANY, Iowa City: 506 specimens of Iowa plants (exchange).

STATE UNIVERSITY OF IOWA, HERBARIUM, Iowa City: 32 specimens of Iowa plants (exchange).

STEPHENSON, DR. T. A., Aberystwyth, Wales: 524 specimens of algae (gift).

STEYERMARK, MRS. CORA, Barrington, Illinois: 105 specimens of plants

from western United States, 1 photographic print (gift).

SUTLIFF, MRS. E. C., San Francisco: 69 specimens of hepatics (exchange).

SWINK, FLOYD, Chicago: 1 plant specimen (gift).

TASMANIAN FORESTRY COMMISSION, Hobart, Tasmania: 1 board of King William pine (gift).

TAYLOR, DR. WILLIAM RANDOLPH, Ann Arbor, Michigan: 13 specimens of algae (gift).

UNITED STATES NATIONAL MUSEUM, Washington, D.C.: 133 plant specimens, 2 cryptogamic specimens (exchange).

UNIVERSITY OF ADELAIDE, DEPARTMENT OF BOTANY, Adelaide, Australia: 78 plant specimens, 156 specimens of marine algae (exchange).

UNIVERSITY OF ARIZONA, DEPARTMENT OF BOTANY, Tucson: 142 specimens of Arizona plants (exchange).

UNIVERSITY OF CALIFORNIA, DEPARTMENT OF BOTANY, Berkeley: 6 specimens of cultivated plants, 10 specimens of algae (gift); 1,403 specimens of cultivated plants, 835 plant specimens from Central and South America, 1,272 cryptogamic specimens (exchange).

UNIVERSITY OF ILLINOIS, DEPARTMENT OF BOTANY, Urbana: 130 specimens of Illinois plants (exchange).

UNIVERSITY OF MICHIGAN, DEPARTMENT OF BOTANY, Ann Arbor: 996 plant specimens, 367 cryptogamic specimens (exchange).

UNIVERSITY OF PENNSYLVANIA, DEPARTMENT OF BOTANY, Philadelphia: 57 specimens of mosses (exchange).

UNIVERSITY OF SOUTHERN CALIFORNIA, ALLAN HANCOCK FOUNDATION, Los Angeles: 737 plant specimens, 347 specimens of marine algae (exchange).

UNIVERSITY OF TEXAS, DEPARTMENT OF BOTANY, Austin: 20 specimens of *Ruellia* (gift).

UNIVERSITY OF WASHINGTON, DEPARTMENT OF BOTANY, Seattle: 112 plant specimens (exchange).

VAN HORN, MRS. GEORGE E., Casa Grande, Arizona: 1 cryptogamic specimen (gift).

VARGAS, DR. CÉSAR, Cuzco, Peru: 50 specimens of Peruvian plants (gift).

VATTER, DR. ALBERT E., Chicago: 5 specimens of algae (gift).

VOGL, REVEREND FATHER CORNELIUS, Caracas, Venezuela: 2 specimens of seeds of *Ormosia* (gift).

WADE, W. E., East Lansing, Michigan: 9 specimens of algae (gift).

WHITEHOUSE, DR. EULA, Dallas, Texas: 87 specimens of algae (gift).

WILLIAMS, DR. LOUIS G., Beaufort, North Carolina: 1 cryptogamic specimen (gift).

WOMERSLEY, DR. H. B. S., Adelaide, Australia: 6 specimens of algae (gift).

WYNNE, DR. FRANCES E., Chicago: 36 specimens of mosses (gift).

YALE UNIVERSITY, OSBORN BOTANICAL LABORATORY, New Haven, Connecticut: 12,000 specimens of algae (exchange).

YOUNG, MARY, Boyce, Virginia: 14 specimens of Solanaceae (gift).

DEPARTMENT OF GEOLOGY—ACCESSIONS

ACADEMY OF NATURAL SCIENCES, Philadelphia: collection of invertebrate fossils—various localities (exchange).

AMERICAN BRASS COMPANY, Waterbury, Connecticut: 27 economic geology specimens—various localities (gift).

ANACONDA COPPER MINING COMPANY, Butte, Montana: 7 mineral specimens—Butte, Montana; collection of economic geology specimens—various localities (gift).

BAKEWELL, A. A., Solon Springs, Wisconsin: collection of fossil shells—Caloosahatchie Canal, Florida (gift).

BINGHAM, WILLIAM J., St. Paul: 26 semiprecious gem specimens—various localities (gift).

BRANDT, KARL, British Zone, Germany: 4 fossil plant specimens—Hagen, Vorhalle (exchange).

CHICAGO NATURAL HISTORY MUSEUM: Collected by Harry E. Changnon (Eastern States Geological Expedition, 1947): collection of rock, mineral, and ore specimens—various localities.

Collected by Harry E. Changnon and Robert Kriss Wyant (Southwest Geological Field Trip, 1948): collection of rock and ore specimens—various localities.

Collected by George Langford: 730 fossil plant specimens—Wilmington, Illinois.

Collected by George Langford and Orville L. Gilpin (Wilmington Field Trips, 1948): 954 fossil flora specimens, 83 fossil fauna specimens—Wilmington and Braidwood, Illinois.

Collected by Eugene S. Richardson, Jr., and Alan Jager (Southern Illinois Field Trip, 1948): 177 fossil invertebrates—Illinois.

Collected by Dr. Sharat K. Roy: (Field Museum Expedition to Erie

County, New York, 1941) 9 vertebrate fossil specimens—Erie County, New York; 50 economic geology specimens—various localities in India.

Collected by Dr. Rainer Zangerl and William D. Turnbull (Wyoming Paleontological Expedition, 1948): collection of fossil mammals, fossil reptiles, fossil fishes, and fossil invertebrates—various localities.

Transferred from the Department of Zoology: 1 fossil clam specimen—Amazon Basin.

Purchases: 2 Sabellaria worm specimens—North Sea; fossil plant collection—Germany; shattuckite specimen—Arizona; 7 fossil turtles—Kansas.

COMER, EARL, South Bend, Indiana: 5 fossil shark teeth—Everglades, Florida (gift).

DONOR UNKNOWN: 10 shark teeth—Calvert County, Maryland (collected).

DUPONT, JAMES M., Chatham, New Jersey: 2 silicified wood specimens, 15 marine invertebrate specimens—various localities (gift).

EAGLE PICHER RESEARCH LABORATORY, Joplin, Missouri: 8 samples of lead and zinc by-products (gift).

FIELD, HENRY, Washington, D.C.: 1 box of sand—Freeport, Maine (gift).

FRIZ, DR. CARLOS A., Chicago: 98 rock and mineral specimens—various localities (gift).

GOTHAM, W., Merseburg, Prussia: 2 fragments of fossil rubber plants—Prussia (exchange).

GRIESBACH, JOHN O., Duluth: 3 invertebrate fossils, 1 fossil fish—various localities (gift).

GROSVENOR, CAPTAIN RICHARD, Canal Zone, Panama: 6 groups of zeolite specimens, 2 groups of stilbite crystals, 1

pectolite specimen, 1 heulandite specimen—Canal Zone, Panama (gift).

HACKENBARY, ELMER, SR., Pine Ridge, South Dakota: check region of an oregon skull—Shannon County, South Dakota (gift).

HAWK, ROBERT M., Denver: 5 nephrite fragments—Long Creek Mine, Colorado (gift).

LANGFORD, GEORGE, Chicago: 617 fossil plant specimens—Wilmington, Illinois (gift).

LOOK, ALFRED A., Grand Junction, Colorado: 25 specimens of barite crystals—Appleton, Colorado (gift).

MOE, EDWIN, Chicago: 2 ammonite specimens—Black Hills, South Dakota (gift).

NEW JERSEY ZINC COMPANY, New Jersey: 19 rare mineral specimens—various localities (gift).

PERRY, STUART H., Adrian, Michigan: 5 meteorite specimens—various localities (gift).

PLUMMER, ROY O., San Diego: slab of Pliocene fossils, concretion with snail shell—San Diego (exchange).

PRINCETON UNIVERSITY, Princeton, New Jersey: 26 invertebrate fossil specimens—various localities (exchange).

REPUBLIC STEEL CORPORATION, Massillon, Ohio: collection of economic geology specimens—various localities (gift).

REYNOLDS METALS COMPANY, Richmond, Virginia: 38 aluminum samples (gift).

REYNOLDS MINING COMPANY, Alexander, Arkansas: 3 bauxite specimens—Arkansas (gift).

RICHARDSON, EDWARDS N., Winnetka, Illinois: 1 invertebrate fossil specimen—Racine, Wisconsin (gift).

RICHARDSON, EUGENE S., JR., Winnetka, Illinois: 1 invertebrate fossil specimen, 1 ventifact specimen, 1 box of oolitic sand—various localities (gift).

ROHWER, O. H. D., Chicago: Devonian coral specimen—locality unknown (gift).

SINCLAIR, G. WINSTON, University of Western Ontario, Ontario, Canada: Bryozoan collection—Quebec, Canada (gift).

SMITH, EGBERT T., Fort Meyers, Florida: pink conch pearl—Florida (gift).

STANDARD OIL COMPANY, New York: 10 panels telling the story of oil (gift).

STRAIGHT, H. R., Redfield, Iowa: 1 variscite specimen—locality unknown (gift).

THOMPSON, R. T., Phoenix, Arizona: 1 specimen of fluorescent chalcodony—Arizona (gift).

UNIVERSITY OF CHICAGO, Chicago: 9 fossil turtles—Kansas (gift).

VERNON, OLIVE, Rosemont, California: 1 trilobite specimen—locality unknown (gift).

WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, New York: 12 Upper Cambrian fossils—Wisconsin and Minnesota (exchange).

WHITFIELD, DR. AND MRS. R. H., AND JACK WHITFIELD, Evanston, Illinois: 77 fossil insects, 3 fossil fishes, collection of invertebrate fossils—Florissant, Colorado (gift).

WILLEMS, DR. J. DANIEL, Chicago: 1 step-cut golden beryl specimen—Brazil (gift).

ZANGERL, DR. RAINER, Harvey, Illinois: 5 fossil shark teeth—Switzerland (gift).

DEPARTMENT OF ZOOLOGY—ACCESSIONS

ALLEN, ROSS, Silver Springs, Florida: 1 reptile—Mexico (gift).

ANDERSON, ARTHUR E., Chesterton, Indiana: 1 snake skin—Indiana (gift).

ARNETT, DR. ROSS H., JR., Washington, D.C.: 3 insect paratypes—Florida (gift).

BAECHLE, REVEREND JOHN W., Collegeville, Indiana: 1 mollusk—locality unknown (gift).

BAYALIS, JOHN, Chicago: 2 insects—Chicago (gift).

BEAMER, DR. RAYMOND H., Lawrence, Kansas: 6 insects—United States (gift).

BEECHER, WILLIAM J., Chicago: 3 insects—New Caledonia (gift).

BENESH, BERNARD, North Chicago, Illinois: 7 reptiles and amphibians—Tennessee (gift).

BERLIOZ, M., Paris, France: 163 birds—Madagascar (exchange).

BIESE, DR. WALTER, Santiago, Chile: 13 lots of fresh-water mollusks, 10 of which are paratypes—Chile (gift).

BLAKE, EMMET R., Winnetka, Illinois: 15 insects—Barrington, Illinois (gift).

BRITISH MUSEUM (NATURAL HISTORY), London, England: 71 mammals, 22 lots of lower invertebrates—various localities (exchange).

BUCH, FATHER A., Ningpo, China: 652 insects—China (gift).

BUCHEN, WALTHER, Chicago: 77 birds—Mt. Kenya, Africa (gift).

BULLOCK, D. S., Angol, Chile: 18 mammals—Chile (gift).

BURCH, JOHN Q., Los Angeles: 2 mollusks—West Mexico (gift).

BURTON, ROBERT, Chicago: 2 ivory-billed woodpeckers—Arkansas (gift).

CALLAN, PROFESSOR E. MCC., Trinidad, British West Indies: 4 reptiles—Trinidad, British West Indies (gift).

CAM, MENEUE, Kisantu, Congo Belge: 10 insects—Belgian Congo (gift).

CAMRAS, DR. SIDNEY, Chicago: 9 insects—various localities (gift).

CAREY, DR. JOSHUA H., Chicago: 35 birds—Idaho (exchange).

CARNEGIE MUSEUM, Pittsburgh: 28 reptiles—Honduras (exchange).

CHICAGO NATURAL HISTORY MUSEUM:

Collected by Henry S. Dybas (Palau Entomological Expedition, 1947-48): 253 insects and their allies—Berkeley, California.

Collected by Dr. Fritz Haas (Bermuda Zoological Expedition, 1947): 18 reptiles, 121 insects and their allies, 330 lots of lower invertebrates—Bermuda.

Collected by Dr. Fritz Haas and others (Bermuda Deep-Sea Expedition, 1948): 21 reptiles and amphibians, 91 insects and their allies, 729 lots of lower invertebrates—Bermuda.

Collected by Harry Hoogstraal (University of California African Expedition, 1948): 30 chameleons—Africa.

Collected by Harry Hoogstraal and others (Philippines Zoological Expedition, 1946-47): 1 monkey-eating eagle, 18,247 insects and their allies—Philippine Islands.

Collected by Robert F. Inger and Henry S. Dybas (local field work): 1 reptile—Illinois.

Collected by Dr. James Kezer and the Clifford H. Popes (Kezer-Pope Missouri Cave Field Trip, 1948): 1 mammal, 25 amphibians—Missouri.

Collected by Rodger D. Mitchell (Guatemalan Zoological Expedition, 1948): 12 birds—Guatemala.

Collected by Bryan Patterson (Paleontological Expedition to the Southwest, 1946): 1,444 insects and their allies—Texas.

Collected by the Clifford H. Popes and others (Mountain Lake Biological Station Field Trip, 1948): 527 reptiles and amphibians—Virginia, West Virginia, Kentucky.

Collected by Eugene S. Richardson, Jr. (Grand Tower Field Trip, 1948): 4 lots of lower invertebrates—Grand Tower, Illinois.

Collected by Colin C. Sanborn (local field work): 2 mammals—Illinois.

Collected by Colin C. Sanborn and others (Arkansas Zoological Field Trip, 1948): 116 mammals, 38 reptiles and amphibians, 22 lots of lower invertebrates—Arkansas.

Collected by Karl P. Schmidt and others (Texas Herpetological Field Trip, 1948): 4 mammals, 170 reptiles and amphibians, 409 insects and their allies—Texas.

Collected by Dr. Alexander Spoehr (Ethnological Expedition to Micronesia, 1947): 38 insects and their allies—Micronesia.

Collected by Luis de la Torre (Guatemalan Zoological Expedition, 1948): 859 mammals—Guatemala.

Collected by Mr. and Mrs. Melvin A. Traylor, Jr. (Mexican Zoological Expedition, 1948): 15 mammals, 4 reptiles—Mexico.

Collected by William D. Turnbull and C. M. Barber (Field Trip to Alabama, 1947): 4 insects—Alabama.

Collected by Rupert L. Wenzel (from animals brought in for Museum collection): 58 insects and their allies—in Museum.

Collected by Rupert L. Wenzel and others (local field work): 67 insects and their allies—Indiana.

Collected by Rupert L. Wenzel, Rodger D. Mitchell, and Luis de la Torre (Guatemalan Zoological Expedition, 1948): 51 reptiles and amphibians, 2,408 insects and their allies, 32 lots of lower invertebrates—Guatemala.

Collected by Mr. and Mrs. John W. Winn (Field Trip to Mammoth and New Discovery Caves, 1947): 103 insects and their allies—Mammoth Cave National Park, Kentucky.

Collected by Loren P. Woods and others (Bermuda Deep-Sea Expedition, 1948): 5,294 fishes—Bermuda.

Collected by Dr. Rainer Zangerl (Wyoming Paleontological Expedition, 1948): 50 lots of lower invertebrates—Wyoming and South Dakota.

Purchases: 267 mammals, 2,293 birds, 1,073 reptiles and amphibians, 128 fishes, 5,818 insects and their allies, 106 lots of lower invertebrates.

CHICAGO ZOOLOGICAL SOCIETY, Brookfield, Illinois: 13 mammals, 72 birds, 7 reptiles and amphibians, 1 reptile egg—various localities (gift).

CIESLAK, DR. EDWIN S., Minneapolis: 10 insects—Minnesota (gift).

CIFERRI, CLAUDIO, Caracas, Venezuela: 6 birds—Venezuela (gift).

CITY EXTERMINATING COMPANY, Chicago: 5 insects—Chicago (gift).

COLLINS, STEPHEN, Ithaca, New York: 1 reptile—Indiana (gift).

CONANT, ROGER, Philadelphia: 39 snakes (1 type, 19 paratypes), 16 amphibians—United States (gift).

CONOVER, BOARDMAN, Chicago: 9 birds—various localities (gift).

COONLEY, MRS. JOHN STUART, Chicago: 5 mollusks—tropical seas (gift).

CORDELL, JERRY, Savannah, Georgia: 1 reptile—Savannah, Georgia (gift).

CURTIS, LAWRENCE, Dallas, Texas: 14 reptiles—Texas (gift).

DAHLGREN, DR. B. E. Chicago: 4 reptiles and amphibians—Cuba (gift).

DAVEY, DAWN, Chicago: 3 lots of mollusks—St. Petersburg, Florida (gift).

DAVIS, D. DWIGHT, Richton Park, Illinois: 3 mammals, 1 reptile—various localities (gift).

DICKINSON, J. C., JR., Gainesville, Florida: 6 reptiles—Florida (gift).

DOWLING, HERNDON, JR., Ann Arbor, Michigan: 8 reptiles—Florida (gift).

DRAKE, DR. CARL J., Ames, Iowa: 111 insects and their allies—various localities (gift).

DRAKE, ROBERT J., Albuquerque, New Mexico: 5 lots of mollusks—Texas and New Mexico (gift).

DUBOIS, ERNEST P., Talara, Peru: 69 reptiles, 3 insects and their allies—Peru and Ecuador (gift).

DYBAS, HENRY S., Chicago: 81 insects—various localities (gift).

EMERSON, DR. ALFRED E., Chicago: 8 reptiles—Belgian Congo (gift).

FIELD, DR. HENRY, Washington, D.C.: 3 mammals, 9 insects and their allies, 6 lots of lower invertebrates—Egypt (gift).

FLEMING, ROBERT, Mussoorie, India: 123 insects and their allies—Mussoorie, India (gift).

FOSS, MRS. DOROTHY B., Chicago: 4 mammals, 1 mammal skull—domestic (gift).

FRANZEN, ALBERT J., Chicago: 1 bird, 4 insects—Barrington, Illinois (gift).

FREEMAN, F. J., Itasca, Illinois: 3 birds—Itasca, Illinois (gift).

GEMMILL, MRS. EUNICE M., Chicago: 1 mollusk—Ogunquit, Maine (gift).

GRAEFE, C. F., Cuyahoga Falls, Ohio: 2 birds—domestic (gift).

GREELEY, MR. AND MRS. FRED, Madison, Wisconsin: 2 reptiles, 1 lot of mollusks—Pelee Island, Ontario, Canada (gift).

GREGG, COLONEL CLIFFORD C., Valparaiso, Indiana: 1 bird, 31 insects (including 10 paratypes), 1 lower invertebrate—mostly Brazil (gift).

HAAS, EDITH P., Chicago: 2 insects, 1 lot of mollusks—Wisconsin (gift).

HAAS, DR. FRITZ, Chicago: 6 lots of mollusks—Chicago (gift).

HAGEY, ROBERT H., Chicago: 1 mammal—Barrington, Illinois (gift).

HAIRSTON, DR. NELSON G., Ann Arbor, Michigan: 522 amphibians—Southern Appalachians (gift).

HANSON, HAROLD, Urbana, Illinois: 5 mammal skeletons, 12 amphibians—Canada (exchange).

HARRIS, MRS. LUCILE B., St. Petersburg, Florida: 1 reptile—St. Petersburg, Florida (gift).

HASLER, DR. ARTHUR D., Madison, Wisconsin: 11 fishes—Madison, Wisconsin (gift).

HERBST, JOHN C., Chicago: 1 bird—Chicago (gift).

HILDER, CHARLES F., Pacific Grove, California: 4 snake skins—East Africa and Brazil (gift).

HOLLEY, F. E., Lombard, Illinois: 32 insects—various localities (gift).

HOOGSTRAAL, HARRY, Chicago: 4,963 insects—various localities (gift).

HOOGSTRAAL, HARRY, STANLEY G. JEWETT, JR., AND DEAN AMADON, Chicago: 37 birds—Dutch New Guinea (gift).

HORBACK, ALEXANDER, Cicero, Illinois: 1 insect—Cicero, Illinois (gift).

HORBACK, STEPHEN, Chicago: 1 mammal—Chicago (gift).

HUMPHREYS, PAUL, Whiting, Indiana: 17 lots of mollusks—Norway (gift).

INGER, ROBERT F., Chicago: 8 insects and their allies—Dune Acres, Indiana (gift).

JAVIER PRADO, MUSEO DE HISTORIA NATURAL: Lima, Peru: 9 mammals—Peru (gift).

JOHNSON, J. E., JR., Waco, Texas: 32 reptiles and amphibians—Texas (gift).

KELLER, PAUL J., Dyer, Indiana: 1 reptile—Illinois (gift).

KLEMM, WALTER, Strasswalchen, Austria: 34 lots of mollusks—Austria (exchange).

KNOLL, JOSEF N., Columbus, Ohio: 21 insects—United States (gift).

KOHN, ROBERT R., Madison, Wisconsin: 6 reptiles—southwest Pacific (gift).

KRAUSS, N. L. H., Honolulu, Hawaii: 6 reptiles and amphibians—various localities (gift).

KREUGER, R., Almvagen, Finland: 51 birds' eggs—Old World (exchange).

KURFESS, LIEUTENANT JOHN, Warrington, Florida: 26 reptiles and amphibians—Florida and Texas (gift).

LEECH, HUGH B., San Francisco: 2 insects (1 paratype)—British Columbia (gift).

LINCOLN PARK ZOO, Chicago: 6 mammals, 9 reptiles and amphibians, 1 spider—various localities (gift).

LOOSANOFF, V. L., Milford, Connecticut: 1 lot of mollusks—Oregon (gift).

LORWIE, DR. DON C., Las Vegas, New Mexico: 31 mammals—Las Vegas, New Mexico (gift).

LYONS, SERGEANT ALOYSUS V., PATROLMAN WILLIAM McNULTY, AND PATROLMAN EDWARD OHLEN, Chicago: 1 bird—South Chicago (gift).

MANUEL, CANUTO, Manila, Philippine Islands: 6 birds—Philippine Islands (gift).

MARIA, BROTHER NICEFORO, Bogotá, Colombia: 3 mammals, 1 reptile—Colombia (gift); 2 reptiles—Colombia (exchange).

MARTIN, RICHARD A., Chicago: 14 insects and their allies—Wheatfield, Indiana (gift).

MAZZOTTI, DR. LUIS, Mexico, D.F.: 1 mammal—Mexico (gift).

MCGREW, DR. PAUL O., Laramie, Wyoming: 3 mammal skeletons—Wyoming (exchange).

MILLER, CHARLES M., Los Angeles: 3 reptiles—California (gift).

MITCHELL, RODGER D., Wayne, Illinois: 34 insects and their allies—Illinois (gift).

MOE, VIRGINIA, River Forest, Illinois: 3 insects—Illinois (gift).

MOECK, ARTHUR H., Milwaukee, Wisconsin: 2 butterflies (paratypes)—New Mexico (gift).

MOORE, J. E., Alberta, Canada: 48 reptiles and amphibians—Canada (exchange).

MORROW, MRS. JOHN, AND MARGARET CLOW, Lake Bluff, Illinois: 1 bird—Lake Bluff, Illinois (gift).

MURPHY, WALTER P. (deceased): 177 birds (one type)—North America (gift).

MUSEUM OF COMPARATIVE ZOOLOGY, Cambridge, Massachusetts: 58 insects (14 paratypes), 23 lots of lower invertebrates—various localities (gift).

NECKER, WALTER L., Chicago: 5 mammals, 3 lots of mollusks—New Mexico (exchange); 2 reptiles—Europe (gift).

NOLASCO, DR. J. O., Calamianes, Philippine Islands: 29 parasites—Philippine Islands (gift).

NORRIS, KENNETH S., Los Angeles: 6 reptiles—California (gift).

O'BRIEN, MARIE, Evanston, Illinois: 11 insects and their allies—various localities (gift).

PARK, DR. ORLANDÓ, Evanston, Illinois: 384 insects—United States (gift).

PATTERSON, BRYAN, Chicago Heights, Illinois: 1 mammal, 1 amphibian, 88 insects and their allies—Wyoming and Illinois (gift).

PERKINS, C. B., San Diego: 17 living geckos—San Diego, California (gift).

PHELPS, WILLIAM H., Caracas, Venezuela: 1 bird—Paraguay (gift); 1 bird—Venezuela (exchange).

POPE, CLIFFORD H., Winnetka, Illinois: 6 amphibians—Louisiana (gift).

POPP, JOHANN, Munich, Germany: 3 mammals—Germany (gift).

PUESTE, JAVIER ORTIZ DE LA, Lima, Peru: 3 birds—Peru (gift).

RAFFLES MUSEUM, Singapore: 155 mammals, 5 mammal skulls—Malaysia (gift).

RAY, EUGENE, Chicago: 42 insects—Illinois and Indiana (gift); 10,000 insects—South Pacific (exchange).

REED, DR. C. A., Tucson, Arizona: 5 amphibians—Oregon (gift).

REMINGTON, DR. C. L., New Haven, Connecticut: 1,149 insects—New Caledonia (gift).

RIVERO, DR. JUAN A., Mayaguez, Puerto Rico: 16 amphibians, 3 fishes, 2 lots of lower invertebrates—Puerto Rico (gift).

ROMER, J. D., Hong Kong, China: 14 reptiles and amphibians—Hong Kong, China (gift).

ROOSEVELT COLLEGE, Chicago: 5 typist chairs; 1,653 insects—various localities (exchange).

ROSE, DR. WILLIAM, Chicago: 4 insects—Philippine Islands (exchange).

ROSS, CAPTAIN J. M., Chicago: 1 lot of mollusks—Solomon Islands (gift).

SCHLESCH, DR. HANS, Copenhagen, Denmark: 6 lots of mollusks—Paraguay (gift).

SCHMIDT, KARL P., Homewood, Illinois: 1 bird—Homewood, Illinois (gift).

SEIG, C. H., Angar, Palau Islands: 25 amphibians—Angar, Palau Islands (gift).

SENCHENBERG MUSEUM, Frankfurt on the Main, Germany: 2 amphibians—Madagascar (exchange).

SIOLI, DR. HARALD, Belem, Brazil: 108 lots of mollusks—Amazonas (exchange).

SMITH, EGBERT T., Fort Myers, Florida: 1 lot of mollusks—West Indies (gift).

SMITH, DR. HOBART M., Urbana, Illinois: 1 paratype of a lizard—Miami, Florida (gift).

SPRINGER, PAUL, La Grange, Illinois: 5 amphibians—La Grange, Illinois (gift).

STEYERMARK, DR. JULIAN A., Barrington, Illinois: 1 bird, 1 amphibian, 11 insects—Missouri and Illinois (gift).

STORM, ROBERT M., Corvallis, Oregon: 62 amphibians—Oregon (exchange).

STREET, MR. AND MRS. WILLIAM S., Seattle, Washington: 1 Alaska brown bear—Alaska (gift).

SWAYNE, JULIUS R., Carbondale, Illinois: 4 mammal skeletons—Illinois (exchange).

TARRANT, ROSS, Wilmette, Illinois: 1 mammal, 7 fishes—various localities (gift).

TERRA, HELMUT DE, Cuernavaca, Mexico: 3 lots of mollusks—Mexico (gift).

THOMAS, JAY, AND T. W. PAPE, JR., Chesterton, Indiana: left mandible of Canada porcupine—Indiana (gift).

THOMPSON, DR. DAVIS, River Forest, Illinois: 1 mammal skull—Illinois (gift).

TORRE, LUIS DE LA, Ann Arbor, Michigan: 22 insects—Hayward, Wisconsin (gift).

TSCHAMBERS, BERT, Chicago: 5 insects—Florida and Chicago (gift).

UNITED STATES NATIONAL MUSEUM, Washington, D.C.: 1 snail paratype—Philippine Islands (gift); 64 fishes (5 paratypes)—various localities (exchange).

UNIVERSITY OF AREQUIPA, Arequipa, Peru: 97 reptiles and amphibians—Peru (exchange).

UNIVERSITY OF CINCINNATI, Cincinnati, Ohio: 2 birds—Sweden and Cyprus (exchange).

VAN DER SCHALIE, HENRY, Ann Arbor, Michigan: 111 lots of mollusks—various localities (gift).

WENZEL, RUPERT L., Oak Park, Illinois: 404 insects—various localities (gift).

WEYRAUCH, DR. WOLFGANG, Tingo Maria, Peru: 21 lots of mollusks—Peru (gift).

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 Brewer, Mrs. Angeline L.
 Breyer, Mrs. Theodor
 Bridges, Arnold
 Briggs, Mrs. Gertrude
 Bristol, James T.
 Brock, A. J.
 Brodribb, Lawrence C.
 Brodsky, J. J.
 Brostoff, Harry M.
 Brown, A. Wilder
 Brown, Mrs. C. H.
 Brown, Christy
 Brown, Mrs. Everett C.
 Brown, John T.
 Brown, Dr. Joshua M.
 Brown, Mark A.
 Brown, Scott
 Brown, William F.
 Brucker, Dr. Edward A.
 Bruckner, William T.
 Brugman, John J.
 Bruhn, H. C.
 Brundage, Avery
 Brunswick, Larry
 Bryant, John J., Jr.
 Buchner, Dr. E. M.
 Buck, Guy R.
 Buck, Nelson Leroy
 Buckley, Mrs. Warren
 Bucklin, Mrs. Vail R.
 Buddig, Carl
 Buehler, H. L.
 Buettner, Walter J.
 Buffington, Mrs. Margaret A.
 Buhmann, Gilbert G.
 Bunge, Mrs. Albert J.
 Bunte, Mrs. Theodore W.
 Burbott, E. W.
 Bureh, Clayton B.
 Burchmore, John S.
 Burdick, Mrs. Alfred S.
 Burgmeier, John M.
 Burgstreser, Newton
 Burgweger, Mrs. Meta Dewes
 Burke, Mrs. Lawrence N.
 Burke, Webster H.
 Burley, Mrs. Clarence A.
 Burns, Mrs. Randall W.
 Burry, William
 Bush, Earl J.
 Bush, Mrs. William H.
 Butler, Mrs. Hermon B.
 Butler, John M.
 Butler, Paul
 Butz, Theodore C.
 Butzow, Mrs. Robert C.
 Byrne, Miss Margaret H.
 Cahn, Dr. Alvin R.
 Cahn, Bertram J.
 Cahn, Morton D.
 Caine, John F.
 Caine, Leon J.
 Callender, Mrs. Joseph E.
 Calmeyn, Frank B.
 Camenisch, Miss Sophia C.
 Cameron, Dr. Dan U.
 Cameron, Will J.
 Camp, Mrs. Arthur Royce
 Campbell, Delwin M.
 Campbell, Herbert J.
 Canby, Caleb H., Jr.
 Canman, Richard W.
 Canmann, Mrs. Harry L.
 Capes, Lawrence R.
 Capps, Dr. Joseph A.
 Cardelli, Mrs. Giovanni
 Carlin, Leo J.
 Carmell, Daniel D.
 Carney, William Roy
 Caron, O. J.
 Carpenter, Mrs. Frederic Ives
 Carpenter, George Sturges
 Carpenter, Hubbard
 Carqueville, Mrs. A. R.
 Carr, Mrs. Clyde M.
 Carr, Robert A.
 Carroll, John A.
 Carry, Joseph C.
 Carter, Mrs. Armistead B.
 Carton, Alfred T.
 Cary, Dr. Eugene
 Castle, Alfred C.
 Castruccio, Giuseppe
 Cates, Dudley
 Cederlund, R. Stanley
 Cerling, Fredolph A.
 Cernoch, Frank
 Chandler, Henry P.
 Chapin, William Arthur
 Chapman, Arthur E.
 Chatain, Robert N.
 Cheney, Dr. Henry W.
 Chenier, Miss Mizpah
 Cheronos, George D.
 Cherry, Walter L., Jr.
 Childs, Mrs. C. Frederick
 Childs, Mrs. George W.
 Chinlund, Miss Ruth E.
 Chislett, Miss Kate E.
 Christensen, E. C.
 Christiansen, Dr. Henry
 Churan, Charles A.
 Clare, Carl P.
 Clark, Ainsworth W.
 Clark, Miss Alice Keep
 Clark, Charles V.
 Clark, Mrs. Edward S.
 Clark, Edwin H.
 Clark, Willard F.
 Clarke, Charles F.
 Clarke, Harley L.
 Clay, John
 Clemen, Dr. Rudolph A.
 Cleveland, Paul W.
 Clifford, Fred J., Jr.
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 Clithero, W. S.
 Clonick, Abraham J.
 Clonick, Seymour E.
 Clough, William H.
 Clow, Mrs. Harry B.
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 Cochran, John L.
 Coffin, Fred Y.
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 Cohen, Mrs. L. Lewis
 Colburn, Frederick S.
 Colby, Mrs. George E.
 Coldren, Clifton C.
 Cole, Sidney I.
 Coleman, Clarence L., Jr.
 Coleman, Dr. George H.
 Coleman, Mrs. John
 Coleman, Loring W.
 Coleman, Marvin H.
 Colianni, Paul V.
 Collins, Beryl B.
 Collison, E. K.
 Colvin, Miss Catharine
 Colvin, Miss Jessie
 Colvin, Mrs. William H.
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 Connor, Frank H.
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 Cook, Mrs. David S.
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 Cook, L. Charles
 Cook, Louis T.
 Cook, Thomas H.
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 Cooke, Miss Flora
 Cooley, Gordon A.
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 Coolidge, E. Channing
 Coolidge, Dr. Edgar D.
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 Coonley, Prentiss L.
 Cooper, Samuel
 Copland, David
 Corbett, Mrs. William J.
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 Cornell, Mrs. John E.
 Cosford, Thomas H.
 Coston, James E.
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 Cowen, Maurice L.
 Cowles, Knight C.
 Cox, James C.
 Cox, William D.
 Coyle, C. H.
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 Crego, Mrs. Dominica S
 Crilly, Edgar
 Cromwell, Miss Juliette
 Clara
 Cubbins, Dr. William R.
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 Guthrie, Jr.
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 Cushing, John Caleb
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 Cutler, Henry E.
 Cuttle, Harold E.
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 Paul
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 Daily, Richard
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 Dalmar, Hugo, Jr.
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 Danielson, Philip A.
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 Danne, William C., Jr.
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 D'Aquila, George
 Darbo, Howard H.
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 Davey, Mrs. Bruce E.
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 Davidson, David W.
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 Davies, Marshall
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 Davis, C. S.
 Davis, Dr. Carl B.
 Davis, Don L.
 Davis, Frank S.
 Davis, Dr. Loyal
 Davis, Dr.
 Nathan S., III
 Deahl, Uriah S.
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 Decker, Charles O.
 DeCosta, Lewis M.
 deDardel, Carl O.
 Dee, Thomas J.
 Degen, David
 DeGolyer, Robert S.
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 Charles W.
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 Porter
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 Deutsch, Mrs. Percy L.
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 Dick, Elmer J.
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 Thompson
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 Dimmer, Miss
 Elizabeth G.
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 Warren
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 Ebeling, Frederic O.
 Eckhart, Percy B.
 Eckstein, Mrs. Louis
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 Edwards, Miss Edith E.
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 Egloff, Dr. Gustav
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 Eiseman, Fred R.
 Eisenberg, Sam J.
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 Eisendrath, Robert M.
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 Elliott, Dr. Clinton A.
 Elliott, Frank R.
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 Elting, Howard
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 Ericsson, Dewey A.
 Ericsson, Walter H.
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 Eustice, Mrs. Alfred L.
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 Evans, Mrs. David
 Evans, David J.
 Evans, Eliot H.
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 Fabrice, Edward H.
 Fabry, Herman
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 Faget, James E.
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 Faithorn, Walter E.
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 George
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 Arthur C.
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 Fishbein, Dr. Morris
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 Florsheim, Irving S.
 Florsheim, Mrs.
 Milton S.
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 Fortune, Miss Joanna
 Foster, Mrs. Charles K.
 Foster, Volney
 Foute, Albert J.
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 Fox, Dr. Paul C.
 Franche, Mrs. D. C., III
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 Frankenstein, William B.
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 Lester E., Jr.
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 Freeman, Charles Y.
 Freiler, Abraham J.
 French, Dudley K.
 Frenier, A. B.
 Freudenthal, G. S.
 Frey, Charles Daniel
 Freyn, Henry J.
- Fridstein, Meyer
 Friedlich, Mrs. Herbert
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 Sumner
 Fuller, Mrs. Gretta
 Patterson
 Fuller, J. E.
 Fuller, Judson M.
 Furry, William S.
- Gabathuler, Miss Juanita
 Gabriel, Adam
 Gaertner, William
 Galgano, John H.
 Gall, Charles H.
 Gall, Harry T.
 Gallup, Rockwell L.
 Galt, Mrs. A. T.
 Gamble, D. E.
 Garcia, José
 Garden, Hugh M. G.
 Gardiner, Mrs. John L.
 Gardner, Addison L.
 Gardner, Addison L., Jr.
 Gardner, Henry A.
 Gardner, Mrs. James P.
 Garen, Joseph F.
 Garnett, Joseph B.
 Garrison, Dr. Lester E.
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 Gay, Rev. A. Royal
 Gaylord, Duane W.
 Gear, H. B.
 Gehl, Dr. W. H.
 Gehrmann, Felix
 Geiger, Alfred B.
 Geiling, Dr. E. M. K.
 Gellert, Donald N.
 Gensburg, Samuel H.
 Gentry, Veit
 Gentz, Miss Margaret
 Nina
 George, Mrs. Albert B.
 Gerber, Max
 Gerding, R. W.
 Gerngross, Mrs. Leo
 Gettelman, Mrs.
 Sidney H.
 Gettlemen, Frank E.
 Getz, Mrs. James R.
 Getzoff, E. B.
 Gibbs, Richard F.
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 Gidwitz, Alan K.
 Giffey, Miss Hertha
 Gilford, Mrs.
 Frederick C.
 Gilbert, Miss Clara C.
 Gilchrist, Mrs. John F.

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Gilchrist, Mrs. William Albert
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 Girard, Mrs. Anna
 Giryotas, Dr. Emelia J.
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 Glasner, Rudolph W.
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 Goehst, Mrs. John Henry
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 Goldfine, Dr. Ascher H. C.
 Golding, Robert N.
 Goldman, Mrs. Louis
 Goldstein, Dr. Helen L. Button
 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, Colin S.
 Gordon, Harold J.
 Gordon, Dr. Richard J.
 Gordon, Mrs. Robert D.
 Gorrell, Mrs. Warren
 Gottlieb, Frederick M.
 Gould, Jay
 Gould, Mrs. June K.
 Grade, Joseph Y.
 Gradle, Dr. Harry S.
 Graf, Robert J.
 Graff, Oscar C.
 Graham, Douglas
 Graham, E. V.
 Graham, Miss Margaret H.
 Gramm, Mrs. Helen
 Grant, James D.
 Grant, John G.
 Graves, Austin T.
 Graves, Howard B.
 Grawoig, Allen
 Gray, Dr. Earle
 Gray, Edward
 Green, Michael
 Green, Robert D.
 Greenacre, Miss Cordelia Ann
 Greenburg, Dr. Ira E.
 Greene, Henry E.
 Greenebaum, M. E., Jr.
 Greenlee, Mrs. William Brooks
 Greenman, Mrs. Earl C.
 Gregory, Stephen S., Jr.
 Gregory, Tappan
 Gressens, Otto
 Grey, Charles F.
 Grey, Dr. Dorothy
 Griest, Mrs. Marianna L.
 Griffenhagen, Mrs. Edwin O.
 Griffith, Mrs. Carroll L.
 Griffith, Mrs. William
 Griswold, Harold T.
 Grizzard, James A.
 Groak, Irwin D.
 Gronkowski, Rev. C. I.
 Groot, Cornelius J.
 Groot, Lawrence A.
 Gross, Henry R.
 Grossman, Frank I.
 Grotenhuis, Mrs. William J.
 Grotowski, Mrs. Leon
 Gruhn, Alvah V.
 Grunow, Mrs. William C.
 Guenzel, Louis
 Guest, Ward E.
 Gunthorp, Walter J.
 Gurley, Miss Helen K.
 Gurman, Samuel P.
 Guthman, Edwin I.
 Gwinn, William R.
 Hadley, Mrs. Edwin M.
 Haffner, Mrs. Charles C., Jr.
 Hagen, Mrs. Daise
 Hagens, Dr. Garrett J.
 Hagner, Fred L.
 Haight, George I.
 Hair, T. R.
 Hajicek, Rudolph F.
 Haldeman, Walter S.
 Hale, Mrs. Samuel
 Hales, William M.
 Hall, Edward B.
 Hall, Mrs. J. B.
 Hallmann, Herman F.
 Halperin, Aaron
 Halverstadt, Romaine M.
 Hamm, Fred B.
 Hammaker, Paul M.
 Hammerschmidt, Mrs. George F.
 Hammond, Thomas S.
 Hand, George W.
 Hanley, Henry L.
 Hann, J. Roberts
 Hansen, Mrs. Carl
 Hansen, Mrs. Fred A.
 Hansen, Jacob W.
 Hanson, Mrs. Norman R.
 Harder, John H.
 Harders, Mrs. Flora Rassweiler
 Hardie, George F.
 Hardin, John H.
 Harding, John Cowden
 Harding, Richard T.
 Harms, Van Deursen
 Harper, Alfred C.
 Harrington, David L.
 Harris, Mrs. Abraham
 Harris, David J.
 Harris, Gordon L.
 Harris, Hayden B.
 Harris, Stanley G.
 Hart, Mrs. Herbert L.
 Hart, Max A.
 Hart, William M.
 Hartmann, A. O.
 Hartshorn, Kenneth L.
 Hartwig, Otto J.
 Hartz, W. Homer
 Harvey, Byron, III
 Harvey, Richard M.
 Harwood, Thomas W.
 Haskell, Mrs. George E.
 Hass, G. C.
 Hay, Mrs. William Sherman
 Hayakawa, Dr. S. I.
 Hayes, Charles M.
 Hayes, Harold C.
 Hayes, Miss Mary E.
 Haynie, Miss Rachel W.
 Hays, Mrs. Arthur A.
 Hayslett, Arthur J.
 Hazlett, Dr. William H.
 Hazlett, Mrs. William H.
 Healy, Vincent Jerrems
 Heaney, Dr. N. Sproat
 Hearst, Mrs. Jack W.
 Heaton, Harry E.
 Heaton, Herman C.
 Heck, John
 Hedberg, Henry E.
 Heffernan, Miss Lili
 Hefner, Adam
 Heide, Mrs. Bernard H.
 Heiman, Marcus
 Heine, Mrs. Albert
 Heinzelman, Karl
 Heinzen, Mrs. Carl
 Heisler, Francis
 Hejna, Joseph F.
 Heldmaier, Miss Marie
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 Heller, John A.

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- Heller, Mrs. Walter E.
 Hellman, George A.
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 Hemple, Miss Anne C.
 Henderson, Thomas B. G.
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 Henley, Dr. Eugene H.
 Hennings, Mrs.
 Abraham J.
 Henry, Huntington B.
 Henschel, Edmund C.
 Herrick, Charles E.
 Herron, James C.
 Herron, Mrs. Ollie L.
 Hershhey, J. Clarence
 Hertz, Mrs. Fred
 Hertzberg, Lawrence
 Herwig, George
 Herwig, William D., Jr.
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 Hesse, E. E.
 Heverly, Earl L.
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 Hibbard, Mrs. W. G.
 Hieber, Master J. Patrick
 Higgins, John
 Higley, Mrs. Charles W.
 Hildebrand, Dr.
 Eugene, Jr.
 Hildebrand, Grant M.
 Hill, Mrs. Russell D.
 Hill, William C.
 Hill, William E.
 Hille, Dr. Hermann
 Hillebrecht, Herbert E.
 Hills, Edward R.
 Hind, Mrs. John Dwight
 Hinkle, Ross O.
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 Hirsch, Jacob H.
 Histed, J. Roland
 Hixon, Mrs. Frank P.
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 Hempstead
 Hogan, Robert E.
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 Holmes, William
 Holmes, William N.
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 Holt, McPherson
 Holub, Anthony S.
 Holzheimer, Carl
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 Hoover, H. Earl
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 Hopkins, Mrs.
 James M., Jr.
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 Dodge, Jr.
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 Horton, Hiram T.
 Horton, Horace B.
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 Horween, Isidore
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 Hovland, Mrs. John P.
 Howard, Willis G.
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 Howe, Clinton W.
 Howe, Mrs. Pierce
 Lyman
 Howe, Ralph B.
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 Howe, Warren D.
 Howe, William G.
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 Katherine J.
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 Hufty, Mrs. F. P.
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 Hughes, John W.
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 Hume, John T.
 Humphrey, H. K.
 Huncke, Herbert S.
 Huncke, Oswald W.
 Hunding, B. N.
 Hurd, Ferris E.
 Hurvitz, H. R.
 Huska, Mrs. Joseph
 Hust, George
 Huszagh, Ralph D.
 Hutchinson, Foye P.
 Hutchinson, Samuel S.
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 Idelman, Bernard
 Igoe, Michael L.
 Ilg, Robert A.
 Illich, George M., Jr.
 Ingalls, Allin K.
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 Irons, Dr. Ernest E.
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 Jackson, Archer L.
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 Jackson, Miss Laura E.
 Jackson, Mrs. W. A.
 Jacobi, Miss Emily C.
 Jacobs, Hyman A.
 Jacobs, Julius
 Jacobs, Whipple
 Jacobson, Raphael
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 Jameson, Clarence W.
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 Jarchow, Charles C.
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 Jeffries, F. L.
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 Jenkinson, Mrs. Arthur
 Gilbert
 Jennings, Ode D.
 Jerger, Wilbur Joseph
 Jetzinger, David
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 Jirka, Dr. Frank J.
 Jirka, Dr. Robert H.
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 Joseph, Louis L.
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 Judson, Clay
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 Kahn, Louis
 Kaime, James B.
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 Kanter, Jerome J.
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 Kaplan, Nathan D.
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 Katz, Solomon
 Katzenstein, Mrs. George P.
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 Kauffmann, Alfred
 Kaufman, Justin
 Kaufmann, Dr. Gustav L.
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 Keefe, Mrs. George I.
 Keeney, Albert F.
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 Keith, Stanley
 Keith, Mrs. Stanley
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 Kellogg, John L.
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 Kemper, Miss Hilda M.
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 Kempner, Stan
- Kendall, Mrs. Virginia H.
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 Keogh, Gordon E.
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 Kimball, William W.
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 Kinsey, Robert S.
 Kintzel, Richard
 Kirkland, Mrs. Weymouth
 Kitchell, Howell W.
 Kitzelman, Otto
 Klee, Mrs. Nathan
 Kleinpell, Dr. Henry H.
 Kleist, Mrs. Harry
 Kleppinger, William H.
 Kleutgen, Dr. Arthur C.
 Klinetop, Mrs. Charles W.
 Knickerbocker, Miss Paula
 Knopf, Andrew J.
 Knutson, George H.
 Koch, Mrs. Fred J.
 Koch, Raymond J.
 Kochs, August
 Kochs, Mrs. Robert T.
 Kohl, Mrs. Caroline L.
 Kohler, Eric L.
 Kohlsaad, Edward C.
 Konsberg, Alvin V.
 Kopf, Miss Isabel
 Koppenaal, Dr. Elizabeth Thompson
 Kosobud, William F.
 Kotal, John A.
 Kotin, George N.
 Koucky, Dr. J. D.
 Kovac, Stefan
 Kraft, Mrs. Walter A.
 Kraft, C. H.
 Kraft, James L.
 Kraft, John H.
 Kraft, Norman
- Kralovec, Emil G.
 Kralovec, Mrs. Otto J.
 Kramer, Leroy
 Kraus, Peter J.
 Kraus, Samuel B.
 Kreidler, D. C.
 Kresl, Carl
 Kretschmer, Dr. Herman L.
 Kretschmer, Herman L., Jr.
 Kropff, C. G.
 Krost, Dr. Gerard N.
 Kuehn, A. L.
 Kuh, Mrs. Edwin J., Jr.
 Kuhl, Harry J.
 Kuhn, Frederick T.
 Kuhn, Dr. Hedwig S.
 Kunka, Bernard J.
 Kunstadter, Albert
 Kunstadter, Sigmund W.
 Kurfess, John Fredric
 Kurtz, W. O.
 Kurtzon, Morris
- Lacey, Miss Edith M.
 LaChance, Mrs. Leander H.
 Lafin, Mrs. Louis E.
 Lafin, Louis E., Jr.
 Lafin, Louis E., III
 Lambert, C. A.
 Lambert, Wilson W.
 Lanahan, Mrs. M. J.
 Lane, F. Howard
 Lane, Ray E.
 Lang, Edward J.
 Langenbach, Mrs. Alice R.
 Langford, Mrs. Robert E.
 Langhorne, George Tayloe
 Langworthy, Benjamin Franklin
 Lanman, E. B.
 Lansinger, Mrs. John M.
 Larimer, Howard S.
 Larsen, Samuel A.
 Larson, Mrs. Sarah G.
 Lasker, Albert D.
 Lassers, Sanford B.
 Latshaw, Dr. Blair S.
 Lau, Max
 Lauren, Newton B.
 Lauter, Mrs. Vera
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 Lavidge, Arthur W.
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 Lawson, David A.
 Lax, John Franklin

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- Layden, Michael J.
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 LeBaron, Miss Edna
 Lebold, Foreman N.
 Lebold, Samuel N.
 Lebolt, John Michael
 Lederer, Dr. Francis L.
 Lee, David Arthur
 Lee, Mrs. John H. S.
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 Lefens, Walter C.
 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.
 Leslie, John Woodworth
 LeTourneau, Mrs.
 Robert
 Leverone, Louis E.
 Levinson, Mrs. Salmon O.
 Levitan, Benjamin
 Levitz, Nathan
 Levy, Alexander M.
 Levy, Arthur G.
 Lewis, Mrs. Ellis R.
 Levy, Dr. Alfred
 L'Hommedieu, Arthur
 Liebman, A. J.
 Ligman, Rev. Thaddeus
 Lillyblade, Clarence O.
 Lindahl, Mrs. Edward J.
 Linden, John A.
 Lindheimer, B. F.
 Lingle, Bowman C.
 Lipman, Robert R.
 Liss, Samuel
 Little, Mrs. E. H.
 Little, Harry E., Jr.
 Livingston, Julian M.
 Livingston, Mrs.
 Milton L.
 Llewellyn, Paul
 Lochman, Philip
 Loeb, Mrs. A. H.
 Loeb, Hamilton M.
 Loeb, Leo A.
 Loewenberg, Israel S.
 Loewenberg, M. L.
 Loewenherz, Emanuel
 Loewenstein, Sidney
 Loewenthal, Richard J.
 Logan, L. B.
 Long, William E.
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 Lord, John S.
 Lord, Mrs. Russell
 Loucks, Charles O.
 Louer, Albert E. M.
 Louis, Mrs. John J.
 Love, Chase W.
 Lovell, William H.
 Lovgren, Carl
 Lucey, Patrick J.
 Ludolph, Wilbur M.
 Lueder, Arthur C.
 Lunding, Franklin J.
 Luria, Herbert A.
 Lurie, H. J.
 Lusk, R. R.
 Lustgarten, Samuel
 Lyford, Harry B.
 Lyon, Charles H.
 Maass, J. Edward
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 MacDonald, E. K.
 Macfarland, Mrs.
 Henry J.
 MacIntyre, Mrs. M. K.
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 Mackey, Frank J.
 Mackinson, Dr. John C.
 MacLellan, K. F.
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 Donald
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 Albert F., Jr.
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 Maher, Mrs. D. W.
 Main, Walter D.
 Majors, Mrs. B. S.
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 Malone, William H.
 Manaster, Harry
 Mandel, Mrs. Aaron W.
 Mandel, Edwin F.
 Mandel, Miss Florence
 Mandel, Mrs. Robert
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 Manierre, Louis
 Manley, John A.
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 Mark, Griffith
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 Marsh, A. Fletcher
 Marsh, John
 McWilliams, H.
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 Marsh, Mrs. Marshall S.
 Marston, Mrs. Thomas B.
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 Martin, George F.
 Martin, Samuel H.
 Martin, W. B.
 Martin, Wells
 Martin, Mrs. William P.
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 Marzluff, Frank W.
 Mazon, Leo A.
 Mason, Willard J.
 Massee, B. A.
 Massey, Peter J.
 Masterson, Peter
 Mathesius, Mrs. Walther
 Matson, J. Edward
 Matter, Mrs. John
 Maurer, Dr. Siegfried
 Maxant, Basil
 Maxwell, Lloyd R.
 Mayer, Frank D.
 Mayer, Mrs. Herbert G.
 Mayer, Herman J., Jr.
 Mayer, Isaac H.
 Mayer, Leo
 Mayer, Oscar F.
 Mayer, Oscar G.
 Mayer, Theodore S.
 McAloon, Owen J.
 McArthur, Billings M.
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 McCarthy, Edmond J.
 McCarthy, Joseph W.
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 Clara L.
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 McCord, Downer
 McCormack, Professor
 Harry
 McCormick, Mrs.
 Chauncey
 McCormick, Fowler
 McCormick, Howard H.
 McCormick, Leander J.
 McCormick,
 Robert H., Jr.
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 McCready, Mrs. E. W.
 McCright, Louis Ralph
 McDonald, E. F., Jr.
 McDonald, Lewis
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 McDougal, Mrs. Robert
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 McGuinn, Edward B.
 McGurn, Mathew S.

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 Walter G.
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 McMillan, John
 McMillan, W. B.
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 Melnick, Leopold B.
 Merrell, John H.
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 Merrill, William W.
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 Metz, Mrs. Robert
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 Meyer, Abraham W.
 Meyer, Dr. Charles A.
 Meyer, Charles Z.
 Meyers, Erwin A.
 Meyers, Jonas
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 Midowicz, C. E.
 Mielenz, Robert K.
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 Miller, Hyman
 Miller, John S.
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 Beaupre
 Miller, Oscar C.
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 Mills, Allen G.
 Mills, Lloyd Langdon
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 Minturn, Benjamin E.
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 Mitchell, John J.
 Mitchell, Leeds
 Mitchell, Oliver
 Mix, Dr. B. J.
 Mock, Dr. Harry Edgar
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 Moeller, Rev. Herman H.
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 Mong, Mrs. C. R.
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 Moore, Philip Wyatt
 Moran, Miss Margaret
 Morey, Charles W.
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 Morrison, James C.
 Morrison, Matthew A.
 Morrisson, James W.
 Morse, Mrs. Charles J.
 Morse, Leland R.
 Morse, Mrs. Milton
 Morse, Robert H.
 Morton, Sterling
 Morton, William Morris
 Moses, Howard A.
 Moss, Jerome A.
 Mouat, Andrew J.
 Moxon, Dr. George W.
 Moyer, E. J. T.
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 Mudge, Mrs. John B.
 Muehlstein, Mrs. Charles
 Mueller, Austin M.
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 Mueller, J. Herbert
 Mueller, Paul H.
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 Jane
 Mulhern, Edward F.
 Mulholand, William H.
 Mulligan, George F.
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 Murphy, Joseph D.
 Murphy, O. R.
 Murphy, Robert E.
 Musselman, Dr.
 George H.
 Muszynski, John J.
 Myrland, Arthur L.
 Naber, Henry G.
 Nadler, Dr. Walter H.
 Naess, Sigurd E.
 Nance, Willis D.
 Nast, Mrs. A. D.
 Nathan, Claude
 Naumann, Miss Susan
 Nebel, Herman C.
 Neely, Mrs. Lloyd F.
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 Nellegar, Mrs. Jay C.
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 Nelson, Donald M.
 Nelson, N. J.
 Nelson, Victor W.
 Neuman, Sidney
 Neumann, Arthur E.
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 Newman, Charles H.
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 George R., Jr.
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 Nichols, S. F.
 Nilsson, Mrs.
 Goodwin M.
 Nishkian, Mrs.
 Vaughn G.
 Nitze, Mrs. William A.
 Noble, Samuel R.
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 Noyes, Allan S.
 Noyes, Mrs. May Wells
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 Hermien D.
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 Oberfelder, Walter S.
 Obermaier, John A.
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 O'Connell, Edmund
 Daniel
 Odell, William R.
 Odell, William R., Jr.
 Offield, James R.
 Oglesbee, Nathan H.
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 O'Keefe, William F.
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 Oldefest, Edward G.
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 Olsen, Miss Agnes J.
 Olsen, Mrs. Arthur O.
 Olson, Gustaf
 Olson, Rudolph J.
 O'Neil, Dr. Owen
 Onofrio, Mrs. Michael J.
 Ooms, Casper William
 Opeka, Frank M.
 Oppenheimer, Alfred

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- 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. J. Augustus
 Otis, J. Sanford
 Otis, Joseph E.
 Otis, Joseph Edward, Jr.
 Otis, Ralph C.
 Otis, Stuart Huntington
 Owings, Mrs.
 Nathaniel A.
 Paasche, Jens A.
 Packard, Dr. Rollo K.
 Paepcke, Walter P.
 Page, John W.
 Palmer, James L.
 Palmgren, Mrs.
 Charles A.
 Pardee, Harvey S.
 Pardridge, Mrs. E. W.
 Park, R. E.
 Parker, Dr. Gaston C.
 Parker, Norman S.
 Parker, Troy L.
 Parks, C. R.
 Parmelee, Dr. A. H.
 Parry, Mrs. Norman G.
 Partridge, Lloyd C.
 Paschen, Mrs. Henry
 Pashkow, A. D.
 Patterson, Grier D.
 Patterson, Mrs. L. B.
 Patterson, Mrs. Wallace
 Patzelt, Miss Janet
 Peabody, Mrs. Francis S.
 Peabody, Howard B.
 Peabody, Miss Susan W.
 Pearl, Allen S.
 Pearse, Langdon
 Pearson, F. W.
 Pearson, George
 Albert, Jr.
 Peck, Dr. David B.
 Peel, Richard H.
 Peet, Mrs. Belle G.
 Peirce, Albert E.
 PenDell, Charles W.
 Percy, Dr. Mortimer
 Nelson
 Perel, Harry Z.
 Perkins, A. T.
 Perkins, Mrs. Herbert F.
 Perry, Dr. Ethel B.
 Perry, Mrs. I. Newton
 Peter, William F.
 Peters, Harry A.
 Petersen, Jurgen
 Peterson, Dr. William F.
 Peterson, Albert
 Peterson, Alexander B.
 Peterson, Arthur J.
 Peterson, Axel A.
 Peterson, Mrs. Bertha I.
 Peterson, Mrs.
 Richard E.
 Pfaelzer, Miss
 Elizabeth W.
 Pflaum, A. J.
 Pflock, Dr. John J.
 Phelps, Mrs. W. L.
 Phemister, Dr. Dallas B.
 Phillips, Dr. Herbert
 Morrow
 Phillips, Mervyn C.
 Pick, Albert, Jr.
 Pick, Frederic G.
 Pierce, J. Norman
 Pierce, Paul, Jr.
 Pierson, Joseph B.
 Pink, Mrs. Ira M.
 Pirie, Mrs. John T.
 Pitzner, Alwin Frederick
 Plapp, Miss Doris A.
 Platt, Edward Vilas
 Platt, Mrs. Robert S.
 Plummer, Comer
 Plunkett, William H.
 Pobloske, Albert C.
 Podell, Mrs. Beatrice
 Hayes
 Polk, Mrs. Stella F.
 Pollak, Charles A.
 Pool, Marvin B.
 Poole, Mrs. Frederick
 Arthur
 Poole, Mrs. Marie R.
 Poor, Fred A.
 Pope, Herbert
 Poppenhagen, Henry J.
 Porter, Charles H.
 Porter, Edward C.
 Porter, Mrs. Frank S.
 Porter, Henry H.
 Porter, Louis
 Porter, Mrs. Sidney S.
 Portis, Dr. Sidney A.
 Post, Mrs. Philip Sidney
 Pottenger, William A.
 Poulson, Mrs. Clara L.
 Powills, Michael A.
 Pratt, Mrs. William E.
 Prentice, John K.
 Price, John McC.
 Primley, Walter S.
 Prince, Harry
 Prince, Rev. Herbert W.
 Prince, Leonard M.
 Pritchard, Richard E.
 Probst, Marvin G.
 Proxmire, Dr.
 Theodore Stanley
 Prussing, Mrs. R. E.
 Pucci, Lawrence
 Puckey, F. W.
 Pulver, Hugo
 Purcell, Joseph D.
 Purcey, Victor W.
 Purdy, Sparrow E.
 Putnam, Miss Mabel C.
 Puttkammer, E. W.
 Pyterek, Rev. Peter H.
 Quick, Miss Hattiemae
 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
 Rancy, Mrs. R. J.
 Rankin, Miss Jessie H.
 Rassweiler, August
 Rathje, Frank C.
 Ravenscroft, Edward H.
 Raymond, Mrs.
 Howard D.
 Razim, A. J.
 Reach, Benjamin F.
 Redfield, William M.
 Redington, F. B.
 Redmond, Forrest H.
 Reed, Mrs. Frank D.
 Reed, Mrs. Lila H.
 Reed, Norris H.
 Reed, Mrs. Philip L.
 Reeve, Mrs. Earl
 Refelt, Miss F. A.
 Regan, Mrs. Robert G.
 Regenstein, Joseph
 Regensteiner, Theodore
 Regnery, Frederick L.
 Regnery, William H.
 Reid, Mrs. Bryan
 Reingold, J. J.
 Remy, Mrs. William
 Renaldi, George J.
 Renshaw, Mrs. Charles
 ReQua, Mrs. Charles
 Howard, Jr.
 ReQua, Haven A.
 Rew, Mrs. Irwin

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- Reynolds, Mrs. G.
William
- Reynolds, Harold F.
- Reynolds, Mrs. J. J.
- Rice, Mrs. Charles R.
- Rice, Laurence A.
- Rich, Elmer
- Rich, Harry
- Richards, Mrs. Bartlett
- Richards, J. DeForest
- Richards, Donald
- Richards, Marcus D.
- Richardson, George A.
- Richardson, Guy A.
- Richter, Mrs. Adelyn W.
- Rickcoards, Francis S.
- Ridgeway, Ernest
- Rieser, Leonard M.
- Rietz, Elmer W.
- Rietz, Walter H.
- Ripstra, J. Henri
- Ritchie, Mrs. John
- Rittenhouse, Charles J.
- Roberts, Mrs. John
- Roberts, John M.
- Roberts, Shepherd M.
- Roberts, Mrs. Warren R.
- Roberts, William
Munsell
- Robertson, Hugh
- Robinson, Sanger P.
- Robinson,
Theodore W., Jr.
- Robson, Miss Sarah C.
- Roche, Miss Emily
- Roderick, Solomon P.
- Rodgers, Dr. David C.
- Rodman, Thomas
Clifford
- Rodman, Mrs. Hugh
- Roehling, Mrs. Otto G.
- Roehm, George R.
- Roesch, Frank P.
- Rogers, Miss Annie T.
- Rogers, Mrs. Bernard F.
- Rogers, Edward S.
- Rogers, Joseph E.
- Rogerson, Everett E.
- Roggenkamp, John
- Rogovsky, W. P.
- Rolfes, Gerald A.
- Roller, Fred S.
- 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.
- Rosenstone, Nathan
- Rosenstone, Samuel
- Rosenthal, Kurt
- Rosenthal, Lessing
- Rosenthal, Samuel R.
- Rosenwald, Mrs. Julius
- Rosenwald, Richard M.
- Ross, Joseph F.
- Ross, Robert C.
- Ross, Mrs. Robert E.
- Ross, Thompson
- Ross, Walter S.
- Roth, Aaron
- Roth, Mrs. Margit
Hochsinger
- Rothacker, Watterson R.
- Rothschild, George
William
- Routh, George E., Jr.
- Rozelle, Mrs. Emma
- Rubens, Mrs. Charles
- Rubloff, Arthur
- Rubovits, Theodore
- Ruckelhausen, Mrs.
Henry
- Ruettinger, John W.
- Runnells, Mrs. Clive
- Rupprecht, Mrs.
Edgar P.
- Rushton, Joseph A.
- Russell, Dr. Joseph W.
- Russell, Paul S.
- Rutledge, George E.
- Ryan, Mrs. William A.
- Ryerson, Mrs.
Donald M.
- Sackley, Mrs. James A.
- Sage, W. Otis
- Salmon, Mrs. E. D.
- Sammons, Wheeler
- Sample, John Glen
- Sampsell, Marshall G.
- Sandidge, Miss Daisy
- Sands, Mrs. Frances B.
- Santini, Mrs. Randolph
- Sargent, Chester F.
- Sargent, John R. W.
- Sargent, Ralph
- Sauter, Fred J.
- Sawyer, Ainslie Y.
- Sawyer, Dr. Alvah L.
- Schacht, John H.
- Schafer, Mrs. Elmer J.
- Schafer, O. J.
- Schaffner, Mrs. Joseph
- Schaffner, Mrs. L. L.
- Scharin, Mrs. J. Hippach
- Scheinman, Jesse D.
- Schenck, Frederick
- Schermerhorn, W. I.
- Schlichting, Justus L.
- Schmidt, Dr. Charles L.
- Schmidt, Mrs. Minna
- Schmitz, Dr. Henry
- Schneider, D. G.
- Schneider, F. P.
- Schnering, Otto Y.
- Schnur, Ruth A.
- Scholl, Dr. William M.
- Schram, Harry S.
- Schreiner, Sigurd
- Schroeder, Dr. George H.
- Schroeder, Dr. Mary G.
- Schueren, Arnold C.
- Schukraft, William
- Schulze, Mrs. Mathilde
- Schupp, Philip C.
- Schurig, Robert Roy
- Schutz, Thomas A.
- Schuyler, Mrs.
Daniel J., Jr.
- Schwab, Laurence E.
- Schwander, J. J.
- Schwanke, Arthur
- Schwartz, Charles K.
- Schwartz, Charles P.
- Schwartz, Dr. Otto
- Schwarz, Herbert E.
- Schwarzhaupt, Emil
- Sclanders, Mrs. Alexander
- Scott, Miss Maud E.
- Scott, Robert L.
- Scribner, Gilbert
- Scully, Mrs. D. B.
- Sears, Miss Dorothy
- Sears, J. Alden
- Sears, Richard W., Jr.
- Seaton, G. Leland
- Seaverns, Louis C.
- Sedgwick, C. Galen
- See, Dr. Agnes Chester
- Seeberger, Miss Dora A.
- Seeburg, Justus P.
- Segal, Victor
- Seifert, Mrs. Walter J.
- Seip, Emil G.
- Seipp, Clarence T.
- Seipp, Edwin A., Jr.
- Seipp, William C.
- Sello, George W.
- Sencenbaugh, Mrs. C. W.
- Seng, V. J.
- Senne, John A.
- Shaffer, Carroll
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- Shanahan, Mrs. David E.
- Shanesy, Ralph D.
- Shannon, Angus Roy
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- Sharpe, N. M.
- Shaw, Alfred P.

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- Shaw, Mrs. Arch W.
 Sheldon, James M.
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 Shepherd, Mrs. Edith P.
 Shepherd, Miss Olive M.
 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.
 Shroyer, Malcolm E.
 Shumway, Mrs. Edward
 DeWitt
 Sidley, William P.
 Siebel, Mrs. Ewald H.
 Sieck, Herbert
 Siegel, David T.
 Sigman, Leon
 Silander, A. I.
 Silberman, Charles
 Silberman, David B.
 Silberman, Hubert S.
 Sills, Clarence W.
 Silverstein, Ramond
 Silverthorne, George M.
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 Simonds, Dr. James P.
 Simpson, John M.
 Sincere, Henry B.
 Sinclair, Dr. J. Frank
 Singer, Mrs. Mortimer H.
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 Sitzer, Dr. L. Grace
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 Sleeper, Mrs. Olive C.
 Smith, Charles Herbert
 Smith, Clinton F.
 Smith, Mrs. E. A.
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 Smith, Franklin P.
 Smith, Harold Byron
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 Dunlap
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 Smith, Samuel K.
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 White
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 Snyder, Harry
 Socrates, Nicholas A.
 Sola, Joseph G.
 Solem, Dr. George O.
 Sonnenschein, Hugo
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 Soravia, Joseph
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 Spiegel, Mrs.
 Frederick W.
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 Spitz, Leo
 Spohn, John F.
 Spooner, Charles W.
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 Sprague, Dr. John P.
 Spray, Cranston
 Squires, John G.
 Staaek, Otto C.
 Stacey, Mrs. Thomas I.
 Stanley, Sinclair G.
 Stanton, Henry T.
 Starbird, Miss Myrtle I.
 Starrels, Joel
 Stearns, Mrs. Richard I.
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 Steele, Henry B., Jr.
 Steele, W. D.
 Steepleton, A. Forrest
 Steffey, David R.
 Stein, Mrs. Henry L.
 Stein, Dr. Irving
 Stein, L. Montefiore
 Stein, Sydney, Jr.
 Steinberg, Dr. Milton
 Stenson, Frank R.
 Stephan, Mrs. John
 Sterba, Dr. Joseph V.
 Stern, Mrs. Alfred
 Stern, Alfred Whital
 Stern, David B.
 Stern, Felix
 Stern, Gardner H.
 Stern, Oscar D.
 Stevens, Delmar A.
 Stevens, Elmer T.
 Stevens, Harold L.
 Stevenson, Engval
 Stewart, Miss
 Mercedes Graeme
 Stirling, Miss Dorothy
 Stockton, Eugene M.
 Stone, Mrs. Jacob S.
 Stone, Mrs. Theodore
 Straus, Henry H.
 Straus, Martin L.
 Straus, Melvin L.
 Strauss, Dr. Alfred A.
 Strauss, Ivan
 Strauss, John L.
 Straw, Mrs. H. Foster
 Street, Mrs. Charles A.
 Strickfaden, Miss
 Alma E.
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 Knutson, A. C.
 Koch, Carl
 Koehn, Carl W.
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 Koenig, O. N.
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 Kort, George
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 Kramer, Herman J.
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 Lane, Howard
 Laney, Seymour J.
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 Lange, Hugo C.
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 Langer, Joseph S.
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 Large, Judson
 Larsen, Roy R.
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 Levin, Robert E.
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 Levine, William D.
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 Liffshin, Reuben J.

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Richard A.
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- Lindenmeyer, Conrad A.
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- Lindsey, Dr. Maude L.
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- Line, Dr. Eva J.
- Lingott, Richard H.
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- Lipman, Abraham
- Lippincott, R. R.
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- Lipsey, Howard
- Lipshutz, Joseph
- Litschgi, Dr. J. J.
- Llewellyn, Mrs. K.
- Lloyd, Miss Georgia
- Lloyd, Glen A.
- Lloyd, William B., Jr.
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- Lochridge, W. F.
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- Lock, Gilbert L.
- Lockefer, Frank V.
- Lockett, Harold
- Lockwood, Lawrence A.
- Lockwood, Robert R.
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- Loeb, Mrs. Ernest G.
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- Loebe, Edward E.
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- Loewenstein, Richard M.
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Murphy, Morgan F.
Murphy, P. M.
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Murray, William M.
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Norman, Mrs. Hedwig
Norris, Mrs. James
North, Mrs. F. S.
North, Harold F.
Norton, Christopher D.
Norton, G. A.
Norton, Thomas L.
Norville, Leo T.
Novak, Edward E.
Novotny, Richard R.
Noyes, W. H., Jr.
Nyhan, Thomas J.
Nylander, Dr. Victor T.
- Oberhelman, Dr.
Harry A.
O'Brien, M. J.
Ochsner, Dr. Edward H.
O'Connell, Dr. John S.
O'Connor, Fred J.
O'Connor, P. K.
Odell, Jay G.
Odell, Joseph R.
Ogden, Walter Headden
O'Hara, Arthur J.
O'Hearn, Rev. John J.
O'Keefe, John F.
Oleson, Philip H.
Olin, Mrs. David
Olin, Edward L.
Oliver, James P.
Oliver, Dr. Marguerite
Olsen, Dr. Charles W.
Olsen, Harvey W.
Olson, Albert M.
Olson, Benjamin Franklin
Olson, H. Edsall
O'Neal, Wendell
O'Neal, William James
O'Neill, Dr. Eugene J.
Orban, Dr. Balint
Orschel, Albert K.

ANNUAL MEMBERS (Continued)

- Osanai, Mrs. Mary M.
 Osborne, W. Irving, Jr.
 Osburn, M. B.
 Ossendorff, Dr. K. W.
 Ostrander, E. L.
 Overend, Robert B.
 Overmyer, Franklin R.
 Owen, Robert R.
 Owens, Harry J.
- Pallasch, Paul V.
 Palmer, Mrs. Claude
 Irwin
 Palmer, Curtis H.
 Pandaleon, Costa A.
 Parker, Austin H.
 Parker, Miss Edith P.
 Parks, Burritt A.
 Parks, Robey
 Parrott, George H.
 Patch, A. Huntington
 Patterson, W. A.
 Patterson, William F.
 Pauley, Clarence O.
 Paulus, Mrs. Max G.
 Payson, Randolph
 Peabody, Mrs.
 Stuyvesant
 Pearce, Charles S.
 Pearson, Mrs. George
 Pederson, Alfred S.
 Peirce, Mrs. Clarence A.
 Pencik, Mrs. Miles F.
 Pendergast, Frank
 Pendleton, Maurice B.
 Pennebaker, Elliott H.
 Penner, Louis L.
 Penner, Samuel
 Peponis, Arthur H.
 Perin, Reuben L.
 Perlman, I. B.
 Perlman, Morris
 Perlstein, Mrs. Harris
 Perreault, Earl E.
 Perry, Arthur C.
 Person, Dr. Allgot G.
 Peterkin, Daniel, Jr.
 Peters, Dr. Fredus N.
 Peterson, V. W.
 Petrie, John
 Petrie, Morton H.
 Pettibone, Holman D.
 Pfaelzer, Mrs. Monroe
 Pflager, Charles W.
 Phelps, Erastus R.
 Phelps, William Henry
 Phillips, Mrs. Howard C.
 Phillips, John Ward
 Pier, H. M.
 Pillinger, Douglass
 Pillsbury, Mrs. Charles S.
 Pirie, Mrs. S. C., Jr.
- Pirofalo, James C.
 Pitt, A. A.
 Platt, Robert
 Pletz, S. R.
 Plimpton, Miss Bonita V.
 Plotkin, Mrs. Oscar H.
 Plummer, Daniel C., Jr.
 Plunkett, Paul M.
 Poe, Miss Frances
 Pollock, Mrs. Lewis J.
 Pond, Mrs. Harold M.
 Pond, M. C.
 Pontius, Mrs. G. V.
 Pope, George J.
 Pope, Mrs. Henry, Jr.
 Pope, Mrs. S. Austin
 Pope, Sidney T.
 Porte, James J.
 Porter, Dr. George J.
 Post, Myron H.
 Potter, Howard I.
 Potter, Mrs. T. A.
 Power, John W.
 Powers, William F.
 Poyer, Stephen A.
 Prada, William R.
 Praed, William G.
 Praeger, Charles H.
 Pratt, J. H.
 Preble, Robert C.
 Preikschat, Ray W.
 Prentice, J. Rockefeller
 Press, Robert M.
 Preus, J. A. O.
 Price, Allen H.
 Price, Frederick J.
 Price, Griswold A.
 Price, John C.
 Price, Owen N.
 Priest, MacMillan
 Prietsch, Miss Mary
 Jeannette
 Prince, William Wood
 Pritchard, N. H.
 Proby, Dr. Edmund A.
 Prosser, John A.
 Pruitt, Raymond S.
 Puestow, Dr. Charles B.
 Puzey, Russell V.
- Quackenbush, E. W.
 Quan, John B.
 Quisenberry, T. E.
- Radack, Mrs.
 Dorothy W.
 Randall, Frank A.
 Ranney, Mrs. George A.
 Rappold, Samuel R.
 Rasmussen, Frank
 Rasmussen, L. M.
 Rathburn, M. Hudson
- Rau, John M.
 Rauh, Morris
 Ray, Mrs. Herbert S.
 Raymond, Mrs.
 Clifford S.
 Rayner, Lawrence
 Reace, William T.
 Read, Freeman C.
 Ready, Charles H.
 Reber, M. D.
 Reddy, Mrs. Philip J.
 Reed, Mrs. Frank C.
 Reed, L. F. B.
 Reese, Mrs. C. W.
 Regan, Mrs. Ben
 Reichert, Hugh J.
 Reilly, Vincent P.
 Rein, Lester E.
 Reiser, Miss Irene K.
 Renholm, Harold A.
 Renier, Edward P.
 Renken, Miss Martha
 Replogle, Dr. Fred A.
 ReQua, Mrs. Charles H.
 Reskin, Charles G.
 Reticker, Edward
 Revzan, Theodore
 Reynolds, Milton
 Rhodes, Charles M.
 Rhodes, Martin C.
 Richards, Oron E.
 Richert, John C.
 Ricker, Jewett E.
 Ricks, Ivan
 Riggs, Mrs. Joseph A.
 Riggs, Dr. Lloyd K.
 Riley, John H.
 Rinaker, Samuel M.
 Ritter, Miss Lavinia
 Ritzwoller, Earle H.
 Rivenes, A. I.
 Rivera, J. A.
 Robbins, Burr L.
 Robbins, Laurence B.
 Roberts, J. K.
 Roberts, Miss
 Margaret A.
 Robertson, Egbert
 Robertson, Theodore B.
 Robinson, Miss Nellie
 Robson, Mrs. Oscar
 Roche, Burke B.
 Roche, Mrs. Donald M.
 Roche, John Pierre
 Rochlitz, O. A.
 Rockafellow, G. B.
 Rockhold, Mrs.
 Charles W.
 Rockwell, Theodore G.
 Roden, Carl B.
 Rodger, John H.
 Rodwick, Frank P.

ANNUAL MEMBERS (Continued)

- Roefler, Henry A.
 Rogers, Mrs. J. B.
 Rogers, Miss Suzanne
 Rogers, Milton P.
 Rogers, Thomas W.
 Roman, B. F.
 Ronning, Magnus I.
 Roos, Edwin J.
 Rootberg, Philip
 Roseland, J. G.
 Rosenbaum, Mrs. Joseph
 Rosenberg, Ben L.
 Rosenberg, Mrs. Bernhard
 Rosenfels, Mrs. Irwin S.
 Rosenson, Herzl
 Rosenthal, M. A.
 Ross, Earl
 Ross, Dr. Chester John
 Ross, Dr. Martin T.
 Ross, Ralph H.
 Ross, Mrs. Sophie S.
 Rosset, Harry
 Roth, Arthur J.
 Rothschild, Mrs. Maurice L.
 Rowley, William A.
 Rubert, William F.
 Rugen, Fred A.
 Ruskin, Mrs. Harry H.
 Rutherford, M. Drexel
 Ryan, Arnold W.
 Ryan, Mrs. Lawrence J.
 Ryder, F. W.
 Ryerson, Mrs. Anthony M.
 Ryser, Adolph
- Saalfeld, Harry H.
 Sabbath, Milton J.
 Sabin, Eben T.
 Sager, Mrs. S. Norman
 Saladin, Harry J.
 Salk, Miss Betsy Ruth
 Sallemi, James V.
 Salomon, Ira
 Salomon, William E.
 Saltarelli, Dr. Gabriel
 Saltiel, Dr. Thomas P.
 Salzman, Philip H.
 Sampsell, Mrs. Joseph C.
 Samuels, Benjamin
 Sanborn, Mrs. V. C.
 Sandberg, Harry S.
 Sandberg, John V.
 Sandel, Mrs. Clara
 Sando, E. E.
 Sandrok, Edward G.
 Sandvold, Mrs. W. C.
 Sang, Bernard G.
 Sang, Philip D.
- Sapp, Warren H., Jr.
 Sauerman, John A.
 Saunders, Thomas W.
 Sawicki, Michael J.
 Sayers, Mrs. A. J.
 Sayre, Dr. Loren D.
 Scalbom, O. Trumbull
 Scalbom, Oscar L.
 Scanlan, Thomas P.
 Scarborough, Mrs. Henry
 Schaar, B. E.
 Schaffner, Arthur B.
 Schaffner, Miss Marion
 Schalla, Ralph W.
 Scheinfeld, Aaron
 Schelly, Mrs. Herbert S.
 Schenker, Ben W.
 Scheu, Ralph J.
 Schick, Miss Inez M.
 Schiff, Max
 Schiller, Dr. A. L.
 Schiltz, M. A.
 Schipfer, Dr. L. A.
 Schlatter, Miss Nina E.
 Schlossberg, Mrs. Harry
 Schlossman, Norman J.
 Schmidt, George A.
 Schmidt, John
 Schmidt, Mrs. Siegfried G.
 Schmus, Elmer E.
 Schneider, Benjamin B.
 Schnering, Robert B.
 Schnur, Joseph M.
 Schnute, Dr. William J.
 Schoeneberger, Charles A.
 Scholl, Bertha M.
 Schonthal, B. E.
 Schott, Harold C.
 Schottenhamel, Mrs. Max P.
 Schuetz, Ralph E.
 Schulman, Harry
 Schultz, Mrs. Arnold C.
 Schultz, Chester H.
 Schultz, William F.
 Schulz, George H.
 Schuman, J. R.
 Schureman, Jean L.
 Schuttler, Mrs. Peter
 Schutz, Reuben M.
 Schuyler, L. H.
 Schwab, Raymond J.
 Schwab, Dr. Walford A.
 Schwartz, Joseph
 Schwartz, Milton H.
 Schwartz, Nathan H.
 Schwartz, Selwyn S.
 Schweitzer, E. O.
 Schwemm, Earl M.
 Sciaky, Mario M.
 Scofield, Clarence P.
- Scott, Mrs. Cortlandt N.
 Scott, Frederick H.
 Scott, George A. H.
 Scott, Mrs. Marion R.
 Scovel, Harold F.
 Sringeur, Miss Gladys M.
 Scudder, Mrs. Barrett
 Scudder, Mrs. William M.
 Seuderi, Mrs. Carlo
 Seaberg, Edward R.
 Seaholm, A. T.
 Seaman, Henry L.
 Sears, A. T.
 Searles, Donald K.
 Seaverns, George A., Jr.
 Secord, Burton F.
 Seder, A. R.
 Segal, Myron M.
 Segil, Harold T.
 Selby, J. F.
 Selfridge, Calvin F.
 Selig, Lester N.
 Sellers, Paul A.
 Selz, A. K.
 Seneard, Dr. F. E.
 Severson, D. O.
 Sexton, Mrs. Thomas G.
 Shafer, Walter S.
 Shapiro, Joseph R.
 Shaw, John I.
 Shay, Grant F.
 Shaykin, Dr. Jacob B.
 Shedd, Mrs. Charles C.
 Sheffer, K. A.
 Sheldon, Walter M., Jr.
 Shennan, A. G.
 Shepard, Robert Philip
 Sheppard, Joseph L.
 Sheridan, Leo J.
 Sherman, H. C.
 Shlopach, Wallace B.
 Short, William H.
 Shrader, Frank K.
 Shufitowski, Joseph T.
 Sibley, Joseph C., Jr.
 Siebel, George E.
 Sieger, Joseph F.
 Sillani, Mrs. Mabel W.
 Silverman, Harry
 Silverstein, Milton
 Sima, Dr. Charles A.
 Simmons, William P.
 Simpson, Bruce L.
 Sinaiko, Dr. Edwin S.
 Singer, Albert H.
 Singer, William A.
 Sinnerud, Dr. O. P.
 Slamin, Henry A.
 Sloan, William F.
 Smart, David A.
 Smerz, E. J.

ANNUAL MEMBERS (Continued)

- Smick, Robert W.
 Smith, George W.
 Smith, Dr. H. Reginald
 Smith, H. S.
 Smith, Harold A.
 Smith, John F., Jr.
 Smith, Joseph Herbert
 Smith, Monroe A., Jr.
 Smith, Reynold S.
 Smith, Robert C.
 Smith, T. A.
 Snider, Dr. S. Sinclair
 Snyder, Mrs. E. F.
 Sollitt, Mrs. Ralph T.
 Sollitt, Sumner S.
 Somes, J. J.
 Sonne, Mrs. Fred T.
 Sonnenschein, Mrs. Edward
 Spark, David I.
 Sparr, Mrs. Caroline H.
 Speed, Dr. Kellogg
 Spencer, Arthur T.
 Sperry, Mrs. Albert F.
 Spiegel, Miss Katherine J.
 Spiegel, Mrs. Philip
 Spielmann, Willson
 Spitz, M. W.
 Spivack, Dr. Julius L.
 Sporrer, M. J.
 Springsguth, Robert C.
 Staffelbach, Earl T.
 Stahl, Felix B.
 Stahmer, George F., II
 Staller, Joseph H.
 Stanbery, J. N.
 Stanley, J. Paul
 Stanton, Lyman A.
 Starbuck, J. C.
 Starrett, Miss Carolyn J.
 Starshak, A. L.
 Stathas, P. P.
 Steffen, Charles
 Steffey, D. Earl
 Stein, Mrs. S. Sidney
 Steins, Mrs. Halsey
 Steinwedell, William
 Stemm, R. Edward
 Stensgaard, W. L.
 Stephens, Miss Laura G.
 Stern, David B., Jr.
 Stern, Herbert L.
 Stern, Herbert L., Jr.
 Stern, Jacob S.
 Steuer, Mrs. Joseph True
 Stevens, Miss Charlotte M.
 Stevens, E. W.
 Stevens, Mrs. R. St. John
 Stevenson, Mrs. Adlai E.
 Stevenson, Miss Lillian
 Stevers, Martin D.
 Stewart, E. E.
 Stewart, George R.
 Stiles, J. F., Jr.
 Stoehr, Kurt
 Stoetzel, Herbert W.
 Stoffels, Oscar A.
 Stokes, Mrs. Edward J.
 Stolle, Arthur E.
 Stone, Dr. F. Lee
 Stone, Mrs. J. S.
 Stone, Saul
 Storkan, Mrs. James
 Stormont, Dr. D. L.
 Storms, North
 Stout, Frederick E.
 Straka, Frank B.
 Stransky, Franklin J.
 Stratton, Mrs. E. W.
 Stratton, Paul
 Stratton, Robert C.
 Straus, Harry C.
 Straus, Mrs. Robert E.
 Stresenreuter, Mrs. Charles H.
 Stresen-Reuter, Frederick A.
 Strodel, F. A.
 Strohmeier, Dr. Otto E.
 Strong, Joseph L.
 Stuart, Robert K.
 Stuart, William M.
 Stude, Henry
 Stumes, Charles B.
 Sturla, Harry L.
 Sudler, Carroll H., Jr.
 Sullivan, Joseph P.
 Suyker, Hector
 Swift, T. Philip
 Switzer, Mrs. James W.
 Sylvanus, Alfred
 Sylvester, Edmund Q.
 Sylvester, Dr. Emmy
 Symmes, William H.
 Symonds, Merrill
 Tadrowski, Anton J.
 Talbot, Mrs. Eugene S., Jr.
 Tannenbaum, Dr. Karl H.
 Tarnopol, Emil
 Tarrson, Albert J.
 Tartak, Paul H.
 Tatge, Paul W.
 Tatman, James H.
 Taussig, Mrs. J. M.
 Taylor, Mrs. A. Thomas
 Taylor, Fitzhugh
 Taylor, George H.
 Taylor, Mrs. Samuel G.
 Tegarden, J. E.
 Templeton, Kenneth S.
 Temps, Leopold
 Teninga, Alfred J.
 Tenuey, Henry F.
 Tevis, Paul F.
 Thiel, Raymond F.
 Thiele, George C.
 Thomas, Mrs. John W., Sr.
 Thomas, Lee B.
 Thompson, Dr. Willard O.
 Thoren, Mrs. J. N.
 Thorne, Mrs. Gordon C.
 Thorson, Reuben
 Throop, Mrs. George Enos
 Thurrott, J. Angus
 Tichy, Dr. Elsie M.
 Timmings, G. H.
 Timpson, Mrs. T. William
 Tippens, Mrs. Albert H.
 Todd, A.
 Tomhave, Mrs. William H.
 Tonk, Percy A.
 Toomin, Philip R.
 Topaz, Martin
 Towne, Claude
 Towner, Mrs. Frank H.
 Townley, Mrs. Paula H.
 Townley, W. Fred
 Townsend, Hubert F.
 Traut, Bernard H.
 Traver, George W.
 Traynor, William B.
 Traynor, William Knowlton
 Treffeisen, Gustave
 Tregenza, A. E.
 Trier, Robert
 Troeger, Louis P.
 Trumbull, Mrs. Charles L.
 Trumbull, Robert F.
 Trumbull, William M.
 Tuck, Walter R.
 Tucker, Irwin R.
 Tucker, J. C.
 Turnbull, Mrs. George C.
 Turner, Mrs. Christopher F.
 Turner, G. H.
 Turner, Dr. Herbert A.
 Tuteur, Charles
 Tuteur, Irving M.
 Tyrrell, Miss Frances
 Uhlmann, Richard F.
 Ullmann, S. E.

ANNUAL MEMBERS (Continued)

- Unwin, Mrs. Parkinson
 Urban, Andrew
 Ursin, Mrs. Ben E.
 Utley, Mrs. Clifton M.
- VanBuskirk, M. G.
 VanDeventer, William C.
 VanHoosen, Dr. Bertha
 VanSchaick, Mrs.
 Ethel R.
 Varty, Leo G.
 Vastine, Lee B.
 Vaughan, Alan W.
 Velde, James A.
 Velvel, Charles
 Vilsoet, William
 Vincent, James L.
 Vineyard, Philip W.
 Vloedman, Dr. D. A.
 Vogel, James B.
 Vogel, Mrs. Leslie H.
 Vogt, Earle E.
 Voltz, D. H.
 vonPerbandt, Mrs. Louis
 Vose, Mrs. Frederic P.
- Wach, Dr. Edward C.
 Wade, Glenn D.
 Wadler, Milton Arnold
 Wagner, Richard
 Wahl, Herman L.
 Wain, Mrs. Philip H.
 Waite, Roy E.
 Walcher, Alfred
 Waldeck, Herman
 Waldstein, Herman S.
 Walker, Dr. Alfred O.
 Walker, Wendell
 Wall, Dr. James M.
 Wallace, Charles Ross
 Wallace, George H.
 Wallenstein, Sidney
 Waller, Edward M.
 Waller, William, Jr.
 Wallgren, Eric M.
 Walsh, Donald J.
 Walters, Gary G.
 Walz, John W.
 Wanzer, Howard H.
 Wardwell, H. F.
 Ware, Mrs. Robert R.
 Ware, Willis C.
 Warner, Ernest N.
 Warner, Mason
 Warren, L. Parsons
 Warren, William G.
 Washburn, Dr.
 Kenneth C.
 Wasserman, Hy
 Wasson, Theron
 Waterhouse, Paul G.
 Watkins, Frank A.
- Watling, John
 Watt, Herbert J.
 Way, Mrs. Henry J.
 Weary, Allen M.
 Weaver, R. B.
 Weaver, Sheldon A.
 Webb, Dr. Edward F.
 Weber, James E.
 Webster, Maurice
 Webster, N. C.
 Weeks, Miss Dorothy
 Weidert, William C.
 Weil, Mrs. Benjamin
 Weil, David M.
 Weiner, Charles
 Weiner, George H.
 Weinress, Morton
 Weinress, S. J.
 Weiser, Frederick S.
 Weismantel, Miss
 Theresa A.
 Weiss, Alexander
 Weiss, Louis A.
 Weitzel, Carl J.
 Welch, M. W.
 Welch, R. T.
 Welfeld, Marvin J.
 Wells, F. Harris
 Wescott, Dr. Virgil
 West, Alfred C.
 West, James D.
 Westbrook, Charles H.
 Westerlin, Mrs. J. M.
 Wetten, Walton
 Wetmore, Horace O.
 Wezeman, Frederick H.
 Wheeler, Mrs. Seymour
 Wheelock, Miss Ellen P.
 Whipple, Gaylord C.
 Whipple, Mrs. Jay N.
 Whipple, Miss Velma D.
 Whiston, Frank M.
 Whitaker, James E.
 White, Mrs. Harold R.
 White, William J.
 Whitelock, John B.
 Whitney, Mrs.
 Charles R.
 Whitney, Emerson C.
 Whyte, W. J.
 Wible, R. R.
 Wick, William D.
 Wickersham, Mrs.
 Lucille
 Wickland, Algot A.
 Wickman, C. E.
 Wigdahl, Edward H.
 Wilbur, Lawrence S.
 Wilby, A. C.
 Wilcox, Edward B.
 Wilcox, Mrs. Harold C.
- Wilcoxson, Mrs.
 Arthur L.
 Wilds, John L.
 Wiley, Mrs. Edwin G.
 Wilhelm, Mrs. Frank E.
 Wilkinson, William D.
 Willard, Nelson W.
 Williams, Albert W.
 Williams, Mrs.
 Allan C., Jr.
 Williams, Lawrence
 Williams, Ralph E.
 Williams, Russell V.
 Willingham, G. J.
 Willis, Ivan L.
 Wilson, Allen B.
 Wilson, Arlen J.
 Wilson, Mrs.
 Elizabeth C.
 Wilson, H. Fred
 Wilson, Holmes
 Wilson, Percival C.
 Wilson, Miss S. Edna
 Wincher, John A.
 Windchy, Mrs.
 Frederick O.
 Winsberg, Herbert H.
 Winsberg, Samuel
 Winston, Mrs. Farrell
 Winterbotham, John R.
 Wise, Herman
 Wise, James E.
 Wiseman, William P.
 Wittkowsky, James
 Witt, Earl J.
 Wolf, Morris E.
 Wolf, Frank C.
 Wolf, Oscar M.
 Wood, Miss Aileen
 Wood, Edward W.
 Wood, Milton G.
 Woodson, William T.
 Woodward, Arthur H.
 Woodyatt, Dr. Rollin
 Turner
 Woolard, Francis C.
 Woolf, S. Roger
 Worthy, Mrs. James C.
 Woulfe, Henry F.
 Wright, William Ryer
 Wright, Mrs. R. G.
 Wrisley, George A.
 Wrisley, L. Norton
- Yanofsky, Dr. Hyman
 Yates, John E.
 Yates, William H.
 Yohe, C. Lloyd
 York, Melvin S.
 Young, C. S.
 Young, Dr. Donald R.
 Youngberg, Arthur C.

ANNUAL MEMBERS (Continued)

Youngren, W. W.
Youngsma, T. S.

Zadek, Milton
Zangerle, A. Arthur

Zelezny, John G.
Zelzer, Harry
Zillman, Mrs. L. C.
Zimmerman, Austin M.
Zimmermann, Mrs. P. T.

Zipse, Edwin W.
Zischke, Herman
Zitzewitz, Elmer K.
Zolla, Abner M.
Zusser, Maurice M.

DECEASED, 1948

Barron, John F.
Belden, Mrs. Joseph C.
Brady, Earl J.

Degener, August W.

Eitel, Robert J.
Eulass, E. A.

Fowler, Gordon F.

Goldsmith, Henry M.

Goldsmith, Melvin M.

Headley, Mrs. Ida M.
Healy, John J.

Kaufmann, Charles D.

Latimer, William L.

Monroe, Walter D.

Ross, Dr. H. M.

Schobinger, Miss Elsie
Schulze, Paul
Shirk, Miss Lydia E.
Stibgen, Geary V.

Wacker, Fred G.
Webster, James
West, Mrs. Mary Lavelle
Woltersdorf, Arthur F.

Articles of Incorporation

STATE OF ILLINOIS

DEPARTMENT OF STATE

WILLIAM H. HINRICHSEN, *Secretary of State*

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

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

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

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

W. H. HINRICHSEN,
Secretary of State.

[SEAL]

TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

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

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

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

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

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

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

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

(Signed)

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McCurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer

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

STATE OF ILLINOIS }
 COOK COUNTY } ss.

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

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

G. R. MITCHELL,

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

CHANGE IN ARTICLE 1

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

CHANGE IN ARTICLE 1

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

CHANGE IN ARTICLE 3

Pursuant to a resolution passed at a meeting of the corporate members held the 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 shall 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, 1920, in the office of the Secretary of State for Illinois.

CHANGE IN ARTICLE 1

Pursuant to a resolution passed at a meeting of the corporate members held the 15th day of November, 1943, the name of FIELD MUSEUM OF NATURAL HISTORY was changed to CHICAGO NATURAL HISTORY MUSEUM. A certificate to this effect was filed November 23, 1943, in the office of the Secretary of State for Illinois.

Amended By-Laws

DECEMBER, 1945

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 Member. 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 (\$100.00) 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 entertainments under the auspices of the Museum, provided reservation is requested in advance; and admission of holder of membership and accompanying party to all special exhibits and Museum functions day or evening. Any person residing fifty miles 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 shall 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 days after notice of election and within thirty days after each recurring annual date. 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 membership 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 and 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

OFFICERS

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, signed by such officer, or officers, or other persons as the Board of Trustees may from time to time designate.

SECTION 2. The securities and muniments of title belonging to the corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer, except as hereinafter provided. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: the President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum. 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 (a) to sell, assign and transfer as a whole or in part the securities owned by or registered in the name of the Chicago Natural History Museum, 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 the Chicago Natural History 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

THE DIRECTOR

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

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 Board may direct.

ARTICLE VII

THE AUDITOR

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board. He shall certify to the correctness of all 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 not less than five or more than seven 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 funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to make and alter investments from time to time, reporting its actions to the Board of Trustees. The Finance Committee is fully authorized to cause any funds or investments of the Corporation to be made payable to bearer, and it is further authorized to cause real estate of the Corporation, its funds and investments, to be held or registered in the name of a nominee selected by it.

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

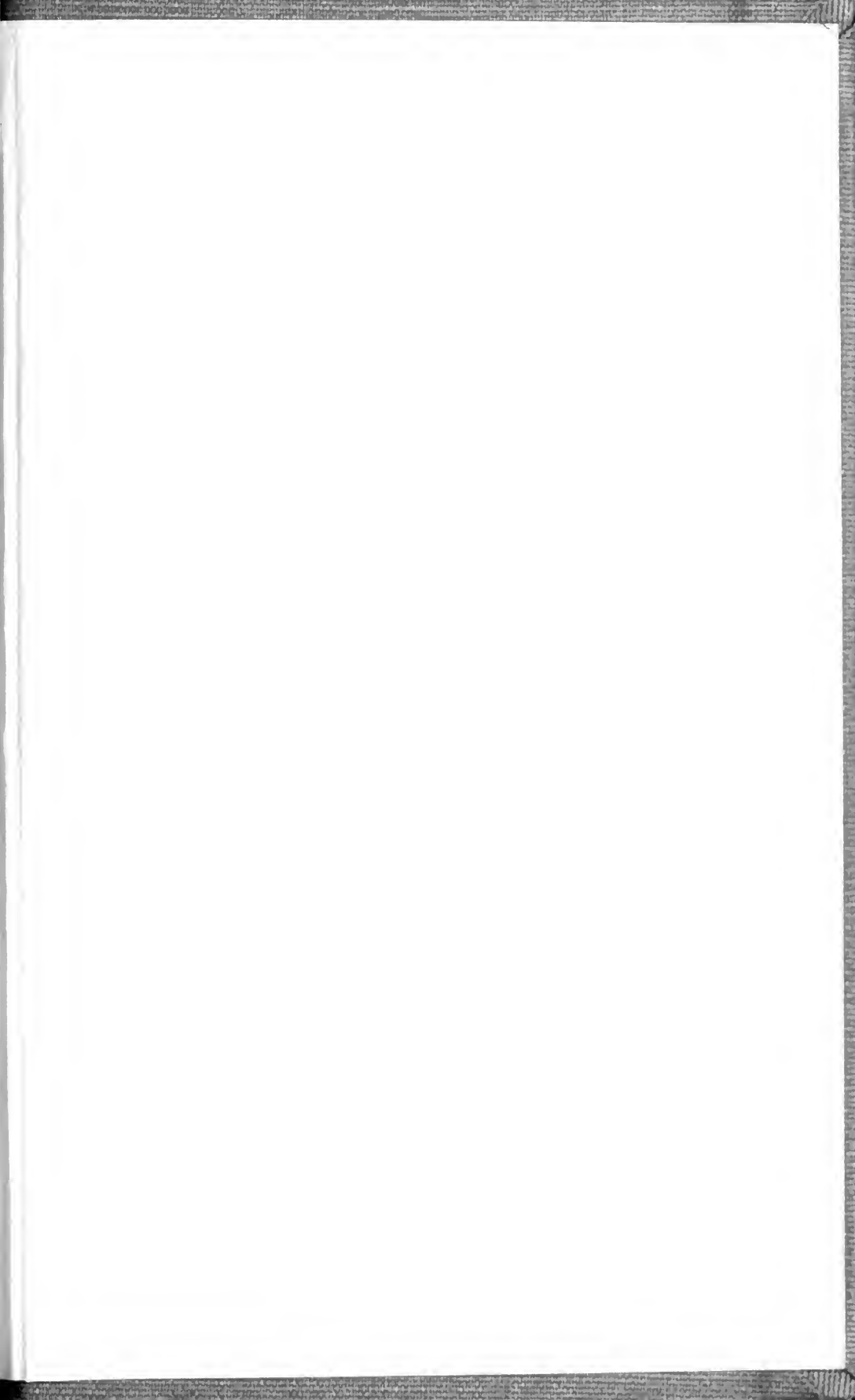
NOMINATING COMMITTEE

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. The By-Laws, and likewise the Articles of Incorporation, may be amended at any regular meeting of the Board of Trustees by a vote in favor thereof of not less than two-thirds of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.



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