SMITHSONIAN INSTITUTION

UNITED STATES NATIONAL MUSEUM

REPORT ON THE PROGRESS AND CONDITION OF THE UNITED STATES NATIONAL MUSEUM FOR THE YEAR ENDED JUNE 30, 1950

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United States National Museum,
Under Direction of the Smithsonian Institution,
Washington, D. C., October 15, 1950.

Sir: I have the honor to submit herewith a report upon the present condition of the United States National Museum and upon the work accomplished in its various departments during the fiscal year ended June 30, 1950.

Very respectfully,

Remington Kellogg,
Director, U. S. National Museum.

Dr. A. Wetmore,
Secretary, Smithsonian Institution.

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REPORT ON THE PROGRESS AND CONDITION OF THE UNITED STATES NATIONAL MUSEUM FOR THE FISCAL YEAR ENDED JUNE 30, 1950

By Remington Kellogg

Director of the United States National Museum

INTRODUCTION

From the funds appropriated by Congress to carry on the operations of the Smithsonian Institution and its bureaus during the fiscal year 1949–50, a total of $751,684 was allotted for the work of the United States National Museum. This allotment included $36,200 for printing and binding, the remainder being used for salaries and expenses required for the preservation, increase, and study of the national collections of anthropological, zoological, botanical, and geological specimens as well as materials illustrative of engineering, industry, graphic arts, and history.

Neil M. Judd, curator of the division of archeology, retired on December 31, 1949, and was succeeded by Dr. Waldo R. Wedel. In the department of geology, Norman H. Boss, chief exhibits preparator in the division of vertebrate paleontology, retired at the end of May 1950. A change in the administrative staff was the resignation of Paul H. Oehser on May 31, 1950, after 19 years as editor of the United States National Museum, to become chief of the editorial division of the Smithsonian Institution following the retirement of Webster P. True.

Dr. Preston E. Cloud, Jr., chief of paleontology and stratigraphy branch, United States Geological Survey, and Dr. Roland W. Brown, geologist in the same service, were given honorary appointments on November 9, 1949, as custodians of Paleozoic fossils and of Mesozoic and Cenozoic plants, respectively. Two deaths among the honorary staff occurred during the year: Dr. Henri Pittier, for many years an associate in botany, died on January 27, 1950, and Dr. Leland Ossian Howard, veteran entomologist and honorary curator of insects, died on May 1.

More professional and subprofessional workers are urgently needed in the curatorial staff. The principal responsibility of the Museum staff to the public is the classification, documentation, and preservation

for continued use of the exhibits and other materials comprising the national collections. Most of the departments are undermanned and, consequently, the work relating to the classification and arrangement of the collections to make them accessible and useful cannot keep pace with the yearly increment in the backlog of unclassified materials. Additional personnel for the division of marine invertebrates and for the divisions in the department of history would result in considerable improvement in the existing situation.

Again attention is directed to the increasing need for adequate laboratory and office space for the professional workers, for modern halls designed primarily for the display of the exhibition collections, and for storage rooms constructed in accordance with the normal requirements for the safekeeping of materials that are at present subjected to deterioration by exposure to light, dust, moisture, and destruction by insect pests. All available space has been utilized, and the present overcrowded conditions can be alleviated only by the construction of new buildings. More than 20 years have elapsed since authorization was made by Congress for wings at each end of the Natural History Building. Reference has been made in previous reports to the inadequacy of the Arts and Industries Building, which was constructed in 1883 on the south side of the Mall. The housing program envisages an Engineering and Industries Building to replace the antiquated Arts and Industries Building and a building to house the anthropological and historical exhibits and collections.

The United States National Museum is not merely a storehouse for aggregation of objects, such as the Nation's treasures in the natural and technological sciences, but its exhibits reveal to the general public the resources of the world in which we live, the material cultures that illustrate the political, cultural, and technical achievements of man, and the ideas and principles that have resulted from scholarly research. These exhibits now occupy more than 300,000 square feet of floor space and are viewed annually by over 2,600,000 visitors. Overcrowding of the national collections in the three buildings occupied by the Museum, the resulting reduction in space for exhibition purposes, the inadequacy of appropriated funds for the accomplishment of a comprehensive modernization and coordination of the entire exhibit series, and the present small size of the exhibits staff have limited every effort that has been made to maintain these exhibits at an effective level for the instruction and inspiration of the millions who will view these displays. Nevertheless, detailed plans have been formulated for a general revision of the exhibit series in accordance with new and effective methods of exhibition presentation.

Collections.—The materials added to the national collections during the past year were greater in number than had been anticipated, and

they maintained the great variety normally represented in the annual accessions. These additions came from gifts and bequests of individuals, donations from industrial concerns, exchanges with institutions in foreign countries, scientific expeditions sponsored by the Smithsonian Institution, and purchases made under the income of bequests for specific purposes.

The accessions for the year, including gifts, bequests, transfers, and purchases, arrived in 1,849 separate lots, totaling 793,326 specimens (402,233 more than were accessioned during the fiscal year 1949), and were distributed among the six departments as follows: Anthropology, 4,982; zoology, 186,855; botany, 61,983; geology, 530,758; engineering and industries, 2,047; and history, 6,701. A complete list (by donor) of all accessions received during the year is given on pages 82 to 139 of this report.

For examination and report 1,430 lots of specimens were received, involving the identification of 55,191 individual items, the larger part of which was referred to the departments of zoology, botany, and geology. Some of this material was returned to the senders, and some that is especially desirable was retained with the approval of the sender for the Museum's collection. In addition to the above, 3,516 lots totaling 27,725 specimens were identified at the request of visitors and employees of other agencies.

Gifts of duplicates to schools, museums, and other institutions numbered 17,922 specimens. Exchange of duplicate material with various organizations, institutions, and individuals for scientific or educational purposes totaled 54,939 specimens, and 353 specimens were transferred to other Government agencies. Loans for scientific study to investigators outside of Washington totaled 51,299 specimens. Thirty-six collecting outfits were distributed.

The following summary of the collections has been adjusted to reflect additions to and eliminations from the various series to the end of the fiscal year.

Anthropology	760,623
Zoology	24,745,225
Botany	2,414,362
Geology	3,655,246
Engineering and industries	165,134
History	635,007
Total	32,375,597

Library.—Staff changes in the Museum library during the year were the retirement on March 31, 1950, of Miss Mathilde M. Carpenter, who had long given invaluable service in charge of the sectional library of the division of insects, and the appointment of Mrs. Helene G. Cushman to succeed her.

The Museum library has long been so badly cramped for space that it becomes increasingly difficult to maintain high standards of service and to give adequate care either to the existing collections or to new acquisitions. Under the added handicap of continued understaffing, a great deal of work was nevertheless done during the past year.

In all, 962 of the most urgently needed books were purchased, and paid subscriptions for 182 different periodicals were entered. The largest number of acquisitions were, as usual, scientific serial publications received in exchange for the Museum's own publications. The initiation of 168 new exchanges accounted for a considerable number of the 4,990 volumes and parts received in response to 319 special requests for new publications and for parts needed to fill gaps in incomplete sets.

The splendid library of some 4,000 books and pamphlets that accompanied and will remain with the Cushman Foraminiferal Collection was the most notable gift of the year. Among other gifts received from generous donors, many of them members of the Museum staff, were about 500 books and pamphlets presented by Neil M. Judd upon his retirement as curator of archeology.

The number of volumes and pamphlets fully classified and cataloged during the year was 3,183, and 8,698 parts of periodicals were entered. Cards added to catalogs and shelf lists numbered 11,848.

Statistics of circulation are kept only at the main library loan desks, and so the 9,707 loans recorded there give only a partial idea of the use of books by readers. There is a large but uncounted intramural circulation of books and periodicals sent to sectional libraries for filing, and the addition of 3,980 volumes and parts this year would alone undoubtedly represent several times that figure in a statistical record of their circulation and use among members of the divisions to which they were assigned. Loans of 2,181 publications were made to 104 outside libraries throughout the country, and 1,471 publications were borrowed from the Library of Congress and other libraries for use within the Institution.

There were 1,100 volumes prepared and sent to the Government Printing Office for binding, principally recently completed volumes of serial publications. More or less extensive repairs of 1,013 worn volumes were made in the library, and many pamphlets were put in folders. There is still a very large arrearage of binding and repair work to be done.

Some much needed new equipment included several card catalog units, and fluorescent lights installed in the reference room in the Natural History Building relieved eyestrain of readers and staff alike and added greatly to ease in consulting the catalogs.

Statistics of material acquired, handled, and used are at best only points of departure for summing up the library's reason for being, which is to make it possible for the curatorial staff and other serious inquirers to have constant access to the literature of their special subjects, without which it would be impossible for them to carry on their work. All the library's activities are directed toward this end.

Publications.—For the fiscal year 1949–50 there was allotted $36,200 from appropriations made to the Smithsonian Institution for the publication program of the United States National Museum. Twenty-nine publications were issued: 1 Annual Report, 2 in the Bulletin series, 22 in the Proceedings, and 4 numbers of the Contributions from the United States National Herbarium. A list of these is given on pages 140 to 141. Special mention is made of the eighteenth volume of A. C. Bent's Life Histories of North American Birds, entitled "Life Histories of North American Wagtails, Shrikes, Vireos, and their Allies," and a "Catalog of the Automobile and Motorcycle Collection of the Division of Engineering, United States National Museum," by S. H. Oliver.

Volumes and separates distributed to libraries and individuals on the regular mailing list totaled 49,657, while 8,281 copies of publications issued during the current and previous years were supplied in response to special requests. As compared to the year 1948–49, the distribution of Museum publications was reduced by about 7,300.

DETAILED REPORTS ON THE COLLECTIONS

DEPARTMENT OF ANTHROPOLOGY

(Frank M. Setzler, *Head Curator*)

Even though most of the space allotted to the department for the storage of study collections has been exhausted, the divisions were forced to consolidate into the already overcrowded halls and cases the several thousand additional specimens received during the year. This was accomplished by placing storage cases three tiers high in the corridors of the third floor, by reclassifying some of the older collections, and by eliminating some of the undocumented specimens. Once this space has been filled, the ceilings and roof will prevent any further expansion. In spite of our inadequate number of personnel the divisions were able to process most of the incoming collections, although very little progress could be made in reducing the heavy backlog of work. The workload in connecton with replies to outside requests by correspondence has increased 12 percent, especially in the division of ethnology, as compared with previous years.

On November 28, 1949, through a private donation to the Smithsonian Institution for the purpose, a new fund was established in the department, known as the "Southwestern Archeological Fund," to be used in connection with the research of one of our collaborators. The department has been fortunate in receiving excellent cooperation from Mrs. Arthur M. Greenwood, especially in regard to the documentation and classification of the Dr. and Mrs. Arthur M. Greenwood Collection now in the process of being cataloged. Mrs. Greenwood has contributed much through her specialized knowledge in amplifying the basic data associated with the specimens relating to the arts and furnishings of rural America between the years 1630 and 1850.

After almost 38 years of continuous service, during which time he established a national reputation as an outstanding archeologist, Neil M. Judd retired from active duty on December 31, 1949, as curator of the division of archeology. In recognition of his long and meritorious service he was appointed research associate in the department. Dr. Waldo R. Wedel, who served as associate curator in the division of archeology since 1936, was promoted to curator.

During the year, F. M. Setzler, head curator, completed the classification and cataloging of 464 ethnological specimens he had obtained

from the natives in Arnhem Land, northern Australia, in 1948. During the fall he assisted in the preparation of an article for the National Geographic Society covering the international expedition to Arnhem Land and in editing 3 miles of kodachrome cinefilm covering the activities of the various scientists on the expedition. On the basis of the completed film, condensed to about 3,000 feet, he prepared a lecture entitled "Aboriginal Australia," which he presented at the annual meeting of the American Association for the Advancement of Science and before the National Geographic Society and other groups. In November he presented a paper, "Anthropological Investigations on the Arnhem Land Expedition," at the annual meeting of the American Anthropological Association and in February gave an illustrated lecture entitled "Material Culture of the Natives of Arnhem Land" before the graduate students of the department of anthropology at the University of Michigan. On October 15, 1949, Mr. Setzler represented the Smithsonian Institution at the inauguration of William Bay Irvine as twelfth president of Marietta College, Marietta, Ohio.

As a result of the many international and national meetings of anthropologists held in the eastern United States, a great many visiting colleagues from various parts of the world were entertained in the department.

This fiscal year was one of normal growth of accessions and satisfactory achievement in the interpretation of the collections in the division of ethnology. For the first time, the staff was able to meet the responsibility of scientific research in European and colonial American ethnology, and to attend adequately to the growing popular interest in cultural-history topics. Even though no extended field work was undertaken, it was possible for the associate curators, John C. Ewers and C. Malcolm Watkins, to visit museums in other cities and to examine outstanding private collections. In October, Mr. Watkins was detailed to confer with members of the Sussex Archaeological Association of Lewes, Del., regarding European pottery recovered in connection with the excavation of Indian sites in and around Lewes. In March, Mr. Ewers visited museums in Chicago and Springfield, Ill., Milwaukee, Wis., and the Detroit area in order to study some of the more recent developments of anthropological exhibits. Several manuscripts were prepared and published, describing the collections and specialized fields of knowledge by the various curators.

The staff of the division of archeology, from helpers to curator, was occupied almost wholly with routine laboratory and office tasks. No field work, as a project of the division or under Museum sponsorship, was undertaken. Prior to his retirement, Mr. Judd continued, as time and many other duties permitted, his researches on Pueblo Bonito.

At the beginning of the fiscal year, Dr. Waldo R. Wedel, associate curator, was in Lincoln, Nebr., assigned, as in previous years, to supervising the field and laboratory operations of the Missouri River Basin Surveys. He returned to Washington in mid-September, and made his final inspection trip as field director to the Lincoln office from November 23 to December 9. On January 1, he assumed the curatorship of the division, succeeding Mr. Judd. Shortly thereafter he was relieved of administrative responsibility for Missouri River Basin Survey activities. Mrs. Margaret C. Blaker, scientific aide, continued reworking the archeological collections from the Atlantic seaboard, with emphasis particularly on materials from Maine to Virginia. She also worked on new exhibits of New England materials, participated in several professional conferences, visited nearby museums and research institutions, and carried on limited research on the collections from the eastern United States.

ACCESSIONS

The number of accessions for this fiscal period was approximately 20 percent less than last year, whereas the number of specimens received showed an increase of 25 percent, not including 464 specimens that had been accessioned in the previous year but were not completely processed until May 1950. A total of 78 accessions, comprising 4,981 specimens, as compared with 97 accessions with 3,989 specimens, was received. These 78 accessions were distributed among the following divisions and sections: Archeology, 4,371 specimens in 23 accessions; ethnology, 459 specimens in 31 accessions; ceramics, 16 specimens in 7 accessions; musical instruments, 10 specimens in 4 accessions; period art and textiles, 72 specimens in 7 accessions; physical anthropology, 53 specimens in 6 accessions.

Archeology.—The 4,371 archeological specimens were acquired through gifts, transfers, deposit, purchase, and collected for the Museum. Of these, 1,268 were assigned to Old World archeology. Outstanding among those recorded are the following: 16 gold fishhooks from Colombia, presented by F. M. Estes; 991 pottery, stone, and other objects of the Neolithic period from northern Honshu, Japan, presented by Maj. Howard A. MacCord, United States Army; a series of shards from shell heaps in Panama, believed to represent the earliest ceramic horizon yet recognized in that region, collected by Drs. M. W. Stirling and Gordon R. Willey during the Smithsonian Institution-National Geographic Society Expedition of 1948; a Basketmaker III pitcher from La Plata County, Colo., presented by E. H. Morris; a Roman cinerary urn of the Roman Republic period (ca. 50 B. C.), presented by the National Federation of Business and Professional Women's Clubs; 14 casts of stone artifacts from a deeply

buried pre-pottery camp site on Lime Creek, in Frontier County, Nebr., gift of the University of Nebraska State Museum, Lincoln; a pottery vase, found near the Persian frontier and ascribed to the pre-Achaemenid period (pre-800 B. C.), presented by Miss Sarah Meseroll.

Ethnology.—The accessions in the division of ethnology represent the handicrafts and material equipment from many of the world's peoples. Of a total of 49 accessions all but 5 came as unsolicited gifts from individuals. Especially noteworthy among the specimens cataloged during the year are the following: A collection of 464 ethnological specimens obtained for the Museum by Frank M. Setzler in Arnhem Land, Northern Territory, Australia, during the year 1948 while deputy leader of the Arnhem Land Expedition, made possible by the cooperation and under the auspices of the Commonwealth of Australia, the National Geographic Society, and the Smithsonian Institution. These examples of the material culture of isolated stone age peoples are important, since no specimens have heretofore been received from the general area covered by the Arnhem Land Expedition. Mr. Setzler was able to document the collection fully with data obtained from the native informants as to the use and function of each specimen in the culture of the aborigines. In its entirety, the collection illustrates the utilitarian, esthetic, and ceremonial arts of a primitive people little known to science. Included are digging sticks, fishing nets, turtle and fish spears, models of dugout canoes, containers of shell, bark, and woven basketry; head rings for carrying burdens, garments of paper bark, woven and feather headdresses, belts, weapons, such as spears, knives, clubs, throwing sticks, spear throwers; red and yellow ochres and decorative bark paintings; decorative objects of personal adornment in pearl shell, pandanus, and bugle grass; dance plumes of white cockatoo feathers and spirit bags worn in ceremonial dances; rhythm sticks, shell and wooden trumpets, drone tubes, and bullroarers; message sticks, painted and carved totem figures of birds, turtles, snakes, and other animals; mythological ancestral figurines and legendary deities. Of special interest is the gift by José M. Cruxent, director of the Museo de Ciencias Naturales, Caracas, Venezuela, of an outfit for snuffing *yopo* (*Piptadenia peregrina*), obtained by the donor in 1949 from the Piaroa Indians of the Río Paria area, a tributary of the Orinoco River.

Some of the most important specimens received during the year were from the Near East. President Harry S. Truman deposited on loan the Scrolls of the Law, hand-lettered in Hebrew on parchment, and a beautiful Ark to hold these sacred scrolls, made of copper, finely decorated with Biblical inscriptions in silver, by skilled craftsmen of the Bezalel School of Arts and Crafts in Jerusalem. These were the gift of Chaim Weizmann, first President of Israel, to the Presi-

dent of the United States. Two camel saddles, with bridles and elaborately woven and decorated saddle bags presented by His Majesty, King Ibn Sa'ud of Saudi Arabia, as tokens of friendship to Maj. Gen. C. V. Haynes and Rear Adm. John P. Whitney, were donated to the Museum by the recipients.

Among the North American Indian accessions, a collection from the Cree Indians living near Hudson Bay and on the plains of Saskatchewan is a particularly noteworthy addition to our collections from Indians previously not well represented in this Museum, the gift of Copley Amory. Included in Mr. Amory's gift is an excellent example of a smooth-bore, muzzle-loading gun made in England and generally referred to as a northwest gun, of a type supplied the Indians of the Great Lakes, Great Plains, and Canadian interior in considerable numbers in the years before the development of the breechloader and metallic cartridges. Although many of these guns were used by Indians in waging intertribal wars during the first three-quarters of the nineteenth century, specimens of the northwest gun are now rare.

The division's extensive collections of original paintings and drawings of American Indians, frequently consulted by artists, historians, and ethnologists, were enriched through the transfer from the Bureau of American Ethnology of 11 oil paintings by Charles W. Furlong, depicting the Ona, Yahgan, and Tehuelche Indians, painted during his expedition to Patagonia and Tierra del Fuego in 1908.

Textiles, weaving, and costumes collected by the late Gen. John J. Pershing from the Moro, Mandaya, and Bagobo during his tours of duty in the Philippine Islands between 1899 and 1913, and from Peruvian and Bolivian Indians acquired during his visit to South America in 1924–25, were presented by his son, Francis Warren Pershing.

Among the less comprehensive but outstanding ethnological collections received during the period covered in this report are the following: Burial blanket from the Ifugao of north central Luzon, Philippine Islands, the gift of Miss Dorothy Cheney; four carved and painted wooden ancestral figurines from Ngulu atoll, and the island of Woleai in the western Carolines, the gift of N. J. Cummings; a Korean 18th century wooden chest shod with horn and painted with Korean symbolic designs, the gift of Mrs. M. Preston Goodfellow; and 16 examples of Hawaiian tapa cloth, the gift of Mrs. Norman D. Dole, originally collected by Sanford B. Dole, the first territorial governor of Hawaii.

A valuable collection in the field of cultural history was the bequest by Miss Mary E. Maxwell of 235 specimens of Oriental and European furniture, textiles, ceramics, and metalwork which she had collected during her travels over a period of many years.

Physical anthropology.—The most noteworthy collection of skeletal material received consists of 48 more or less complete skeletons from a protohistoric Indian site near Lewes, Del. This collection, which represents the best sample of Indian remains thus far recovered in Delaware, was received as a gift from the Sussex Archaeological Association. The skeleton of another Delaware Indian was presented by H. Geiger Omwake. Although it comes from a different site, the accompanying cultural objects indicate cultural identity.

Distribution and exchange of specimens.—During the year numerous specimens (15 cataloged) were sent to various educational institutions and museums as open exchanges. In return, the division of physical anthropology received one lot of 69 kodachrome slides illustrating fossil primates. Continuing the practice adopted in 1946, six lots of uncataloged specimens from the Huntington Collection were sent in open exchange to a number of teaching institutions. In addition, a small lot of unidentified bone and one cataloged femur were transferred to the Armed Forces Institute of Pathology. Casts of the Tepexpan skull and lower jaw were sent in open exchange to the Department of Anthropology, University of Tennessee. Three specimens on loan were withdrawn by the owners.

Number of specimens under the department.—During the past fiscal year the department received an addition of 5,430 specimens, a net gain of 88 percent over the number received in the previous year. On June 30, 1950, the department was charged with a total of 760,623 cataloged specimens. The actual number of specimens received amounted to 5,445; however, 15 previously cataloged specimens were distributed as gifts, withdrawn, or transferred to other institutions or Government departments The following summary indicates the distribution of specimens in the various divisions and sections in the department:

Archeology	526,447
Ethnology	184,284
Ceramics	7,932
Musical instruments	2,426
Period art and textiles	2,656
Physical anthropology	36,878
Total	760,623

INSTALLATION AND PRESERVATION OF COLLECTIONS

The department's responsibility in preserving the many thousands of perishable objects under its jurisdiction is considerable, and as a consequence much time by the entire staff is required to process the anthropological specimens as received. The mere storage of these specimens, representing cultural objects from all parts of the world, is not sufficient. In all cases currently received specimens are thor-

oughly fumigated before reaching the divisional laboratories; they are then classified and documented by the collector or by the staff on the basis of accompanying records. Then, depending on the nature and condition of the specimens, they are repaired. Finally they are meticulously described and measured, providing the essential data for the official records and divisional catalog cards. Whenever the required data are missing, the staff exhausts every effort by means of comparative studies or analysis to determine the source, period of manufacture, provenience, and general ethnic position before they are added to the national collections. This time-consuming work, often involving considerable library research and correspondence with other experts in the various disciplines, is of prime importance, since these specimens are to be used by hundreds of scholars, investigators, or visitors every year in advancing their research. Moreover, many of the specimens, more than 100 years old obtained from now extinct civilizations and cultural groups, are absolutely irreplaceable. It is the Museum's duty, therefore, to maintain and preserve these collections for the future generations in the best possible manner.

One of the most difficult problems confronting the curators is the lack of adequate space and personnel. The extremely crowded conditions for even the storage of their specimens magnifies the potential danger of deterioration. Then, too, this crowding prevents them from making the desired classified arrangements. Scholars wishing to examine and study the collections are delayed because there is no space available to lay out large series of specimens for comparative studies or because unsatisfactory makeshift arrangements must be made to accommodate them. To encroach upon the already crowded exhibition halls will not only restrict our acceptance of future donations but also will defeat one of the Museum's prime functions—exhibition.

Cataloging.—The department cataloged 4,958 specimens received during the year and 464 received in previous years but not cataloged.

All incoming ethnological collections were fumigated, cleaned, and repaired as a routine procedure preliminary to cataloging. The staff devoted considerable time to obtaining supplemental data regarding incompletely documented accessions. For example, to catalog properly a snuffing outfit presented by José M Cruxent, it was necessary to obtain information concerning the nature of the snuff used by the Piaroa Indians. A careful examination of ethnological literature on the area and correspondence with the donor in Caracas, Venezuela, revealed that the snuff used is the so-called *yopo*, derived from *Piptadenia peregrina*, not *parica*, which is obtained from the leaves of a species of *Virola*. Another example involved a metal pipe-tomahawk, presented by William W. Young, bearing the stamped name "J. Hayes"

on the blade. The donor's son stated that the specimen had been in the possession of his family in Mifflin County, Pa., for several generations and believed that "J. Hayes" had been connected with Indian missions in Pennsylvania or Ohio in the eighteenth century. In response to letters sent to the Lutheran Theological Seminary, the Historical Society of Pennsylvania in Philadelphia, and the Pennsylvania Historical and Museum Commission in Harrisburg, it was indicated that the only J. Hayeses in Pennsylvania frontier history were a father and son named John Hayes or Hays. The father came to Weaversville near Fort Allen on the Pennsylvania frontier from Ireland in 1730. His son was well known in frontier history as the traveling companion of the Moravian missionary, Christian Frederich Post, who journeyed about the Indian country in 1760, in an endeavor to bring about a peaceful settlement of the border warfare in the French and Indian War. The younger Hayes died in Meadville, Pa., in 1796; his father 16 years earlier. Probably, therefore, this tomahawk-pipe belonged to the father, son, or both, and hence dates from about the middle of the eighteenth century.

During the process of installing skeletal collections in room 342, following its renovation, it was determined that the records pertaining to the older collections from Virginia were incomplete. During the year these records were fully reviewed in the light of the information furnished by the original papers. All necessary changes were incorporated on new catalog cards.

In addition, history cards were provided for this section of the collection, and some progress was made on the general program of supplying history cards for the accessions of past years. At the close of the fiscal year a large series of scapulae were returned to the respective skeletons; this material had been separated from the stored skeletons in 1942 when Dr. Aleš Hrdlička was engaged in research on this particular bone. The return of this material to the collections released an additional amount of storage space. The process of cataloging the large reprint collection has gone forward steadily but slowly.

Exhibition.—Considerable progress was made in modernizing, reinstalling, and erecting new exhibits, especially in the division of ethnology. The compromise program for modernizing the exhibitions in hall 11, as indicated in the last annual report, went forward, receiving the anticipated favorable reactions on the part of the staff and visitors.

Ethnology: The Yahgan Indian diorama, titled "The Southernmost People of the World," was installed in an alcove at the west end of hall 11, along with two wall-case exhibits illustrating the material culture of the Indians of Tierra del Fuego and Patagonia. This has created a most favorable reaction from visitors. In addition, 12 of the life-sized Indian groups were relocated in this hall, and the back

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glass of each was painted a light solid color to set off the figures and prevent the distraction caused by looking completely through one group at unrelated exhibits beyond. In connection with a proposed diorama of California Indians the anthropological laboratory constructed a scale model and modeled several Indian and animal figures and the plaster quadrisphere for the painted background to accompany the diorama. The installation of six new case exhibits in the California Indian alcove, where this diorama will be shown, was nearing completion at the end of the year. An exhibit of Plains Indian picture writing was installed in hall 9, one of Arabian costume and saddlery in hall 8, and an exhibit of Hawaiian royal costumes was placed in hall 7, completing the revision of the Hawaiian alcove.

During March, J. C. Ewers, associate curator of ethnology, visited various museums in the Middle West as a member of a committee to study recently installed anthropological exhibits. Much valuable information was obtained regarding methods of exhibit preparation and installation, personnel, and cost involved, which may be used in preparing long-range plans for modernizing exhibits in the Museum.

The division of ethnology participated in and initiated several other special exhibitions. Currently on display is a selection from the Dr. and Mrs. Arthur M. Greenwood Collection illustrating the "Arts and Furnishings of Rural America: 1630–1830." This exhibition consists of 10 display-case units: (1) "Art of the People," such as folk paintings, wood carvings, scrimshaw; (2) "Utensils of the Kitchen"; (3) "Domestic Furnishings of the 17th Century"; (4) "Pewter"; (5) "The Art of the Blacksmith"; (6) "American Glass"; (7) "Art of the Housewife," a display of embroideries and needlework; (8) "Imported Earthenware of the Early Colonial Period," showing English and Dutch delftware, German stoneware, and English earthenware; (9) "English Creamware," examples of hand-decorated and transfer-printed late eighteenth- and nineteenth-century wares; (10) "China and Glass as Decoration, circa 1760."

The fourth anniversary of the United Nations was commemorated with a display during United Nations Week (October 17–24), in which were installed coins and stamps of the United Nations from the department of history, and folk dolls of the several member nations, from the division of ethnology.

Archeology: Before his retirement as curator, Neil M. Judd installed an exhibit of cultural materials from Pueblo Bonito. Mrs. M. C. Blaker installed a new exhibit of materials from Maine and other New England States. The program for revision and installation of other exhibits for the northeastern United States was delayed pending receipt of exchange materials adequately illustrating the archeology of the areas involved in light of current knowledge.

Preservation of collections.—By thoroughly fumigating all perishable collections prior to their delivery to the divisional offices, it has been possible to forestall serious infestations of destructive beetles and moths. The weekly inspection of collections on exhibit and the constant use being made of the study collections also enable the staff to guard against destruction or deterioration of objects. However, the insurmountable problem of limited and therefore crowded storage space constitutes the greatest hazard in the preservation of this portion of the national collections.

One of the important assignments of Assistant Curator Robert A. Elder is to inspect and classify the collections in storage and to maintain a catalog giving the exact location of the thousands of specimens housed in many hundreds of storage and exhibition cases in two Museum buildings. During the year Mr. Elder completed the classification of the collection of heating and lighting materials and the bows and arrows, clubs, and other weapons of Melanesia, Australia, Polynesia, Latin America, and Africa. He also unpacked and arranged the large Greenwood Collection; assisted in classifying, cataloging, and storing the ethnological materials collected by the Arnhem Land Expedition and the Mary E. Maxwell bequest of period art objects; and placed in classified storage the American Indian basketry collections, the Panamanian, Mexican, Central American, and other specimens moved into storage from exhibit hall 11 in preparation for the modernized exhibits for California, Patagonia, and Tierra del Fuego. The present status of the collections on exhibition and in the department's study series is most gratifying. However, the exposure to the public of unhoused keyboard and other musical instruments on the second floor of the rotunda, Natural History Building, has led to repeated vandalism of a serious character. Owing to the extensive removals of specimens from exhibition to storage and to the necessary replacement of specimens from old to new storage locations entailed by the continuous reclassification project, there has developed a backlog in the maintenance of the placement index.

The scientific helpers in the division of archeology continued the slow and time-consuming task of cleaning, rearranging, and consolidating the study collections. During the past several months the Maryland collections received most attention. This great mass of material includes some important items, but much of it consists of surface specimens and rejectage, often with far too many duplicates, which are of no study, exhibit, or other value to this or any other museum or research institution. As the pressure on storage space increases it is essential to eliminate more and more of these old materials in order to create space for those specimens obtained under more precisely controlled conditions.

Upon completion of the work of remodeling and redecorating room 342 by the division of physical anthropology, the collections assigned to this room were arranged in numerical succession and a placement catalog prepared. Proper notations regarding the new location of the specimens were added to the respective catalog cards as well as a careful listing of the bones present in each skeleton. This procedure extended the stabilized and readily accessible skeletal collections by about 420 drawers.

Anthropological laboratory.—The anthropological laboratory performed a wide variety of tasks for the various divisions in the department. For the division of archeology 12 pieces of Japanese pottery were repaired, restored, and treated with a preservative, and 4 pieces of American Indian pottery were repaired and restored. Numerous specimens of copper and iron were treated with preservatives, and several stone and ceramic specimens were repaired. Five specimens of a sandal fragment were mounted between sheets of glass, and an oil painting cleaned. For the division of ethnology, the background was painted and the lights and labels installed in the Yahgan diorama completed in the laboratory the previous year. Silhouettes of Patagonian horsemen and two Yahgan natives in a canoe were also made for this exhibit. In connection with a proposed diorama of California Indians the anthropological laboratory constructed a scale model, several Indian and animal figures, and a plaster quadrisphere. Silhouettes were also made of two Arabs riding camels, an Indian spearing fish, and an Indian shooting a bow and arrow. Five painted casts of a terra-cotta horse from Nepal were made. A pair of life-size shoulders in plaster was cast and painted. A diagrammatic drawing in ink was made of a buffalo-skin pictograph, and the legends and photographs of a steer hide pictograph were mounted on painted panels. In addition, 29 Catlin paintings and a portrait of a Creek chief were cleaned, repaired, and varnished, one of which was also remounted. A bone spearhead and a bone harpoon head were mounted on a plastic background. Seven painted skulls and hundreds of spears, bark paintings, spear throwers, wooden trumpets, paddles, digging sticks, animal figures, and stone axes from Arnhem Land, Australia, were treated with preservatives to prevent scaling of the mineral paints. The Chippewa warrior and family and the Cocopa Indian groups were repaired. For the division of physical anthropology the bust of Mazaska, a Teton Sioux Indian, was bronzed. Six casts in natural color were made of the Tepexpan skull and jawbone. Drawings and cut-outs of office and storage space requirements were made for the department. The statue of George Washington, by Pettrich, and an ivory base for a Chinese vase were repaired for the National Collection of Fine Arts. The bust of Commodore Stephen

Decatur was repaired and bronzed for the department of history. Several visitors were given information on diorama construction and casting techniques. Sculpture throughout the Natural History Building was kept in repair.

INVESTIGATION AND RESEARCH

Numerous scientific papers dealing with research problems in relation to the collections were completed and published in various scientific journals, and the results of several research projects were prepared and read at meetings of anthropological societies.

During the fall the head curator spent a few days examining minor excavations in connection with an extension of a small museum at the south end of the famous Grave Creek Mound at Moundsville, W. Va. This prehistoric structure represents one of the highest earth mounds in the Ohio Valley. While attending the inauguration of a new president at Marietta College, Marietta, Ohio, he had an opportunity to examine one of the earliest reported mound groups in Ohio.

In collaboration with F. D. McCarthy, curator of anthropology, Australian Museum, Sydney, F. M. Setzler published an article, "A Unique Archeological Specimen from Australia," in the Journal of the Washington Academy of Sciences, describing a unique hafted adz recovered by Mr. Setzler in one of the caves he excavated near Oenpelli at the western edge of Arnhem Land. It is the first time that a specimen of this type has been recovered in Australia. At the close of the year he was working on a longer paper covering all the archeological investigations undertaken by the Arnhem Land Expedition. At the request of various local groups he prepared a short lecture on the history of the Smithsonian Institution, expeditions, and unusual exhibits.

Physical anthropology.—After his return to Washington in September 1949, Dr. T. D. Stewart, curator of physical anthropology, prepared a paper, "Historical Résumé of the Thinking on American Indian Variability," which he contributed to the symposium at the annual meeting of the American Anthropological Association in November 1949. Next he completed his report on the skeletal remains from Zaculeu, Guatemala, to be published by the United Fruit Co., and prepared a paper on "The Problem of the Earliest Claimed Representatives of *Homo sapiens*," which he read at the Cold Spring Harbor Symposium on Quantitative Biology in June 1950, and a bibliography on human paleontology to be published in the 1950 Yearbook of Physical Anthropology. During July and August, Dr. M. T. Newman, associate curator of physical anthropology, prepared a paper on "The Sequence of Indian Physical Types in South America" for the Viking Fund symposium on the American Indian, held in Sep-

tember 1949. Later in the fall, he revised this paper for publication in the forthcoming symposium volume. In August Dr. Newman also prepared a report on "Indian Skeletal Material from the Bynum Site (Mississippi)" for inclusion in the archeological report on that site. In October and early in November, he prepared a paper on "Historical Résumé of Interpretations of American Indian Variability," which he read at the annual meeting of the American Anthropological Association, and from time to time during the winter and early spring made revisions in two manuscripts: "Historical Résumé of Interpretations of American Indian Variability" and "The Blond Mandan: A Critical Review of an Old Problem," which were submitted for publication before the close of the year. At the request of the State Department, he also worked on a summary report covering the physical anthropology of the Trust Territory (Micronesia). Dr. Newman made a detailed report on fragmentary human remains from Marajo Island at the mouth of the Amazon River, to be incorporated in an archeological report by Dr. and Mrs. Clifford Evans. During May and early June, Dr. Newman prepared a report on a small and fragmentary collection of Indian skeletal remains from two sites in the Addicks Reservoir, near Houston, Tex., for the River Basin Surveys, and began a report on Dr. Oberg's measurements on Unutina, Nhambiquara, and Iranxi Indians from Matto Grosso, west Brazil.

Archeology.—Prior to his retirement on December 31, 1949, as curator, Neil M. Judd had brought to virtual completion his National Geographic Society report on the material culture of Pueblo Bonito. Other volumes dealing with the same site are in preparation. Dr. Waldo R. Wedel, the new curator, undertook a study, mostly outside official hours, of aboriginal pottery from Montana, based on several small sherd collections sent to the Museum for examination and on some loan material from the American Museum of Natural History. In March Dr. Wedel participated in a 2-day symposium on methods of collecting, preserving, and identifying archeological materials, sponsored by the Viking Fund, at which he presented a paper, "On the Use of Earth-Moving Machinery in Archeological Excavations."

Mrs. Margaret C. Blaker, scientific aide, continued her analysis of the Frank Hamilton Cushing collection of Maine shell-heap material from a group of 13 island sites off the coast of Brooklin, Maine. She also devoted considerable time to the draft of a manuscript on ceramics of the Townsend site near Lewes, Del., with a distributional study of Townsend pottery types based on collections in the Museum. In addition, as time and other assignments permitted, she added to a file of notes on ceramic collections in the Museum, with a view to ultimate compilation of a descriptive and distributional study of ceramics of the Middle Atlantic region.

Ethnology.—The curator of ethnology, Herbert W. Krieger, after completing his research on the aboriginal cultures of Taiwan (Formosa), prepared a paper on the Yami of Botel Tobago and the Batanese, marginal peoples occupying island groups lying between southern Formosa and the northern Philippine island of Luzón. In connection with this study the Museum's collections of Formosan and Philippine materials, including the recently acquired General Pershing collection from the Mandaya, Bagobo, and Moro, were reexamined. Manuscripts on these researches were completed. Research was continued with the collections made by Mr. Krieger under Smithsonian grants from the Dr. W. L. Abbott and Ernest N. May funds at fifteenth- and sixteenth-century historic Indian villages sites and European settlements in the Bahamas, Hispaniola, and Cuba. The associate curator, John C. Ewers, devoted considerable time to the editing of portions of a newly discovered manuscript dealing with several Plains Indian tribes of the Upper Missouri Valley. This manuscript, written by the fur trader Edwin T. Denig in 1855 and 1856, is based on his 23 years' experience among the Indians of the region. The Missouri Historical Society, St. Louis, owner of the manuscript, kindly lent the original for transcription. His work with these materials included the preparation of critical footnotes and of a biographical sketch of Denig. One chapter of the manuscript, "Of the Arickaras," was published in the Bulletin of the Missouri Historical Society in January 1950. The editing of Denig's 75-page account of the Crow Indians was completed. Mr. Ewers also continued comparative research in the literature in connection with his field study of the horse in Blackfoot culture, and has collected comparative data useful for documenting the early George Catlin collections of specimens in this Museum. The latter investigation has included the locating of documented collections of comparable age in other museums in this country and in Europe. The associate curator, C. Malcolm Watkins, continued with his research on the Museum's collection of Patent Office models of lighting devices of the period 1830–60.

Dr. Walter W. Taylor, collaborator in anthropology, continued the analysis of specimens that he recovered during several seasons of cave excavations in Coahuila, Mexico. A first draft of his final report was nearing completion at the end of the year.

Research by outside investigators.—Seventy-one scholars and research students from all parts of the world used the collections in the department to carry forward various phases of their research programs. Even though this entails considerable work on the part of the staff, especially owing to the extremely crowded condition of our collections, every effort is made to accommodate all serious students.

Moreover, the accumulated knowledge of the staff often contributes to the success of various investigations. Then, too, the divisional libraries in the special fields encompassed are in considerable use. The scholars using the collections and facilities offered by the department came from the following localities throughout the world: Copenhagen, Denmark; Greenland; Trondheim, Norway; Lund and Stockholm, Sweden; Berlin, Germany; Vienna, Austria; Rome, Italy; Jerusalem, Israel; Lhasa, Tibet; Manila, Philippine Islands; Habana, Cuba; São Paulo and Rio de Janeiro, Brazil; Caracas, Venezuela; Bogotá, Colombia; Lima, Peru; Ottawa, Canada; and Victoria, British Columbia, Canada, as well as 27 States in the Union. In addition, many visitors came to the divisions requesting the identification and attribution of personal specimens. Moreover, hundreds of specimens were received through the mails for identification and reports and subsequently returned. This year the department identified 2,108 specimens. According to the respective divisions, archeology identified 157; ethnology, 1,865; physical anthropology, 86. These identifications represent one of the most important services extended to the public. Two hundred and eighty-five of our anthropological specimens were lent to various museums, galleries, and scientific organizations for research and temporary exhibitions.

DEPARTMENT OF ZOOLOGY

(Waldo L. Schmitt, *Head Curator*)

In the past quarter of a century the number of specimens in this department has increased more than 300 percent, rising from a little over 6,000,000 in 1925 to nearly 25,000,000 in 1950. The problem of providing adequate personnel to service and curate these collections is as pressing today as it was 25 years ago, despite the fact that meanwhile there has been some increase in the zoological staff as well as salary increments. The 1925 annual report of the late head curator, Dr. Leonhard Stejneger, was written around the theme of "the necessity for additional assistance in the divisions of the department that the work may be continued effectively." The necessity is far greater today. Compared with the threefold increase in the number of zoological specimens in the national collections, the staff responsible for them has increased only 26 percent. Urgent and repeated budgetary requests and justifications have not yet succeeded in overcoming the marked disparity in size between collections and staff. Indeed, the disparity continues to grow with the years.

The preservation, processing, cataloging, and labeling of the vast collections accruing to the Museum require meticulous care and unremitting labor. As Dr. Stejneger pointed out years ago, "the proper identification, naming, and classifying of these specimens can be done only by highly trained specialists whose lives are devoted to the study of restricted branches of zoological science. The field is so vast, the number of forms so stupendous (as for instance in entomology where the species run into millions) that in many branches the scientific investigator is compelled to devote all his time to one special group if he is to accomplish fundamental work upon which other workers may rely in the practical solution of their multifarious problems in sanitation, agriculture, and other economic activities." Among entire groups of animals in which the Museum had no specialists Dr. Stejneger enumerated spiders, myriapods, worms, and sponges. After 25 years the department is still without specialists in these and other equally significant groups. Also, as Dr. Stejneger pleaded in 1925, "further assistants are needed to relieve trained men of routine burdens and that younger men may be developed to carry on the work of the Museum in later years. Aid in these directions is urgently needed." This is truer today than ever before.

Staff participation in expeditions abroad and field work this year were rather limited. In October Dr. David H. Johnson, associate curator of mammals, and Norman M. Miller, scientific aide in the same division, undertook a brief sampling of the mammalian fauna of Rockbridge and Southampton Counties, Va., and collected 15 small mammals.

Financed by the W. L. Abbott fund of the Smithsonian Institution, M. A. Carriker, Jr., spent another year in Colombia amassing further specimens of its avifauna. Support from the same source enabled Secretary Wetmore, assisted by W. M. Perrygo, to complete a successful collecting trip to new areas of Panama in extension of collections made in that country by these two for several years past. This year they obtained 956 bird skins, 11 skeletons, several sets of eggs, and 10 mammals. Dr. Wetmore also collected 32 mammals during various week ends spent in the Shenandoah National Park in Virginia.

Charles O. Handley, Jr., on temporary assignment as assistant curator of birds, collected 184 birds, 6 skeletons, 3 sets of eggs, and approximately 100 mammals in the Northwest Territories of Canada in the summer of 1949 while participating in an expedition jointly with the National Museum of Canada.

Assisted by grants from the American Philosophical Society and the Guggenheim Foundation, Dr. Herbert Friedmann, curator of birds, toward the end of the year left for Europe en route to South Africa and Southern Rhodesia to study the habits of the parasitic honeyguides and weaverbirds.

Paul L. Illg, associate curator of marine invertebrates, also left near the end of the year to spend some weeks at the University of Washington Oceanographic Laboratories at Friday Harbor, Wash., gathering data on the life histories and ecology of commensal copepods and making incidental collections. Prof. M. M. Ellis, collaborator, collected astacid crayfish in Montana, Idaho, Oregon, Utah, and Wyoming, and cambarid species in four localities in Montana, Wyoming, and Kansas. The returns were most remunerative and the collections of parasites in which Dr. Ellis is particularly interested surprisingly good. Blood samples for serological relationship tests were also taken.

Dr. J. P. E. Morrison, associate curator of mollusks, spent the last few days of the fiscal year on the Eastern Shore of Maryland making an ecologic study of the mollusks inhabiting the salt marshes of that area. R. Tucker Abbott, assistant curator, was detailed to work with the Pacific Science Board, National Research Council, for the purpose of obtaining carnivorous snails and *Scolia* wasps in Kenya and Tanganyika Territory for the control of economic pests in the Trust Territories of the Pacific. While on this mission he made extensive collec-

tions of mollusks in areas very poorly or not at all represented in the Museum's study collections.

W. L. Brown, chief exhibits preparator, made two brief but successful trips afield to obtain accessories, color notes, and photographs needed for the Virginia-deer and pronghorn-antelope groups now being prepared for installation in the North American mammal hall. He spent 5 days on the trip to South Carolina, where the new mounted specimens of Virginia deer were collected, and 22 on the visit to Wyoming, where the pronghorn antelope were obtained.

Mrs. Annie C. Willis, secretary to the curator of insects, after being associated with the work of the division for over 25 years, retired at the end of September 1949. Three subprofessional museum or scientific aides (Brooks Meanley, division of birds; Donald S. Erdman, division of fishes; and George S. Cain, division of marine invertebrates) transferred to higher-grade positions in other Government agencies. The first of the two vacancies so created was temporarily filled by the appointment of Romeo Mansuetti, the third by John T. Willett; the second remained open at the close of the year. Maj. William L. Jellison was reappointed on July 13, 1949, as collaborator, division of insects, for a period of 5 years; and Mrs. Mildred S. Wilson on June 19, 1950, was reappointed collaborator in copepod Crustacea for 2 years. Dr. Leland Ossian Howard, honorary curator of insects, died on May 1, 1950.

ACCESSIONS

The total number of zoological accessions for the year was 805. These brought an estimated 186,854 specimens to the national collections. The number of accessions was 37 less than last year, and the number of specimens involved was 38,741 less, a recession of about 4½ percent in accessions and about 17 percent in specimens. Apportioned among the divisions the accessions and specimens were as follows: Mammals, 62 accessions, 2,136 specimens; birds, 66 accessions, 16,660 specimens; reptiles and amphibians, 41 accessions, 1,137 specimens; fishes, 52 accessions, 8,866 specimens; insects, 249 accessions, 139,108 specimens; marine invertebrates, 139 accessions, 13,024 specimens; mollusks, 178 accessions, 2,923 specimens or lots of specimens (including helminths, 11 accessions, 444 specimens; and corals, 7 accessions, 51 specimens); and echinoderms, 18 accessions, 3,000 specimens.

Mammals.—The foremost mammalian accession consisted of 295 Costa Rican mammals collected for the Museum in 1949 by Dr. Henry W. Setzer, associate curator. Perhaps equally important from a scientific standpoint were the further transfers from various medical and public-health services. Among these were approximately 300 monkeys and other arboreal animals collected by Dr. H. C. Clark and asso-

ciates in Panama in connection with yellow-fever studies carried on by the Gorgas Memorial Laboratory and turned over to the Museum by the Canal Zone Health Department; 98 mammals from the Malay Peninsula resulting from the scrub-typhus investigations of Maj. Robert Traub and his associates in that area, a transfer from the Medical Department of the Army; 32 Bolivian mammals received from the Pan American Sanitary Bureau; and 197 mammals from the Brooks Range, northern Alaska, obtained by Dr. Robert Rausch in connection with parasitological studies he is making in that area for the U. S. Public Health Service. On Prince Patrick Island, in the eastern Arctic, Charles O. Handley, Jr., collected approximately 100 mammals for the Museum. Carl R. Eklund, also collecting for the Museum, obtained 33 microtine rodents in the Ungava region of Labrador. In continuation of his annual collections of Oriental material for the Museum, Ford Wilke sent the Museum 36 specimens of Japanese mammals, including a splendid series of porpoise skulls. Other noteworthy accessions included 4 Philippine bats presented by Capt. H. L. Keegan and 14 small mammals taken by the donor, Roger Rageot, in southern Maryland. The largest single accession in this division in point of numbers comprised 551 mammals transferred from the United States Fish and Wildlife Service.

Birds.—A magnificent and generous gift, the largest single avian accession for many years past, comprised about 10,000 skins and 424 skeletons of North American birds, particularly rich in obscure and juvenile plumages, which were received from J. A. Weber. Field investigations financed by the Smithsonian Institution through the W. L. Abbott fund, resulted in the receipt of 956 skins, 11 skeletons, 3 sets of eggs, and 1 nest from Panama, collected by Secretary Wetmore and W. M. Perrygo; 2,546 skins and 3 sets of eggs from Colombia, collected by M. A. Carriker, Jr.; and 344 skins from British Columbia, collected by J. A. Munro. The Smithsonian also, through the E. J. Brown Library fund, made possible the acquisition of 74 skins of Hungarian birds, a notable addition to the Museum's European collections. Forms and species new to the collections were received as gifts from the following: W. H. Phelps, 6 skins of Venezuelan birds; Dr. R. A. Philippi, the rare Chilean hawk *Buteo albigula;* Dr. Léonce Bonnefil, the nest of the palm chat *Dulus dominicus*, much wanted for the exhibition series; and Museum of Zoology, University of Michigan, 8 skins of Indian birds by exchange. Other noteworthy accessions were 35 bird skins from Virginia presented by Dr. Wetmore; 5 bird skins from the Keewatin District, Canada, a gift of the collector, Dr. Francis Harper; 158 Georgia birds from Herbert L. Stoddard; and 21 skins of Costa Rica birds collected in 1949 for the Museum by Dr. H. W. Setzer.

Reptiles and amphibians.—Two herpetological accessions of special interest included specimens of frogs useful for comparison and for study in connection with the comprehensive report on the frogs of southeastern Brazil nearly completed by Dr. Doris M. Cochran, associate curator in charge of the division. The first, a gift from Cornell University, comprised 141 specimens collected in Venezuela by E. Mondolfi and G. Vivas-Berthier; the second was an exchange from the Museu Paulista, São Paulo, Brazil, through P. E. Vanzolini, the collector, involving 94 specimens from the state of São Paulo. Among other accessions in this division worthy of note were 146 reptiles, including a fine series of very variable water snakes from Ohio, a gift of the collector, John T. Wood; 24 blind cave salamanders, *Typhlotriton spelaeus*, from Smallin's Cave near Ozark, Mo., presented by Dr. C. G. Goodchild and representing the largest collection of these subterranean forms to come to the Museum in many years; and the type and allotype of a new species of salamander from Indiana, collected and described by the donor, M. B. Mittleman. Paratypes of other reptiles and amphibians were received from the following: Museum of Vertebrate Zoology, University of California, through R. C. Stebbins, the gift of a salamander; Chapman Grant, the gift of a lizard; and University of Illinois, through L. Firschein, one frog as an exchange.

Fishes.—As an exchange Cornell University, through Dr. Edward C. Raney, sent the Museum a collection of more than 1,000 fishes made some years ago by the late David Starr Jordan in Japan and the Hawaiian Islands. A considerably larger collection, 4,500 specimens transferred from the U. S. Fish and Wildlife Service, comprised fishes taken by the vessel *Pelican* in the course of the Gulf of Mexico shrimp investigations. Important but smaller gifts were received from Dr. Coleman J. Goin, a specimen of *Lophotus lacepedei* collected by Nick Tsacrios from the Atlantic side of North America (at Clearwater, Fla.); from Maj. Gen. T. D. White, United States Air Forces, 517 Mexican fishes, accompanied by scientifically invaluable color sketches made by Mrs. White; and from Spencer Tinker two accessions totaling 80 fishes, including several reported for the first time as members of the Hawaiian fauna. Valuable and interesting type material was received from Dr. J. L. B. Smith, scale "No. 68" of the holotype of the rare "living fossil fish," *Latimeria chalumnae*, and as an exchange the paratypes of two other South African fishes; from the Muséum National d'Histoire Naturelle, as an exchange, 8 paratypes of fishes; from the British Museum of Natural History an exchange consisting of 3 paratypes of *Prionotus brachychir* and 9 paratypes of poecilid fishes; from the Chicago Natural History Museum, through Loren P. Woods, in exchange, a paratype of *Enneap-*

terygius punctulatus from the New Hebrides and 247 specimens of *Fundulus bermudae* from Bermuda; and from the Museum of Comparative Zoology, in exchange, the paratype of an eel, *Scuticaria unicolor*. Dr. Rui Simões de Menezes donated the holotype and 7 paratypes of a new species of Brazilian anchovy; and the California Academy of Sciences presented two holotypes and three paratypes of new pipefishes from the Philippines.

Insects.—Only the more outstanding among the many important gifts received by the division of insects can be acknowledged here. As evidence of their appreciation of the part played by the Smithsonian Institution in the loan of the services of J. F. Gates Clarke to the British Museum of Natural History for 2 years, that institution secured and transmitted to the National Museum a collection of British tortricid moths amounting to about 5,000 specimens. At the same time and for the same reason, Norman D. Riley, head keeper of insects at the British Museum, transmitted as a gift a fine collection of about 15,000 British Microlepidoptera, which he had obtained on his own responsibility. These two collections are of special importance because they contain Palearctic material in which the Museum has long been deficient. Mention should also be made of John R. Malloch's donation of his extensive personal collection of Diptera and of a collection of about 10,500 beetles, mostly of the families Carabidae and Pselaphidae, which came to the Museum as a bequest from the late Alan S. Nicolay. This latter assemblage of Coleoptera is particularly outstanding because of the excellence of the preparation of each individual specimen.

Marine invertebrates.—A diversity of invertebrate material, including many types and covering a wide geographic range from the Arctic regions to the Tropics, is represented in the year's more important accessions coming to this division. Among these were the following transfers: From the Office of Naval Research, fine collections of more than 2,500 miscellaneous marine invertebrates made by Prof. and Mrs. G. E. MacGinitie at the Arctic Research Laboratory at Point Barrow, Alaska, and through Dr. Mary Sears and Dr. Martin W. Johnson, holotype and representative specimen of a species of siphonophore; from the United States Fish and Wildlife Service, through H. W. Terhune, administrator of the Philippine fishery program, a well-preserved series of 28 specimens of 4 species of spiny lobsters from the Philippines, and through Dr. E. H. Hollis 1,299 lots of fresh-water plankton samples from various shad-breeding grounds in the eastern United States. While working off the coast of Labrador in the summer of 1949 in his schooner, *Blue Dolphin*, under the auspices of the Arctic Institute of North America, David C. Nutt collected nearly 4,000 miscellaneous invertebrates for the Museum. Significant gifts

to the collections, largely of type material, included: 541 specimens of shrimps and other marine invertebrates collected during the "Crossroads" Expedition to the Marshall Islands, from Dr. Martin W. Johnson; over 103 isopods, mostly type material of new species received from the Pacific Marine Station, College of the Pacific, and from the University of California, through Robert J. Menzies; more than 700 marine arthropods taken by diving off the coasts of North and South Carolina, including type specimens of a parasitic isopod and representatives of many other forms not commonly taken by usual collecting procedures, from Dr. A. S. Pearse; 137 echiuroid and sipunculoid worms and 10 flatworms accumulated by the donor, Dr. W. K. Fisher, from various parts of the world; more than 104 Indian amphipods, including types, from Dr. K. Nagappan Nayar, Madras, India; 39 miscellaneous invertebrates from the Marine Biological Laboratory of the Florida State University, through Dr. H. J. Humm; microscope slides of type specimens of two species of cladocerans from Dr. R. W. Kiser; microscope slides of type specimens of a species of ostracod from Gerald A. Cole; holotype, allotype, and paratype specimens of of a species of copepod from W. H. Sutcliffe, Jr.; paratype of a species of isopod from Herbert W. Levi; holotypes, morphotypes, and allotypes of two species of crayfishes from Dr. Horton H. Hobbs, Jr.; a type specimen of a species of hydroid from Dr. Nathan W. Riser; type specimens of six species of sipunculid worms from Dr. W. K. Fisher; hototype, allotype, and paratype of a species of crayfish from Prof. George Henry Penn; holotype and allotype of a species of copepod from the United States Public Health Service, through Dr. Jack C. Haldeman; holotype and paratypes of a species of conchostracan from Dr. N. T. Mattox; microscope slides of holotype and allotype specimens of four species of ostracods from William Danforth; holotype and representative specimens of a species of copepod from Prof. A. S. Pearse; and holotype and paratypes of a species of polychaete worm from the Allan Hancock Foundation, through Dr. Olga Hartman. Equally valuable exchanges of specimens were received from the Rijksmuseum van Natuurlijke Historie, Leiden, through Dr. W. Vervoort, paratypes of one species and representative specimens of four other species of copepods; from the Muséum National d'Histoire Naturelle, Paris, through Dr. Gilbert Ranson, portions of type specimens of two species of gorgonians; and from the British Museum (Natural History), through Dr. J. P. Harding, paratype and representative specimens of a species of copepod.

Mollusks.—The increment in molluscan types this year was particularly gratifying. As gifts the following were received: A collection, largely North American Sphaeriidae, approximating 4,000 specimens, from Leslie Hubricht; 300 marine mollusks from Biak Island, Nether-

lands East Indies, from Frederick M. Bayer; the holotype of *Trigonostoma milleri*, from Tambor, near Puntarenas, Costa Rica, from John Q. Burch; the holotype and 5 paratypes of the Mexican land mollusk *Coelostemma freytagi*, from Dr. George F. Freytag; and the holotype and 30 paratypes of *Triodopsis hopetonensis claibornensis* from the author, Prof. Louis Lutz; 13 marine mollusks, including a holotype, paratype, and several topotypes from the Indo-Pacific from Dr. Jeanne S. Schwengel; the holotypes of two new cephalopods, *Octopus burryi* and *Rossia equalis*, described by the donor, Gilbert L. Voss; a paratype of the land snail *Sonorelix angeles* Gregg from Los Angeles County, Calif., from Dr. Wendell O. Gregg; the paratype of the marine mollusk *Hydatina verrilli*, from A. Hyatt Verrill. By exchange the division was able to secure from the Academy of Natural Sciences of Philadelphia, through Dr. Henry A. Pilsbry, in 3 accessions, a paratype of *Blanfordia integra* from Japan, 10 paratypes of land and fresh-water mollusks from Peru and Guatemala, and a specimen of the very rare *Strombus goliath* from the state of Maranhão, Brazil; from the Museum of Comparative Zoology, 13 African and Puerto Rican land mollusks, including 2 lots of paratypes of marine shells; from the Auckland Museum, New Zealand, through Dr. A. W. B. Powell, 250 mollusks, including many deep-sea species; from the Zoological Institute, Kyoto University, through Dr. Tadashige Habe, 150 specimens of Japanese species, of which 23 are paratypes; and from Dr. Walter Biese, 53 fresh-water mollusks from Chile, including paratypes of four new species and subspecies described by the donor. Three transfers brought additional material of value into the collections: From the United States Geological Survey, through Dr. Preston E. Cloud, Jr., about 500 specimens collected by Dr. Cloud in Saipan; from the Fish and Wildlife Service, through Dr. Paul S. Galtsoff, about 5,000 marine shells, which he collected in Panama; and from the Smithsonian Institution, purchased through the Frances Lea Chamberlain fund, 621 land and fresh-water mollusks from Peru, including many rare species and topotypes. Collected for the Museum, and described by the collector, Frederick M. Bayer, was the holotype of *Pecten mildredae* from Florida.

Helminths.—Five of the year's accessions brought types of worms to the collection as gifts from the authors of the new forms: From Dr. Ellsworth C. Dougherty, the type of a nematode described jointly by him and Victor Nigon; from Jacob H. Fischthal, the type and a paratype of a new tapeworm from Wisconsin; from Dr. E. C. Haderlie, the type and two paratypes of a new trematode from California; from Dr. Harley J. Van Cleave, eight holotypes and six paratypes of eight new species of digenetic trematodes from marine fishes from La Jolla, Calif.; and from Miss Marietta Voge, the type of a cestode from California.

Corals.—Although this section has been more or less inactive for several years, 7 accessions, totaling 51 specimens, were received. Deserving more than passing notice were two transfers from the Department of the Interior, one from the Geological Survey through Drs. Harry S. Ladd and Preston E. Cloud, Jr., 10 Saipan corals, and the other from the Fish and Wildlife Service, through Dr. Paul S. Galtsoff, 7 corals from Panama. Two gifts of Recent Floridian corals were: 9 from Frank B. Lyman at Lantana, Fla., and 8, including some from the Bahamas, from Leo A. Burry. Nine Floridian corals from the Pleistocene at Lake Worth were received as a gift from John H. Irons.

Echinoderms.—Six of the 18 accessions credited to the division of echinoderms were of special interest. Most noteworthy among them were three accessions, totaling 400 specimens, dredged by the Woods Hole Oceanographic Institution vessel *Atlantis* from the deep waters of the North Atlantic. Included in the lot were two new species, one of which belongs to a genus known previously only from a single specimen of the type species, as well as several species not taken since they were originally dredged in the same waters by the *Challenger*, *Travailleur*, *Talisman*, and *Princesse-Alice*. The fourth of these accessions comprised about 100 specimens from Saipan collected by Dr. Preston E. Cloud, Jr., transferred from the Geological Survey, and representing the first echinoderms to come to the Museum from this Pacific island. The fifth and sixth accessions, numbering 150 specimens in all, were transfers from the Department of the Navy and had been brought together by Prof. George E. MacGinitie, scientific director of the Arctic Research Laboratory at Point Barrow, and Mrs. MacGinitie; in this collection were found the first specimens of *Gorgonocephalus stimpsoni* found in Alaska since the original record in 1860.

Distribution and exchange of specimens.—This year 169 transactions were completed, involving the distribution of 33,931 duplicate specimens to various organizations, establishments, and individuals for scientific or educational purposes; 19,829 specimens were sent out in exchanges, 13,992 as gifts, and 110 as transfers. Nine mounted animals, 3 mammals, 5 birds, and 1 fish, were lent as temporary exhibits to one Government agency, 3 other organizations, and one private individual. In addition, 29 photographs were sent out as exchanges. The specimens enumerated above were not all recorded or cataloged and therefore, in part, do not affect the totals of specimens in the collections at the close of the fiscal year.

Number of specimens under the department.—The total number of specimens in the respective divisions and in the department at the

close of the year, excepting corals, of which no inventory or estimate has ever been made, is as follows:

Mammals		258,597
Birds:		
Skins	327,168	
Skeletons	19,575	
Alcoholics	10,123	
Eggs	93,598	
Nests	3,744	
		454,208
Reptiles		137,583
Fishes		1,471,375
Insects		11,701,881
Marine invertebrates		1,219,621
Mollusks		9,275,000
Helminths		44,850
Echinodermus		182,110
Total		24,745,225

INSTALLATION AND PRESERVATION OF COLLECTIONS

Cataloging.—During the year, 108,660 specimens or lots of specimens were cataloged or processed, while 186,854 were accessioned. The backlog of uncataloged material remaining at the end of the year totaled 1,234,245, an increase of 78,195 (9 percent) over last year's total.

Exhibition.—Work on the exhibition series proceeded slowly because of lack of funds, material, and labor. However, two cases of birds, one of toucans and one of hornbills, were completed. Two similar cases containing pheasants were under way at the close of the year. A special exhibit of the bristle-thighed curlew and the first known eggs and chicks of this species was arranged early in the year, while popular interest in this bird, occasioned by an article in the National Geographic Magazine, was at its height, and continued for several months. A gibbon and a blue sheep were added to the mammal exhibits, and a black bear, tree shrew, and guineafowl were removed. Seven lifelike celluloid reproductions of local snakes on naturalistic habitat bases, in preparation by E. G. Laybourne during the past few years, were installed in the special District of Columbia faunal exhibit series. W. D. Field, associate curator of insects, made commendable progress with the rehabilitation of the Iddings collection of Lepidoptera, which had been withdrawn from exhibition the year before.

The cleaning of cases and refurbishing of the specimens continued; 65 cases were worked over and fumigated, their labels straightened, and the lighting of illuminated cases improved where necessary.

In the taxidermist shop work was continued on long-planned habitat

groups and other exhibits that will be placed on display when suitable cases and backgrounds can be provided. The trees, grasses, and other accessories for a red-wolf habitat group were in active preparation. Three penguins were mounted, as well as nine other birds destined for future exhibit, a fawn for a Virginia-deer group, and three other mammals. In the last weeks of the year W. L. Brown, in charge of the taxidermist shop, made two trips afield for obtaining accessories, field notes, sketches, and photographs—first to South Carolina, the locale from which the animals that will form the Virginia-deer group were obtained, and the second to the pronghorn-antelope country in western Wyoming, whence came the four magnificent specimens obtained for the Museum by Dr. O. J. Murie 2 years ago. The Museum is much indebted to R. B. Vance, of Allendale, S. C., and to James Harrower, of Pinedale, Wyo., for the success attending Mr. Brown's efforts on these occasions.

The most encouraging feature of the year's exhibit activities was the opportunity afforded Dr. Herbert Friedmann of participating in the deliberations of the Smithsonian's Committee on Exhibits and, in the course of its survey of exhibit needs and future plans, to visit a number of other American museums to get first-hand information as to methods, cost, and the problems attending the improvement and modernization of present-day museum exhibits.

Preservation of collections.—Mammals: The rearrangement of the study collection was given primary attention by Dr. Setzer and Mr. Miller. The arranging and preliminary listing of skins were carried through the orders Monotremata, Marsupialia, Insectivora, Dermoptera, Primates, Edentata, Pholidota, and Lagomorpha. The completion of the project will probably require several more years and in time will result in as convenient and workable an arrangement as can be obtained in the space allotted to the division. The work of cleaning skulls and skeletons of mammals proceeded in a satisfactory manner. The colony of dermestid beetles established in 1948 thrived and was used for cleaning nearly all the osteological material. Skins of 83 large and medium-sized mammals were tanned by a commercial tanner, leaving no backlog of untanned skins at the end of the year. All cases containing mammal skins were inspected and fumigated.

Birds: For want of new storage cases it has not been possible to advance the merger of the United States Fish and Wildlife Service collection with that of the Museum. Only a few odd genera were brought together during the year, but, nevertheless, a modest amount of rearranging and expanding of badly crowded portions of the collection was accomplished by Mr. Deignan for the families Meliphagidae and Cracticidae and the subfamily Pachycephalinae. The reidentifying and labeling of old specimens were continued as time permitted. For the first time the division came to the close of a fiscal year

with a backlog of uncataloged material, as the result of receiving over 11,000 specimens in the last few months of the year. All new lots of specimens, as well as the study collection, were thoroughly poisoned; and alcoholics, nests, and eggs were processed and incorporated into the main collection.

Reptiles and amphibians: The problem of storing large alcoholics was alleviated to some extent with the receipt of two rubber-lined barrels. It will to a considerable degree be solved when two large monel-metal tanks now under order are delivered. Most of the alcoholic turtles that were threatened with spoilage by being kept in the long-unsatisfactory wooden barrels have been made into dry preparations, in part by Barry Hampton, of this division, but in greater part by C. S. East, of the taxidermist force. The completion of this remedial measure is now in sight. The physical condition of the collections in the custody of this division continues very good, despite unavoidable crowding brought on by want of space and sufficient glass containers.

Fishes: The alcoholic fish storage remains an acute problem, although the installation of additional steel shelves has provided some temporary relief. Three of the last four remaining wooden barrels were replaced by rubber-lined barrels this year. Besides installing the steel shelves and attending to many other miscellaneous duties, James Bush, skilled laborer, serviced the more than 400 crocks in use in the division, renewing or replenishing the alcohol as necessary. The general routine of the division was kept up to date by W. T. Leapley, scientific aide, but identification and cataloging of the larger accessions will require several years.

Insects: Shortage of space and storage facilities in the division of insects has become so serious a problem as to hamper the proper care of the collections. Although 20 cases contracted for in 1948 were received, no drawers were made available for general use. Available facilities, however, made it possible to incorporate the Hesperiidae from the E. A. Smyth collection in the regular collections and to rearrange parts of the butterfly families Danaidae, Nymphalidae, and Pieridae. Considerable progress was also made in the rearrangement of the collections of springtails and silverfish. Altogether, nearly 24,000 specimens were prepared and placed in the collections during the year. All drawers needing attention have had naphthalene replenished and glass covers cleaned by Joseph Singleton, skilled laborer, who also attended to many miscellaneous duties and the careful packing of the great number of outgoing shipments.

Marine invertebrates: Replenishing alcohol, replacing imperfect jars and gaskets, and keeping the huge collection of alcoholically preserved specimens in general good order and condition took most of the time of N. L. Livingston, the skilled laborer attached to the divi-

sion. The rearrangement of the entire amphipod collection and the recataloging and rearranging of the penaeid shrimps, together with the resignation of G. S. Cain, scientific aide, who was familiar with the work, materially slowed down the inventory of the collection that has been under way for some time. To date, all Crustacea below the decapods have been inventoried and rearranged. Before he left, Mr. Cain also practically completed an inventory of the divisional library. Of the radiate collections in the custody of the division, Frederick M. Bayer, assistant curator, almost completely revised, reidentified, and relabeled the collection of gorgonaceans and pennatulaceans. These collections, which had received very little attention for many years prior to Mr. Bayer's appointment to the staff, are now well organized. Dr. Marian H. Pettibone, who worked in the division during the entire year on a revision of the Arctic polychaete worms for the Naval Research Laboratory at Point Barrow, Alaska, in line with her research studies gave the annelid collections some much-needed attention, checking and reidentifying all the Arctic polychaetes and naming a large amount of backlog material from northern seas. Dr. R. S. Bassler, associate in paleontology, continuing his work on the Recent as well as the fossil species of bryozoans, spent at least half the year on the Recent forms in the preparation of a treatise on this phylum. In the course of this investigation he accomplished considerable curatorial work on the collections and added a number of types to this already outstanding series. The rearrangement of the dry collection under way in the attic since the previous year was completed by Mr. Bayer and Mr. Cain soon after the start of the fiscal year. All quarter-unit cases containing dry materials were checked for pests during the rearrangement and paradichlorobenzene added.

Considerable progress was made in embedding certain marine invertebrates in plastic blocks. Funds made available from the Rathbun fund enabled the temporary employment of John L. Hoke, who had several years' experience with the polyester thermosetting plastic developed fairly recently for this purpose. Although Mr. Hoke devoted only 2 weeks to the project, he devised a technique for embedding crabs far superior to any previously tried. He successfully embedded a good series of xanthid crabs and some other crustaceans. If additional species can be embedded gradually and this nucleus built up, family by family, a useful and much-needed adjunct to the alcoholic series for ready reference will be made available.

Mollusks: Commendable progress was made in rearranging the molluscan study collections. All mollusks belonging to the Indo-Pacific marine fauna were combined into one collection, to which was added a vast amount of cataloged material that had not yet been integrated with any part of the study series. As a result, this splendid collection was made much more useful and had its scientific value

enhanced manyfold. At the same time a comparable rearrangement of the Old World tropical land mollusks was practically completed.

Helminths, Corals, and Echinoderms: These several collections continue in satisfactory physical condition, the helminths, as usual, being excellently cared for by members of the staff of the Zoological Division of the Bureau of Animal Industry at Beltsville, Md. The corals, with minor exceptions, are dry specimens requiring little attention after being placed in appropriate storage cases; while the echinoderm collection was considerably improved by the addition of a large number of specimens to the reserve.

Taxidermist Shop: Much time of the exhibits staff was diverted from exhibition work to preparatorial work on the study collections of the divisions concerned primarily with land vertebrates. During the year the preparatorial work performed for these several divisions accounted for the skinning, and making up of skins, of 57 mammals and 182 birds; the tanning of 14 and the beaming of 4 other mammal skins; the tanning and making up as dry preparations of 92 alcoholic turtles; and the cleaning of 1,051 mammal skulls and 11 skeletons, 97 bird skeletons and skulls, parts of the skeletal structures of 13 other birds, 1 large turtle skull and 117 shells and skulls, and 3 crocodile skeletons. Instruction in the preparing and making up of study skins was given in the course of the year to seven individuals, of whom four were members of the armed forces concerned with malaria control.

INVESTIGATION AND RESEARCH

Mammals.—Dr. Remington Kellogg, director of the Museum and curator of mammals, assisted by Mrs. Mabel E. Byrd, Mrs. Margaret M. Pinney, and Norman M. Miller, continued filling in the distributional details being included in the current revision of Gerrit S. Miller's "Checklist of North American Mammals." Dr. David H. Johnson, associate curator, made substantial progress on his report on the mammals of the Arnhem Land Expedition. In connection with this project, which is about 40 percent completed, he visited the American Museum of Natural History in May to study comparative material. Dr. Henry W. Setzer completed and submitted two papers for publication, one describing two new shrews of the genus *Crypotis*, the other reporting on the mammalian collections made by Ensign P. Quentin Tomich, for Naval Medical Research Unit No. 3, in the Nile Valley.

Birds.—The curator of birds, Dr. Herbert Friedmann, devoted considerable time to assembling the ranges of the passerine birds of North America for the new American Ornithologists' Union Checklist. Together with Secretary Wetmore and others, he published the annual supplement of the current Checklist. With Foster D. Smith, Jr., he also published a large report on northeastern Venezuelan birds.

Other papers by the curator included shorter accounts on new birds from Venezuela, on the races of the hawk-eagle, and on African cuckoos. The associate curator, Herbert G. Deignan, made notable progress on his report on the birds of the Arnhem Land Expedition, on the critical catalog of type specimens of birds in the Museum, and on his checklist of the birds of the Indo-Chinese Region, and published three papers in connection with these projects. He also prepared several other papers as yet unpublished on Australian and Oriental birds. Dr. A. Wetmore devoted most of his research time to the preparation of various items connected with the fifth edition of the A. O. U. Checklist of North American Birds, to a review of the present status of knowledge of fossil birds presented at the International Ornithological Congress at Uppsala in June 1950, and to identifying his Panamanian and Colombian collections. He published descriptions of a new *Spodiornis* from Venezuela, a new grasshopper sparrow from Colombia, and a study of *Corythus splendens*. Charles O. Handley, Jr., temporary assistant curator, spent several months studying Arctic American birds in connection with his field work in the Canadian Arctic.

Reptiles and amphibians.—Dr. Doris M. Cochran, associate curator in charge of the division, virtually completed the text of her monographic report on the frogs of Brazil, though not all the necessary illustrations are finished and some comparisons with certain types in European museums remain to be made for a planned continuation of the amphibian survey of Brazil. Dr. Cochran also described a new subspecies of toad from Santa Catharina, Brazil.

Fishes.—Drs. Leonard P. Schultz, curator, and Ernest A. Lachner, associate curator of fishes, continued to devote the greater part of their time to the preparation of the descriptive catalog of the fishes of the northern Marshall and Marianas Islands collected during the Operation Crossroads experiments, now about four-fifths complete. Loren P. Woods, temporary associate curator, who had been assisting with the report on the Bikini fishes for the past three years, resigned on August 8, 1949, to return to his post of curator of fishes at the Chicago Natural History Museum. Three papers completed by the curator were published during the year, one was in press, and three others were submitted for publication. He also submitted for publication a joint paper with R. Simões de Menezes describing a new anchovy of the genus *Anchoviella* from the Potí and Parnaíba Rivers, Brazil, and with Dr. Wilbert M. Chapman completed "A Review of the Blennioid Fish Genus *Ecsenius* of the Tropical Indo-Pacific with Descriptions of Five New Species." Dr. Lachner completed and submitted for publication four studies that he had undertaken earlier and that had been interrupted by his transfer to the Museum staff. These papers dealt with the biology, growth, and habits of

some western Pennsylvania percoid fishes and the cyprinid fishes and fingerlings of northern small-mouth bass in western New York. Two of these papers, one jointly with E. F. Westlake and P. S. Handwerk, were published during the year. He also completed a paper on "Studies of Certain Apogonid Fishes from the Tropical Indo-Pacific with Descriptions of Three New Species" and submitted it for publication. Donald S. Erdman, scientific aide, completed and published a semipopular account of fishing in Arabia, based on his investigations in the Red Sea and Persian Gulf last year, and another on the distribution of the Spanish mackerel in the West Indies. Mr. Erdman also submitted for publication a third paper prepared jointly with C. J. Goin recording the occurrence of the crested oarfish in the western North Atlantic.

Insects.—Dr. E. A. Chapin, curator, as time permitted gave further attention to his study of the Coccinellidae of Colombia. The associate curator, Dr. R. E. Blackwelder, submitted for publication his large manuscript on the generic names of the staphylinid beetles and continued work on the sixth and concluding part of the checklist of Latin American Coleoptera. W. D. Field, in continuance of his researches on the Lepidoptera looking toward a revision of the New World Lithosiinae, completed his studies of four genera, submitting the manuscripts for three of them for publication. Two genera of Pieridae were also revised, and some further progress was made with the subfamily Theclinae. The manuscript and drawings describing a new proturan from Venezuela recording the first member of this group of primitive arthropods known from South America were completed by Grace Glance, associate curator. Associate Curator O. L. Cartwright continued taxonomic work on the Aphodiinae, revising the American species of *Psammodius*, in the course of which it is believed that all the species known or described from the United States were seen and recognized. A revision of the genus *Ataenius* was also initiated.

Marine invertebrates.—The curator, Dr. F. A. Chace, Jr., continued to accumulate data for a general revision of the anomuran crabs of the family Porcellanidae and started a report on the shrimps of the Marshall Islands collected by the Operation Crossroads and the resurvey expeditions to that archipelago, completing the manuscript for four families. He planned to complete his report on a collection of fresh-water crabs from Nyasaland early in the coming year. A fourth project undertaken by Dr. Chace is a long-term one, involving the figuring of the male pleopods of the types of fresh-water crabs in the national collections. Rarely have they been adequately described in the literature, and the publication of accurate figures of the appendages of the species available in the Museum collections will constitute a real contribution to the science of carcinology. The associate curator,

P. L. Illg, continued his revisionary studies of the commensal copepods of the cyclopoid family Lichomolgidae and of certain notodelphyoid genera. He completed and published the description of a new lichomolgid. He studied more than 20 of the notodelphyoid genera and discovered more than 20 undescribed species, including 4 new genera. Mr. Illg also had in progress a paper on copepod classification, a greatly needed clarification and revision of existing systems. F. M. Bayer, assistant curator, completed two manuscripts including descriptions of a new gorgonacean from North Borneo, and another from the Antarctic. The first of these studies, together with the report on the Gorgonacea of the Marshall Islands, completed in a previous year, was published this year. The handbook of the West Indian Alcyonaria upon which he is engaged was also given some attention, and a part of a report on the Alcyonacea of the Marshall Islands was completed. C. R. Shoemaker, associate in zoology, made further progress with his revisionary studies on the American amphipods of the family Talitridae and partially completed a report on the amphipods of the Point Barrow, Alaska, region for the Arctic Research Laboratory. Mrs. Mildred S. Wilson, collaborator in copepod Crustacea, actively continued her investigations of the Alaskan fresh-water copepod fauna and of copepod commensals of mollusks, completing also a manuscript on a new species of *Pupulina* parasitic on a manta ray. The specialists who have kindly identified material of various groups at our request during the current fiscal year are the following:

Dr. Donald P. Abbott	Tunicates
Dr. Albert H. Banner	Mysidacean crustaceans
Dr. Martin D. Burkenroad	Shrimps
Dr. Wesley R. Coe	Nemertean worms
Dr. Ralph W. Dexter	Fresh-water medusae and branchiopods
Dr. W. K. Fisher	Echiuroid and sipunculoid worms
Dr. Olga Hartman	Polychaete worms
Dr. Melville H. Hatch	Isopod crustaceans
Dr. Dora P. Henry	Barnacles
Dr. Horton H. Hobbs, Jr.	Crayfish
Mr. Leslie Hubricht	Amphipod crustaceans
Dr. Libbie H. Hyman	Flatworms
Dr. R. W. Kiser	Cladoceran crustaceans
Dr. M. W. de Laubenfels	Sponges
Miss Mary Jean Lindenschmidt	Fresh-water sponges
Dr. Folke Linder	Branchiopod crustaceans
Dr. N. T. Mattox	Conchostracan crustaceans
Mr. Robert J. Menzies	Isopod crustaceans
Dr. Marvin C. Meyer	Leeches
Mr. Stanley Mulaik	Isopod crustaceans
Dr. Edward G. Reinhard	Rhizocephalan crustaceans
Dr. Mary Dora Rogick	Bryozoa
Dr. Wilbur Tidd	Copepod crustaceans
Dr. Willis L. Tressler	Ostracod crustaceans
Dr. Elise Wesenberg-Lund	Polychaete worms

Mollusks.—The present studies of the curator, Dr. Harald A. Rehder, are concerned with the pelecypods of the Marshall Islands (Bikini) and earlier investigations on the Antillean marine shells and terrestrial mollusks still in progress. The associate curator, Dr. J. P. E. Morrison, concentrated on the preparation of his section of the report on the mollusks of Bikini and the Marshall Islands. Some time was also spent on the western Atlantic species of the Cymatiidae and the North American Ellobiidae. R. Tucker Abbott, assistant curator, continued work on speciation in the fresh-water Thiaridae and on several groups of western Atlantic marine mollusks in which he is especially interested. Dr. Paul Bartsch, associate, nearly finished an extensive paper on the Cuban Urocoptidae and did some further work on certain Mexican members of the same family of mollusks.

Echinoderms.—Austin H. Clark, the curator, confined his attention largely to several reports that he had in preparation on the Arnhem Land echinoderms, an important collection from Saipan in the Marianas Islands, a large collection from Point Barrow, Alaska, and additional material from Bikini and the Antarctic. He also brought nearly to completion another manuscript in the Bulletin 82 series, "A Monograph of the Existing Crinoids," the present work forming part 5 of volume 1. Mr. Clark likewise continued his studies on brittle-stars of the Dutch East Indies.

Research by outside investigators.—Among the 2,700 visitors to the offices and laboratories of the department of zoology, not counting a considerable number of casual callers of whom no record is kept, there were 281 serious students of some field of zoology who studied collections or consulted with the staff regarding their research problems. To assist outside investigators unable to visit the Museum 35,857 specimens were sent out (as loans) in 438 separate shipments. Furthermore, 58,795 specimens were identified during the year for correspondents of the Museum and outside investigators, relating to staff research projects and the proper care and organization of the national collections. In addition, about 100 manuscripts were evaluated, revised, or edited, and, indeed, in some cases reorganized in furthering the publication and dissemination of technical information. Publications based on Museum material numbered not less than 289, of which 80 were authored by members of the zoological staff alone or jointly with others, 57 by employees of other Government agencies making use of the collections, and 153, the same number as last year, by outside investigators aided by our staff while working in the Museum or by the loan of specimens.

DEPARTMENT OF BOTANY

(E. P. Killip, *Head Curator*)

The department of botany, during the second year of its present organization with four divisions, exceeded last year's record in many respects. The number of scientific papers prepared and submitted for publication by members of the staff nearly doubled. Specimens accessioned showed a 60-percent increase over the preceding year, the material coming from many different parts of the world. About 38 percent more specimens were inserted in the herbarium than during 1948–49. This work was preceded by a shift of the entire phanerogamic herbarium, made possible by the installation of a large number of new storage cases. Because of incorporating so much material in the collections, the department's backlog showed only a slight increase at the end of the year in spite of the large amount of material accessioned and the marked decrease in the number of duplicates distributed to other institutions.

Miss Beulah E. Shields, secretary in the office of the head curator, retired on January 31, 1950. Except for the resignation of Miss Sylvia A. White as assistant curator, which took effect at the end of June 1949, there were no changes in the active scientific personnel. Dr. Henri Pittier, who for many years had held the title of associate in botany, died at Caracas on January 27. The National Herbarium has been greatly enriched by the specimens collected in tropical America by Dr. Pittier during a long lifetime.

E. P. Killip, head curator, and Jason R. Swallen, curator of the division of grasses, spent nearly 3 weeks on Big Pine Key, Fla., collecting material for study and making notes of the distribution of species on this key, the largest of the Lower Keys. The work was done in connection with a project, first undertaken several years ago, of preparing an account of the vegetation of a floristically very interesting part of the United States, which will undoubtedly lose many of its natural features in the near future because of the spread of real-estate developments and the expansion of naval construction in the area.

Mr. Swallen visited the Great Plains Field Station at Mandan, N. Dak., at the request of the U. S. Department of Agriculture, continuing studies of crested wheatgrass in connection with the experimental work on grasses being carried on there. He spent a week in the Kingsville, Tex., area, at the request of the Texas Research Founda-

tion, to complete a survey of the grasses of the region. Later he made a trip to the Kasatchie National Forest in central Louisiana, and to other southern States, for field studies on certain species of *Andropogon* and other grasses.

In August C. V. Morton, curator of the division of ferns, attended the annual summer foray of the northeastern section of the Botanical Society of America, at the University of Michigan. About 50 members participated in the excursion, which lasted 9 days and covered a considerable part of Michigan. There were some especially good opportunities for studying *Botrychium* and *Equisetum* in the field. A special search was made in the Keweenaw Peninsula for *Equisetum telmateia*, which was reported there some years ago but never found again. After the formal close of the foray, Mr. Morton spent an additional 2 days in field work with Dr. Rogers McVaugh, of the University of Michigan.

Dr. George A, Llano, associate curator of cryptogams, spent 3 months in Alaska during the summer under the auspices of the Arctic Institute of North America, with headquarters at the Arctic Research Laboratories at Point Barrow, from which he traveled by aircraft to various regions. Conditions for field work in June were most favorable at Wainwright, 100 miles west of Point Barrow. Early in July he went to Umiat, on the Colville River, and then visited the Anaktuvuk Pass, about 300 miles inland, a broad gateway through the Brooks Range, which drains to both the Colville and to the Yukon Rivers. In August he collected around Anchorage and then visited Adak, Great Sitka, Amchitka, Attu, Shemya, and Kodiak, in the Aleutian Chain. He returned to the United States about September 1 and then collected for a few days in the vicinity of Monterey, Calif. In Alaska he obtained a large lot of plants, which will be the subject of a future report.

Associate Curator Paul S. Conger, of the division of cryptogams, spent 2 months during the summer in studying marine diatoms at the Chesapeake Biological Laboratory, Solomons Island, Md. He worked in collaboration with members of the staff of that institution on studies of diatom ecology of submerged weed beds and on diatom productivity in shallow water. He obtained large collections of diatoms in the area and made two collecting trips to Chincoteague Bay on the eastern shore of Maryland.

Dr. F. A. McClure, research associate in grasses, was in the West Indies, Central America, and South America the greater part of the year, continuing his studies of bamboos and supervising experimental work on their propagation.

Late in June Dr. A. C. Smith, curator of the division of phanerogams, and Mr. Swallen, left for Stockholm to take part in the Seventh

International Botanical Congress as representatives of the Smithsonian Institution and several other institutions and societies. Before returning both planned to carry on research work at the important herbaria in London.

ACCESSIONS

During the year there were accessioned 61,983 specimens in 521 lots, a marked increase over 1948–49, when 38,708 specimens and 408 lots were received, as well as over the average number received annually during the preceding 10 years.[1] The source of the material was as follows: Exchanges, 19,276; collected for the Museum, 13,121; gifts, with identifications requested, 11,098; other gifts, 8,328; purchases, 5,724; transfers from Government bureaus, 4,252; photographs made by the Smithsonian photographic laboratory, 184. The four divisions were represented in these accessions thus: Phanerogams, 39,167; grasses, 11,401; ferns, 2,956; cryptogams, 8,459. Among large collections that contained significant material for two or more divisions several should be mentioned. H. A. Allard collected 5,577 specimens for the Museum in northeastern Peru. The collection made by Associate Curator E. H. Walker in New Zealand subsequent to his attendance at the Pacific Science Congress was received during the year; it contained 2,282 specimens. Among 4,175 specimens received in several lots as exchanges from the University of California mention should be made of 2,690 California specimens collected by Dr. R. F. Hoover and 985 specimens collected by Robert J. Rodin in South Africa. Likewise received in exchange were 3 accessions, totaling 1,027 specimens, from the University of Florence, the material mainly collected in Eritrea by Dr. A. Pappi, and 2 accessions, with 762 specimens, from various islands of the Pacific, from the Bernice P. Bishop Museum. Dr. John Gossweiler presented 645 specimens from Portuguese West Africa, and Dr. C. M. Rogers gave 980 specimens from the Mesa de Maya region of the southwestern United States. Received from the Escuela Agricola Panamericana, Tegucigalpa, Honduras, were 960 specimens, about half of which were sent in exchange and half as a gift in return for identifications. From Kjell von Sneidern, of Popayán, Colombia, there were purchased 1,596 specimens obtained by him in that country.

Among important accessions made up entirely or predominantly of material for an individual division were the following:

Phanerogams.—2,514 Mexican specimens purchased from James C. Hinton; 2,098 specimens from Colombia, mostly from the eastern lowland region, collected by Dr. Richard E. Schultes and received in 2

[1] The number of specimens accessioned in the past 10 years is as follows: 1939–40, 47,775; 1940–41, 37,225; 1941–42, 36,303; 1942–43, 34,298; 1943–44, 36,240; 1944–45, 30,442; 1945–46, 41,943; 1946–47, 43,695; 1947–48, 54,292; 1948–49, 38,708.

transfers from the Division of Rubber Plant Investigations, United States Department of Agriculture, names being requested for most; 845 specimens collected in Costa Rica by Paul H. Allen, received in 3 lots from the Research Department of the United Fruit Co., in Costa Rica, as a gift, with a request for the identification of many; 764 specimens from the Yukon, Canada, mostly collected by A. E. Porsild, an exchange from the National Museum of Canada; 481 specimens from San José Island, Panama, collected by Dr. I. M. Johnston, received in exchange from the Arnold Arboretum; 1,338 photographs of type specimens of plants of Taiwan, purchased from the Arnold Arboretum; 312 photographs of type specimens in European herbaria, purchased from the Chicago Natural History Museum or received in exchange from that institution; 783 specimens from Florida, collected for the Museum by E. P. Killip and Jason R. Swallen; 304 specimens, mostly obtained in Surinam by various collectors and including many isotypes, an exchange from the Rijksuniversiteit, Utrecht; 331 specimens of New Caledonian plants, collected by Dr. J. T. Buchholz, received in exchange from the University of Illinois; 313 specimens collected in southern Brazil by the Rev. Raulino Reitz, a gift from the Herbario Barbosa Rodrigues, Itajai, Santa Catarina, with a request for names; 691 Colombian specimens received in several lots as gifts for identification or in exchange from the Instituto de Ciencias Naturales, Bogotá, mostly collected by Dr. H. García-Barriga; and 237 specimens collected in Venezuela and Ecuador by Dr. J. A. Steyermark, an exchange from the Chicago Natural History Museum.

Grasses.—Much of the important material accessioned by this division came as a gift for identifications, and unless otherwise stated the accessions here listed were so received: 388 specimens from southern Brazil, received from the Colegio Anchieta, Pôrto Alegre; 619 specimens from Japan, presented by Dr. Jisaburo Ohwi; 497 specimens from India, Iran, and Afghanistan, transferred by the National Arboretum; 214 specimens from South Africa, received as an exchange from H. G. Schweickerdt; 252 photographs and fragments of Phillipi types, presented by the Ministerio de Agricultura, Santiago, Chile; 135 specimens, mostly from Africa, an exchange from the Royal Botanic Gardens, Kew; 497 specimens from Argentina, received in 4 lots from the Fundación Miguel Lillo, Tucumán; 1,775 grasses from Texas, collected for the Museum by the curator of the division, Jason R. Swallen; 300 specimens from Canada and South America, received in 3 lots from the Department of Agriculture, Ottawa; 508 specimens from Tennessee, received from the University of Tennessee; and 280 specimens from Arkansas, received from the University of Arkansas.

Ferns.—Most of the fern specimens were received in mixed accessions containing material for other divisions of the department, which

are mentioned above. In addition, the following accessions were noteworthy: 315 specimens collected in Ecuador by Dr. W. H. Camp, received as a gift for identification from the New York Botanical Garden, many new species apparently being represented in the collection; 175 specimens from Michigan, collected by Dale Hagenah, received in exchange from the Cranbrook Institute of Science; 53 specimens from New Caledonia, received in exchange from the University of Illinois; 57 specimens, chiefly *Woodsia*, from Ontario and Minnesota, an exchange from the Missouri Botanical Garden; 40 specimens from Brazil and Venezuela, received in exchange from the Botanisches Museum, Munich; 35 specimens from Cuba, received as a gift for identifications from Brother Clemente, Colegio de la Salle, Santiago, Cuba; and 41 specimens from Jamaica, a gift from the Science Museum, Institute of Jamaica, names being requested.

Cryptogams.—1,836 miscellaneous cryptogams, mostly lichens, collected in Alaska for the Museum by Dr. George A. Llano; 912 lichens of Norway, received in exchange from the Universitetets Botanisk Museum, Oslo; 600 bryophytes, constituting Musci Cechoslovenici Exsiccati Fasc. 9–15 and Sphagna Cechoslovenica Exsiccata Fasc. 3 and 4, received in exchange from Zdeněk Pilous; 447 South American bryophytes collected on the Cinchona Expeditions, transferred by the National Arboretum; 367 miscellaneous cryptogams from Japan, distributed by Dr. S. Hattori, partly received from Dr. Hattori, partly from the Department of the Army, and partly through the Library of Congress; 225 lichens of the Canadian Arctic, presented by the Arctic Institute of North America; 225 miscellaneous cryptogams of Arctic Canada, collected for the Museum by Charles O. Handley, Jr.; 187 miscellaneous cryptogams, in exchange with the Chicago Natural History Museum; 100 miscellaneous cryptogams (Kryptogamae Exsiccatae Century XXXVII), an exchange from the Naturhistorisches Museum, Vienna; 100 bryophytes of Czechoslovakia (Bryophyta Century XIV), received in exchange from Masaryk University; and 95 Canadian lichens, received as a gift from Dr. Nicolas Polunin, names being requested.

Distribution and exchange of specimens.—There were distributed during the year 6,165 specimens in 92 lots. Of these, 4,999 were sent in continuation of exchanges with 34 different institutions and individuals. This is only a fraction of the number distributed in 1948–49, when 27,806 specimens were sent in exchange to 120 recipients. This decrease is due largely to the fact that a general distribution of duplicates ordinarily takes place in alternate years. The 18,000 specimens of grasses of "Centuries of American Grasses," mentioned in last year's report, still await distribution. As gifts were distributed 1,142 specimens, of which 495 were sent 21 institutions and individuals with a

request for identifications. A single transfer of 24 specimens was made. The material distributed during the year was divided among the divisions thus: Phanerogams, 3,152 specimens; grasses, 1,530; ferns, 1,102; cryptogams, 381.

Number of specimens under the department.—The number of specimens in the four divisions of the department, not including duplicates awaiting distribution, is estimated as follows:

Phanerogams		1,558,967
Grasses		325,271
Ferns		192,233
Cryptogams:		
Diatoms	46,263	
Fungi	80,946	
Other cryptogams	210,682	
		337,891
Total		2,414,362

INSTALLATION AND PRESERVATION OF COLLECTIONS

During the year 27,301 specimens of flowering plants and ferns were mounted, wholly by adhesive straps and sewing, 23,700 of these by contract and 3,601 by preparators on the staff. In addition, 5,935 pockets of cryptogams and 1,730 photographs of specimens were pasted on sheets. This represents an increase over last year of about 2,900 in specimens and photographs mounted and made ready for the herbarium. More than 10,000 specimens were repaired, the work being done mainly in connection with outgoing loans. About 28,800 specimens of flowering plants and ferns are ready to mount, this increase of nearly 70 percent over last year's mounting backlog being due mainly to the large increase in specimens accessioned in 1949–50. The estimated backlog of all unprocessed material at the end of the year was 185,236, a slight increase over the estimate of a year ago.

There were stamped and recorded 27,392 specimens, distributed among the divisions thus: Phanerogams, 22,403; grasses, 3,944; ferns, 1,045. No start has yet been made in numbering the cryptogamic specimens.

There was a notable increase in the number of specimens incorporated into the herbarium, 52,003 specimens having been added during the year as compared with 37,853 last year. This record of inserting more than 50,000 specimens in a single year was due largely to the concentrated efforts of the staff of the division of phanerogams.

The type herbarium, maintained as a separate unit, was increased by the insertion of 645 types and isotypes during the year, the total number of specimens in this collection now being 48,878. They are divided thus among the divisions: Phanerogams, 36,120; grasses,

9,616; ferns, 3,050; cryptogams, 92. The phanerogamic portion of this herbarium was expanded during the year into three standard-size cases and two smaller ones; as a result, the crowded condition in this invaluable collection is temporarily relieved.

Phanerogams.—The backlog of the division on June 30, 1950, is estimated as 71,938 specimens, a reduction of 13,029 during the year. This decrease is due largely to the fact that the rearrangement and expansion of the herbarium permitted the incorporation of the very large number of 49,044 specimens, an increase of 26,410 over the corresponding figure last year. The current reduction in the divisional backlog was made in spite of the fact that comparatively few duplicates were distributed during the year.

As usual, all incoming specimens of the division, both new specimens and returned loans, were poisoned upon receipt. No damage from insects was noted in the collections, which were subjected to thorough fumigation in November and May.

The delivery of a large number of new herbarium cases toward the end of last year made possible a complete rearrangement of the phanerogamic collections. During July and August the entire herbarium was expanded, all members of the professional staff, as well as others of the departmental staff, taking part in this task. The expansion involved a careful preliminary estimate of available space, the shifting of essentially all herbarium material of the division, and subsequent relabeling of all the cases. Finally, each block of cases was labeled by means of a card in large-sized type, so that its contents are apparent from the central aisle at a glance. The phanerogam herbarium now occupies every case in the western half of the main hall, on both floor and balcony, and is arranged in a single uninterrupted linear sequence; it is undoubtedly in better condition in this respect, and more easily consulted by staff and visitors, than ever before. The lists of genera, which are placed at the begining of each family, were revised toward the close of the year and will soon be inserted.

The fruit collection of the division was increased by the addition of 33 specimens, bringing the total number now in this collection to 1,032. These specimens are arranged in numerical sequence in accessible cases, so that any specimen can be readily located for examination in connection with mounted herbarium material.

Grasses.—The backlog of unprocessed specimens in this division increased during the year from 35,241 to 44,610. This was due chiefly to two causes: As a result of emphasis being placed on research and identification work only 502 specimens were inserted in the grass herbarium, as compared to 6,229 filed last year; labels for the 18,000 specimens of the series "Centuries of American Grasses" were com-

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pleted too late to permit the distribution of these duplicates in 1949–50. No changes were made in the arrangement of the collections during the year. With additional cases available, all the material will be shifted in order to insert the rather large number of specimens which have accumulated for filing.

To the Hitchcock and Chase Library 53 publications on grasses were added, bringing the entries now cataloged to 6,781. The various indexes of grasses were kept up to date. Additions to the species index numbered 239, making a total of 77,422 entries.

Ferns.—During the year the curator incorporated 1,593 specimens in the collection, and there are now almost no mounted ferns ready for insertion. There are, however, about 3,550 specimens prepared for mounting, in comparison with 2,357 on hand last year. Ferns require special techniques in mounting, and the head preparator hopes to train additional mounters in this field. The backlog for the division was estimated as 14,313 specimens at the end of the year, the increase of 261 over last year being due partly to this lag in mounting.

The curator continued with the work begun 2 years ago of rearranging the collections on a geographic basis. This year a start was made in segregating the South American specimens of some of the larger genera on a geographic basis, which will greatly facilitate identification work.

Cryptogams.—There were mounted during the year 5,935 pockets of lower cryptogams, mostly algae, a substantial increase over the number mounted last year. The divisional backlog is estimated at 54,375 specimens, an increase of 7,214 over the estimate of a year ago. This is due partly to the fact that an unusually large number of specimens were accessioned during the year, most of which have not been processed. Over 5,000 recently mounted specimens are now ready for incorporation in the collections, and a great many duplicates for exchange are on hand awaiting labeling and identification.

During the year continued emphasis was placed on sorting the backlog of unprocessed specimens by Dr. Llano. Almost a third of these need pocketing and labeling, a time-consuming process. The identified specimens have mostly been made ready for mounting and the unidentified ones stored for future curatorial attention. The card catalogs which serve as indices to the various groups are being maintained, but they are far out of date. The whole collection needs to be reorganized along modern lines. Some groups have been much improved through the annotations of specialists, notably Dr. R. Santesson, of Uppsala, on the epiphyllous lichens, Dr. Alexander W. Evans, of Yale University, on the genus *Cladonia*, and Dr. R. Tomaselli, of Pavia, on the Basidiolichenes.

Associate Curator Conger continued with the routine work on the diatom collections, which includes the refilling of bottles with pre-

servative and the transfer of collections to a new type of container. The work of labeling and mounting the W. H. Long Collection of fungi was continued during the year by John A. Stephenson, honorary curator of fungi; this work is nearly completed.

INVESTIGATION AND RESEARCH

Although members of the staff spent much time in rearranging the herbarium and inserting specimens as well as in curating the unusually large number of accessions, there was opportunity for carrying on considerable research work, 31 papers being submitted for publication. In connection with these studies several members visited other institutions. Dr. A. C. Smith spent 2 weeks at the Gray Herbarium and the Arnold Arboretum of Harvard University; C. V. Morton visited the University of Michigan, the Cranbrook Institute of Science, Michigan State College, Douglas Lake Biological Station of the University of Michigan, and Northern Michigan State College of Education; Dr. L. B. Smith consulted the collections at the Gray Herbarium in August and again in September; Paul S. Conger spent a short time at the Chicago Natural History Museum and the Hodges Collection in Indianapolis; Dr. George A. Llano visited the Farlow Herbarium, Cambridge, and the Arctic Institute offices in Baltimore; Miss Rudd checked manuscripts she was preparing at the North Dakota Agricultural College and the Chicago Natural History Museum.

The meetings held under the auspices of the American Association for the Advancement of Science at New York in December were attended by eight members of the staff, several of whom presented papers. Opportunity was taken at the same time to consult the herbarium of the New York Botanical Garden.

During the year 16,554 specimens, in 406 lots, were received for identification, as compared with 22,859 specimens and 389 lots in the preceding year. This reduction in material sent for report is gratifying as more time is afforded members of the staff for work on research problems. About 17,400 identifications were reported to the senders, many of them, however, pertaining to material received in other years. In addition, 762 specimens were named informally by the staff. Among Government agencies and outside organizations for which material was identified were the Division of Plant Exploration and Introduction, Division of Rubber Plant Investigations, Forest Service, Soil Conservation Service, National Park Service, Geological Survey, Federal Bureau of Investigation, Forest Products Laboratory, Public Health Service, Institute of Inter-American Affairs, and the Food and Agricultural Organization, United Nations.

Phanerogams.—The research of Dr. A. C. Smith was directed largely toward revisions of groups of Pacific Island plants; three

papers discussing new and noteworthy Fijian plants, including a regional revision of the family Lauraceae, were submitted for publication. In the tropical American field, two papers dealing with special families were published and material for future studies was examined. He published one paper on a controversial point of plant nomenclature, and prepared a report on the "Vegetation and Flora of Fiji." to be read at the Seventh International Botanical Congress.

E. C. Leonard, continuing his studies of the large family Acanthaceae in tropical America, submitted for publication treatments dealing with species of Honduras and of Trinidad and Tobago, and the first part of an extended treatment of the species of Colombia. Preparation of the second part of the Colombian study is now well advanced. Continuing his work on a Flora of Hispaniola, Mr. Leonard devoted some time to a study of the family Oxalidaceae.

In continuation of his work on separate accounts of the Bromeliaceae of Colombia, Bolivia, and Brazil, Dr. L. B. Smith prepared keys for more than half of the Colombian species, described a new Bolivian species, and completed the first installment of the family treatment for Hoehne's "Flora Brasilica." The Museum published the fifteenth paper in his series of miscellaneous studies of the Bromeliaceae. The collections of Mulford B. Foster in South and Central America are being studied and the results incorporated in floristic treatments. A revised manuscript dealing with the Bromeliaceae was submitted to the Chicago Natural History Museum for inclusion in the "Flora of Guatemala." Keys to the species of the family occurring in Santa Catarina, Brazil, were prepared at the request of Dr. Raulino Reitz, in connection with work on the control of mosquitoes breeding in bromeliad leaf-tanks, and were forwarded for publication. Collaborative research with Dr. Bernice G. Schubert on the genus *Begonia* was continued, one miscellaneous paper and an account of the family for inclusion in Woodson and Schery's "Flora of Panama" having been completed. Studies of Colombian Violaceae (with Alvaro Fernández) and of Colombian Xyridaceae (with J. M. Idrobo) are being carried on individually, with the intention of combining results at a later time.

Dr. E. H. Walker's work consisted largely of editing a manuscript flora of Okinawa. He also wrote an article for the 1949 Smithsonian Report on "New Zealand, a Botanist's Paradise."

Miss Rudd completed and submitted for publication a paper discussing the geographic affinities of the flora of North Dakota; her current research is directed toward a revision of the genus *Aeschynomene*.

Although Mr. Morton's research is largely concerned with ferns, in the area of phanerogams he worked on a treatment of the family

Gesneriaceae in Panama, to be published in the "Flora of Panama," completing accounts of the genera *Columnea* and *Alloplectus* for this revision. A short paper describing a new species of *Brunfelsia* was published.

Mr. Killip carried on research work in three large families of flowering plants, Leguminosae, Rubiaceae, and Urticaceae, in connection with the preparation of a Flora of Colombia. He also made a study of the Valerianaceae of the northern Andes and worked on a revision of the Andean species of *Bomarea.*

Grasses.—Eight papers were completed and submitted for publication by Mr. Swallen. One contained a description of a new genus from California and another of a new species from Texas; in a third several new species from Mexico, Central America, and Surinam were described. Papers on crested wheatgrass and various species of *Andropogon* occurring in this country were prepared and published. The grass portions of papers on the floras of the Sonoran Desert, Fiji, and British Guiana were written by Mr. Swallen, and transmitted for inclusion in treatments by other authors. His manuscript on the Gramineae for the "Flora of Guatemala" is about one-third done and should be completed early in the fall.

Mrs. Agnes Chase spent most of her time correcting proof of the revised edition of the "Manual of Grasses of the United States." It is expected that this important work will be published by the end of the year.

Ferns.—Less than half of Mr. Morton's time was devoted to work within this division, of which he is curator, as he continued in charge of the division of cryptograms and, as usual, assisted in the identification of phanerogams. He completed a paper on additions to the fern flora of the Galápagos Islands, the study being based primarily on collections by John Thomas Howell, of the California Academy of Sciences. He worked also on the ferns of Colombia, and prepared preliminary treatments of several genera, particularly in the tribe Pterideae. He began work on a supplement to the Index Filicum of Carl Christensen, a bibliographic project that will take a number of years to complete.

Cryptogams.—Mr. Conger continued with his studies of the diatoms of Chesapeake Bay and on the diatomists and diatom deposits of Richmond, Va. He also carried on the study of diatom movement and shell structure and of diatoms in weed beds and submerged surfaces. He experimented with the use of hydrochloric acid as a preservative for diatoms, and found that the acid has certain advantages over formalin. The results were published in a paper entitled "A New Method for the Preservation of Diatoms and other Organic Siliceous Structures."

Dr. Llano's research was confined largely to the study of his own collections of Alaskan plants. In addition, he prepared a paper, "Utilization of Lichens in the Arctic and Subarctic," for publication by the Stefansson Library in the Encyclopedia Arctica, and a preliminary report on his Arctic exploration in 1949, which was published in "Arctic." His monograph of the family Umbilicariaceae in the Western Hemisphere was submitted during the year and is in course of publication.

Research by outside investigators.—Members of the staffs of the Department of Agriculture, the Fish and Wildlife Service of the Department of the Interior, and other Government agencies as usual made frequent use of the collections during the year. The herbarium was also consulted by numerous visitors in connection with their scientific work, of whom 75 came from outside Washington and its immediate vicinity. During the year 73 papers based in part on material in the National Herbarium were published by authors other than those on the staff.

Twenty-six informal loans, consisting of 525 specimens, were made to the Department of Agriculture, and one loan of 3 specimens was made to the Medical Museum of the Department of the Army. There were sent as formal loans to institutions and individuals outside the city 11,853 specimens in 169 lots, in comparison with 15,906 specimens in 125 lots in 1948–49. They were represented by divisions thus: Phanerogams, 8,757 specimens in 136 lots; grasses, 129 specimens in 5 lots; ferns, 144 specimens in 5 lots; cryptogams, 2,823 specimens in 23 lots. During the year many loans of long standing were returned, efforts to obtain the return of prewar loans to European institutions having been quite successful.

DEPARTMENT OF GEOLOGY

(W. F. Foshag, *Head Curator*)

The additions to the staff of the department of geology in 1948 and 1949 have resulted in increased progress in both curatorial work and scientific achievement. The collections continue to grow at an accelerating rate, and the new positions recently created assure adequate care for the collections in the fields now covered.

Norman Boss, chief exhibits preparator, retired on May 31 from his position after more than 40 years in the department. His long years of diligent and skillful service are reflected in the outstanding exhibition series of extinct animals in our halls. Miss LaVerna Pendleton, cataloger and aide, transferred to the River Basin Surveys. In recognition of their interest in the collections of this department, Dr. Preston E. Cloud, Jr., and Dr. Roland Brown, both of the U. S. Geological Survey, were appointed custodian of Paleozoic fossils and custodian of fossil plants, respectively.

Much of the energy of the department was devoted to a reorganization of the available space to accommodate the expanded needs of the section of stratigraphy and paleontology of the U. S. Geological Survey, which has for years occupied offices in the department. An exhibition hall, which at one time housed an unattractive exhibit of building stone, and which during the war period was used as a storage room for collections, was converted into office and laboratory space, thereby ameliorating, to some degree, the crowded condition of the regular offices. Reallocation of offices in the east wing of the third floor brought together scattered elements of both the Museum and Geological Survey staffs. These changes not only greatly simplified the administrative control but resulted in better liaison between both groups.

The advances briefly mentioned above are very gratifying, but there remain serious deficiencies in the department. Curatorial assistants are needed in paleontology to care for the vast collection of fossil plants; in the collections of coralline animals, to fill a vacancy created by the transfer of Dr. Loeblich to the care of the important Cushman collection of Foraminifera; and in the collections of fossil reptiles. Less urgent, but nevertheless pressing, needs are curatorial assistants in Mesozoic and Cambrian paleontology, and additional museum aides of several categories.

Dr. George S. Switzer, associate curator, spent 3 months in California collecting mineralogical material, particularly of the rare sublimate minerals, at "The Geysers," Sonoma County. This is the first of an intended series on the mineralogy and geochemistry of saline mineral deposits.

Four field parties were concerned with problems in invertebrate paleontology. One, consisting of G. A. Cooper, W. T. Allen, and Alwyn Williams, visiting Commonwealth Fellow from Wales, had as its chief object a study of lower Middle Ordovician strata in the Mississippi Valley and collecting fossils from them. Collections were made at various localities in Michigan, Minnesota, Wisconsin, Iowa, Missouri, Tennessee, New Mexico, Texas, and Oklahoma. A. R. Loeblich, Jr. and W. T. Allen carried on field investigations in the Lower Cretaceous beds in Oklahoma and Texas. A brief field assignment in the fall took G. A. Cooper and Alwyn Williams into Pennsylvania and New York to examine lower Middle Ordovician strata. David Nicol, in company with a group from the Johns Hopkins University, examined the Upper Cretaceous and Tertiary beds of North Carolina and Virginia.

Prior to the close of the last fiscal year and continuing into the present, Curator C. L. Gazin, assisted by F. L. Pearce, conducted an expedition to New Mexico and Wyoming. The first part of the season was spent in the San Juan Basin in northwestern New Mexico searching for and collecting remains of primitive mammals in the Puerco and Torrejon horizons of the Paleocene. An excellent series of specimens, mostly jaws, skull portions, and teeth, was obtained from the Puerco in the vicinity of Ojo Alamo and Kimbetoh and the various branches of Arroyo Torrejon. The latter part of the season was spent collecting lower Eocene vertebrates, mostly Mammalia, from the Knight formation in the vicinity of Big Piney and LaBarge in western Wyoming. Much valuable material of the unusual condylarth *Meniscotherium* and a rare skull of the earliest titanothere, *Lambdotherium*, were obtained. The results of this expedition were highly significant to collections of the National Museum and necessary background material for the curator's general long-term study of Paleocene and Eocene faunas of the Rocky Mountain region.

As a result of very promising reports received during 1949, Dr. Gazin, assisted by Dr. T. E. White, of the Smithsonian River Basin Surveys, conducted an expedition to the interior of western Panama. The party achieved considerable success in securing abundant remains of the giant sloth, *Megatherium*, in deposits adjacent to springs, not far from the towns of Ocú and Pesé. Some material was found of the South American notoungulate, *Toxodon*, and fragments of a few other representatives of the fauna, such as horse and deer. This ex-

pedition was carried on with the cooperation of the Panamanian Government, and in particular the Museo Nacional de Panamá where a part of the collection will eventually be displayed. The purpose and result of this expedition was largely the securing of highly valuable exhibition material and such important scientific information as could be obtained.

Shortly after the curator departed for Panama, the associate curator, Dr. D. H. Dunkle, conducted an expedition to the Pinar del Río region of western Cuba to investigate and collect remains of marine Jurassic fishes and reptiles known to occur in the Jagua formation. Assisted by local help, he was highly successful in securing an excellent series of uncrushed and undistorted fish remains in nodules weathering from the formation, including several complete individuals, and four genera new to this formation. Incidental to the vertebrate collecting, he also obtained several hundred Jurassic ammonites, some Miocene echinoids, and a series of Recent land snails for the divisions of invertebrate paleontology and mollusks. The Cuban expedition was a part of the associate curator's long-term study of the Mesozoic origins of the teleostean fishes and was accomplished with the cooperation of the Cuban Government and with the help of the generously proffered facilities of the Cuban Army.

Prior to the close of the present year, Dr. Dunkle assisted by F. L. Pearce left for Colorado, Utah, and Wyoming to collect Eocene fishes from the Green River formation and make stratigraphic studies of their occurrences in ancient lake Uintah and a smaller basin in the vicinity of Fossil, Wyo. This expedition is a part of a general study of the Green River fish fauna being carried on jointly with Dr. Bobb Schaeffer, of the American Museum of Natural History.

ACCESSIONS

The department as a whole received 251 accessions, totaling 530,758 specimens, compared with 275 accessions and 109,499 specimens in 1949. The great increase in the number of specimens is due to the acquisition of the Renfro Collection (250,000 specimens) and the Cushman bequest (150,000 slides of Foraminifera). Of the total, mineralogy and petrology received 122 accessions (1,831 specimens), invertebrate paleontology and paleobotany 109 accessions (527,099 specimens), and vertebrate paleontology 20 accessions (1,828 specimens).

This year's increment to the collections includes some of the most important accessions received for many years. The bequest of Dr. Joseph A. Cushman of his collection and library of Foraminifera brought to this Museum the most important accumulation of its kind in the world. This outstanding collection, representing nearly an en-

tire lifetime of work by Dr. Cushman, contains about 150,000 slides and includes about 13,000 type and figured specimens. It is anticipated that this collection will attract many students of these important fossils to our study rooms.

To complement the Cushman collection of smaller Foraminifera, the U. S. Geological Survey transferred to the custody of the U. S. National Museum the collection of larger Foraminifera, estimated at about 25,000 specimens, assembled by Dr. T. Wayland Vaughan.

The Kegel collection of South-West African minerals, acquired by purchase for the Roebling collection of minerals, constitutes the finest series of magnificent exhibition specimens received by the Museum since the gift of the original Roebling collection in 1926. Included are superb examples of crystallized azurite, dioptase, cerussite, anglesite, and related minerals.

By purchase, through the Walcott fund, an outstanding collection of about 250,000 specimens of Pennsylvanian and Cretaceous fossils from Texas, the Renfro collection, was obtained. Especially noteworthy are the Pennsylvanian pelecypods and gastropods, which include new species and genera, and fine, well-preserved Cretaceous fossils from the vicinity of Fort Worth, Tex.

Additional material of importance resulted from field explorations by members of the staff. Dr. George S. Switzer, associate curator of mineralogy, obtained a comprehensive series of the rare fumarolic minerals from "The Geysers," Calif. Notable collections were made under the Walcott fund: Dr. David H. Dunkle, associate curator of vertebrate paleontology, during his field investigations in the Pinar del Río region of western Cuba, secured an important collection of Jurassic fossil fish; two expeditions by Dr. C. Lewis Gazin, curator of vertebrate fossils, yielded a large quantity of unusual material, including small Paleocene mammal material from New Mexico, rare mammalian forms from Wyoming, and sufficient material of the spectacular extinct ground sloth, *Megatherium*, to assemble a mounted example; Dr. G. Arthur Cooper, curator of invertebrate paleontology, collected about 15,000 specimens of Paleozoic fossils in Texas, New York, and Pennsylvania; Dr. Alfred R. Loeblich, Jr., associate curator, together with William J. Allen, obtained about 3,000 Lower Cretaceous fossils in Oklahoma and Texas.

Mineralogy and petrology.—The general mineral collections continue to grow through gifts and exchanges. Species new to the collection were received from the following donors: Paraguanajuatite (selenide of bismuth) from Eduardo Schmitter, bowleyite and duplexite (silicates of beryllium) and formanite (tantalate of uranium and yttrium) from H. P. Rowledge, calciocelsian (silicate of aluminum, calcium, and barium) from Sir Douglas Mawson, sengierite

(hydrous uranate and vanadate of copper) from Dr. Paul F. Kerr, giannettite (silicate of zirconium) from D. Guimares, and djalmaite (tantalate of uranium and calcium) from Allan Caplan.

The following additional new species were added to the general collections through exchange: Monrepite (an iron-rich mica), wolfeite (phosphate of iron and manganese), jeremejevite (borate of aluminum), wurtzite–4H, wurtzite–6H and wurtzite–15R (sulfides of zinc), basaluminite (hydrous aluminum sulfate), and cliftonite (carbon).

New species added to the collections through transfer from the United States Geological Survey are: Frondelite and rockbridgeite (hydrous phosphates of iron and manganese), paraschoepite (hydroxide of uranium), loughlinite (hydrous silicate of magnesium), bauerite (silica), andersonite (hydrous uranyl carbonate of sodium and calcium), bayleyite (hydrous uranyl carbonate of magnesium), swartzite (hydrous uranyl carbonate of calcium and magnesium), and miserite (hydrous silicate of calcium and potassium).

Among the described materials are cerite, arrojadite, and graftonite transferred by the United States Geological Survey.

Among the many fine specimens received as gifts during the past year, the following are unusual: Schairerite, tychite, northupite and hanksite from Searles Lake, Calif., from the American Potash and Chemical Corp.; gypsum, Brownsville, Tex., from the Humble Oil & Refining Co.; smithsonite, Magdalena, N. Mex., from Mrs. Nellie M. Sherman; ransomite, Jerome, Ariz., from Mr. and Mrs. J. W. Bradley; veatchite, Lang, Calif., from William H. Nisson; gypsum, Texas, from A. O. Phipps.

Floyd A. Rapp continued his interest in the collections by donating a number of rare Japanese minerals.

Received in exchanges were: Perovskite from L. Ph. Bolander, Jr., a collection of 18 Japanese minerals from Prof. Toshio Sudo, glaucophane from M. Vonsen, spangolite and fluorite from Hatfield Goudey, babingtonite and herderite from M. Z. Kissileff, tychite, hanksite, apthitalite, and tincalconite from Modesto Leonardi, fluorite from R. C. Linck, fluorite from Col. John J. Livingston, hisingerite from Dr. F. F. Osborne, hypersthene in garnet from Elmer B. Rowley, and staurolite from Ned Blandford.

Transferred from the United States Geological Survey were hewettite from Colorado and schroeckingerite from Wyoming.

Roebling Collection: 1,021 specimens in 19 accessions were purchased through the Roebling fund. Outstanding among these is the Kegel collection of fine crystallized secondary copper and lead minerals from Tsumeb, South-West Africa. This collection, comprising approximately 900 specimens, contains many of the finest known examples of beautifully crystallized specimens of azurite, malachite,

cerussite, anglesite, vanadinite, and mimetite. Also included were unusually fine specimens from other South-West African localities, notably dioptase and descloizite from Otavi. The Kegel collection is considered to be the most important single addition ever purchased through the Roebling fund. For this accession we are specially indebted to Dr. Mark C. Bandy, of the Economic Cooperation Administration, who spent several days of his own time in our behalf inspecting and packing the collection in Switzerland for shipment to the United States.

Other outstanding specimens added to the Roebling collection are three large masses of jadeite from Japan, a large muscovite crystal from Brazil, two fine groups of adularia from Switzerland, two very fine danburite crystals from Japan, and a 75-pound bar of silver recovered east of Key Largo, Fla., from the wreck of an ancient Spanish treasure ship.

Canfield Collection: 47 specimens through 14 accessions were purchased through the Canfield fund. Outstanding among these are a very fine columbite crystal from North Carolina, witherite from Illinois, a large specimen of native lead with pyrochroite from Sweden, a fine large group of dolomite crystals from Colorado, a striking example of rutilated quartz from Brazil, a group of large wulfenite crystals from Arizona, and two large and perfect grossularite crystals from Mexico.

Gems: 59 gems were added to the gem collection in 8 accessions. The outstanding acquisition is a collection of 41 pieces made up largely of strands of beads of a variety of gem materials, as well as some very fine cut amethysts, a bequest of Mrs. Edna Ward Capps.

Additions to the gem collection purchased through the Chamberlain fund include a 3.49-carat Russian alexandrite (chrysoberyl) showing a very pronounced color change, and an unusual tourmaline cat's-eye weighing 53.20 carats. Purchased through the Roebling fund were a 9.04-carat green apatite from Canada and a very fine slab of moss agate from India.

The following gems were received as gifts during the year: A 32.02-carat smoky quartz and a 4.5-cm. asteriated quartz sphere, both from New Hampshire, from Paul H. Burroughs, and a series of nine cut synthetic sapphires of various colors from the Linde Air Products Co. Received in exchange was an 11.07-carat brilliant-cut labradorite from Utah, through William B. Pitts.

Meteorites: Dr. Stuart H. Perry continued his interest in the meteorite collection by donating two newly found individuals of the Kearney, Nebr., stony meteorite weighing 8.4 kilograms and 502 grams, respectively. He also presented some beads made from meteoritic iron, found in an Indian mound near Havana, Ill., and a 13½-pound piece

of the Densmore, Kans., meteorite. Through the kindness of Dr. Frank Reeves a meteoritic shale ball from the Wolf Creek Crater in Australia was received. A series of small slices of the Social Circle, Ga., meteorite were acquired through the cooperation of Captain Garland Peyton, director, and Dr. A. S. Furcon, assistant director, Georgia Department of Mines, Mining, and Geology. A very fine cross section of the Admire, Kans., pallasite was presented by the Institute for Nuclear Studies of the University of Chicago, through Dr. Harrison Brown. The following Spanish meteorites were received in exchange from the Museo Nacional de Ciencias Naturales of Madrid, Spain: Barea, Guarena, Nulles, Olmedilla de Alarcon and Sena. Through exchange with H. H. Nininger, a reference specimen of the Rolla No. 2, Kans., stony meteorite was obtained.

Rocks: The following gifts were received during the year: Lava, Parícutin Volcano, from Carl Fries, Jr.; metabasalt, Virginia, from Lloyd G. Henbest; a suite of described specimens from Pleasant Mountain, Maine, from Dr. Esper S. Larsen, Jr.; and a collection of rocks from various localities in the British Isles, from Dr. John P. Marble. Received as a transfer from the United States Geological Survey were six sets of described rocks from various localities in Montana, Pennsylvania, Colorado, and California. Received as a transfer from the United States Bureau of Mines was a suite of nine specimens of peridotite from Murfreesboro, Pike County, Ark.

Ores: Two accessions of 40 specimens were added to the ore collection. Dean F. Frasche continued his interest in the collection by presenting a series of chrome ores from New Caledonia, Afghanistan, and India, nickel ores from New Caledonia, and manganese ores from India.

Invertebrate paleontology and paleobotany.—Many important specimens of fossil invertebrates came to the Museum as gifts, such as: 500 fresh-water invertebrate fossils from the Pliocene Truckee formation, presented by Daniel I. Axelrod; the type specimen of *Pachyphyllum vagabunda* Ehlers, a very unusual coral from the Upper Devonian strata of New York, a gift of Dr. C. H. Chadwick; approximately 2,600 specimens of fine Ordovician fossils from O. C. Cole; 45 specimens of Jurassic fossils from Turkey received from G. H. Cornelius; 18 topotypes and pieces of primary types of Devonian corals from the Devonian of Michigan described by Ehlers and Stumm, from Dr. G. M. Ehlers; type specimens of Michigan Carboniferous fossils from Dr. W. A. Kelly; 150 invertebrate fossils from Wales collected by Dr. J. P. Marble; 21 type specimens of Foraminifera from the Pennsylvanian shale at Bridgeport, Tex., from Dr. Helen J. Plummer; 150 Triassic invertebrates from Italy from Dr. Franco Rasetti; 500 Paleozoic, Mesozoic, and Cenozoic invertebrates from Tunisia, Algeria, and the Sa-

hara Desert from Maurice H. Wallace; 24 Paleozoic and Mesozoic brachiopods from England from Dr. H. B. Whittington.

Springer Collection: Several hundred fine specimens of Ordovician, Mississippian, and Pennsylvanian type crinoids were purchased through Springer funds. These specimens are of the highest quality, beautifully prepared, and a great addition to the Springer collection. They are mostly of genera not hitherto represented in the collection.

Walcott fund: As in previous years, this fund made it possible for the division to send out several field parties and to make purchases of fine fossils. The most important accession from this source is that of the Renfro collection of Pennsylvanian and Cretaceous fossils. The collection numbers about 250,000 specimens and is rich in exquisite material. It is perhaps the best-known collection of Pennsylvanian fossils from the Jack County area, which is famous for its fine specimens. Especially noteworthy in the collections are the pelecypods and gastropods forming a large percentage of the material which is rich in new species and genera. Of equal importance in the Renfro collection is the great quantity of fine Cretaceous fossils from the vicinity of Fort Worth, Tex. This part of the collection is also important for its abundance of well-preserved specimens and wealth of new material. The Renfro collection was brought together over a period of 12 to 15 years by Mrs. J. H. Renfro and Miss Millicent Renfro.

Other gifts from the Walcott fund are about 15,000 specimens of Paleozoic invertebrates collected by Dr. G. A. Cooper and W. T. Allen in the Midwest, 500 specimens from the Ordovician of New York and Pennsylvania collected by Dr. Cooper, and 250 samples and 3,000 specimens of Lower Cretaceous fossils from southern Oklahoma and central Texas collected by Dr. A. R. Loeblich, Jr., and W. T. Allen.

In addition to the above accessions, 400 invertebrate fossils from the Permian of Sicily were purchased.

From the U. S. Geological Survey several important transfers were received: The Vaughan collection of larger Foraminifera, now in the charge of L. G. Henbest and estimated at about 25,000 specimens; approximately 25,000 Tertiary invertebrate fossils; the smaller Foraminifera belonging to the Geological Survey and used by Dr. Joseph A. Cushman; 653 Silurian brachiopods from southeastern Alaska to be described by W. T. Amsden, of Johns Hopkins University; Paleocene and Eocene cores from Nicaragua, rich in Foraminifera; 1,275 type and figured specimens of Jurassic Forminifera from Montana, Wyoming, and South Dakota described by Dr. A. R. Loeblich, Jr., and Helen Tappan Loeblich; 147 type specimens of Mesozoic and Cenozoic Foraminifera from the Naval Petroleum Reserve No. 4 in northern Alaska and described by Helen Tappan Loeblich.

A transfer from the Bureau of American Ethnology through Henry B. Collins, Jr., deserves special mention. Dr. Collins collected some fine Silurian fossils from remote Cornwallis Island in the Arctic.

As in past years, several exchanges were arranged which brought the Museum fine specimens from distant lands. These exchanges yielded genera and species not represented in the collections. The largest incoming exchange is that from Sgt. Philip Cambridge, who sent 1,351 specimens of Tertiary and Mesozoic fossils from England; from the Naturhistorisches Museum of Vienna, Austria, the Museum obtained 764 specimens of Triassic brachiopods from Austria; smaller lots were received from Morocco, Germany, and India.

Vertebrate paleontology.—Both the number of accessions and the number of specimens acquired this year are less than last, but this is to be expected, inasmuch as last year saw a record high, covering many years. The volume of material received, on the other hand, was greater than in any year since 1934. The Panama collection alone weighed 6 tons, representing, however, a relatively small number of individuals of the giant sloth, *Megatherium.*

From an exihibition point of view, the skeletal material of *Megatherium*, collected by the curator in the province of Herrera in Panama, is the most striking addition to the collections this year. A complete, though composite, skeleton of this bizarre, gigantic mammal can be mounted for exihibition in the United States National Museum, and good material was selected for exihibition in Panama.

Of much value from a scientific point of view is the collection of fossil fish and reptile remains that Associate Curator D. H. Dunkle obtained from the Jurassic of western Cuba.

Perhaps of equal significance, and again based on a series of specimens, is the collection of Paleocene mammals that the curator collected from the San Juan Basin in New Mexico. This contains an excellent representation of the fauna from the classic Puerco and Torrejon, or earliest Tertiary horizons. Also secured in this expedition was a valuable lot of Lower Eocene mammals from the Knight beds of western Wyoming, largely representing the unusual *Meniscotherium* and including a rare skull of earliest titanothere, *Lambdotherium.*

Attention should also be called to a small collection of Oligocene materials procured in an exchange from the South Dakota School of Mines. These include two *Protoceras* skulls, a fish, and the skeleton of a small extinct type of alligator, the latter being particularly worthy of mention and a notable addition.

A further significant acquisition, enhancing the collections of fossil birds, was obtained by exchange from the Naturhistorisches Museum in Basel. These remains are from the Lower Miocene of France

and represent a series of avian forms not previously included in our collections.

Among the materials transferred from the Smithsonian River Basin Surveys are two mosasaur skulls, representing two distinct types, collected by Dr. T. E. White from the Cretaceous of Texas. These are worthy additions to the Museum's collections of marine reptiles of North America.

Distribution and exchange of specimens.—Material distributed for educational, scientific study, or other purposes consisted of 62 gifts, totaling 2,530 specimens; 67 loans with 2,939 specimens; 49 exchanges totaling 30,058 specimens; and 18 transfers of 171 specimens.

Number of specimens under the department.—The total number of specimens now in the collections of the department is 3,655,246, as compared with 3,157,247 for last year. These specimens are distributed as follows:

Mineralogy and petrology	260,694
Invertebrate paleontology and paleobotany	3,358,844
Vertebrate paleontology	35,708
Total	3,655,246

INSTALLATION AND PRESERVATION OF COLLECTIONS

Cataloging.—All specimens received in the division of mineralogy and petrology were completely cataloged, numbered, and distributed with the exception of some that came in late in the year. There is no catalog backlog in this division. The division of paleontology and paleobotany had the services of a cataloger from the beginning of the fiscal year until her transfer on March 20, 1950. In the 9 months she worked for the division, 1,649 entries were made. The large number of types cataloged slowed down the recording. About 7,500 specimens were numbered. In spite of this satisfactory accomplishment, no important progress was made on reducing the backlog. The principal backlog in the division of vertebrate paleontology is in the documenting or assembling of geological and geographic field data, identification as to classification and osteological parts represented, and numbering and card-indexing of the individual specimens. Cataloging was completed for over 100 specimens.

Exhibition.—The mineral hall was painted for the first time in 40 years, with the result that the general appearance of the collection is greatly improved. A number of fine specimens were added to the systematic mineral collection as well as to the gem collection. A new exhibit was installed showing fluorite and other minerals from Illinois, lent by Col. John J. Livingston. Revamping of the large specimen cases by the windows was started, in order to carry out the theme

begun last year in the American cases containing the systematic mineral collection. A silver ingot recovered from the wreck of an ancient Spanish treasure ship was placed on exhibit.

A third to a half of the vertebrate-paleontology laboratory time was allotted to exhibition work this year. Preparation of the slab of *Buettneria* skulls was completed and is awaiting final work on the exhibition case. The complete skeleton of the large ichthyodectid fish from the Cretaceous of Wyoming was completed for exhibition and is awaiting installation as a wall-type mount in the hall of vertebrate paleontology. Much work was accomplished for exhibition on the phytosaur skeleton that the United State Geological Survey collected from the Chinle formation in Arizona, and a beginning was made on the preparation of the giant sloth from Panama, which will, undoubtedly, prove to be one of the most interesting exhibits undertaken for several years. Work is going forward on the exhibition case for the *Camarasaurus* skeleton that was placed in the exhibition hall in 1947. Currently, the division artist, William D. Crockett, is working on plans and drawings for a new type of exhibit that will be an innovation to the customary type of natural-history display.

Preservation of collections.—With each year's increment to the collections, the lack of adequate storage facilities becomes aggravated. The situation in invertebrate paleontology is particularly acute, but in other divisions the problem can be met only by constant shifting and condensation. During the year considerable time was devoted to such changes, in part incident to the reallocation of space to accommodate the increased needs of the United States Geological Survey. The described geological locality sets were moved from the east corridor to the attic to accommodate the bryozoan collection contained in room 325. The gastropod collections under study by Dr. J. Brookes Knight were transferred to room 302. In order to conform to the stipulation of the Cushman bequest, room 304 was vacated to house the foraminiferan collection. Burdensome as these charges were, they resulted in a more convenient grouping of the active collections.

William T. Allen, museum aide, completed the rearrangement of the cephalopod collection, in which all specimens were cleaned, unlabeled material eliminated, and the types arranged alphabetically. Miss Jessie G. Beach continued the selection of bryozoan material from the accumulation of siftings and dredgings.

The Cushman collection of Foraminifera was transported from Sharon, Mass., and completely installed, together with the Cushman library, in room 304, where it is now available to students.

Dr. R. S. Bassler, associate in paleontology, rearranged the byrozoan biologic series in 21 six-foot cases in the third-story southeast hall

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after transfer from its former room relinquished to the United States Geological Survey. Similar work was carried on with the graptolite collection by segregating a biologic series and its attendant types from the general stratigraphic set.

The general arrangement of the collections of fossil fishes was completed, and the various categories of fossil vertebrates are now, for the most part, arranged effectively for convenient use and allow a limited expansion for new accessions.

In the laboratory, N. H. Boss completed preparation of the curator's 1947 collection from the Bridger Eocene and the 1948 and 1949 collections from the Lower Eocene Knight formation of Wyoming. He also completed preparation of a collection of Pleistocene vertebrate remains from a fissure deposit near the Virginia-West Virginia line. Immediately prior to his retirement in May, Mr. Boss undertook and partially completed preparation of the skull of *Megatherium* secured in Panama in 1950. Franklin L. Pearce completed the preparation for exhibition of the slab of *Buettneria* skulls from the Triassic of New Mexico and made a beginning on the sloth material from Panama. In addition, he completed the initial rough preparation of the fish and reptile materials recently obtained for the Museum from the Jurassic of Cuba. Arlton C. Murray prepared for exhibition the Cretaceous ichthyodectid fish from Wyoming, as well as other materials from the Pierre formation, remounted a nearly complete skull of an early described Upper Cretaceous fish, and completed much of the preparation of the Triassic phytosaur from Arizona.

Still to be prepared are the materials recently transferred from the River Basin Surveys, including Jurassic and Eocene material from Wyoming, Oligocene and Miocene collections from Montana, and two mosasaur skulls from Texas. Also remaining are the Oligocene alligator and mammal materials received this year in an exchange with the South Dakota School of Mines.

Essentially no backlog exists in the laboratory preparation of vertebrate fossils, earlier than the 1947 collections, except for some 39 boxes remaining of the original Marsh collection, a residue of questionable value.

In the lapidary shop Frank E. Holden completed the following preparations: 67 meteorites cut, polished, and etched; 456 rocks and ores cut and polished; 102 thin sections cut and prepared. In addition, 115 plaster bases for exhibition specimens were cast.

It is not out of place here to mention the good work performed by Robert Jones, recently appointed laborer to the department. Mr. Jones' best help has been in ticketing the field collections and patching and numbering specimens, relieving the curators of this time-consuming task.

INVESTIGATION AND RESEARCH

Mineralogy and petrology.—At the request of the Instituto de Antropología e Historia, Guatemala, Curator Foshag undertook a study of the Meso-American archeological jade objects in the public museums and some private collections in Guatemala. He devoted 2 months to the important collection contained in the Museo de Antropología in Guatemala, 2 weeks to the famous Rosbach Collection in the Municipal Museum in Chichecastenango, and the remaining time in the Robles collection in Quetzaltenango and the Nottebohm collections in Guatemala. These collections contain a wide diversity of jade varieties, as well as similar and related materials. A study of ancient jade-working techniques was included in the program. Additional analyses of volcanic products of Parícutin Volcano, Mexico, were completed as a part of the curator's geochemical investigation of this unusual volcano.

E. P. Henderson, associate curator, continued his general studies of the chemical composition of iron meteorites and of the relationships and distribution of their cohenite, schreibersite, and troilite inclusions.

Dr. George S. Switzer, associate curator, completed a study of the Golconda, Brazil, pegmatite, and a manuscript on this subject and on the mineralogy of the California glaucophane schists. He is continuing work on a general study of the saline minerals, in particular on collections made in California at "The Geysers" and at Island Mountain. Approximately 250 X-ray powder photographs were taken of mineral specimens in the collections and added to the reference catalog of these photographs.

Dr. John P. Marble, associate in mineralogy, continued his investigations on the absolute measurement of geologic time, including the analysis of various radioactive minerals, the testing of others for their suitability for this purpose, and preliminary studies on standard radioactive mineral samples.

Invertebrate paleontology and paleobotany.—Dr. G. A. Cooper, curator, made some progress on his Ordovician studies during fall and winter. The specific descriptions of most of the Orthacea and all the inarticulate brachiopods were completed. This represents about one-third of the manuscript on the "Chazyan and Related Brachiopods." The 253 plates are finished. The Permian of the Glass Mountains program is still in the accumulation-of-materials stage and will remain so for at least another year. The end of the etching preparation for this program is in sight. After the materials are sorted, descriptions will be prepared, and the choice specimens photographed. Several hundred pictures have already been prepared.

Dr. A. R. Loeblich, Jr., associate curator, in preparation of his

studies on Foraminifera, washed many Jurassic (Oxfordian and Callovian) Foraminifera samples from the northwestern United States. He also picked Jurassic (Oxfordian and Liassic) samples of northern Alaska, and he made considerable progress on the material from the Cretaceous strata of Texas.

Dr. David Nicol, associate curator, completed a study on recent species of the lucinoid pelecypod *Fimbria* and is now making a similar study on *Cucullaea*. He did some work on the pelecypod suborder Prionodonta for the "Treatise of Invertebrate Paleontology."

Dr. J. B. Knight, research associate, continued his researches on Permian snails with special emphasis on the Wolfcampian fauna and partially completed the manuscript of this study. Dr. Knight is also revising his manuscript on the higher categories of classification of gastropods.

Proofreading of his Paleozoic coral monograph, in course of publication by the Geological Society of America, occupied several weeks of the time of Dr. R. S. Bassler, associate in paleontology, but the larger part of the year he devoted to the preparation of text and illustrations for the bryozoan volume of the treatise on invertebrate paleontology for the same organization. A résumé of his manuscript on Ordovician Cystoidea, containing descriptions of new families and genera, was completed for publication in advance of the delayed monograph.

Vertebrate paleontology.—Research by the curator, Dr. C. L. Gazin, was rather limited by the amount of time he spent in field work; nevertheless, he made some progress on his tillodont monograph and completed a study of the Miocene land mammals of the Chesapeake Bay region.

Dr. D. H. Dunkle, associate curator, continued investigation of the Eocene Green River fishes, work that he is dividing with Dr. Bobb Schaeffer, of the American Museum of Natural History. They now have about a third of the families represented completely worked up. In a long-term project, Dr. Dunkle has been concerned with the late Mesozoic origins of the teleostean fishes and toward this end continued in the work of serially sectioning, by the peel method, a leptolepid fish from the Jurassic of Cuba.

Research by outside investigators.—As in past years, many investigators from this country and elsewhere were aided by use of Museum materials and help of the staff. Members of the Geological Survey continued their studies on Museum material, which often included description and illustration of specimens. Thomas Stern and David Barnes, of the United States Geological Survey, were given use of the mineral collections in connection with their special assignments. Dr.

Harrison Brown, of the University of Chicago, made considerable use of the information contained in the card catalog on meteorites.

Fifty-four loans or gifts of mineral material (totaling 212 specimens) were sent to scientific investigators in various institutions.

Dr. T. W. Amsden, Johns Hopkins University, completed a study of several hundred specimens of Silurian brachiopods from southeastern Alaska. These specimens were collected by the Geological Survey, but, after Dr. Amsden's study, were deposited in the Museum. Dr. Franco Rasetti, of the same university, came to Washington on a number of occasions to study types of Cambrian trilobites. Dr. Alwyn Williams, University of Glasgow, Scotland, made an intensive study of the stropheodontid brachiopods. This collection is a large one, and the study took the best part of 8 months. A manuscript revising this group was submitted for publication in the United States. A smaller paper describing the new genera resulting from this study was in press. Dr. Norman D. Newell, American Museum of Natural History, is monographing a large collection of Permian pelecypods belonging to the National Museum. Dr. Ralph Chaney, University of California, spent some time in the Museum studying paleobotanical material. Harrell L. Strimple, Bartlesville, Okla., is studying a Museum collection of peculiar Silurian crinoids collected by A. R. Loeblich in Oklahoma. Dr. John H. Hoskins, University of Cincinnati, has a large collection of fossilized wood from the lower Mississippian rocks of Kentucky which he is reorganizing and studying. Paul Tasch borrowed a large collection of Cambrian fossils from the Warrior limestone of Pennsylvania and prepared a monograph on them in conjunction with material that he had collected. James Wilson, University of Texas, borrowed a collection of Upper Cambrian trilobites which he studied in conjunction with his doctoral work at Yale.

Loans of invertebrate paleontological material were made to 17 institutions.

Dr. T. E White, of the Smithsonian River Basin Surveys, made some use of the collections of the division of vertebrate paleontology in working up the materials he collected from the area of the Boysen Reservoir in the Wind River Basin of Wyoming. Dr. Jean R. Hough, of the United States Geological Survey, made extensive use of the division collections in her study of the Oligocene carnivores.

The following vertebrate paleontologists from other institutions visited the Museum to study specimens in this division in connection with their researches: Dr. Tilly Edinger, of the Museum of Comparative Zoology, examined endocranial casts of various types of extinct vertebrates in preparation for a revision of her monograph on the fossil brain; Dr. J. T. Gregory, of Yale University, worked on the

Mazon Creek collection of primitive vertebrates from the Pennsylvanian of Illinois; Dr A. S. Romer, director of the Museum of Comparative Zoology, reexamined the Craddock bone bed collection of primitive reptiles from the Permian of Texas; Dr. Bobb Schaeffer, of the American Museum of Natural History, studied much of the collection of Green River fishes as a part of a cooperative program he is carrying out with Associate Curator Dunkle, and also investigated our recently collected fossil fish remains from the Triassic of Virginia; Dr. Chester Stock, chairman of the Geology Department of the California Institute of Technology, made a study of some of our Pipestone Springs Oligocene Mammalia, our upper Tertiary carnivores, and Mexican Pleistocene horse material; Dr. W. E. Swinton, of the British Museum, reviewed our dinosaur collections in connection with his long-term study of this group of reptiles; Dr. E. H. Taylor, of the University of Kansas, studied amphisbaenid lizards in the National Museum collections; Paulo E. Vansolini, of Harvard University, made a study of the fossil ophidians in the collections.

DEPARTMENT OF ENGINEERING AND INDUSTRIES

(Frank A. Taylor, *Head Curator*)

The increased interest and activity in the program for new buildings furnished the highlight of the year in the department of engineering and industries. Careful reviews of the objectives of the sections, sketch plans for the utilization of typical categories of space, and consideration of the services the department is capable of performing were consolidated in a tentative request for new facilities. In connection with this study and the other work of the department, more than 20 museums, galleries, and industrial collections were visited by 5 members of the staff.

Research on the department's projects continued from the previous year proceeded satisfactorily, and component units of the studies were completed in most of them.

Notable improvements in the preservation of collections were made in the sections of manufactures, textiles, and photography.

The programs of special monthly exhibits in graphic arts and photography continued with good results. "The Symbol of the Rose in Textile Design," "The United States Government Hospital Programs," and the annual "Photography-in-Science Competition" were effective special exhibits. The construction of a gallery for exhibiting the monthly photography exhibition was a major undertaking in exhibition improvement. New permanent exhibits were added and improvement in individual exhibits was accomplished in all sections. The head curator served on the Smithsonian committee studying the broad problem of exhibition improvement.

Continuous use was made of the collections and the services of the staff by individuals and agencies seeking information, indentifications, and opinions. This function of the work occupied approximately one-fifth of the time of the staff and totaled 6,885 calls, visits, and letters.

ACCESSIONS

Accessions for the year total 131, or 3 more than last year. The number of specimens is 2,047—563 less than last year. The breakdown of the year's accessions is as follows: Crafts and industries, 23 (237 specimens); engineering, 33 (92 specimens); graphic arts, 69 (1,701 specimens); and medicine and public health, 6 (17 specimens). Of these the following are noteworthy:

Crafts and industries.—A model of the interior of a textile finishing mill, a detailed study of how a fabric design is born, magnification of 33 weaves, and a scientific study of a wrinkle-shed finish were prepared in two exhibition units and presented by Dan River Mills, Inc. An exhibit of the new nontarnishable, metallic yarn, Lurex, was furnished by the Dobeckmun Co.

Wood technology received from the Department of the Army a fine set of 40 commercial woods of Japan assembled and distributed by the Forestry Division of the National Resources Section in Tokyo.

Engineering.—The first (1858) pumping engine of the Washington (D. C.) aqueduct system was presented by the District of Columbia through the Board of Commissioners. It is a hydraulic duplex pump that obtained its power from water at main pressure and pumped to a reservoir that served the Georgetown high-level area.

A Branly tripod detector was presented by Alfred Jacquemin. It is the only instrument in the collections representing the work of Prof. Edward Branly of France, a pioneer of wireless communication.

A nicely preserved repeater bracket clock made in 1795 by Thomas Reid of Edinburgh, a well-known clockmaker and writer on clockmaking, was received from the estate of Mrs. Lizzie F. Lyon.

The watercraft collection received a group of inventor's models of the Freeman rotating life boat davit and the Marten-Freeman compensating davit as a gift from L. B. Stacey. Ralph E. Cropley continued to add material to the collection of scrapbook notes on steamships and sailing vessels.

The Chicago & North Western Railway Co. presented a short length of railroad rail of about 1857. It has an inverted V-shaped flange to fit the corner of a timber stringer. Ransom Matthews, a contributor of many interesting automotive relics, gave a series of early carburetors.

A group of recording machines, including those used by Alice C. Fletcher and Frances Densmore, pioneers in recording language and songs of the American Indian, was received from the Bureau of American Ethnology. Mrs. Charles Sumner Tainter presented documentary material relating to the work of her late husband in perfecting the early graphophone.

Graphic arts.—The most important accessions in graphic arts were purchases made through the Dahlgreen fund, the most outstanding of which were two prints by Stanley William Hayter, "Cronos," an engraving and soft-ground etching, and "Palimpsest," a soft-ground etching printed in three colors. Other specimens new to the collections, purchased through the Dahlgreen fund, are "Company Town," a contemporary wood engraving by Lynd Ward, and "Promenade," a color wood cut by Irving Amen. A second color wood cut,

"Evening," by Mr. Amen was received as a gift from the artist. Heretofore the Museum had no examples of work by contemporary artists in these relief media. Another important accession purchased through the Dahlgreen fund was "La Faute" by Jacques Villon. This is an example of lift-ground aquatint, not previously represented in the collections.

Of particular interest were 51 specimens of the work of the photographer Victor Prevost, presented by Melville Rosch. These included 19 photographic prints, one composite picture, 3 original paper negatives of the May 26, 1854, eclipse, and 24 other paper negatives, 3 prints and a photograph of the maker. Prevost was a pioneer in the use of waxed-paper negatives in this country.

A Renfax synchronizer, early sound equipment used before the invention of sound on film, was presented by Ralph S. Koser. Two examples of the lithocaustic process were presented by A. Hoen & Co. The first-prize-winning print in the color division of the Second Annual Photography-in-Science Competition of 1948, a photographic study of the explosive charge used in the Poulter method of seismic exploration, was presented by the maker, Dr. Thomas C. Poulter. The first-prize-winning entry of a two-print combination from the monochrome division, illustrating a photographic comparison of natural and artificial mercury, 5461 A, was acquired as a transfer from the National Bureau of Standards, through the maker, Dr. William F. Meggers.

Medicine and public health.—The two outstanding accessions of the year in this division are the exhibits "Sutures in Ancient Surgery," presented by Davis & Geck, Inc., and "Aureomycin," a gift of the Lederle Laboratories Division of the American Cyanamid Co. "Sutures in Ancient Surgery" is a graphic portrayal by means of colored transparencies of the development and use of sutures in early times. "Aureomycin" illustrates the manufacture of aureomycin and its various medicinal forms, together with a brief history of this important antibiotic, and the disease entities treated with it. Miss Virginia M. Henkel presented the division with a static electricity machine made by her great-grandfather about 1840 and used by him to treat patients.

Distribution and exchange of specimens.—Sixteen specimens were sent out by the division of crafts and industries, as follows: 15 wood specimens to the Henry Francis duPont Winterthur Museum for use in a study of woods used by early American cabinetmakers; a portrait of Charles Goodyear lent to the Virginia Museum of Fine Arts for an exhibition of the work of the artist, G. P. A. Healy. The division of graphic arts lent 6 plates and a number of etching and engraving tools to the Slater Memorial Museum, and telegraph instruments, a

camera, and other Morse relics to the National Academy of Design, on the occasion of the Academy's one hundred and twenty-fifth anniversary. The division of engineering sent 44 patent models to the United States Patent Office as a loan. This division continued to lend sets of photographs to school teachers, this year's loans totaling 201 photographs of inventors, inventions, transportation, and so forth. The total number of photographs processed by the department for loans, gifts, and pay orders was 614. Prints of drawings ordered from the Historic American Merchant Marine Survey, division of engineering, totaled 189, bringing the cumulative total to 5,839. One hundred and thirty-three unaccessioned duplicates of etchings by Charles W. Dahlgreen were sent to the Washington County Museum of Fine Arts, Hagerstown, Md.

Number of specimens under the department.—At the end of the year, the total number of specimens in the department of engineering and industries, was as follows:

Crafts and industries	60,726
Engineering	32,267
Graphic arts	49,287
Medicine and public health	22,854
Total	165,134

INSTALLATION AND PRESERVATION OF COLLECTIONS

Cataloging.—The cataloging of new material was kept current with minor exceptions, and all divisions made improvements in their older records.

Eight thousand new cards were typed by Mrs. Lottie A. Dickson for the section of manufactures, including a careful check and correction of the card entries. In the sections of land transportation and electricity the associate curators improved the documentation of specimens as they studied and described them for the descriptive catalogs.

The section of photography employed its aide, Ralph Forney, to locate, assemble, and systematically arrange the pictorial prints and to inventory the historical photographic equipment. These collections are cataloged and located for the first time in recent years. Many omissions in the record remain to be resolved.

Exhibition.—Crafts and industries: In the section of manufactures, an exhibit showing uses of human and animal hair was completed, and eight other exhibits were improved by rearrangement. The aisle space on the south hall gallery was widened by substituting 4-foot cases for 8-foot ones.

In the section of textiles, the Jacquard fabrics and drafts were reinstalled near the Jacquard equipment. The hooked rug exhibit was

returned to exhibition with additional new material. The Dan River Mills exhibit was installed by representatives of the company. Approximately 100 fabrics were hung in the south hall for the special exhibit, "The Symbol of the Rose in Textile Design." This exhibit was a loan from the Scalamandré Museum of Textiles, supplemented by specimens from the section's collection. An exhibit of Lurex yarns and fabrics was installed. In all, the section added, improved, or retired 10 exhibits.

In the "wood court," the hardboard exhibit, presented by Masonite Corporation last fiscal year, was installed.

ENGINEERING: Kenneth M. Perry designed a small exhibit for the Henry magnet employing a model of the magnet to show the manner in which it was used in the laboratory at Yale College in 1831. William H. Dunn, Jr., exhibits preparator, made the model. Several other cases in the section of electricity were renovated and supplied with new labels prepared by the aide, J. Harry Phillips, Jr.

Three cases of calculating machines were reconstructed and lighted. The construction and installation were performed by Mr. Dunn and Mr. Phillips, including most of the wiring.

The Simplex automobile was restored, without cost to the Museum, by the firm of Haley's, Inc. It has been reinstalled and is a much better representation of a fine car of 1912.

John C. Carter, skilled laborer in the division, devoted most of his time to the maintenance of exhibits including the many machines and vehicles not cased. He assisted in the renovation and reinstallation of exhibits.

GRAPHIC ARTS. The most important improvement during the year was the construction of a modern gallery for the display of special photographic exhibits, now nearing completion. Specimens removed to temporary storage to make room for this installation will be reexhibited in the space formerly devoted to the special exhibits.

The Smithsonian edition of prints by Charles W. Dahlgreen is represented in a vertical case installed during the year at the southwest end of the connecting range.

Plans were made in conjunction with a committee from the Lithographers National Association to assemble and install an exhibit representing the offset lithographic industry. This project, now progressing well, will provide a full exhibit illustrating the origins and development of offset lithography.

The Third Annual Photography-in-Science Competition, with *The Scientific Monthly* as co-sponsor, was displayed as a special exhibit in the foyer of the Natural History Building.

Special exhibits of the graphic arts and photography held during the year were as follows:

Graphic arts

June 20–September 5, 1949.	Prints purchased through the Dahlgreen Fund and Smithsonian edition of Dahlgreen prints.	28 prints.
September 6–October 2, 1949.	Armin Landeck	35 drypoints.
October 3–October 30, 1949.	Vera Andrus	30 lithographs.
October 31–November 27, 1949.	Stanley William Hayter	39 prints.
November 28–January 2, 1950.	Hugh Botts	35 prints.
January 3–January 29, 1950.	Josef Albers	24 woodcuts.
January 30–February 26, 1950.	Michael J. Gallagher	34 prints.
February 27–March 26, 1950.	Mary E. Whelan	27 prints.
March 27—April 23, 1950.	Louis Lozowick	40 lithographs.
April 24–May 21, 1950.	Hubert Davis	35 prints.
May 22–June 25, 1950	Jack Galloway	24 drawings and gouaches.

Photography

June 1949	Mildred Hatry	42 pictorial photographs.
July 1949	Telephone Camera Club of Manhattan.	56 pictorial photographs from the 15th Bell System Travel Salon.
August 1949	Grace B. Ballentine	61 pictorial photographs.
September 1949	Harold Lincoln Thompson.	35 pictorial photographs.
October 1949	Smithsonian Institution and *Scientific Monthly*.	168 scientific photographs (3d annual Photography-in-Science Competition).
November 1949	Metropolitan Camera Club Council, Inc.	90 pictorial photographs (13th Annual Travel Salon).
December 1949	Edward C. Crossett	71 pictorial photographs.
January 1950	National Photographic Society.	106 pictorial photographs (7th Annual Salon).
February 1950	*Popular Photography*	107 pictorial photographs (5th Traveling Salon).
March 1950	C. Harrison Conroy	60 color photographs.
April 1950	Fritz Henle	61 pictorial photographs (through the American Federation of Arts).
May 1950	National Speleological Society.	60 prints (3d Annual Salon of The National Speleological Society).
June 1950	Joseph Breitenbach	53 pictorial photographs.

At the conclusion of the Third Annual Photography-in-Science Competition, the prints were sent in the form of a traveling exhibition on an itinerary including 13 libraries, museums, universities, and professional societies, coast-to-coast.

MEDICINE AND PUBLIC HEALTH: Exhibits work in this division included the planning, conferences on design, and the installation of the two exhibits, "Sutures in Ancient Surgery" and "Aureomycin." A major rearrangement of exhibits was made to accommodate the special exhibit on "United States Government Hospital Programs," and the blood-plasma exhibit was moved to make room for the aureomycin case. William E. Bridges, aide, supervised the installation of these exhibits.

Preservation of collections.—CRAFTS AND INDUSTRIES: The major single undertaking in preservation of the textile collections was the transfer of the fiber specimens from open drawers in the southwest basement to storage cases in the southwest court. This collection, now housed in about 30 quarter-units, was carefully checked by Edward A. Avery, Burlie Parks, and Joseph F. Greene and is now more accessible and in better working condition than ever before.

Approximately 1,200 agricultural models were cleaned by Mr. Greene, and Mr. Parks repaired or reassembled about 40 models of plows. In manufactures, the 179 storage units were again fumigated.

Cleaning and fumigation of the case containing the exhibit of domestic cork checked an attack of insects there.

A large part of the engineering collection of calculating machines was retired to the reference collections, and this entire series was reinstalled in storage lockers.

The small stored collection of watercraft models and parts was moved to the storage court, which provided more space for the better storage of land transportation material in the basement storage area.

Repairs were made to many original machines and vehicles, and a trial of mildew-proofing of leather and wooden parts was begun.

GRAPHIC ARTS: A great deal of progress was made in preservation through the work of a temporary museum aide, Ralph Forney. Many photographic prints which were in the process of deterioration were salvaged and placed in more suitable storage facilities. Mr. Wedderburn and Mr. Forney repaired a number of specimens. Much remains to be done in the preservation of photographic prints and other specimens in the section of photography.

About 100 mats were cut to preserve prints in graphic arts. Storage drawers holding prints were opened to provide prints with necessary periodic airing.

MEDICINE AND PUBLIC HEALTH: The collections are in a good state of preservation. Throughout the year protective measures were taken where they were indicated by the periodic inspections.

INVESTIGATION AND RESEARCH

Crafts and industries.—Continuing the research project begun last year on the care and preservation of textile specimens, Miss Grace L. Rogers, assistant curator of textiles, visited the Museum of Fine Arts, Boston, Mass., and the Brooklyn Museum, receiving some interesting and helpful information on which detailed reports have been submitted.

The associate curator of manufactures and agricultural industries, Fred C. Reed, continued his research on the history and development of the American farm tractor. Illustrations of 66 different tractors were obtained and photographed and 15 charts were made to show the relation of weight to drawbar horsepower.

The curator of wood technology, William N. Watkins, continued his study of foreign hardwoods that are being substituted for species that have become scarce or difficult to obtain.

Engineering.—The associate curators continued their studies of the material in their sections in the course of preparing descriptive catalogs of the collections. S. H. Oliver described most of the bicycles in his collection, and Kenneth M. Perry continued his work with electrical measuring instruments.

Graphic arts.—Jacob Kainen, curator of graphic arts, began a study of the origins of modern photomechanical processes, with special reference to examples in the collections. A study in the origins of relief halftone, completed several years ago, will form a part of the general project. Mr. Kainen's book tracing the history of the Columbian press, America's first important contribution to the printing arts, was published during the year. The work comprises a study of the origins and development of iron hand presses and presents as well, the first documented biography of the American inventor George Clymer.

In photography, work on a descriptive catalog of the still and motion-picture collections was continued. A study of the paper-negative processes was made, and a number of prints illustrating the processes were prepared. Examples of the actinoprint process, a paper-negative method for reducing photographs to basic black and white, developed by the associate curator, Alexander J. Wedderburn, Jr., were made in the laboratory and added to the collections.

Medicine and public health.—The library research and correspondence with colleagues were continued on the subject of the history and usefulness of the various keys to the microscopical identifications of drugs. The equipping of a suitable laboratory for the further development of the study went forward slowly.

Research by outside investigators.—Among the several hundred serious inquirers using the collections during the past year, the following are mentioned as typical of the variety of their interests:

CRAFTS AND INDUSTRIES: Miss Wanda P. Pierce, of the Heirloom Needlework Guild, Inc., spent 2 days in the section of textiles studying records and models of old patents on sewing aids. J. L. Stearns, Timber Engineering Co., was aided in his quest for species of woods from South Africa comparing most closely with our hard maple in properties required for shoe lasts. H. V. Bailey, buyer and forestry consultant, investigated the woods of Tasmania, British West Africa, Argentina, and Brazil.

ENGINEERING: Dr. L. A. Brown, dean of Transylvania College, made comparisons and obtained references and suggestions to enable him to identify a large collection of early physical apparatus. Howard I. Chapelle, historian and author, took the lines from several half-models in the watercraft collection. James Cain, author, used the railroad library for background material for a forthcoming novel. E. H. Cameron, editor, obtained references and information for studies of engineering history. Charles Dollfus, conservateur du Museé de L'Air, examined the collections and discussed museum theory and practices. Leon W. LaRocka, Federal Bureau of Investigation, compared a wood screw with a group of dated wood screws assembled from the collections for this purpose. Ralph H. Lewis, National Park Service, examined drafting instruments in the collections for the purpose of determining the type of dividers suitable for a Civil War restoration, and obtained information about machetes.

GRAPHIC ARTS: Otto R. Wolf, staff writer for the *Chicago Tribune*, studied old printing equipment for a series of articles on the history of printing in the United States.

Ralph Green, a writer on printing-press history, studied old presses. Bruce Etchison, director of the Washington County Museum of Fine Arts, Hagerstown, Md., studied the print collections and catalog methods.

Miss Una Johnson, curator of prints, Brooklyn Museum, studied the Museum's collection of early American woodcuts in preparation for an exhibition she is organizing. R. Djaruman, head of the Government Printing Bureau of Indonesia and R. Suwanto, of the Indonesian Legation, studied the Museum's exhibits and obtained a bibliography for an apprentice school of graphic arts. The visit was arranged through the State Department.

In photography, Harry Burnett studied old photographic processes, including prints held in glass, prints baked on tile, and other old processes that might have contemporary use. Gordon C. Abbott, well-known pictorial photographer, studied the file of pictorial prints to obtain new creative ideas.

Etching and engraving material, which included six plates and tools, were lent to the Slater Memorial Museum, Norwich, Conn., as part of an exhibition illustrating graphic-arts processes.

DEPARTMENT OF HISTORY

(Charles Carey, *Acting Head Curator*)

During the past year the large-scale exhibit-improvement program begun the year before was continued. The work was marked by special efforts to complete the thorough overhauling of exhibition cases and the cleaning and rearrangement of exhibition specimens. Although much progress was made, there remains a substantial amount of work to be done in the navy court and the west hall. The main office suite of the department of history, consisting of the offices of the head curator, curator of numismatics, curator of civil history, and curator of philately, was completely redecorated. Only the office of the curator of military and naval history remains to be done.

Marked progress in the department research program was made, as hereinafter detailed.

The work of improving the storage areas continued and, despite a shortage of manual help, substantial progress was made. An intensified and more regular schedule of examination of storage and exhibition specimens and treatment with insecticides and other preservatives has been instituted. This should result in a marked decline in specimen deterioration.

Cataloging kept pace with receipts of specimens, although the backlog has not been substantially reduced.

Valuable aid was given outside investigators doing research in the field of American history. Information was furnished many Government agencies, including the Department of the Army, Department of the Navy, National Gallery of Art, National Collection of Fine Arts, Federal Bureau of Investigation, Attorney General's office, Treasury Department, Post Office Department, and many private organizations and individuals.

ACCESSIONS

Accessions totaled 62 lots, consisting of 6,701 specimens. This number respresents an increase of 9 accessions over last year's receipts but a decrease of 4,403 specimens. This decrease is explained by the receipt last year of the unusually large Paul A. Straub collection of coins numbering 5,652 specimens. The accessions were assigned to the divisions as follows: Civil history, 14 (90 specimens); military history, 9 (166 specimens); naval history, 2 (38 specimens); numismatics, 17 (352 specimens); philately, 20 (6,055 specimens).

Civil history.—The collections of Presidential chinaware were increased by the receipt from the Lenox Corporation of eight specimens of china made for use in the White House and representing the administrations of Presidents Wilson, Harding, Coolidge, Hoover, F. D. Roosevelt, and Truman. The general civil-history collections were enriched by the bequest of Marie Lenore de Grange of six mahogany chairs of the Empire period and the bequest of Miss Bessie J. Kibbey of a lapel watch and card case, both of gold and green enamel and dating from the period 1855, a gentleman's dressing case purchased in Paris in 1849, and a silver filigree basket reputed to have belonged to Napoleon Bonaparte. Outstanding among the costumes received were a white muslin dress of the Empire style, period 1800–1810, the gift of Miss Helen M. Coolidge, and a gold silk wedding dress of the period 1855, the gift of Mrs. John Schultz.

Military and naval history.—An important addition to the naval collections was made by the Department of the Navy in the transfer of two outstanding ship models. One, of the U. S. S. *Yorktown* (CV–5), which was built at a cost of almost $100,000, is contained in a glazed case of bronze and mahogany and is equipped with a squadron of model planes. The other, of the U. S. S. *Washington* (later *Seattle*), is an exceedingly fine scale model housed in a handsome mahogany framed case. The Department of the Army transferred to the collections a portion of hull planking with copper sheathing from an eighteenth-century British frigate sunk off Yorktown, Va., in 1781. This specimen, recently recovered by United States Army divers, is one of the few of its kind in existence and should be of interest and value to students of naval history. The military uniform collections were brought up to date by the receipt from the Department of the Army of a series of uniforms of the period of World War II.

Numismatics.—The most important numismatic accession of the year was the collection of 28 Greek and 155 Roman coins received as a gift from Albert Parker. Though the collection contains no great rarities, it supplements the Museum collection of ancient coins, which has never been extensive. From the Bureau of Engraving and Printing were received two specimen sets of current United States paper money and Federal Reserve notes in denominations from $1 to $10,000. The collection of medals was increased by the addition of a rare gold life-saving medal awarded by the Treasury Department to Albert A. Rese, New York City, June 18, 1922. The medal was received as a gift from Mr. and Mrs. Albert A. Rese.

Philately.—Several important additions to the collections were received during the year. The Economic Cooperation Administration accepted as a gift from Prince Rainier III of Monaco a portfolio of 107 de-luxe proofs and stamps of the Principality of Monaco and

transferred it to the National Museum. Likewise received through the Economic Cooperation Administration was a collection of stamps issued in honor of the European Recovery Program, the gift of the Italian Government. The Universal Postal Union transferred 2,964 foreign postage stamps to the Museum under their regular program of increasing the National Museum collections.

Distribution of specimens.—During the year 1949–50, 39 specimens lent to the division of civil history were returned to their owners. Lent to the National Academy of Design, New York, for special exhibition were 12 Samuel F. B. Morse medals and decorations and 2 paintings of the laying of the Atlantic cable. The Corcoran Gallery of Art was lent the paintings "Splicing the Cable" and "The Battle of Port Hudson" for special Sesquicentennial exhibition.

The division of military and naval history lent 96 specimens during the year to other agencies, including the Department of the Army, the National Gallery of Art, and the Corcoran Gallery of Art. One loan specimen, the Congressional Gold Medal awarded to General Pershing, was returned to its owner, Francis Warren Pershing. Six uniforms of the period of 1852 to 1872 were sent to the Deadwood Museum, Deadwood, N. Dak., as gifts. One specimen, a model of the U. S. S. *Pittsburg*, was transferred to the National Air Museum.

Number of specimens under the department.—At the close of the fiscal year, the total number of specimens under the care of the department was as follows:

Civil history	35,045
Military history	28,630
Naval history	4,236
Numismatics	61,457
Philately	505,639
Total	635,007

INSTALLATION AND PRESERVATION OF COLLECTIONS

The personnel of the department continued the extensive program of cleaning and rearranging the collections, both exhibition and storage. This included the refinishing of cases, cleaning and, in some cases, coating of specimens, "thinning down" of specimens on exhibition, treatment of all textile specimens with insecticides, spraying all storage areas, and rearranging and redesigning storage trays.

Substantial work on the rearranging of the storage areas and reference collections in the divisions of civil history, military and naval history, and numismatics was performed. This is expected to provide safer and more accessible storage for the reference collections assigned to these divisions.

Cataloging.—All specimens received during the year by the divisions of civil history and military and naval history were cataloged. Special catalog cards for numismatic specimens were designed and will aid greatly in keeping an accurate description of each piece. It is planned to use them for the entire coin collection when it is recataloged. No substantial reduction in the cataloging backlog was made, chiefly because of a shortage of clerical help, only one stenographer being assigned to the entire department.

Exhibition.—The overhauling of the exhibition galleries is almost complete. During the year the refinishing of the cases in the north hall was completed, specimens were laid out in a more logical order, and all labels were retyped.

Civil history.—The interiors of 14 cases in the west hall were refinished, 12 of them in monks-cloth, adding considerably to the attractiveness of the hall. An improved arrangement of the exhibition specimens in these cases was made. A special study of the costumes hall was made, resulting in plans for an improved exhibition of the collection of dresses of the first ladies of the White House. It is hoped that funds may become available for display of groups of the dresses in roomlike settings. As part of this plan, the acting curator conferred with Col. Douglas H. Gillette, of the Commission on Renovation of the Executive Mansion, concerning the possibility of surplus material from the White House being made available for use in these period rooms.

Military and naval history.—Much effort on the part of the personnel of the divisions of military and naval history went into the improvement of exhibitions. The major accomplishments were: (1) Completion of the rearrangement of the collections in the north hall and typing of new labels; (2) rearrangement of the firearms collection and refinishing many of the cases; (3) refinishing of all the sword cases and rearrangement of the sword collection by nation of origin and period; (4) preparation and installation for public use of a general index of the firearms collection; and (5) installation of a special case of firearms associated with famous personages. The south wall case of the navy court has been cleared of specimens in anticipation of the remodeling of that case.

Numismatics.—Extensive work on the coin exhibition was performed during the year. Security measures, which were instituted last year, gave the collections added protection. This work continues. Shatterproof glass was installed in 19 of the upright wall cases, leaving 34 cases yet to be done. Burglar alarms were installed in 36 additional wall cases, making a total of 39 cases so protected. The six recesses between the cases and the walls were boarded up to insure protection to the rear of the cases, to reduce the accumulation of dust and rubbish,

and to eliminate fire hazards. Refinishing of the diaphragms of the coin cases is almost complete, 99 of the total of 106 having been finished in sulphur-free oil paint. Half of the cases are now protected with felt dust seals.

Approximately one-half of the 1808 gold coins in the Paul A. Straub collection have been placed on display in the coin hall. The arrangement of this collection is based on geographical and cultural divisions, and these divisions are again broken down into alphabetical and chronological series. A representative exhibit of 200 foreign and United States orders and decorations was placed on exhibit in the coin hall, and a selected collection of paper money issued prior to and during the American Revolution by 12 of the 13 original Colonies was installed.

Philately.—New issues of United States stamps have been promptly exhibited in the division of philately. New issues of other nations and items of special interest were installed from time to time in special frames devoted to temporary exhibitions. A special exhibit of stamps from all 59 countries belonging to the United Nations was prepared in honor of the fourth session of the General Assembly and was placed on display in the foyer of the Natural History Building. A similar exhibit honoring the seventy-fifth anniversary of the Universal Postal Union is on display at the present time in the division's regular exhibition frames. New frame labels for the cabinets were typed and installed.

INVESTIGATION AND RESEARCH

The acting curator of civil history, Miss Margaret W. Brown, completed her manuscript on "The Dresses of the First Ladies of the White House," after devoting much time to its preparation this past spring.

The research of acting curator of military and naval history, Mendel L. Peterson, on the development of the uniforms of the United States Army and Navy continued and resulted in the preparation of three papers: "The Navy Medal of Honor," "Early American Epaulettes," and "The Army Medal of Honor." Research on the development of the United States war vessels and small arms continued. One paper, "The Christian Sharps Rifle," was completed.

Study by Stuart Mosher, acting curator of numismatics, of the actual specimens in the original United States Mint collection continues. Collateral studies of related documentary material in the Bureau of the Mint, National Archives, and Library of Congress were conducted.

The acting curator of philately, Mrs. Catherine L. Manning, continued her research on the original sources of United States postage stamp design. During the year she was given the first annual award of the National Philatelic Museum for service to philately.

Considerable aid was given other governmental agencies, private organizations, and individuals, such as authors, artists, and students, in their studies of the department's collections and libraries. Among such investigations carried on were studies of the machine-gun collection by representatives of the U. S. Marine Corps, who are preparing an exhaustive work on the development of automatic weapons, and studies by Dr. Raymond F. Stites, of the National Gallery of Art, in connection with a motion-picture film being prepared for the Washington Sesquicentennial. In the latter investigation, three divisions—civil history, numismatics, and military history—cooperated.

The acting curator of military and naval history made a trip to New York to study the administrative and technical work of the department of arms and armor of the Metropolitan Museum of Art. The acting curator of philately attended conventions of philatelic societies in Columbus and Atlantic City.

ACCESSIONS DURING THE FISCAL YEAR 1949–50

(Except when otherwise indicated, the specimens were presented or were transferred, in accordance with law, by Bureaus of the Government)

ABBOTT, R. TUCKER, Washington, D. C.: Approximately 15 marine mollusks from Florida (185724); 1 brown thrasher (186615).

ABBOTT FUND, W. L., Smithsonian Institution: 2,546 bird skins, 6 birds' eggs, 8 mammals, and mollusks from Colombia, collected by M. A. Carriker, Jr. (180807); 956 bird skins, 11 bird skeletons, 3 sets of birds' eggs, 1 bird's nest, mammals, mollusks, and 3 insects from Panama, collected by Dr. A. Wetmore and W. M. Perrygo (185345); 344 birds and 164 mammals from British Columbia, collected by J. A. Munro (185586).

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, Philadelphia, Pa.: 244 plants of the Catherwood-Chaplin Expedition (186406, gift-exchange); (through Dr. Henry A. Pilsbry) 1 mollusk paratype from Japan (183570, exchange); 10 paratypes of land and fresh-water mollusks from Peru and Guatemala (184924, exchange); 1 shell from the state of Maranhão, Brazil (185075, exchange); 10 fresh-water gastropods from Ecuador and Colombia (185211, exchange); (through Dr. Horace G. Richards) 1 sponge (184182).

ACZÉL, Dr. MARTIN. (See under Fundacion Miguel Lillo.)

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station, Tex.: 11 plants and 1 grass from Texas (183590, 186039); 2 grasses from Mexico (185986); 15 plants from Mexico (186078).

AGRICULTURE, U. S. DEPARTMENT OF, Washington, D. C.:

Alaska Insect Project (in cooperation with National Military Establishment, *Department of the Army*): (Through Dr. R. I. Sailer) 7 fresh-water mollusks from Alaska (183400); approximately 395 fresh-water invertebrates from Alaska (183704).

Bureau of Animal Industry: 414 lots of helminths (187197).

Bureau of Entomology and Plant Quarantine: 4 amphipods (183259); 1 land snail from Saipan, intercepted at New York (183636); 5 land mollusks from the Philippines, Solomon Islands, Oregon, and Trinidad (184321); 1 land snail and 1 slug from Mexico (184511, 185542); 425 fruitflies and 38 miscellaneous beetles (184618); 15 land snails from Puerto Rico, Palmyra Island, and Solomon Islands (185367, 186176); 8 land shells from Venezuela and Ecuador (185733); approximately 106 miscellaneous insects from France (185893); 9 garden slugs from Waynesville, N. C. (187011); 53,650 miscellaneous insects (187636); (through C. F. W. Muesebeck) 20 land snails from Mazatlán, Sinaloa, Mexico (183212); 5 amphipods (184190); 4 land and fresh-water mollusks, together with marine invertebrates from Mexico and California (186585); (through C. T. Ritchie) 2 beetles from Hawaii (183924); (through E. R. Sasscer) 7 land snails from Puna, Ecuador, intercepted at Baltimore (187007).

Bureau of Plant Industry, Soils, and Agricultural Engineering, Beltsville, Md.: 12 grasses from Florida (183036); 79 grasses from India (183037); 1 plant from Ecuador

(183674); 4 photographs of new species of plants (184068); 2,189 plants collected in Colombia by Dr. Richard E. Schultes (184490, 186404); 2 lichens and 5 ferns from Liberia (185085, 185585, 185909); 1 type specimen of *Carex* from Mexico (187090); (through John A. Stevenson) 6 lichens (183457); (through Dr. Elmer Brandes) 1 false coral snake collected at Canal Point, Fla. (186804); (through National Arboretum Herbarium): 497 grasses from India, Afghanistan, and Iran (185985); 455 plants (187169).

Forest Products Laboratory, Madison, Wis.: 10 plants and 9 wood samples collected in Florida (183483); 1 plant collected in Texas (186989).

Forest Service: 1 plant from Peru, collected by G. Petersen (183906); 1 fern from Colorado (184582); 4 lichens from Arizona and Washington (186691); (through A. M. Gardner) 1 squirrel from Kaibab National Forest (184874).

Office of Budget and Finance: 1 stereo vest-pocket Tenax Camera by C. P. Goerz, Berlin, and 15 plate holders (186958).

Soil Conservation Service: 2 grasses from Florida (183332, 184802); (through Ben O. Osborn) 4 cryptogams from Texas (184963).

AGUILAR F., Dr. PEDRO G., Lima, Peru: 9 butterflies, representing 6 species of the family Lycaenidae (183630).

AHLES, HARRY E., Urbana, Ill.: 10 grasses from New York (186485).

ALABAMA, UNIVERSITY OF, University, Ala.: 4 ferns from Alabama (185464).

ALABAMA POLYTECHNIC INSTITUTE, Auburn, Ala.: 2 grasses from Alabama (184491, 184493).

ALBERS, JOSEF, New York, N. Y.: 24 prints by Mr. Albers lent for special exhibition during January 1950 (185144, loan).

ALBERTA, UNIVERSITY OF, Edmonton, Alberta: 27 grasses from Canada (182306).

ALEXANDER, Dr. C. P., Amherst, Mass.: 58 craneflies (187105).

ALLARD, H. A., Arlington, Va.: 10 plants of Peru collected by H. F. Allard (184678); 248 plants from Virginia and West Virginia (184680).

ALLEN, E. ROSS, and W. T. NEILL, Gainesville, Fla.: (Through Dr. Coleman J. Goin) 1 salamander neotype (186210).

ALLEN, GREEVER. (See under Post Office Department.)

ALLEN, PAUL H., Palmar Sur, Costa Rica: 2 photographs of ferns (187022).

ALLISON, W. B., New Orleans, La.: 1 plant from Mississippi (184049).

ALVAREZ, Dr. JOSÉ DEL VILLAR, Mexico, D. F.; 20 fishes, paratypes of 2 species from Mexico (185471).

AMANO, TETSUO, Okinawa: 82 plants from Okinawa (185459).

AMEN, IRVING, New York, N. Y.: "Evening." wood cut in color by donor (184894).

AMERICAN CYANAMID CO., Stamford, Conn.: (Through T. G. Rochow) "A Commercial Sample Tri-Sodium Orthophosphate ('TSP') 33X," prize-winning print from the 2d International Photography-in-Science Competition, by Mr. Rochow (185480).

Lederle Laboratories Division, New York, N. Y.: 1 animated exhibit, with case, illustrating history, production, and use of the antibiotic aureomycin (187191).

AMERICAN EMBASSY, Colombo, Ceylon. (See under Bogala Graphite Mines.)

AMERICAN FEDERATION OF ARTS, Washington, D. C.: (Through Mrs. John A. Pope) 61 pictorial photographs by Fritz Henle for special exhibit during April 1950 (186834, loan).

AMERICAN MUSEUM OF NATURAL HISTORY, New York, N. Y.: 5 ferns from Cocos Islands (185903); 14 Jurassic brachiopods from Africa (186599, exchange); (through Dr. Frederick H. Rindge) 5 butterflies (183920); 3 paratypes of moths from western United

States (186282); (through Dr. C. H. Curran) 78 African flies (184948).

American Numismatic Association, New York, N. Y.: (Through Ernst Kraus) 22 modern foreign coins (183396, loan).

American Potash and Chemical Corp., Trona, Calif.: (Through Dr. W. A. Gale) 1 specimen of northupite from Searles Lake, San Bernardino County, Calif. (183224); 3 specimens of schairerite and tychite from Searles Lake, Well L S, depth 121 feet (186867); (through Drs. W. A. Gale and Leo Briggs) 15 specimens of hanksite, thenardite, apthitalite, tychite, northupite, and other minerals from Searles Lake (184313).

Amory, Copley, Washington, D. C.: 19 ethnological specimens from the Cree and Shoshoni Indians, eastern Hudson Bay, and Greenland Eskimo and Chuckchee (185017).

Anderson, John W., Washington, D. C.: Paper-stapling machine, cast iron, approximately 9 inches long by 3¼ inches wide by 6 inches high, on wood base, marked: "Sure Shot. Pat.—Made in U. S. A." (186358).

Anderson, Mrs. N. J., Jr., Afognak, Alaska: 105 plants from Alaska (184037).

Andrus, Vera, Dobbs Ferry, N. Y.: 30 lithographs by Miss Andrus lent for special exhibition during October 1949 (184230, loan); 2 lithographs by donor, "Leaves of the Sea" and "Drying Nets" (184841).

Anonymous: 1 lot of cormorant leg bones collected by S. F. Baird at Ipswich, Mass. (184157, found in the collections); circular wooden chair cut from the solid and carved in high relief, probably late 19th century, from Trondelag, Norway (185530, found in the collections); electroplated silver on repoussé copper lidded ewer, probably English ca. 1850 (185605, deposit); 42 miscellaneous busts (186600, found in the collections); medal of Spain, 1892, and medal of Belgium, 1897 (186794, found in the collections); Indian carrying bag (186993, found in the collections).

Apolinar-María, Rev. Brother, Bogotá, Colombia: 20 plants from Colombia (184096).

Arctic Institute of North America, Montreal, Quebec: 225 lichens from Canada (186242).

Arizona, University of, Tucson, Ariz.: 3 grasses from Arizona (183126, 183757); 12 ferns from Arizona (184396, 185989, exchange); 129 plants from Arizona (184888, exchange).

Laboratory of Tree-Ring Research (in cooperation with the Smithsonian Institution): Wood sections, photographs, graphs, etc., illustrating the science of dendrochronology with special reference to the dating of Pueblo Bonito, selected and arranged by Terah L. Smiley (184790, gift-deposit).

Arkansas, University of, Fayetteville, Ark.: 25 ferns from Arkansas (182636); 280 grasses from Arkansas (183039).

Arkansas State College, State College, Ark.: 25 plants from southern Mississippi (185884).

Armour Laboratories, Chicago, Ill.: "Portraits of Pioneers," photographs and biological sketches of famous American physicians (187192).

Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill.: (Through Charles J. Salat) Photograph, "Calibration of a Ball Bearing Through the Use of Optical Flats," by Charles J. Salat, honorable mention in the 3d Photography-in-Science Competition (185617).

Arnaud, Paul H., Jr., Redwood City, Calif.: Approximately 60 biting midges from California (185833).

Arnett, Dr. Ross H., Jr., Washington, D. C.: 393 beetles, representing 55 species in 12 genera, including paratypes in 10 species, and 273 genitalia slides (183523).

Arnold, Edgar L., Jr., Woods Hole, Mass.: 1 fish taken by a commercial trawler on northern edge of Georges Bank, October 16, 1949 (184583).

ART INSTITUTE OF CHICAGO, Chicago, Ill.: 21 drawings and water colors of World War I period (187000).

ARTZ, LENA, Waterlick, Va.: 90 plants from Virginia (186243).

ATKINSON, Dr. CLINTON E. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

ATOMIC ENERGY COMMISSION, U. S., *Raw Materials Operations*, New York, N. Y.: 1 specimen of davidite from Mavuzi, Tete District, Portuguese East Africa (186996).

AUCKLAND INSTITUTE AND MUSEUM, Auckland, New Zealand: 2 plants from New Zealand (184046, exchange); (through Dr. A. W. B. Powell) approximately 250 marine mollusks from New Zealand (187012).

AUSTIN, MYRON LAROY, Manassas, Va.: 8 pieces of Continental currency, 6 pieces of United States fractional currency, and 1 piece of Russian inflation currency (185254).

AUSTIN, Dr. O. L., Jr., San Francisco, Calif.: 13 skeletons of birds from Japan (184146).

AXELROD, Dr. DANIEL I., Los Angeles, Calif.: (Through Dr. Teng-Chien Yen and the United States Department of the Interior, *Geological Survey*) About 500 specimens of fossil fresh-water mollusks from the Pliocene, Truckee formation, in western Nevada (183910).

AZUMA, MASAO, Kobe, Japan: 125 ants representing 20 species from Japan (183397, exchange).

BABBITT, LEWIS H., Petersham, Mass.: 4 snakes from Massachusetts, Connecticut, and New Hampshire, collected by donor (183700); 4 salamanders from Vermont and 2 snakes from Florida collected by the donor (185940).

BABCOCK, LOUIS L., Buffalo, N. Y.: 2 helminths from a female tarpon caught at Boca Grande Pass, Fla. (183913).

BAILEY, ALFRED M., Denver, Colo.: 2 sage grouse from Colorado (186614).

BAILEY HORTORIUM, Cornell University, Ithaca, N. Y.: 5 phanerogams from Mexico (183533); 17 plants from Mexico, collected by H. E. Moore, Jr. (183562); 106 grasses from Mexico (183678, 183826, 186806); 27 plants collected in Mexico (186855, 186856).

BAIRSTOW, Dr. L. (See under British Government, *British Museum (Natural History).*)

BALDWIN, Dr. J. T., Jr., Williamsburg, Va.: 21 plants (183514); 21 plants from Liberia and 1 from the Azores (186569).

BALL, Dr. CARLETON R., Washington, D. C.: 3 plants from the United States (184921).

BALLENTINE, Mrs. GRACE B., Upper Montclair, N. J.: 61 pictorial photographs by Mrs. Ballentine lent for special exhibition during August 1949 (183683, loan); 4 pictorial photographs by the donor—"Rhythm," "Thunderbird," "Iridescence," and "Home" (183684).

BANDALOUKAS, Dr. CLAUDE B., Athens, Greece: 2 coins, Saxony, 1546, Thaler (Albertine Line) and Hungary, 1778, 20 Kreutzers, Maria Theresa (183912).

BANDY, Dr. O. L., Los Angeles, Calif.: 8 microsamples from the Tertiary of Alabama (185027, exchange).

BARBOUR, ROBERT D., Chapel Hill, N. C.: 1 fossilized fish-bone tumor (186153).

BARNETT, Capt. HERBERT C., San Francisco, Calif.: 251 miscellaneous pinned mosquitoes and 56 slides of larvae from Japan (185891).

BARTLETT, REGINALD, Nambour, Queensland: 10 specimens of Lepidoptera from Australia (185825).

BARTLEY, FLOYD, Circleville, Ohio: 231 plants from Ohio and Kansas (181180, 185568).

BARTSCH, Dr. ALFRED F. (See under Federal Security Agency, *U. S. Public Health Service.*)

BARTSCH, Dr. PAUL, Washington, D. C.: 1 set of 3 eggs of blackheaded cacique (183375).

BASSLER, Dr. R. S. (See under Eleanor Lorenz.)

BATTE, EDWARD G., Gainesville, Fla.: Approximately 500 fresh-water snails from Gainesville, Fla. (186108).

Battelle Memorial Institute, Columbus, Ohio: (Through Charles D. Oughton and Eugene C. Ricker) Color print of the transparency "Xerographic Developing Process," by Messrs. Oughton and Ricker (185253).

Bayer, Frederick M., Washington, D. C.: 17 hepatics from Japan (171785); 300 marine mollusks from Biak Islands, Netherlands East Indies (184692); 9 lots of marine mollusks from Palm Beach, Fla. (185012); 4 echinoderms from Florida (186812); 16 marine mollusks from Okinawa, Ryukyu Islands, Japan (186819); 7 crabs and 2 shrimps (186894). (See also under *University of Miami.*)

Beach, Kay H., Philadelphia, Pa.: 387 plants from China, Hong Kong, and the Philippine Islands (185902).

Beall, Clarkson Jones, Silver Spring, Md.: 4 specimens of Colonial paper money (186838).

Beamer, Dr. R. H. (See under University of Kansas.)

Bears Bluff Laboratories, Wadmalaw Island, S. C.: (Through Dr. G. Robert Lunz, Jr.) 18 mysids (185110).

Beck, Mrs. Elizabeth C., Jacksonville, Fla.: 17 mosquitoes (183284).

Beebe, Ralph, Ecorse, Mich.: 13 insects, mostly Coleoptera (178984).

Bell Telephone Laboratories, Murray Hill, N. J.: (Through A. C. Walker) Color photograph of quartz crystal by Mr. Walker, honorable mention in 3d International Photography-in-Science Competition (185479).

Benedict, J. E., Jr., Washington, D. C.: 1 fern (186244); 1 gray squirrel from Woodside, Md. (187185).

Benenson, Maj. Abram S., Fort Meade, Md.: 1 Norway rat from Fort Meade (187188).

Benesh, Bernard, North Chicago, Ill.: Paratype of a beetle (184498).

Bengston, Mrs. George, Waterloo, Iowa: Approximately 100 marine and land shells from Washington, together with worm tubes and echinoderms (186107).

Bequaert, Dr. Joseph. (See under Harvard University, *Museum of Comparative Zoology.*)

Berry, S. Stillman, Harlowton, Mont.: 62 invertebrate fossils of Cretaceous age from Winnecook Ranch, Wheatland County, Mont. (183930).

Bertovich, Matthew G., Masontown, Pa.: 1 cultivated plant (184162).

Bibikoff, Dr. Michel, Lausanne, Switzerland: 245 ants represented by 39 named forms from Switzerland (185914, exchange).

Biese, Dr. Walter, Santiago, Chile: 12 lots of fresh-water mollusks from Chile, including 4 lots of paratypes of new species and subspecies described by donor (183834).

Biggar, Gordon, Glasgow, Scotland: 1 mint and 1 used 11-pence stamp of Great Britain, current issue (184231).

Bishop, Dr. S. C., Rochester, N. Y.: 2 paratypes of a new species of salamander (185229).

Bishop Museum, Bernice P., Honolulu, T. H.: 520 plants from the Pacific Islands (183177, exchange); 242 plants of the Pacific, mostly from the Mangarevan Expedition (186907, exchange).

Black, Raleigh A., Mont Albert, Victoria: 69 grasses from Australia (185528, exchange).

Blake, Mrs. Doris H. (See under Dr. George N. Wolcott.)

Blake, Dr. S. F., Arlington, Va.: 4 plants from the United States (184614, exchange).

Blandford, Ned, McLean, Va.: 1 staurolite crystal from Masons Mountain, near Franklin, Macon County, N. C. (185910, exchange).

Blandy Experimental Farm, Boyce, Va.: 47 plants from United States and Mexico (186267).

Blankingship, Dr. Oliver T., Bay Pines, Fla.: 5 samples of diatoms from Clermont, Fla. (184486).

Blizzard, Mrs. James L., Low Moor, Va.: (Through G. A. Robertson) A specimen of pseudomorphic limonite from the Low Moor Quarry Cave, Va. (184314).

Blodgett, Agnes M., Washington, D. C.: 1 cardinal (186401).

Blume, Dr. Werner, Göttingen, Germany: 228 lots of land and fresh-

water mollusks from Europe (183334, 183401, exchange).

BOER, ELMER J., Columbus, Ohio: 2d-prize-winning monochrome print from the 2d Annual Photography-in-Science Competition of 1948 (185004).

BOETTGER, Dr. CAESAR, Braunschweig, Germany: Approximately 50 freshwater mollusks from an aquarium, Braunschweig (184062).

BOGALA GRAPHITE MINES, Ruanwella, Ceylon: (Through American Embassy, Colombo, Ceylon) 4 specimens of graphite from Bogala Mines, Ruanwella, Sabaragamuwa Province, Ceylon (184001).

BOGATZKY, Mrs. DAVID, Nashville, Tenn.: Chinese embroidered silk robe of the Ch'ien Lung Period, Ch'ing Dynasty (184219).

BOGUSCH, Prof. EDWIN R., Kingsville, Tex.: 15 ants from Texas (186949). (See also under Texas College of Arts and Industries.)

BOHART, Dr. RICHARD M. (See under University of California, *Division of Entomology and Parasitology.*)

BOLANDER, L. PH., Jr., Oakland, Calif.: 4 specimens of diopside and garnet and 6 of perovskite from San Benito County, Calif. (182764, 184508); 1 specimen of perovskite and 1 of garnet on diopside from San Benito County, Calif. (185209, exchange).

BONHAM, Dr. KELSHAW. (See under University of Washington, *Applied Fisheries Laboratory.*)

BONNEFIL, Dr. LÉONCE, Port-au-Prince, Haiti: 1 nest of palm chat from Haiti (185665).

BORGMEIER, Father THOMAZ, Rio de Janeiro, Brazil: (Through Father Walter Kampf) Cotype of ant from Argentina (186003).

BORYSKO, EMIL. (See under U. S. Department of Commerce, *National Bureau of Standards.*)

BOTANIC GARDENS, Singapore, Straits Settlements: 3 ferns (184122).

BOTANISCH MUSEUM EN HERBARIUM VAN DE RIJKSUNIVERSITEIT, Utrecht, Netherlands: 314 plants from Surinam and the Netherlands, including many isotypes (183896, exchange).

BOTANISCHER GARTEN UND MUSEUM, Berlin-Dahlem, Germany: 3 photographs of types of the plant *Aeschynomene* (185460, exchange).

BOTANISCHES MUSEUM, Munich, Germany: 100 plants (183830, exchange).

BOTT, Dr. RICHARD. (See under Natur-Museum Senckenberg.)

BOTTIMER, L. J., Kerrville, Tex.: Approximately 140 insects and scorpions, including 1 centipede (184060).

BOTTS, HUGH, New York, N. Y.: 35 prints by Mr. Botts lent for special exhibition during December 1949 (184683, loan); 2 aquatints, "Lower Manhattan" and "Heir Conditioning," by the donor (185618).

BOURQUIN, Dr. FERNANDO, Buenos Aires, Argentina: 4 moths (184349).

BOX, HAROLD E., Maracay, Aragua, Venezuela: 5 beetles taken from sugarcane in Venezuela (183326); 80 sugarcane-borer moths, representing 10 species of one genus (185255); 74 moths and 23 beetles from Venezuela (185259, 185537, 186175).

BRACKBILL, HERVEY, Baltimore, Md.: 2 English-sparrow eggs and 1 cowbird egg (186983).

BRADLEY, Dr. JOHN D., London, England: Holotype and allotype of new genus and species of moth from Hawaii (185826).

BRADLEY, Dr. W. H. (See under U. S. Department of the Interior, *Geological Survey.*)

BRADLEYS, Mr. and Mrs. J. W., Los Angeles, Calif.: 2 specimens each of the minerals ransomite from Jerome, Ariz., veatchite from near Lang, Calif., and quartz crystals from Russellville, Ariz. (183833).

BRADY, M. K., Washington, D. C.: 2 gold fishhooks and a nose ring from Colombia, which were unearthed during placer-mining operations at junction of the San Juan and Condoto Rivers, near Andagoya, Chocó Province, and presumably of Chibcha origin (184524).

BRANDES, Dr. ELMER. (See under U. S. Department of Agriculture, *Bureau of Plant Industry, Soils, and Agricultural Engineering.*)

Brandt, William H., Port Moresby, Papua, New Guinea: 44 insects collected by donor near Gosford (Niagara Park), New South Wales (183524).

Branson, Dr. Carl, Midland, Tex.: 10 specimens of the brachiopod *Aulosteges* from the Permian of Wyoming and 7 brachiopods (*Paryphorhynchus*) from the Mississippian in Missouri (185532).

Breed, Allen E., Stockton, Calif.: 12 marine mollusks from California (185849).

Breitenbach, Joseph, New York, N. Y.: 53 photographs by Mr. Breitenbach lent for special exhibition during June 1950 (187103, loan).

Brenckle, Dr. J. F., Mellette, S. Dak.: 1 fern from Guatemala (184994).

Brett Lithographing Co., Long Island City, N. Y.: (Through William M. Winship) 1 reproduction in offset lithography by Brett Lithographing Co. of Charles W. Dahlgreen's etching "A Sunny Day" (183885).

Bridge, Dr. Josiah, Washington, D. C.: 1 slab of Lower Ordovician Roubidoux formation containing the holotypes of 4 species of gastropods (183764).

Briggs, Dr. Leo. (See under American Potash and Chemical Corp.)

British Government:

British Museum (Natural History), London, England: 1 plant from Brazil (185084, exchange); 1 specimen each of rashleighite from Cornwall, England, basaluminite from Northamptonshire, England, and cliftonite from the Youndegan, Australia, iron meteorite (185613, exchange); 92 plants collected by A. H. G. Alston in South America (185901, exchange); 3 cotypes of an asteroid from the Maldive Islands (186512, exchange); (through J. F. G. Clarke) 5,000 British tortricid moths (175192); (through Dr. L. Bairstow) 1 plaster cast of the crinoid *Actinocrinites loricatus* (Schlotheim) from Carboniferous limestone of England (183235); (through Sir Guy A. K. Marshall) 5 beetles, representing 5 genera in the family Curculioniidae, nearly all new to the collection (184059, exchange); (through Dr. N. B. Marshall) 3 paratypes of a species of fish from Brazil collected on the *Terra Nova* Expedition (184388, exchange); (through Dr. J. P. Harding) 6 copepods, including 1 paratype (186924, exchange); (through Dr. F. van Emden) 37 flies from Africa, including types (187030); (through Dr. Ethelwynn Trewavas) 9 paratypes of poecilid fishes (187097, exchange).

Commonwealth Institute of Entomology, London, England: 1 fly larva from South America (187005).

Royal Botanic Gardens, Kew, England: 135 miscellaneous grasses (185885, exchange); 1 plant collected in Colombia (186403).

Broad, Carter. (See under University of North Carolina, *Institute of Fisheries Research.*)

Brookes, A. E., Auckland, New Zealand: Approximately 2,000 land and marine mollusks from New Zealand (186052, exchange).

Brooks, A. R. (See under Canadian Government, *Dominion Entomological Laboratory.*)

Brooks, F. G., Mount Vernon, Iowa: 23 fresh-water mollusks of family Lymnaeidae from Iowa (183635).

Brown, Dr. Barnum, New York, N. Y.: 1,100 Lower Cretaceous fossils from Peten area of Guatemala (181795).

Brown, Dr. Harrison. (See under University of Chicago, *Institute for Nuclear Studies.*)

Brown, Mr. and Mrs. Lawrence F., Naples, Fla.: (Through Drs. Henry Field and Gordon R. Willey) 2 fragmentary earthenware bowls taken from a shell bed (presumably a midden) at Gordons Pass, south of Naples, Fla., by Edward Creighton during a road-dredging operation in 1932 (187072).

Brown, Dr. Roland W., Washington, D. C.: 1 specimen of natrolite from

east side of Bearpaw Mountains, Mont. (184164).

BROWN, SAM, Orlando, Fla.: 2 bird skins (183374).

BROWN, Dr. W. J. (See under Canadian Government, *Department of Agriculture.*)

BROWN, WILLIAM L., Jr. (See under Harvard University, *Museum of Comparative Zoology.*)

BROWN LIBRARY FUND, E. J., Smithsonian Institution: 74 birds from Hungary (185015).

BRUNER, Dr. S. C., Santiago de las Vegas, Cuba: Approximately 325 undetermined treehoppers (Membracidae), more than half of them from Cuba, the remainder mostly from Trinidad, British Guiana, and Brazil (183689). (See also under Estación Experimental Agronómica.)

BRYANT, Mrs. D. R., Abilene, Kans.: 1 natural-cotton and orchid-wool coverlet, "Hail Columbia" (183488).

BUCK, JUDITH, Kensington, Md.: 1 Cape May warbler (186984).

BUCKINGHAM, STEPHEN A., Silver Spring, Md., and Mrs. FREDERICK V. HUNT, Belmont, Mass.: English salt-glaze apostle teapot, about 1850 (185686).

BUELL, NOBLE E. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

BUGBEE, Prof. ROBERT E., Meadville, Pa.: 58 chalcid-flies, representing 10 new forms (175644, exchange).

BUMP, JAMES D. (See under South Dakota School of Mines and Technology.)

BURCH, JOHN Q., Los Angeles, Calif.: A marine mollusk holotype from Tambor, near Puntarenas, Costa Rica (184819); 2 marine mollusks from off La Paz, Baja California (187009).

BURKS, Dr. BARNARD D., Washington, D. C.: 25 slides, 56 mounted specimens, and 2,104 unmounted specimens of insects (184389); 26 slides, 23 species, of parasitic wasps from Europe (185836).

BURROUGHS, PAUL H., Winnisquam, N. H.: A smoky quartz from Long Mountain, Stark, 32.02-carat; an asteriated quartz sphere from Globe Mine, Springfield, 4.5 cm.; and a terminated beryl crystal from Sargent mine, Grafton, all from New Hampshire (186097).

BURRY, LEO A., Pompano Beach, Fla.: 50 deep-sea marine mollusks from Florida (184430); 5 alcyonarians and 1 bryozoan, together with corals (184974).

BURT, CHARLES E., Topeka, Kans.: 17 mosquito specimens (183796).

BURTON, JAMES R., Washington, D. C.: 1 camera manufactured by the Scovill Co., together with plate holder and 1 still magazine-type camera of British make (manufacturer unknown) (183884).

BUSHEY, Dr. CLINTON J., Upland, Ind.. 16 land mollusks from Grant County, Ind. (186952).

BYRNE, RICHARD, Falls Church, Va.: (Through Dr. J. P. E. Morrison) 1 barred owl (185881).

CALIFORNIA, UNIVERSITY OF, Berkeley, Calif.: 2,690 plants, mostly collected by Dr. R. F. Hoover in central California (183175, exchange); 105 plants from California and the Pacific Islands (183297, exchange); 204 plants of California and Texas collected by Dr. Lincoln Constance (183298, exchange); 1 grass from California (183807); 178 plants of Pacific States, mostly California, collected by C. W. Sharsmith (184098, exchange); 30 plants from Hawaii (184889, exchange); 6 grasses from Mexico (185608); 83 phanerogams collected in Baja California, Mexico, by Dr. Lincoln Constance (185609, exchange); 985 plants collected in South Africa by Robert J. Rodin (186410, 187085, exchange); (through Robert J. Menzies) 38 types of isopod crustacea (183315).

Citrus Experiment Station, Riverside, Calif.: (Through Prof. P. H. Timberlake) 4 bees, including 2 paratypes, from California (185488).

Division of Entomology and Parasitology, Davis, Calif.: (Through Dr. Richard M. Bohart) 19 black flies, including types (185535, exchange).

Museum of Vertebrate Zoology, Berkeley, Calif.: (Through Dr. F. A. Pitelka) 1 crab (185040); (through Prof. Robert C. Stebbins) 1 paratype of a new species of *Plethodon* from southwest of Los Alamos, N. Mex., collected on August 14, 1949 by Professor Stebbins (185512, deposit).

Scripps Institution of Oceanography, La Jolla, Calif.: (Through Dr. Theodore J. Walker) 1 pearlfish from harbor of the Manus Island in the Admiralty Islands, collected August or October 1944 by Dr. Walker (186152).

California Academy of Sciences, San Francisco, Calif.: 17 ferns from the Galápagos Islands (184149); (through Hugh B. Leech) 33 African beetles (185009); 22 new species of water beetles from North America (185839); (through Dr. Edward S. Ross) paratype of a black fly (185486, exchange); (through Dr. Earl S. Herald) 5 type fishes from the Philippine Islands (186900).

California State Department of Agriculture, Sacramento, Calif.: 1 grass and 2 plants from California (184041, 187116); (through Dr. Peter C. Ting) 6 moths from California (186285).

California State Department of Public Health, Berkeley, Calif.: (Through Ernestine B. Thurman) 17 mosquitoes from California (186426, 186870).

Cambridge, Sgt. Philip, Cardiff, South Wales: Approximately 325 marine and land mollusks from England (184688, 187107, exchange); 1,351 invertebrate fossils from the Jurassic and Tertiary of England, and 59 fossil fish and mammals from the Pliocene of Red Crag, Suffolk, England (185095, exchange).

Canadian Government:

Department of Agriculture, Ottawa, Ontario: 57 specimens of slide-mounted fleas, represented by 29 named forms (184317).

Central Experimental Farm: 280 grasses from Canada (181123, 181207, 182579, 185242); 61 grasses from South America (183370); 430 plants from northern Canada (184516, exchange); 9 plants (184674); 79 plants collected in southern South America by H. A. Senn (185467).

Division of Botany and Plant Pathology: 1 cultivated plant (185688); 30 grasses from Canada (185992, 186808, 186986); 88 plants from Canada and Argentina (186367, exchange).

Division of Entomology: (Through G. Stuart Walley) 3 insects (183285); (through Guy E. Shewell) 12 flies (184266); 5 flies from Canada (184621); (through Dr. W. J. Brown) 47 specimens, representing 14 named species, of beetles, mostly Canadian examples of European species (184521); (through G. P. Holland) 8 fleas from Canada, including types (185619).

Dominion Entomological Laboratory, Saskatoon, Saskatchewan: (Through A. R. Brooks) 4 flies (183569, 183814).

Fisheries Research Board, Toronto, Ontario: (Through Dr. A. G. Huntsman) 517 amphipods (111578, 115170, 158932, 187113, 187114).

Atlantic Biological Station, St. Andrews, New Brunswick: (Through Alfreda B. Needler) Approximately 6 shrimps (183643).

Geological Survey, Ottawa, Ontario: 2 specimens and 3 casts of Ordovician brachiopods from Ontario (184496, exchange).

National Museum, Ottawa, Ontario: 864 plants of Yukon, Canada, collected mostly by A. E. Porsild (186408, exchange).

CANFIELD FUND, Smithsonian Institution: 1 genthhelvite from Stove Mountain, El Paso County, and 2 topaz crystals from Bear Creek Canyon, El Paso County, Colo. (183482); 6 minerals, azurite from Tsumeb, Southwest Africa, and shattuckite, plancheite, and dioptase from Tantara, Katanga, Belgian Congo (183501); 10 minerals consisting of gadolinite, tephroite, schefferite, and so forth from Norway and Sweden (183520); 2 specimens of leucochalcite and 1 tyrolite from Majuba Hill, Pershing County, Nev. (183521); 6 minerals consisting of wulfenite, fluorite, adamite, and garnets from localities in Mexico and Arizona (183556); 5 minerals, tyrolite, sepiolite, goethite, etc., from several localities in California, Nevada, and Iowa (183668); a specimen of crystallized chalcocite from Cananea, Sonora, Mexico, and a malachite cast from St. George, Utah (183681); 1 specimen of proustite and argentite from Batapilas, Chihuahua, Mexico (184584); 1 specimen of thorite from Colorado (184585); 1 large polished specimen of rutilated quartz from Minas Gerais, Brazil (184716); 3 mineral specimens from Utah, tetrahedrite and enargite from Bingham Mine, and linarite from Moscow Mine (185002); 1 specimen of dolomite from Gilman, Colo. (185531); 4 minerals, witherite from Illinois, native lead and pyrochroite from Sweden, and petzite and native gold from California (185720); 1 crystal of columbite from Micaville, Yancey County, N. C. (186043).

CANNON, Mrs. CHARLES A. (See under Mrs. John Franklin Reed and R. O. Walter.)

CAPITAL TRANSIT CO., Washington, D. C.: Model 2-motor, single-truck, electric streetcar and model single-truck trailer (186860, loan).

CAPLAN, ALLAN, New York, N. Y.: One specimen of djalmaite from Brejauba, Minas Gerais, Brazil (184947).

CAPPS, ESTATE OF EDNA WARD, Washington, D. C.: A gem collection comprising 41 pieces, including 32 strands of amber, quartz crystal, amethyst, citrine, labradorite, lapis lazuli, jade, crocidolite, agate, rhodonite, tourmaline and amazonite beads, and 9 cut stones of amethyst and citrine (184604, bequest).

CARDENAS, Dr. MARTIN, Cochabamba, Bolivia: 190 plants from Brazil (184421); 129 plants from Bolivia (187168).

CARL, Dr. G. CLIFFORD. (See under Provincial Museum.)

CARSEY, Mrs. JAMES, Alexandria, Va.: 1 anaconda skin from the Madeira-Mamoré Railroad route, Brazil, collected by Alexander K. Anderson in July 1909 (183701).

CARVALHO, Dr. JOSÉ C. M. (See under Museu Nacional.)

CENTRO NACIONAL DE INVESTIGACIÓN Y EXPERIMENTACIÓN AGRICOLA DE LA MOLINA, Lima, Peru: 6 plants (184791).

CERQUEIRA, Dr. N. L., Rio de Janeiro, Brazil: 8 pinned mosquitoes together with 8 slides of genitalia, pupae, and larvae from Brazil (185837).

CHABANAUD, Dr. P. (See under Muséum National d'Histoire Naturelle.)

CHACE, Dr. FENNER A., Jr., Washington, D. C.: 23 copepods (183785).

CHADWICK, Dr. GEORGE H., Selkirk, N. Y.: 1 type specimen of coral from the Devonian of Michigan, recently described by Dr. G. M. Ehlers (185003).

CHAMBERLAIN, E. B. (See under Charleston Museum.)

CHAMBERLAIN FUND, FRANCES LEA, Smithsonian Institution: 1 cut green cat's-eye tourmaline weighing 53.20 carats (184210); 1 cut chrysoberyl (alexandrite) from Russia, 3.48 carats (185001); 621 land and freshwater mollusks, including many topotype lots and rare species, from Peru (185541).

CHANDLER, ALLISON, Ottawa, Kans.: 47 coins of India (186208).

CHAPIN, Dr. EDWARD A., Washington, D. C.: 11 ferns (184223); 2 marine mollusks from Bethany Beach, Del. (184624); 2,900 clerid beetles, including 91 holotypes (187117).

CHARLESTON MUSEUM, Charleston, S. C.: (Through E. B. Chamberlain) 1 salamander from South Carolina (185368).

CHASE, Mrs. AGNES, Washington, D. C.: 110 miscellaneous grasses (186498).

CHASE, VIRGINIUS H., Peoria Heights, Ill.: 15 plants (181713); 47 mosses (184668); 6 plants and 73 grasses from Illinois (184884, 184887); 110 plants (185668, gift-exchange).

CHENEY, DOROTHY, Manchester, Conn.: A decorated hand-woven burial blanket from the Ifugao; a carved wooden bowl and wooden spoon with figurine handle obtained in Bontoc in 1909; also a boy's basketry cap and a woman's woven and tailored cotton jacket from the Bontoc village of Sagada (183929).

CHICAGO, UNIVERSITY OF, *Institute for Nuclear Studies*, Chicago, Ill.: (Through Dr. Harrison Brown) 1 specimen of the Admire, Kans., meteorite, weighing 10 pounds (185947).

CHICAGO & NORTHWESTERN RAILWAY CO., Chicago, Ill.: 1 20-inch section of railroad rail used on the Chicago & Northwestern Railway about 1857 (183461).

CHICAGO NATURAL HISTORY MUSEUM, Chicago, Ill.: 55 plants from Colombia and Peru (182987); 177 photographs of type specimens in European herbaria (183832, exchange); 3 phanerogams (Gesneriaceae) from Mexico (184151); 187 cryptogams (184581, exchange); 238 plants from Venezuela and Ecuador, collected by J. A. Steyermark (185090, exchange); 139 plants collected in Colombia by J. Cuatrecasas (185465, 186147, exchange); 1 plant from Caroline Islands (185544); 1 cultivated plant (185907); 242 plants mostly collected in Brazil and Bolivia by Dr. Hugh Cutler (185996); 123 grasses from United States, Mexico, and South America (186038); 1 plant from Venezuela collected by J. A. Steyermark (186570); 45 plants mostly collected in Hawaii by O. Degener and associates (187087, exchange); (through K. P. Schmidt) 4 turtles from Africa collected by Harry Hoogstraal on the University of California African Expedition in 1948 (184333); (through Dr. R. L. Wenzel) 1 bedbug (185030, exchange); (through Loren P. Woods) 247 fishes from Lovers Lake, St. Georges Island, Bermuda (186041, exchange); 1 fish paratype from Wala Island, New Hebrides, collected March 29, 1929 on Crane Pacific Expedition by Herre (186273, exchange).

CHIN, TA-HSIUNG, Kweiyang, China: 20 land and fresh-water mollusks and 3 mammals from China (184362).

CHRIST, J. H., Portland, Oreg.: 10 grasses from Idaho (186037).

CHRISTMAN, ROBERT, Princeton, N. J.: (Through Dr. C. Wythe Cooke) 15 specimens of Miocene, Oligocene, and Eocene echinoids from Anguilla, Tintamarre (Flat Island), St. Martin, and St. Bartholomew Islands (185888).

CITY COLLEGE OF NEW YORK, New York, N. Y.: (Through Dr. Herbert Ruckes) 4 stink bugs, including types from southwestern and midwestern United States (187029, exchange).

CLARK, AUSTIN H., Washington, D. C.: 30 sea-urchins and sea-stars from Bimini, Bahamas (186829). (See also under Frank W. Trainer.)

CLARK, Dr. JOHN, Ann Arbor, Mich.: 27 Permian invertebrate fossils from Pakistan (186833).

CLARKE, J. F. G., Washington, D. C.: 2,913 moths and butterflies from Brazil and Chile and 2,000 bees from England (187004). (See also under H. M. Edelston, Norman D. Riley, and British Government, *British Museum (Natural History)*.)

CLARKE, Mrs. ROBERT WILSON, Bellingham, Ala.: All-white hand-embroidered baby's cape, made in 1865 by Mrs. Frederick Gates for her daughter, Ida Charlotte, the donor (185140).

CLAUSEN, Dr. ROBERT T., Ithaca, N. Y.: 12 ferns from Mexico and Georgia (186270, exchange).

CLEBSCH, ALFRED, Clarksville, Tenn.: 86 grasses from Tennessee (185067).

CLEMENTE, Rev. Brother, Santiago, Cuba: 37 plants from Cuba (183966).

CLEMSON COLLEGE, Clemson, S. C.: (Through Frances McAlister) A tomato-feeding beetle from Abbeville County, S. C. (183322).

CLENCH, WILLIAM J. (See under Harvard University, *Museum of Comparative Zoology.*)

CLEVELAND MUSEUM OF NATURAL HISTORY, Cleveland, Ohio: (Through Dr. Arthur B. Williams) 1 crab (184007).

CLOUD, Dr. PRESTON E., Jr. (See under U. S. Department of the Interior, *Geological Survey.*)

COCHRAN, Dr. DORIS M., Washington, D. C.: 1 hermit thrush (184577); 1 specimen of cultivated plant (185466).

COHER, EDWARD I., Amherst, Mass.: 52 Neotropical gnats, including paratypes (186593).

COLE, Dr. A. C., Jr. (See under University of Tennessee, *Department of Entomology.*)

COLE, GERALD A., Minneapolis, Minn.: 2 microscope slides of ostracod types (183250).

COLE, O. C., Kenyon, Minn.: 500 bryozoans and brachiopods from Middle Ordovician rocks in the vicinity of Cannon Falls, Minn. (182713); about 2,000 bryozoans from the Ordovician of southern Minnesota (184056); 53 Ordovician brachiopods from Minnesota and 1 Mississippian brachiopod from Arkansas (184616).

COLEGIO ANCHIETA, Pôrto Alegre, Brazil: 388 grasses from Brazil (185241).

COLEMAN, Dr. RICHARD W., Berkeley, Calif.: 171 black flies from California and Washington (184813, 185145).

COLLEGE OF MEDICAL EVANGELISTS, Loma Linda, Calif.: 86 plants from California (184676, 184836, 185905).

COLLINS, Dr. R. LEE, Knoxville, Tenn.: About 13 land mammals, mostly Miocene, from the Calvert cliffs along Chesapeake Bay in Maryland, collected in 1932–37 (184809).

COLORADO, UNIVERSITY OF, Boulder, Colo.: 1 grass from Colorado (184803); 6 gastropods from the Chinese Pamirs Sinkiang (184926); 118 plants collected in Colorado by Dr. W. A. Weber (186405, exchange).

COLORADO A. & M. COLLEGE, Fort Collins, Colo.: 2 grasses from Colorado (185904).

COMITA, GABRIEL W., Seattle, Wash.: 84 copepods (186216).

COMITÉ EJECUTIVO PERMANENTE DEL FARO DE COLON, Ciudad Trujillo, Dominican Republic: (Through the Library of Congress) 9 stamps of Ecuador overprinted "Comite Pro-Faro Colon Ecuador" (183686); (through Fernando Arturo Garrido) 10 sets of the 9 stamps of Ecuador overprinted "Comite Pro-Faro Colon Ecuador," 3 photographs of the model of the lighthouse, and 1 night view of the proposed completed lighthouse (183961).

COMMERCE, U. S. DEPARTMENT OF, Washington, D. C.:

National Bureau of Standards: (Through L. L. Marton) First-prize-winning photograph, monochrome division, 3d International Photography-in-Science Competition, "Electron-Optical Shadow Method" (184842); (through S. B. Newman, Emil Borysko, and Max Swerdlow) third-prize-winning photograph in monochrome division of 3d International Photography-in-Science Competition, "Cells in Onion Root Tip" (184895); (through Dr. William F. Meggers) 2 prints of first-prize-winning photograph in the monochrome division of the 2d Annual Photography-in-Science Competition of 1948 made by Dr. Meggers (185252).

Weather Bureau: 10 lichens from Greenland (185086).

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION, Canberra, Australia: 80 grasses from Australia (183808, exchange).

CONDE, Dr. VICENTE, Cardenas, Cuba: 11 crabs from Ensenada de Barrera (183426); approximately 330 land and marine mollusks from Cuba (184063, exchange).

CONNELLY, E. (See under George Washington University.)

CONROY, C. HARRISON, Philadelphia, Pa.: 60 color prints from the Ives Color Process by Mr. Conroy lent for special exhibit during March 1950 (186154, loan).

CONTINENTAL OIL CO., Houston, Tex.: 5,000 washed samples of foraminiferal material and 1,000 foraminiferal slides, now incorporated in the Cushman collection (187198).

COOK, Mrs. A. G., Oklahoma City, Okla.: 1 cultivated plant (184385).

COOKE, Dr. C. WYTHE, Washington, D. C.: 81 stereoscopic views from photographs mostly by Hillers taken on geological surveys of J. W. Powell of Ute, Paiute, and Pueblo Indians and scenery in the Rockies and the Southwest (184613). (See also under Robert Christman.)

COOKE, CHARLES B., Hague, Va.: 3 snakes from near Beaverdam, Hanover County, Va., collected by donor (185505).

COOLIDGE, HELEN M., Washington, D. C.: 4 early-19th-century painted satin, paper, and lace fans; 3 strips of Valenciennes and 4 of Mechlin lace; an embroidered jabot and pair of sleeves on net; a Mechlin lace and embroidered collar; an embroidered collar and an embroidered dress acquired in Paris (184156).

COOPER, Dr. G. ARTHUR. (See under Walcott Fund.)

CORNELIUS, GEORGE H., Alexandria, Va.: 43 Jurassic fossils from Turkey (184082).

CORNELL UNIVERSITY, Ithaca, N. Y.: 351 plants from Georgia collected by Robert F. Thorne (184067, exchange); (through Prof. Edward C. Raney) 141 frogs and lizards from Venezuela collected by Edgardo Mondolfi and Gaston Vivas-Berthier, 1938–1940 (183453); 1,086 fishes from Japan and the Hawaiian Islands, collected by D. S. Jordan (186793, exchange).

New York State College of Agriculture: 7 plants from eastern United States (184579, exchange); 111 liverworts from the eastern United States, of the S. H. Burnham collection (186987, exchange).

CORPORACIÓN DE FOMENTO DE PRODUCCIÓN OF CHILE, Punta Arenas, Chile: (Through U. S. Department of the Interior, *Geological Survey*, and C. R. Thomas) 290 specimens and 70 casts of Mesozoic and Tertiary fossils from southern Chile (187026).

COSMINSKY, PHILIP R., Falls Church, Va.: 1 specimen of lithiophorite from Timberlane, south of Falls Church, Fairfax County, Va. (183682).

COURTNEY, Dr. K. O. (See under the Panama Canal, *Health Department.*)

COX, WILLIAM, Lubbock, Tex.: 10 notostracan branchiopods (184852).

CRANBROOK INSTITUTE OF SCIENCE, Bloomfield Hills, Mich.: 175 plants from Michigan (185667, exchange).

CRANT, H. (See under the Shell Factory.)

CROSS, FRANK C., Silver Spring, Md.: 2 plants from Maryland (186149).

CROSSETT, EDWARD C., Osterville, Cape Cod, Mass.: 63 monochrome prints and 8 color prints by Mr. Crossett lent for special exhibition during December 1949 (185309, loan).

CROSSLEY, D. A., Lubbock, Tex.: 5 mites including a holotype from Texas (186100).

CRUXENT, Dr. JOSÉ M., Caracas, Venezuela: Materials used in narcotic snuffing, objects of personal adornment, a basketry container, and a photograph of a Piaroa Indian taking snuff, collected by donor from the Piaroa Indians of the Rio Paria area, Territorio Federal Amazonas, Venezuela, and 53 enlarged photographs of Motilon, Piaroa, Panare, and Chiricoa Indians (184754).

CUMMINGS, N. J., Falls Church, Va.: 4 carved and painted wooden figurines collected during World War II by donor from Ngulu and Woleai Islands in the western Carolines (184612).

CUMPSTON, ANNA. (See under E. C. Harmon.)

CUNNINGHAM, J. R., Kingston Beach via Hobart, Tasmania: 15 beetles from Tasmania (186001, exchange).

CURRAN, Dr. C. H. (See under American Museum of Natural History.)

CURTIN, Col. RALPH A. (See under Francis Warren Pershing.)

CURTIS, KARL, Gamboa, C. Z.: Skin of water opossum from Panama (186580).

CURTISS CANDY CO., Chicago, Ill.: Skeleton of prize-winning Ayrshire bull "Netherhall Swanky Dan" (186220).

CUSHMAN, JOSEPH A. (deceased), Sharon, Mass.: Approximately 150,000 slides of fossil and Recent Foraminifera; approximately 4,000 books and pamphlets, mostly relating to fossil Foraminifera; 24 sectional bookcases, a large sectional card file including a very extensive set of cards of the Foraminifera; 2 file cases consisting of 6 units each; 2 large map cases containing slides of Foraminifera; 1 camera (photomicro, Bausch & Lomb 5 x 7, No. 70319) and 1 microscope (187176, bequest).

DAHLGREEN, CHARLES W., Oak Park, Ill.: 201 etchings by donor, 18 of which are new to the collections (183970).

DAHLGREEN FUND, CHARLES W., Smithsonian Institution: 1 wood engraving, "Company Town," by Lynd Ward (183911); "Promenade," woodcut in color by Irving Amen (184840); 2 prints by Stanley William Hayter: "Cronos," engraving and soft ground etching; "Palimpsest," soft ground etching in 3 colors (185096); liftground aquatint, "La Faute," by Jacques Villon (187102).

DALMAT, Dr. HERBERT T., Guatemala, Guatemala: 350 miscellaneous insects, also reptiles, mammals, fish, and marine invertebrates from Guatemala, mostly from Yepocapa (183465); 18 flies, representing 6 undescribed species and including types (184165); 3 crabs (185111); 10 black flies representing 4 species from Guatemala (185485, exchange).

DAN RIVER MILLS, INC., Danville, Va.: A model of the interior of a textile finishing mill, complete with mahogany case; also a duplicate case featuring an electric clock illustrating the timely use of cotton fabrics, a scientific study of the wrinkle-shed finish, magnification of 33 different fabric weaves, and a detailed study of how a fabric design is born (183869).

DANFORTH, WILLIAM, Los Angeles, Calif.: 7 microscope slides of ostracod types (186491).

DARLINGTON, Dr. P. J., Jr. (See under Harvard University, *Museum of Comparative Zoology.*)

DAVIDSON, Dr. R. H., Columbus, Ohio: 2 paratypes of leafhoppers (184500).

DAVIES, DOUGLAS M., Toronto, Ontario: 4 black flies and 1 pupa collected by R. Gwatkin at Baker Lake, Northwest Territory (185098, exchange).

DAVIS, HUBERT, Milton, Pa.: 29 lithographs and 6 etchings by Hubert Davis lent for special exhibition April 24 through May 21, 1950 (186627, loan).

DAVIS, J. J. (See under Purdue University.)

DAVIS, MORGAN J. (See under Humble Oil & Refining Co.)

DAVIS & GECK, INC., Brooklyn, N. Y.: A single-panel exhibit "Sutures in Ancient Surgery," comprised of colored transparencies illuminated from the rear with fluorescent lights (185011).

DEAM, CHARLES C., Bluffton, Ind.; 66 plants from Florida (183192).

DE ANDRADE, THEOPHILO, Rio de Janeiro, Brazil: 5 ethnological specimens from Shavante and Kalabalas Indians, Rio Araguaya, Brazil (187020).

DEANE, LEONIDAS M., Rio de Janeiro, Brazil: 2 mosquitoes from Brazil (184816).

DEASON, H. J. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

DE CARVALHO, Prof. MARIO BEZERRA, Recife, Pernambuco, Brazil: 3 crickets (183983); 1 mollusk from Brazil (184169).

DeForest-Sanabria Corp., Chicago, Ill.: 5 audion tubes manufactured for or by the DeForest Radio Co., dating from 1907 to 1914 (185243).

Degener, Otto, Wailua, Oahu, T. H.: 127 plants from Hawaii (186033).

De Grange, Lenore Marie (deceased): 2 cut-glass decanters; 1 Chelsea pitcher; 2 Staffordshire platters; 1 Solar lamp and shade; 2 porcelain match boxes; 18 specimens of silver flatware; 1 sampler dated 1832; 1 hand-woven coverlet; pair of oil portraits; 1 watch; 6 Empire mahogany side chairs (184369, bequest).

Deignan, Herbert G., Washington, D. C.; 1 plant from Limeton, Va. (184996); 1 rat from Shenandoah National Park, Va. (186005); 621 plants collected in Virginia (186696).

Del Mar College, Corpus Christi, Tex.: (Through Dr. Aaron Seamster) 2 lots of sponges (183110).

De Menezes, Dr. Rui Simões, Fortaleza, Cerara, Brazil: 9 fishes from Potí Velho, Potí River and Parnaiba River, Teresina, State of Piauí, Brazil (183547, 184918).

De Metz, J. A., Washington, D. C.: 2 shrimps (183741).

Denning, Dr. D. G., Laramie, Wyo.: 1 lot of slugs from Laramie, Wyo. (183914).

De Oliveira, Dr. LeJeune. (See under Instituto Oswaldo Cruz.)

Descat, Gilles and Arnaud, Corrèze, France: 100 amphipods taken from springs and swamps at Roussille Lamazière Basse, Corrèze, France (184270).

Dickson, Mrs. H. R. P., Kuwait, Persian Gulf: 36 miscellaneous insects, mostly grasshoppers (176828).

District of Columbia, *Board of Commissioners*, Washington, D. C.: Hydraulic pumping engine of 1858, the first pumping engine used in the Washington aqueduct system (184777).

Dixon, W. B., Hobe Gardens, Jamaica: 20 chinch bugs (184600).

Doeckmun Co., New York, N. Y.: 40 specimens of Lurex, the new, non-tarnishable metallic yarn, showing the various yarns and their use in home and apparel fabrics, and other decorative textile items (185033).

Dodge, Mrs. Arthur R., Sr., Washington, D. C.: Collection of 6 brown wax cylindrical records for early Columbia phonograph (185082).

Doig, Mrs. Arthur, Washington, D. C.: 2 dresses of periods of 1910 and 1916, and a wool cape of approximately 1880 (184591).

Dole, Mrs. Norman D., Omaha, Nebr.: 16 samples of Hawaiian tapa collected by Sanford B. Dole, first governor of Hawaii, and great uncle of the donor's husband (183737).

Donaldson, Ivan, Bonneville Dam, Oreg.: 1 lot of parasitic worms from the intestine of the white sturgeon, from the Bonneville Dam region, Oreg. (183442). (See also under National Military Establishment, *Department of the Army, Chief of Engineers.*)

Donovan, James W., West Palm Beach, Fla.: Approximately 150 marine mollusks from the Marianas Islands (185725).

Dos Passos, Cyril F., Mendham, N. J.: 4 paratypes of butterflies (183691).

Dougherty, Dr. Ellsworth C., Berkeley, Calif.: Type specimen of a new species of nematode (185078).

Douglass, S. C. (See under Estate of Leander G. Pope.)

Downes, W., Victoria, British Columbia: 10 bugs from North America (186048).

Downie, N. M., Pullman, Wash.: 66 beetles, representing 7 species, from Greece and Turkey (183463).

Drake, Dr. Carl J., Ames, Iowa: 9 bugs (184499, exchange); 22 shore bugs, including 16 paratypes, from western United States (185830, exchange); 6 shore bugs, including 1 paratype (186002); 1 shore bug from Europe, 1 from Germany, and 2 from North America (186422, 186704, exchange).

Drake, Robert J., San Mateo, Calif.: 6 land mollusks from Catron County, N. Mex. (184410); 14 land and freshwater mollusks, including types, from Chihuahua, Mexico (185044).

Dransfield, Mrs. Mary C., Roslindale, Mass.: Hand-crocheted and beaded collar and trimmings from a cape of the period 1850 (183549).

Drossos, P. J., Athens, Greece: Pair of 10 lepta Red Cross stamps of Ionian Islands, Scott's #NRA1, unused (184316).

Dryander, Mrs. Edith, Tuluá, Valle, Colombia: 9 plants from Colombia (183379, 183679).

DuBois, Arthur E. (See under National Military Establishment, *Department of the Army, Office of the Quartermaster General.*)

Duke University, *Department of Zoology*, Durham, N. C.: (Through Dr. George W. Wharton, Jr.) 16 small mammals from North Carolina (184622).

Dumbleton, L. J., Nelson, New Zealand: 14 mosquitoes from South Pacific (186047).

Dun, Dr. G. S., Cronulla, New South Wales: 7 land snails from Keravat, New Britain (184227).

Dupont, James M., Chatham, N. J.: 1 piece of fossil wood from New Jersey (186868).

Duquesne University, *Department of Biology*, Pittsburgh, Pa.: (Through Dr. Tage U. H. Ellinger) 1 fish from St. Thomas, Virgin Islands, collected by Dr. Ellinger (184243).

Dybas, Dr. H. S., Chicago, Ill.: 24 beetles collected in Hawaii (185694).

East African Agriculture and Forestry Research Organization, Amami, Tanganyika, Africa: 40 plants collected in Africa (186592).

École d'Agriculture, Rimouski, Quebec: 163 grasses from Alaska (180927, 184646); 47 plants from Alaska (184837, exchange).

Economic Cooperation Administration, Washington, D. C.: Portfolio of de-luxe proofs and stamps of the Principality of Monaco, 107 specimens in all (184239); 1949 regular issue, unused postage stamps of Italy (2,850 specimens) issued in honor of the European Recovery Program (184240).

Edelstein, P. M., Washington, D. C.: Skeleton of a loggerhead turtle found by donor at Fairhaven Beach, Md., on November 24, 1949 (184861).

Edelston, H. M., London, England: (Through J. F. G. Clark) 824 British moths (187003).

Edmondson, Dr. C. H., Honolulu, T. H.: 1 hermit crab (183429); approximately 5 isopods (184245); 2 alcyonarians and 2 sponges (185388).

Ehlers, Dr. G. M., Ann Arbor, Mich.: 18 specimens of topotype and fragments of paratypes and holotypes of new species of Devonian corals from Michigan described by G. M. Ehlers and Edwin Stumm (185887).

Eisel, Vernon G., Garden City, N. Y.: 1 strap cutter for leather and 1 double-ended adjustable wrench (184072).

Eklund, Carl R. (See under Smithsonian Institution, *National Museum, collected by members of the staff.*)

Elias, M. K. (See under Nebraska Geological Survey.)

Ellinger, Dr. Tage U. H., *Pittsburgh*, Pa.: 3 hermit crabs (186803). (See also under Duquesne University.)

Elliott, James W. (See under Taylor & Taylor, Printers.)

Erdman, Donald S., College Park, Md.: 1 shrimp from Mexico (185944).

Escuela Agricola Panamericana, Tegucigalpa, Honduras: 117 plants from Costa Rica (183309, 183729, 183732); 10 plants from Central America (183329); 1 fern from Honduras (183592); 190 plants and 117 grasses from Honduras (184835, 185527, 185545); 14 plants collected by Dr. Louis O. Williams in Honduras (184997); 500 plants of Central America (mostly Honduras) collected by Dr. Louis O. Williams, A. Molina, and others (186896, exchange).

Escuela Nacional De Agricultura, Chinandega, Nicaragua: 7 plants from Nicaragua (185315, 186034, 186489).

Essig, Prof. E. O., Berkeley, Calif.: 3 paratype slides of plant lice from the United States (187106).

Estación Experimental Agronómica, Santiago de las Vegas, Cuba: (Through S. C. Bruner) 3 beetles from Cuba (186020).

Estes, Frank M., Memphis, Tenn.: 16 gold fishhooks of assorted sizes dredged from the bottom of the San Juan River, which were used by the Indians of Colombia before the advent of the Spaniards (184607).

Etz, Mrs. E. H., Westmoreland Depot, N. H.: Hand-painted satin child's coat and bonnet and a cotton shirt with braid edging, period approximately 1880 (187104).

Evans, Dr. Howard E., Manhattan, Kans.: 28 wasps, including 9 paratypes, from the United States (183568, 185915). (See also under Kansas State College.)

Evenari, Dr. Michael, Jerusalem, Palestine: 9 plants (183952).

Farrar, Henry, Knoxville, Tenn.: 58 fresh-water snails from near Knoxville (184395, 186654).

Fasoldt, Dudley F., Rensselaer, N. Y.: A slide containing a ruling, 10,000 to 1 inch, made with Charles Fasoldt's ruling machine; and a photograph of Charles Fasoldt with his first patented clock, enclosed in an envelope signed by him and dated October 9, 1878 (184494).

Fasseaux, W. J., Brussels, Belgium: 62 grasses from Belgium (186265, exchange).

Faust, Burton. (See under National Speleological Society.)

Federal Security Agency:

U. S. Public Health Service, Washington, D. C.: A 9-panel exhibit, "United States Government Hospital Program," illustrating the work of the various types of Government hospitals (184817, loan); (through Samuel Poiley) 1 gerbil (185074).

U. S. Public Health Service, Anchorage, Alaska: 1 lichen (184546); (through Dr. Robert Rausch) 197 mammals from Alaska (184180); 10 fresh-water mollusks from Alaska (184641); (through Dr. Jack C. Haldeman) 2 copepods (186471).

U. S. Public Health Service, Atlanta, Ga.: (Through Dr. Harry D. Pratt) 4 mosquito larvae, 3 from Georgia and 1 from Texas (186104, exchange).

U. S. Public Health Service, Portland, Oreg.: (Through Dr. Alfred F. Bartsch) 12 fresh-water mollusks from Steilacoom Lake, Wash. (184717).

U. S. Public Health Service, Rocky Mountain Laboratory, Hamilton, Mont.: 300 miscellaneous flies, chiefly from the United States (185487); (through Dr. W. L. Jellison) 2 crayfishes (183491); 31 bats from Gallatin County, Mont. (183815); 1 land mollusk from near Hamilton, Mont. (184016); 1 paratype of a fly (184515); 1 skin and skull of cottontail from near Sheridan, Mont. (184537); 1 meadow mouse from Lake County, Mont. (186687); (through Dr. Glen M. Kohls) a pair of tick paratypes (184061); (through Dr. C. B. Philip) 1 horsefly (184462, exchange).

Feehly, Thomas J., Baltimore, Md.: One FI.K.25 13 x 18 CM Carl Zeiss aerial camera, manufactured for use by the Japanese during World War II (187101).

Fender, Kenneth M., McMinnville, Oreg.: 15 beetles, including paratypes, from North America (186156).

Fernald, Dr. Robert L., Seattle, Wash.: Approximately 100 copepods (184536).

Fessenden, G. R., Baltimore, Md.: 1 fern from West Virginia (184120); 4 plants from Maryland and West Virginia (184205); 13 plants from Delaware (184857).

Field, Dr. Henry. (See under Mr. and Mrs. Lawrence F. Brown.)

Figueroa, Dr. Mauro Cardenas, Mexico, D. F.: 17 marine invertebrates (178517).

Fike, Clayton, Alexandria, Va.: A specimen of opal from near Gallup, N. Mex. (185207).

First National Bank in Dallas. (See under Mrs. Edna Spears Monagan.)

Fischer, O. H. (See under Union Diesel Engine Co.)

Fischthal, Dr. Jacob H., Endicott, N. Y.: 23 fresh-water mussels from New York (184116); 2 slides of the type and paratype of a new species of tapeworm from Wisconsin (186881).

Fisher, Dr. W. K., Pacific Grove, Calif.: 8 types of sipunculid worms (185385); 137 echiuroids and sipunculoids and 10 flatworms (186666).

Fleetwood, Edith, Washington, D. C.: Hand-embroidered christening dress and a cotton petticoat (186692).

Florida, University of, Gainesville, Fla.: 1 grass from Florida (185000); (through Dr. Coleman J. Goin) 5 immature salamanders, paratypes of a new subspecies, from Putney Pond, northwest Baker County, Ga., collected by John Crenshaw and George B. Rabb on July 1, 1948 (182768); (through Dr. William M. McLane) 1 fish collected by commercial drag seine operating in Salt Cove, northwest corner of Big Lake George (St. Johns River), Putnam County, Fla., May 12, 1949 (183311); (through Dr. Arnold B. Grobman) 4 salamanders, including types of a new species of *Plethodon*, from near Hawksbill Mountain, Skyline Drive, Madison County, Va., collected in 1947 by Dr. and Mrs. A. Grobman, H. I. Kleinpeter, and S. A. Peabody (184860); (through Prof. E. Lowe Pierce) 8 diatoms (185566); (through Prof. E. Ruffin Jones, Jr.) 2 polychaete worms (186368).

Everglades Experiment Station, Belle Glade, Fla.: (Through Dr. Walter H. Thames, Jr.) 13 land snails from Belle Glade (184268).

Florida Southern College, Lakeland, Fla.: 9 grasses from Florida (183331).

Florida State University, Tallahassee, Fla.: 50 grasses from Florida (182350); 11 amphipods (185942); (through Dr. Harold J. Humm) 28 miscellaneous marine invertebrates and 1 mollusk (185560).

Food and Agriculture Organization of the United Nations, Washington, D. C.: 35 grasses and 9 phanerogams from Guatemala (185468).

Foreman Co., Inc., New York, N. Y.: Modern dress designed by Charles James in Foreman's "Swansoft" material (185482).

Forsythe, Dr. Leslie J., Vicksburg, Miss.: 10 fly larvae (183886).

Fosberg, Dr. F. R., Washington, D. C.: 20 plants collected in the Pacific Islands (187091).

Foshag, Dr. W. F., Washington, D. C.: 1 specimen of jade from an archeological site at Almoloya, Guerrero, Mexico, and 1 from the State of Guerrero, Mexico (184588).

Foster, Mulford B., Orlando, Fla.: 6 plants (Bromeliaceae) (183673); 4 plants from South America (186094).

Franclemont, John G., Washington, D. C.: 4 moths (184592).

Frank, Robert L., Urbana, Ill.: 1 lichen from Canada (183963).

Franz, Dr. Ing. Herbert, Admont, Austria: 49 beetles, representing 33 named species (183102, exchange).

Frasche, Dean F., Washington, D. C.: 27 minerals and ores from India, New Caledonia, and Afghanistan (186901).

Frey, Dr. David G., Chapel Hill, N. C.: 128 miscellaneous insects, collected in the Pacific Islands by donor while he was connected with NAMRU II (177932).

Freytag, George F., St. Louis, Mo.: Holotype and 5 paratypes of a new species of land mollusk from Chihuahua, Mexico (186160).

Fridal, K. H., Jr., Tremonton, Utah: 4 Cambrian and Ordovician trilobites from Utah (185182).

Fries, Carl, Jr., Mexico, D. F.: 3 specimens of lava from Parícutin Volcano, Michoacán, Mexico (184806).

Fundación Miguel Lillo, Tucumán, Argentina: 497 grasses from Argentina (180171, 183124, 183300, 186621); 21 plants (182751, 185108, 186602); 4 plants collected in Argentina (183846, 186956); 100 plants collected in Mexico by Dr. Fred A. Barkley (185716, exchange); (through Dr. Martin Ac-

zél) 16 fruit flies from Argentina (185823, exchange); (through N. Kusnezov) approximately 800 ants from Argentina (185838, exchange); (through Francisco Monrós) 8 leaf beetles from South America (186098, exchange).

GALE, Dr. W. A. (See under American Potash and Chemical Corp.)

GALIANO, Dr. DN. EMILIO FERNENDEZ. (See under Museo Nacional de Ciencias Naturales.)

GALLAGHER, MICHAEL J., Philadelphia, Pa.: 34 prints and 7 drawings by Mr. Gallagher lent for special exhibition during February 1950 (185477, loan).

GALLOWAY, JOHN C., Washington, D. C.: 24 drawings and gouaches by Mr. Galloway lent for special exhibition from May 22 through June 18, 1950 (187028, loan).

GALTSOFF, Dr. PAUL S., Woods Hole, Mass.: 1 sea-urchin and 1 sea-star from Pearl Island, Bay of Panama (186897). (See also under U. S. Department of the Interior, *Fish and Wildlife Service.*)

GARDNER, A. M. (See under U. S. Department of Agriculture, *Forest Service.*)

GARDNER, Dr. JULIA A. (See under U. S. Department of the Interior, *Geological Survey.*)

GARRIDO, FERNANDO ARTURO. (See under Comite Ejecutivo Permanente del Faro de Colon.)

GAZIN, Dr. C. LEWIS. (See under Walcott Fund.)

GEORGE WASHINGTON UNIVERSITY, Washington, D. C.: (Through E. Connelly) 15 ostracods (186509).

GEORGIA, UNIVERSITY OF, Athens, Ga.: 2 plants and 1 grass from Georgia (183529, 184801); 2 ferns from Georgia (185987, exchange).

GEORGIA STATE DEPARTMENT OF MINES, MINING, AND GEOLOGY, Atlanta, Ga.: (Through Capt. Garland Peyton) 4 specimens of the Social Circle, Walton County, Ga., meteorite (184422, exchange).

GIER, L. J. (See under William Jewell College.)

GIFFORD, Prof. E. W., Berkeley, Calif.: 1 lot of 4 bird bones from Fiji (180620).

GINSBURG, ISAAC. (See under Joe Young.)

GIORGI, Prof. Ing. GIOVANNI, Rome, Italy: 190 land mollusks from Italy (186960, exchange).

GLENN, Dr. L. C., Nashville, Tenn.: 4 Pleistocene, Pamlico formation, bryozoans and 1 boring sponge from near Myrtle Beach, S. C. (186075).

GODDARD, JAMES E. (See under Tennessee Valley Authority.)

GODFREY, FRANK E., Maplewood, Mo.: Yetman transmitting typewriter (184337).

GOIN, Dr. COLEMAN J., Gainesville, Fla.: 1 fish from beach of Clearwater, Fla., collected by Nick Tsacrios (185218). (See also under E. Ross Allen and W. T. Neill and University of Florida.)

GOLDMAN, Dr. MARCUS I., Washington, D. C.: 3 specimens of anhydrite from Hallstadt mine, Hallstadt, and Wolfschacht, Eisleben, Austria, and Krugerhall mine, Sachschenthal near Halle, Germany (183280).

GONZALEZ N., Dr. CARLOS, Ciudad Trujillo, Dominican Republic: 6 photographs of plants, 11 photographs of petroglyphs on Rio Chacuey, province of Monte Cristi, and 1 photograph of an old Spanish aqueduct from the Vega Real, Dominican Republic (184228); 1 palm from the Dominican Republic (184308).

GOODCHILD, Prof. C. G., Springfield, Mo.: 3 crayfishes together with amphibians (183430).

GOODFELLOW, Mrs. M. PRESTON, Pocatello, Idaho: 18th-century wooden chest from Seoul, Korea, overlaid with squares of horn, painted with realistic figures of animals, birds, and dragons (183868).

GOODNIGHT, CLARENCE J., LaFayette, Ind.: Approximately 47 marine invertebrates, 3 fishes, together with mollusks and echinoderms (184971).

GOREMAN, Dr. AUBREY, Upton, N. Y.: Approximately 20 amphipods and 6 mites (183238).

Gorgas Memorial Laboratory, Panama City, Panama: Head and feet of a harpy eagle (183495).

Gosline, Dr. William. (See under Spencer Tinker.)

Gossweiler, Dr. J., Luanda, Angola, Portuguese West Africa: 645 herbarium specimens from Angola (183601).

Goudey, Hatfield, Yerington, Nev.: 2 specimens of spangolite from Pershing County, Nev. (184811, exchange); 4 fluorite specimens from the Oscura Mountains, Socorro County, N. Mex. (185614, exchange).

Goublay, E. S., Nelson, New Zealand: 3 plants from New Zealand (184311).

Gowanloch, Dr. James Nelson. (See under Louisiana State Department of Wild Life and Fisheries.)

Graetz, Dr. Eric, Balboa, C. Z.: (Through James Zetek) 5 flatworms, 1 mammal, and 1 mollusk (184849); 1 shrew from Cerro Punta, Panama (187006).

Graf, J. E., Washington, D. C.: 2 plants from Point Barrow, Alaska (183377).

Graham, Rev. David C., Englewood, Colo.: 1 bronze fragment and 3 lots of cylindrical and disk-shaped beads, including some of faience, from ancient tombs in Li Fan Hsien, Szechwan Province, China, dated ca. 500–100 B. C., collected by donor (185560).

Grant, Maj. Chapman, San Diego, Calif.: 2 geckos collected in Hatte Lathan, Haiti, by Anthony Curtiss (182866); 1 slipperyback lizard, paratype of a new subspecies, from Haiti (186209).

Great Atlantic & Pacific Tea Co., New York, N. Y.: A diorama showing activities about a coffee plantation (186553).

Greenfield, Ray, Honolulu, T. H.: 30 marine invertebrates (187013).

Gregg, Dr. Wendell O., Los Angeles, Calif.: 1 paratype of a land snail from Los Angeles County, Calif. (186007).

Gressitt, Dr. J. Linsley, Hong Kong: 2 beetle paratypes from China (185007).

Grobman, Dr. Arnold B. (See under University of Florida.)

Guimaraes, D., Belo Horizonte, Brazil: 1 specimen of giannettite and 2 specimens of djalmaite from Minas Gerais, Brazil (184383).

Haack, Victor L., San Francisco, Calif.: 181 marine shells from Guam (184923).

Habe, Dr. Tadashige. (See under Kyoto University, *Zoological Institute.*)

Haderlie, Dr. E. C., Berkeley, Calif.: Approximately 77 copepods (185045); 3 slides representing the type and 2 paratypes of a new trematode from California (185916).

Haldeman, Dr. Jack C. (See under Federal Security Agency, *U. S. Public Health Service.*)

Hale, Mason E., Jr., New Haven, Conn.: 5 lichens (184644).

Hales & Hunter Co., Chicago, Ill.: (Through Dan Schaaf) 1 slide of grain mites (183653).

Haliday, Mrs. W. B., Washington, D. C.: 1 Kentucky warbler (186955).

Hall, David G., Washington, D. C.: 250 miscellaneous flies (185099).

Hall, Dr. Thomas M., Milledgeville, Ga.: 1 marine mollusk from Puerto Peñasco, Sonora, Mexico (186109).

Halloran, Arthur F. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

Ham, Dr. W. E., Norman, Okla.: 1,300 Lower Ordovician and Upper Cambrian brachiopods from the Arbuckle group of Oklahoma (186902).

Hamilton, Dr. William J., Jr., Ithaca, N. Y.: 1 woodland jumping mouse (183286).

Hampton-Smith, Wilanna, Louisville, Ky.: 2 tintypes of Miss Hampton-Smith made in 1876 and 1877 (183393).

Hand, Mrs. Augustus N. (See under Mrs. Myron W. Whitney.)

Handley, Charles O., Jr., Ann Arbor, Mich.: 1 red bat from Maryland (184843); 8 birds from Michigan (187078).

Haneda, Dr. Yata, Yokosuka, Japan: 45 fireflies from Celebes (186283).

HARDING, Dr. J. P. (See under British Government, *British Museum (Natural History)*.)

HARDY, Dr. D. ELMO., Honolulu, T. H.: 77 flies, including 1 paratype of an African species and 76 specimens of 3 undescribed Australian species (183693); 1 allotype of a fruit fly from Hawaii (184815); 1 paratype of a fly from California (185832); 164 fruit flies from the Orient and Australia (185892). (See also under University of Hawaii.)

HARLEY, Mrs. WINIFRED J., Monrovia, Liberia: 1 fern from Liberia (183640).

HARMON, E. C., and ANNA CUMPSTON, Washington, D. C.: 1 cedar waxwing (187021).

HARPER, Dr. FRANCIS, Mount Holly, N. J.: 5 birds from Nueltin Lake, Keewatin, Canada (183288); 6 small mammals from southwestern Keewatin (183289); 12 cryptogams from Canada (183383).

HARRIS, STANLEY R., Romney, W. Va.: 1 nest of a chimney swift (183859).

HARRY, GEORGE Y., Jr. (See under Oregon State Fish Commission, *Research Laboratory*.)

HARTER, Mrs. FRANK D., Long Beach, Calif.: 1 silver teaspoon, ca. 1770–1785; 1 silver teaspoon, marked "E. Whiton" ca. 1835; 1 plated spoon marked "F. W. Pachtman & Bro." (184871).

HARTMAN, Dr. OLGA. (See under University of Southern California, *Allan Hancock Foundation*.)

HARVARD UNIVERSITY:

Arnold Arboretum, Jamaica Plain, Mass.: 46 grasses from Fiji (179780, 180172); 81 grasses from Micronesia and the Philippines (181875); 1 plant from Indo-China (183435); 481 plants from San José Island, Panama, collected by I. M. Johnston (184795, exchange); 1 plant (184797).

Biological Laboratories, Cambridge, Mass.: 48 plants from Dominican Republic, collected by R. A. Howard (184675).

Botanical Museum, Cambridge, Mass.: 1 plant from Peru (185461).

Department of Mineralogy and Petrography, Cambridge, Mass.: 13 minerals including wolfeite, xanthoxenite, ludlamite, and wurtzite from Palermo mine, North Groton, N. H.; jeremejevite from Russia and dakeite from Wyoming (184101, exchange).

Gray Herbarium, Cambridge, Mass.: 9 fragments of South American plants (180326, exchange).

Museum of Comparative Zoology, Cambridge, Mass.: 2 birds (185291, exchange); (through William L. Brown, Jr.) 43 ants, representing 6 species, one of which is a paratype (183694, exchange); (through Dr. Joseph Bequaert) 47 mites, representing 24 species of A. P. Jacot material (183871, exchange); 1 wasp paratype (185692, exchange); approximately 4,632 ants including cotypes from various localities (186158); 10 beetles, paratypes, from Dominican Republic (186504, exchange); (through William J. Clench) approximately 1,300 miscellaneous worldwide mollusks (184820, exchange); 2 paratypes of a mollusk from Mona Island, Puerto Rico (185312, exchange); approximately 60 paratypes of marine shells and a set of photographs of the types of 152 species of marine shells from Jamaica, all described by C. B. Adams (185896, exchange); (through William C. Schroeder) 1 fish paratype from the Society Islands (184838, exchange); (through Dr. P. J. Darlington, Jr.) 4 beetles from various localities (186178).

School of Public Health, Boston, Mass.: (Through Dr. John C. Snyder) 2 mammals from New York (183451).

HARVEY, Prof. E. NEWTON, Princeton, N. J.: 3 beetles from Singapore (184685, exchange).

HARVEY, Lt. ROBERT A. (See under National Military Establishment, *De-*

partment of the Army, Army Medical Corps.)

HATAI, Dr. KOTORA, Sendai, Japan: 27 fresh-water mollusks from Japan (184431).

HATRY, Mrs. MILDRED, New York, N. Y.: 42 pictorial photographs exhibited during June 1949 (183282, loan); 5 pictorial photographs: "Wind Witch," "Little Mother," "Council," "Dawn Sail," and "Thy Merry Whistling Tunes" (183402).

HATSCHBACH, GERT, Curitiba, Paraná, Brazil: 42 plants from Brazil (184381).

HATTORI, Dr. S., Obi-machi, Miyazaki-ken, Kyushu, Japan: (Through Dr. E. H. Walker) 100 plants from Japan (184999).

HAWAII, UNIVERSITY OF, Honolulu, T. H.: (Through Dr. D. Elmo Hardy) 60 flies from Australia (183566).

HAWKES, Dr. J. G., Mexico, D. F.: 160 plants from Colombia (184578).

HAYDON, JOHN E., Washington, D. C.: Self-feathering marine propeller, marked 18 Hyde 12 RH, patented December 30, 1924 (184387).

HAYNES, Maj. Gen. C. V., Washington, D. C.: Camel saddle and a decorative hand-woven double saddlebag received by donor as a token of friendship from His Majesty, King Ibn Sa'ud of Saudi Arabia (185452).

HAYTER, STANLEY WILLIAM, New York, N. Y.: 27 prints by Mr. Hayter lent for special exhibition during November 1949 (184590, loan).

HEDGPETH, JOEL W., Port Aransas, Tex.: 1 priapulid worm (183856).

HEILMAN, Maj. Gen. FRANK A. (See under National Military Establishment, *Department of the Army*, Army Transportation Corps.)

HEILMAN, ROBERT A., Lebanon, Pa.: 5 fresh-water snails from Pennsylvania (186841).

HENBEST, LLOYD G., Washington, D. C.: 1 specimen of metabasalt, Front Royal, Va. (184100).

HENKEL, VIRGINIA M., Winchester, Va.: 1 electrical "shocking" machine (185203).

HENRY, ANDREW, deceased: 1 discoidal red sandstone slab found by Mr. Henry in a mound over an old ruined pueblo near Fillmore, Millard County, Utah (184789).

HERALD, Dr. EARL S. (See under California Academy of Sciences.)

HERBARIO BARBOSA RODRIGUES, Itajai, Santa Catarina, Brazil: 370 plants from Brazil (183515, 186150).

HERMANN, Dr. F. J., Beltsville, Md.: 10 plants from Maryland (184794).

HERRE, Dr. A. W., Seattle, Wash: 3 lichens (186477).

HERRERA, Prof. JOSÉ, Santiago, Chile: 5 butterflies, representing 3 families, from Chile (183455).

HERSHEY CHOCOLATE CORP., Hershey, Pa.: 1 Tirrill voltage regulator and resistance unit (183964).

HERZOG, MARGOT. (See under National Cotton Council of America.)

HESS, FRANK L., Bethesda, Md.: 1 specimen of fluorescent smithsonite with dolomite from Loy Pinnacle Mine, Mascot, Tennessee, and 1 specimen of scheelite with powellite from 1½ miles south of Oak Springs, Nevada (184229); 1 specimen of cancrinite and albite and 1 specimen of cancrinite and hackmannite from east side of York River, Bancroft, Ontario (184265). (See also under Antonio Llubetic.)

HESTER, J. PINCKNEY, Superior, Ariz.: 31 plants collected in western United States (186322).

HIBBARD, Dr. CLAUDE W. (See under University of Michigan.)

HILDEBRAND, HENRY, Seattle, Wash.: 4 birds from British Columbia and Alaska (186079). (See also under U. S. Department of the Interior, *Fish and Wildlife Service.*)

HILDEBRAND, Dr. S. F. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

HILL, Dr. HOWARD R., Los Angeles, Calif.: 3 land mollusks from West Africa (184065, exchange); approximately 75 land mollusks from California and other Western States (185146, exchange).

HILTON, Prof. WILLIAM A. (See under Pomona College.)

HOBBS, Capt. ALLEN. (See under National Military Establishment, *Department of the Navy*, Hydrographic Office.)

HOBBS, Dr. HORTON H., Jr., Charlottesville, Va.: 6 type specimens of crayfishes, approximately 1,000 shrimps, and a fish (183786, 186781).

HOCHMAN, MARK, Washington, D. C.: A 9.5 mm. Pathex motion-picture camera with coupled hand-wind motor drive and a No. 3–A folding Brownie still camera Pat. 1902 (183565).

HODGE, Dr. WALTER H., Amherst, Mass.: 171 plants from Colombia and Peru (183328); 8 plants collected in South America (187083).

HOEN, ALBERT B., Baltimore, Md.: 2 examples of the Lithocaustic process developed by A. Hoen & Co., Inc., about 1880 (186505).

HOFF, Dr. C. CLAYTON, Albuquerque, N. Mex.: 35 slides representing 11 species of fleas, 2 of which are represented by holotypes, allotypes, and paratypes, from New Mexico (183767); 1 lot of nematodes from a scaled quail from New Mexico (184398).

HOFFMAN, RICHARD L., Clifton Forge, Va.: 23 diplopods collected in Virginia and North Carolina, representing 10 new type species, described by donor (184103); 39 daddy longlegs from eastern United States and holotype of milliped from Ontario (185224).

HOFFMASTER, RICHARD E., Pittsburgh, Pa.: 8 copepods, 9 amphipods, 2 isopods, and 3 flatworms (183319, 185175); approximately 15 amphipods from Pennsylvania (183937).

HOLLAND, G. P. (See under Canadian Government, *Department of Agriculture*, Division of Entomology.)

HOLLIS, Dr. EDGAR H. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

HOLMES, Mrs. MABEL M., Washington D. C.: 1 rim effigy bowl of earthen ware, said to be from New Madrid County, Mo. (186981); homespun blanket made by Almira Maria Clark-Walter (1814–1859) of Scranton, Pa. (great-grandmother of donor) (187075).

HOOPES, FRANK, Delano, Calif.: (Through Harry L. Woodruff) A specimen of benitoite from San Benito County, Calif. (183462).

HORA, Dr. SUNDER LAL. (See under Zoological Survey of India.)

HOSAKA, EDWARD Y., Kamuela, T. H.: 1 grass from Hawaii (183456).

HOTCHKISS, NEIL, Hyattsville, Md.: 10 plants from Maryland (185307).

HOTTES, Dr. F. C., Grand Junction, Colo.: 8 slides of type material of 5 aphid species (184320); 5 slides of aphids from Colorado, all type material (186106).

HOWE, J. V. (See under Captain A. H. Mallery.)

HOWELLS, W. W. (See under University of Wisconsin.)

HUBBARD, Dr. C. ANDRESEN, Portland. Oreg.: 17 slides of fleas, including types, from North America (186424).

HUBRICHT, LESLIE, Danville, Va.: 300 fresh-water snails from Illinois, Missouri, and Virginia (184267); approximately 4,000 mollusks from North America (186840).

HUGHES, PAUL W., Flagstaff, Ariz.: 25 worm tubes from the Supai formation of Arizona (184057).

HUMBLE OIL & REFINING Co., Houston, Tex.: (Through Morgan J. Davis) 9 crystals of gypsum from Kenedy County, Tex., on the Gulf coast midway between Brownsville and Corpus Christi (186416).

HUMM, HAROLD J., Beaufort, N. C.: Approximately 123 amphipods taken at Halifax, Nova Scotia, and Fort Fisher, N. C. (183936); approximately 30 amphipods (185296). (See also under Florida State University.)

HUNT, Mrs. FREDERICK V. (See under Stephen A. Buckingham.)

HUNTER, Col. GEORGE W., III. (See under National Military Establishment, *Department of the Army*, 406th General Medical Laboratory.)

HUNTSMAN, Dr. A. G. (See under Canadian Government, *Fisheries Research Board.*)

HUNTSVILLE LIONS CLUB, Huntsville, Ala.: 2 sections of log pipe used in the Huntsville city water system built in 1827 (185690).

HUTSON, ETHEL, Gulfport, Miss.: 4 cultivated plants from Mississippi (184222).

IDAHO, UNIVERSITY OF, Moscow, Idaho: 76 grasses from Idaho (185932).

ILLINOIS, UNIVERSITY OF, Urbana, Ill.: 395 plants from New Caledonia collected by J. T. Buchholz (184799, exchange); 1 paratype of frog (187052, exchange); 190 plants mostly collected by G. N. Jones in central and western United States (187167, exchange).

State Natural History Survey Division: (Through Dr. H. H. Ross) 41 leafhoppers including paratypes from Illinois (186102, 186103, exchange).

IMPERIAL COLLEGE OF TROPICAL AGRICULTURE, Trinidad, British West Indies: 4 plants from Trinidad (180008).

INDIA, GEOLOGICAL SURVEY OF, Calcutta, India: 5 supposed pre-Cambrian brachiopods from Neemuch, central India (185552, exchange).

INDIA, ZOOLOGICAL SURVEY OF, Calcutta, India: (Through Dr. Sunder Lal Hora) 63 Indian fishes (186096, exchange).

INGALLS, HUNTLEY, Bethesda, Md.: 1 specimen of native gold and galena in quartz from Maryland Gold Mine, Montgomery County, Md. (185719).

INGRAM, Dr. WILLIAM M. (See under Mills College.)

INSTITUT DES RECHERCHES AGRONOMIQUES, Saigon, Indo-China: 11 plants from Indo-China (183545); 35 plants collected in Indo-China by Dr. P. A. Pételot (187093).

INSTITUT VOOR PLANTENZIEKTEN, Buitenzorg, Java: (Through Dr. J. van der Vecht) 13 wasps from Java (185835, exchange).

INSTITUTE OF JAMAICA, *Science Museum,* Kingston, Jamaica: 42 ferns from Jamaica (183731, 186513); (through C. Bernard Lewis) 3 beetles from Jamaica (183965).

INSTITUTO AGRONOMICO DO NORTE, Belém, Pará, Brazil: 19 grasses and 10 plants from Brazil (183809, 184920, exchange); 12 plants (Passifloraceae) (185088).

INSTITUTO BIOLÓGICO, Escuintla, Chiapas, Mexico: 4 plants from Mexico (184225, 185883).

INSTITUTO DE BOTÁNICA, Buenos Aires, Argentina: 6 plants from Argentina (185610, exchange).

INSTITUTO DE CIENCIAS NATURALES, Bogotá, Colombia: 56 plants from Colombia (184310, 186619, exchange); 22 plants from Colombia (184416, 184867); 643 plants from Colombia (185308, 185623, gift-exchange).

INSTITUTO DE PESCA DEL PACIFICO, Guaymas, Sonora, Mexico: (Through Dr. René Nuñez) 2 shrimps (184973).

INSTITUTO ECUATORIANO DE CIENCIAS NATURALES, Quito, Ecuador: 136 plants from Ecuador, including 117 grasses and 19 phanerogams (185529).

INSTITUTO GEOBIOLOGICO LA SALLE, Canoas, Rio Grande do Sul, Brazil: 73 plants from Brazil (184224, exchange).

INSTITUTO GEOLÓGICO Y MINERO DE ESPAÑA, Madrid, Spain: (Through Dr. José García Siñeriz) A collection of 18 minerals, including aragonite, andalusite, kyanite, wulfenite, sphalerite, and scheelite from various localities in Spain; and a collection of 12 ores from Minas de Comillas, Santander, Spain (183904, exchange).

INSTITUTO "MARDEN," Ituiutaba, Minas Gerais, Brazil: 11 grasses from Brazil (183996); 40 plants from Brazil (185138, 187094); 39 plants from Brazil, including 15 grasses, 11 phanerogams, and 13 ferns (186622).

INSTITUTO NACIONAL DE HIGIENE, Caracas, Venezuela: (Through Dr. Atur Mirsa) 4 beetles from Venezuela (186009).

INSTITUTO OSWALDO CRUZ, Rio de Janeiro, Brazil: (Through Dr. LeJeune

de Oliveira) Approximately 30 marine invertebrates, together with plants, approximately 200 marine mollusks, and echinoderms (183490); (through Dr. Herman Lent) 2 bugs from Brazil (185490).

INTERIOR, U. S. DEPARTMENT OF THE:

Bureau of Mines, Washington, D. C.: 9 specimens of peridotite from the diamond mines near Murfreesboro, Pike County, Ark. (186414).

Fish and Wildlife Service, Washington, D. C.: 2 skeletons of birds, swan and indigo bunting (183564); 1 skeleton of a bird (murre) (184883); wing, leg, and clavicle bones of a snowy owl and skeleton of a gannet (185020); 2 crows (185808); 1 trunk skeleton of a trumpeter swan (186032); 45 plants from the eastern United States collected by Neil Hotchkiss (186571); 5,500 fishes, mostly from the Gulf of Mexico, collected by the *Pelican* (186572); 1,521 birds from various parts of North America (187080); 551 mammals (187186); (through Dr. Clinton E. Atkinson) 1 isopod (180701); (through Arthur F. Halloran) 1 Gila monster from the Kofa Game Range, Yuma County, Ariz., collected by Willard E. Blanchard (183596); (through Dr. Victor B. Scheffer) skull of a porpoise from St. Paul Island, Alaska (183994); (through Dr. S. F. Hildebrand, deceased) 58 miscellaneous fishes left by Dr. Hildebrand for the National Museum (184264); (through Dr. Paul S. Galtsoff) approximately 5,000 marine mollusks and 7 specimens of coral from Panama (184328); 2 sea urchins from Panama (186898); (through R. T. Mitchell) 30 fresh-water mollusks from stomach of duck from Gander, Newfoundland (184818); 206 beetles from South America (185890); (through Dr. Henry Hildebrand) 11 shrimps (185107); (through Dr. Leslie W. Scattergood) 6 copepods (185221); (through John C. Marr) skull of a porpoise (185389); (through Hugh W. Terhune) 28 spiny lobsters and 2 marine mollusks from Philippine Islands (185860, 186085); (through Dr. H. J. Deason) 8 fishes from the Philippines (186070); (through Noble E. Buell) 1 feral dog from Morton County, N. Dak., (186114); (through Dr. Edgar H. Hollis) 1,299 lots of fresh-water plankton samples (186514); (through W. Markham Morton) approximately 234 fresh-water shells from Kodiak Island, Alaska (186885); (through Paul F. Springer) 1 shrimp from Brigantine Refuge, Oceanville, N. J. (187014).

Geological Survey, Washington, D. C.: Skull of lemming collected by Louis L. Ray, Jr., at Hovringen, Norway, July 1946 (178239); 576 type specimens and sections and 698 specimens and sections of nontypical material of invertebrate fossils from Upper Devonian or Lower Mississippian beds of Ohio and Kentucky (183390); 14 specimens, including 9 fossil cyprinid fishes and 5 fragments of feathers, collected by J. Stewart Williams from the late Pliocene Salt Lake formation, near Logan, Cache County, Utah (183391); 147 type specimens of Foraminifera from the Mesozoic and Cenozoic of Naval Petroleum Reserve No. 4, northern Alaska, described by Helen Tappan Loeblich in a manuscript on "Northern Alaska Index Microfossils" (183819); 6 sets of described rocks and minerals from localities of Montana, Pennsylvania, Colorado, and California (183897); 8 analyzed samples of frondelite, rockbridgeite, arrojadite, and graftonite from Brazil and New Hampshire (183934); 265 pieces of fossiliferous rock from various localities in Upper Cambrian, Cambrian, Lower Ordovician, High Devonian, and Low Mississippian from Montana, Colorado, and Arkansas (185072); 104 specimens of Upper Cretaceous belemnites from 10 localities in the western interior

States (185073); 1,275 figured and type specimens of Jurassic Foraminifera from Montana, Wyoming, and South Dakota, described by A. R. Loeblich and Helen Tappan Loeblich (185091); 25,000 specimens and slides of Mesozoic and Tertiary larger Foraminifera, constituting the T. Wayland Vaughan Collection, and approximately 25,000 specimens of registered Tertiary invertebrate fossils (185092); 1 sample of Mississippian conodont-bearing black shale, 1 sample of Devonian conodont-bearing black shale from the Sly Gap formation, 4 Pennsylvanian and 400 Permian invertebrate fossils from the Sacramento Mountains, N. Mex. (185141); 53 invertebrate fossils and pieces of fossiliferous rock from the Devonian and Mississippian of Montana (185246); 365 Lower Paleozoic invertebrate fossils from southwest Virginia (185370); 120 Devonian invertebrate fossils from the Tobacco Root Mountains, Mont. (185472); 9 specimens of hewettite from Colorado, paraschoepite from the Belgian Congo, loughlinite from Wyoming, and bauerite from Montana (185548); approximately 670 freshwater and land mollusks from northern Alaska (185741); 26 plants collected in Alaska by R. M. Chapman (185815); 10 specimens of miserite from Potash Springs, near Hot Springs, Ark. (185853); 50 Devonian invertebrates from the French Gulch Quadrangle, Calif., collected by Arthur R. Kinkel (185912); 79 plants collected in Alaska by William S. Benninghoff (186217); 255 Jurassic samples from Montana, Wyoming, and South Dakota; 8 microsamples from the Pleistocene of Middleton Island, Alaska; 1 sample of Jackson Eocene from Alabama; and slides of Foraminifera from Standard of New Jersey Esso No. 1, "Hatteras Well" (186275); 522 samples of Paleocene and Eocene cores rich in Foraminifera from two wells in Nicaragua, Gulf Oil Corporation well Punta Gordo No. 1 and Atlantic Refining Company well Twara No. 1 (186276); about 30 invertebrates from Middle and Upper Ordovician of the Badwater area, Wyo.; about 70 from the Devonian of Mineral Hill Quadrangle, Nev.; about 100 from the Upper Ordovician of Johnson County, Wyo. (186277); 53 type brachiopods and 600 additional specimens from the Silurian of Alaska (186573); 150 slides containing Cenozoic ostracods including 16 type specimens from 15 wells in North Carolina (186574); approximately 35 arenaceous Foraminifera from the Lower Cretaceous of Texas (186575); 7 type specimens of cerite and related minerals from Jamestown, Colo. (186688); 20 specimens consisting of andersonite, bayleyite, swartzite, schroeckingerite, and straw silica glass from Ramona, Calif., and Hillside mine, Yavapai County, Ariz. (186798); 28,000 Cretaceous and Cenozoic invertebrate fossils collected by D. H. Eargle from the Alabama Coastal Plain area (186832); 47 specimens of beryl, muscovite, cookeite, quartz, cassiterite, and manganotantalite from the Golconda pegmatite, Minas Gerais, Brazil, and 1 specimen of clinohumite from Dillon, Mont. (186886); 4,000 invertebrate and plant fossils from the Brooks Range, northern Alaska, collected by Arthur L. Bowsher in the season of 1949 (186957); approximately 60 pieces of fossiliferous rock containing type specimens and supplementary material of Cenozoic echinoderms from Oregon (187024); 10 cephalopods from Montana and South Dakota (187098); a large collection of foraminiferal material now incorporated in the Cushman Collection (187175); 86 invertebrate fossils, representing 14 species illustrated by Dr. Teng-Chien Yen in "Freshwater Mollusks from

the Kootenai Formation near Harlowton, Montana" (187222); (through Dr. Harry S. Ladd) approximately 1,110 marine invertebrates from Saipan, together with echinoderms, fish, mollusks, and corals (183733); (through Dr. J. B. Reeside, Jr.) last upper molar and tusk of a Pliocene rhinoceros from the Bone Valley formation near Brewster, Fla., collected by F. Stearns MacNeil in September 1949 (183998); 1 lot of schroeckingerite from 40 miles north of Wamsutter, Wyo., and one lot of heulandite from 5 miles north of Vaughn, Mont., collected by Dr. Reeside (184805); (through Dr. W. H. Bradley) approximately 100 clams from Maine (184949); (through Dr. Preston E. Cloud, Jr.) approximately 500 marine mollusks from Saipan (185314); (through Dr. Julia A. Gardner) approximately 1,200 fresh-water snails from Alabama (185539). (See also under Dr. Daniel I. Axelrod and Corporación de Fomento de Producción of Chile.)

National Park Service: 38 plants from the Organ Pipe Cactus National Monument, Ariz. (181257, 183728, 183962, 186883); 6 lichens from Tin Mountain, Death Valley National Monument, Calif. (183953); 4 lichens from the Death Valley National Monument, Calif. (184482); 26 plants from Virginia (183995); 107 plants from Mississippi (185219).

IRMSCHER, Dr. EDGAR, Württemberg, Germany: 3 specimens of *Begonia* from Peru and Panama (183831).

IRONS, JOHN H., Lake Worth, Fla.: 9 corals from the Pleistocene at Lake Worth (187108).

ISANOGLE, Mrs. ISABEL, Westminster, Md.: 94 plants from Maryland (185458).

ISHAM, L. B. (See under University of Miami.)

ISTITUTO BOTANICO, University of Florence, Florence, Italy: 727 plants (183805, exchange); 100 plants from Eritrea collected by A. Pappi (184481, exchange); (through Dr. R. E. Pichi-Sermolli) 200 plants from Eritrea collected by A. Pappi (186146, exchange).

IVES, Prof. J. D., Jefferson City, Tenn.: 125 flies, taken from "a single cave of small size (Anderson's Cave) not far from Jefferson City" (183439); 1,256 flies (184326).

JACOBS, GEORGE J., Washington, D. C.: 5 mammals, 2 fishes, and mollusks from England, together with 4 marine invertebrates from Azores and Atlantic Ocean (184428).

JACQUEMIN, ALFRED, Montreal, Quebec: Branly tripod detector (incomplete) (185880).

JAMES, Brother ANTHONY, Lafayette, La.: 22 fresh-water mollusks from Louisiana and New Mexico (183788).

JAMES, Dr. MAURICE T., Pullman, Wash.: 3 flies, including 2 paratypes (181437, exchange).

JAMESON, Dr. E. W., Quincy, Calif.: A holotype and allotype of a flea (184425); 5 mites, including type and 4 paratypes, from region of Quincy, Calif. (184593); 4 mites, including 3 holotypes and 1 allotype (184897); 17 mites including paratypes from California (185913).

JARDIM BOTÂNICO DO RIO DE JANEIRO, *Secção de Botânica Sistemática*, Rio de Janeiro, Brazil: 67 plants from Brazil (181556, 185857); 39 plants from Brazil (184998, exchange).

JARDIN BOTÁNICO, Madrid, Spain: 266 plants from Spain (183979, exchange).

JARDIN BOTANIQUE DE L'ÉTAT, Brussels, Belgium: 200 plants collected in the Belgian Congo (185717, exchange).

JELLISON, Dr. WILLIAM L. (See under Federal Security Agency, *U. S. Public Health Service*, Rocky Mountain Laboratory.)

JENISON, Mrs. CAROLINE SPOONER, Washington, D. C.: (Through Dr. Nancy Jenison) 2 tintypes, 2 ambrotypes, and 6 cartes de visite (183971).

JENISON, Dr. NANCY. (See under Mrs. Caroline Spooner Jenison.)

JENKINS, RICHARD and JOHN PRICE, Mount Rainier, Md.: 1 wood thrush (186853).

JEPSEN, Dr. GLENN L. (See under Princeton University.)

JEWETT, STANLEY G., Jr., Portland, Oreg.: Approximately 3,500 miscellaneous insects (184531).

JIMÉNEZ, Dr. JOSÉ DE Js., Santiago, Dominican Republic: 168 plants collected in the Dominican Republic (182669, 186170, 186269).

JOHNSON, Dr. MARTIN W., La Jolla, Calif.: 541 marine invertebrates (184881). (See also under National Military Establishment, *Department of the Navy.*)

JONES, Prof. E. RUFFIN, Jr. (See under University of Florida.)

JONES, Dr. FRANK MORTON, Wilmington, Del.: 290 moths (185258).

JONES, W. P., Washington, D. C.: 1 bat caught in U. S. National Museum building (187187).

JORDAN, E. KNOWLES, Port Alfred, C. P., South Africa: 4 fresh-water mussels from Northern Rhodesia, Africa (186905).

JORDAN, E. KNOWLES, and FRED RUMSEY, Port Alfred, C. P., South Africa: 3 fresh-water mussels from the Chambezi River, Northern Rhodesia (186904).

KAMPF, Father WALTER. (See under Father Thomaz Borgmeier.)

KANSAS, UNIVERSITY OF, Lawrence, Kans.: 14 plants from Kansas (185994); (through Dr. A. B. Leonard) approximately 200 land and fresh-water mollusks from the United States (mainly from Kansas) (184687, exchange); (through Dr. R. H. Beamer) paratype of a wasp (185691, exchange); 2 leafhoppers from California and 2 from Arizona (186101, exchange); 12 stink bugs from southwestern United States (187002, exchange).

KANSAS STATE COLLEGE, Manhattan, Kans.: (Through Prof. Howard E. Evans) 8 beetles from North America (186425).

KAUSEL, Dr. EBERHARD, Santiago, Chile: 12 plants from Chile (185462, exchange).

KEARNEY, Dr. THOMAS A., San Francisco, Calif.: 1 fern (184832).

KEEGAN, Capt H. L., San Francisco, Calif.: Insects, together with 4 mammals, 4 reptiles, and 3 mollusks, from the Philippine Islands (186420).

KEEN, MYRA. (See under Stanford University.)

KELLY, Dr. FRANK B., Wolverhampton, Stafford, England: 52 corals from the Silurian of England and 2 brachiopods from the Ordovician of England (185533, exchange).

KELLY, Dr. W. A., East Lansing, Mich.: 17 type specimens of Carboniferous invertebrate fossils from Michigan and a type specimen of a problematical fossil from the pre-Cambrian Keweenaw Peninsula (184891); 1 ostracod from the Traverse formation of Michigan (186415).

KELSO, Z., Washington, D. C.: 1 fern from the District of Columbia (186849).

KELUM, Mrs. MILDRED, Deale, Md.: 1 spider from Deale (184105).

KENK, Dr. ROMAN, Washington, D. C.: Approximately 727 specimens of miscellaneous marine invertebrates, together with 8 mollusks, 1 echinoderm, 1 reptile, 2 fish, 36 insects, 6 whip-scorpions, 11 spiders, 23 phalangids, 2 scorpions, 3 diplopods, and 23 pseudoscorpions (184700).

KENNEDY & Co., New York, N. Y.: (Through Albert Reese) 35 prints by Armin Landeck lent for special exhibition during September 1949 (183813, loan).

KENYON, Mr. and Mrs. ROBERT D., Suncook, N. H.: An all-white quilted counterpane made in 1852 by Mary Ann Kinyon, great-great-grandmother of Robert D. Kenyon, in Onondaga County, N. Y. (186500).

KERR, Dr. PAUL F., New York, N. Y.: 1 sengierite specimen from the Belgian Congo (185612).

KESSEL, Dr. EDWARD L., San Francisco, Calif.: 7 adult flies (185010).

KEUFFNER, WILLIAM R., Washington, D. C.: Unused copy of $1 airmail stamp privately printed in the United States in 1932 and repudiated by the Newfoundland Government (184424).

KEUR, Dr. DOROTHY, New York, N. Y.: Skull (without face or lower jaw) of adult female Navaho, from Big Bead Mesa, T. 14 N., R. 4 W., Sandoval County, N. Mex., dated A. D. 1745–1812 (185071).

KIBBEY, ESTATE OF BESSIE J.: (Through Union Trust Co. of the District of Columbia) Gold, enamel, and diamond Patek Phillipe watch and pin; gold, enamel, and diamond card case; filigree silver basket; man's dressing case, period of 1849; white lace shawl; "dress watch" of plated gold and a wreath of forget-me-nots; blown-glass flask, footed (186435, bequest).

KILHAM, Dr. LAWRENCE, Bethesda, Md.: 1 shrew with litter of 4 young from Bethesda (186628).

KILLIP, E. P., Washington, D. C.: 45 plants from eastern Maryland collected by E. P. Killip, C. V. Morton, G. R. Fessenden, and E. A. Chapin (184890); 175 plants mainly from Montgomery County, Md. (187089).

KILTZ, B. F., Barksdale Air Force Base, La.: 1 plant from Louisiana (183932).

KINDLE, Dr. CECIL M., New York, N. Y.: 86 early Ordovician fossils from northwestern Vermont (185142).

KIPLINGER WASHINGTON AGENCY, Washington, D. C.: (Through W. M. Kiplinger) 48 stereoscopic photographs of the series of bronze statuettes entitled "The Living Hall of Washington, 1944," and 1 stereoscope (183395).

KISER, Dr. R. W., Centralia, Wash.: 5 microscopic slides representing type specimens of cladocerans (183178).

KISSILEFF, M. Z., Philadelphia, Pa.: 2 specimens of babingtonite from Westfield, Mass., 1 of grossularite garnet with scolecite from Thetford, Vt., and 1 of herderite from Palermo, N. H. (186699, exchange).

KITE, MARY AND REBECCA, Washington, D. C.: 1 marble mortar with iron pestle (183525).

KLEARFLAX LINEN LOOMS, INC., Duluth, Minn.: An old sample book of linen fabric swatches, a portfolio of products from seed-flax fiber including a chronological development of the industry from 1900 to 1945, and numerous other samples showing various examples of unfinished and finished fabrics (183847).

KNOTKANEN, Dr. PAAVO, Lieksa, Finland: 38 leafhoppers from Finland (186051, exchange).

KNOWLES, Dr. FRANCIS G .W., Wiltshire, England: 13 crustaceans (185220).

KNOWLTON, Dr. G. F., Logan, Utah: 2 aphids, including types, from United States (186814).

KNULL, Prof. J. N. (See under Ohio State University.)

KOCH, H. J., Johannesburg, Transvaal, South Africa: 80 marine shells from South Africa (186845).

KOHLS, Dr. GLEN M. (See under Federal Security Agency, *U. S. Public Health*, Rocky Mountain Laboratory.)

KOMP, W. H. W., College Park, Md.: 1 mosquito from Brazil (185829); 14 land and fresh-water mollusks from British Honduras (186842).

KOSER, RALPH S., Lewisburg, Pa.: Renfax synchronizer, early sound equipment used before the invention of sound on film (185006).

KOZLOWSKI, Dr. ROMAN. (See under Uniwersytet Warszawski.)

KRAGH, L. C., Chester, Okla.: 1 Cretaceous ammonite from Oklahoma (184893).

KRAUS, ERNST. (See under American Numismatic Association.)

KRAUSS, N. L. H., Honolulu, T. H.: Approximately 200 miscellaneous insects collected by donor in Malaya (183486); 11 vials of Australian ants, representing 10 genera and 11 species (184402); approximately 140 ants from Australia (186480).

KROMBEIN, KARL V., Arlington, Va.: 74 wasps from Nags Head and the Kill Devil Hills, N. C. (186049).

KRYGER, J. P., Thoreby, Flintinge, Denmark: 101 beetle larvae (185310).

KUCYNIAK, JAMES. (See under Montreal Botanical Garden.)

KUSNEZOV, N. (See under Fundación Miguel Lillo.)

KYBURZ, WILLIAM A., Cali, Colombia: 2 plants from Colombia (185906).

KYOTO UNIVERSITY, *Zoological Institute*, Kyoto, Japan: (Through Dr. Tadashige Habe) 35 lots, including 23 lots of paratypes, of mollusks from Japan (185843, exchange).

KYUSHU UNIVERSITY, *Entomological Laboratory*, Fukuoka, Japan: (Through Dr. Keizo Yasumatsu) 8 bees, representing 4 species of 2 each, in the genus *Osmia* (183567, exchange); 49 specimens, 14 species, of ants from Japan (185256, exchange); 2 bees from Japan (185894, exchange).

LA CASSE, Maj. WALTER J. (See under National Military Establishment, *Department of the Air Force*, 207th Malaria Survey Department.)

LADD, Dr. HARRY S. (See under U. S. Department of the Interior, *Geological Survey*, and National Military Establishment, *Department of the Navy*, "Crossroads" Project.)

LAMM, TINSLEY F., Jerome, Idaho: 1 piece of silicified wood of an unusual green color from Idaho (186112).

LANGAN, Lt. Col. PAUL CONWAY, Miami, Fla.: United States national ensign, all-printed design on woolen bunting, 38 stars, period from July 4, 1877, to July 4, 1890 (183687); Navaho Indian chief's blanket, period of 1890–1900, from Arizona (183756).

LANGMAN, Mrs. IDA K., Mexico, D. F.: 334 plants from Mexico (184042, 184160).

LANGUSCH, E. W., Gladstone, Queensland: 160 marine mollusks from Gladstone harbor, Queensland (184691, 186815).

LARSEN, Dr. ESPER S., Jr., Arlington, Va.: 1 type set of 20 petrographic specimens from Pleasant Mountain, Maine (185025).

LATHAM, ROY, Orient, N. Y.: 2 lichens (184489); approximately 15 isopods (185731); 3 diatoms (186778); 1 crab (186780).

LAWTON, MASON B., Washington, D. C.: A ceremonial or war club, collected by donor's father, Elon J. Lawton, from Pawnee Indians near Columbus, Nebr. 1860–1870 (186062).

LAWTON, Dr. WALTER. (See under Dr. Thomas C. Poulter.)

LEDIG, PAUL G., San Juan, P. R.: Earthenware vessels and stone implements found by native farmers in the neighborhood of Huancayo, Department of Junin, Peru (183372).

LEE, JOSEPH P. (See under Telephone Camera Club of Manhattan.)

LEECH, HUGH B. (See under California Academy of Sciences.)

LEITE, Dr. JOSÉ EUGENIO, Nova-Friburgo, Estado do Rio, Brazil: 11 plants from Brazil (184034, exchange).

LEJEUNE, Mr. and Mrs. F. ARNOLD, Carpinteria, Calif.: 5 woodblocks used by Frank Morley Fletcher in making his color print "Waterway" (187178).

LEMBERGER, WILLIAM A., Oshkosh, Wis.: 1 albino salamander from Richters Bay, Lake Winnebago, Wis., collected by Robert Maas in 1949 (186394).

LENOX, INC., Trenton, N. J.: (Through Robert J. Sullivan) Chinaware of the designs made by Lenox for use in the White House during the Presidential administrations of Woodrow Wilson and Franklin D. Roosevelt (8 specimens) (185313).

LENT, Dr. HERMAN. (See under Instituto Oswaldo Cruz.)

LEONARD, Dr. A. B. (See under University of Kansas.)

LEONARDI, MODESTO, Trona, Calif.: 15 specimens of the minerals hanksite, tychite, apthitalite, pirssonite, tincalconite, ulexite, and scheelite from various localities in southern California (184070, exchange).

LEVI, HERBERT W., Madison, Wis.: 1 paratype of an isopod (183639).

LEWIS, BARNARD J., Boston, Mass.: 6 examples of the "Brush-Tone" Process of screenless color overprinting through the use of textured plastic plates and water color printing inks (186324).

Lewis, Lt. Col. B. R., Caracas, Venezuela: 29 plants from Venezuela (184714, 186694).

Lewis, C. Bernard. (See under Institute of Jamaica, *Science Museum.*)

Lewis, Lillian V., Dedham, Mass.: A white quilted counterpane with inscription: "1856 A Representation of the Fair Ground near Russellville, Kentucky" (183387).

Leyva, Carlos J., Oaxaca, Mexico: 1 plant from Mexico (183655).

Library of Congress, Washington, D. C.: 207 plants from Japan (183460); medal of award presented to David Maydole Matteson by the United States George Washington Bicentennial Commission (186659). (See also under Comité Ejectivo Permanente del Faro de Colon.)

Linck, R. C., Philadelphia, Pa.: 9 minerals, consisting of fluorite from Illinois, garnet from Mexico, wulfenite from Saxony, cassiterite from England, and tourmaline from New York (186700, exchange).

Linde Air Products Co., New York, N. Y.: (Through J. J. Murphy) 9 cut synthetic sapphires (183908).

Linder, Maud E., St. Petersburg, Fla.: Chinese court robe of embroidered silk (183292).

Linsley, Dr. E. G., Berkeley, Calif.: 4 beetles (184594).

Livingston, Col. J. J., Fort Belvoir, Va.: 1 specimen of fluorite and 1 of barite on fluorite from Cave-in-Rock District, Hardin County, Ill. (185248, exchange).

Llubetic, Antonio, Cochabamba, Bolivia: (Through Frank L. Hess) 1 specimen of danburite in volcanic ash from 50 miles east of Cochabamba (185094).

Loeblich, Mrs. Alfred R., Jr., Washington, D. C.: 37 paratype specimens of a Lower Cretaceous foraminifer from the Walnut formation of Texas (185024).

Looser, Dr. Gualterio, Santiago, Chile: 1 fern (184420).

Lorenz, Eleanor, Cincinnati, Ohio: (Through Dr. R. S. Bassler) About 1,500 Paleozoic invertebrate fossils from many localities in the United States (184209).

Louisiana State Department of Wild Life and Fisheries, New Orleans, La.: (Through Dr. James Nelson Gowanloch) 1 anostracan branchiopod (186674).

Louisiana State University, *Museum of Zoology*, Baton Rouge, La.: (Through Dr. George H. Lowery, Jr.) 63 mammals from Louisiana (183918, exchange).

Loveless, Mrs. Mildred Hewett, Silver Spring, Md.: Ethnological materials including Kiowa doll cradle and miniature moccasins and 28 early photographs primarily of Southern Plains Indians obtained by donor at Fort Sill, Indian Territory, 1881 and subsequent years (183513).

Lowell, James Brower, Arlington, Va.: 1 pair of bead-decorated, loon-skin-backed mittens from the Indians of the Eastern Woodlands, collected in early 19th century (184032).

Lower, George C., Westtown, Pa.: 7 kodachrome slides of marine crustacea (185501).

Lowery, Dr. George H., Jr. (See under Louisiana State University.)

Lowery, Mrs. Robert, Washington, D. C.: Collection of 9 specimens representing crafts of natives of Efate, New Hebrides, obtained by donor since close of World War II (183882).

Lozowick, Louis, South Orange, N. J.; 40 lithographs by Mr. Lozowick lent for special exhibition, March 27 through April 23, 1950 (186279, loan).

Lunz, Dr. G. Robert, Jr. (See under Bears Bluff Laboratories.)

Lutz, Prof. Louis, Harrogate, Tenn.: Approximately 300 North American land shells from Tennessee (184064, exchange); 1 holotype and 30 paratype specimens of a land shell from Harrogate (184168).

Lyman, Frank B., Lantana, Fla.: 41 marine invertebrates, together with algae and echinoderms (179632); approximately 30 marine mollusks and 9 coral specimens from Florida, which

were illustrated in *Shell Notes* (185013); 1 marine mollusk from the Gulf of California (186820).

LYON, ESTATE OF MRS. LIZZIE F., Sherman, Tex.: (Through C. L. Rolison) Repeater shelf clock, marked "Thos. Reid, Edinburgh 1795" (183607, bequest).

MACCHIAVELLO, Dr. ATILIO. (See under Pan American Sanitary Bureau.)

MACCORD, Maj. HOWARD A., Dayton, Ky.: Archeological material, principally pottery and chipped flint work, excavated by Major MacCord from village deposits along the eastern shore of Lake Anenuma, Aomori Prefecture, northern Honshu, Japan (187073).

MACDOUGALL, MAYNARD E., Proserpine, Great Barrier Reef, Australia: 1 shell from Whitsunday Islands, Great Barrier Reef (184699).

MACDOUGALL, THOMAS, Tehuantepec, Oaxaca: 4 plants from Mexico (185139, 186093, 187082).

MACGINITIE, Dr. G. E., Fairbanks, Alaska: 5 modern brachiopods from Alaska (185244).

MACGINITIE, Dr. and Mrs. G. E. (See under National Military Establishment, Department of the Navy, *Office of Naval Research*, Arctic Research Laboratory.)

MACNAB, Dr. JAMES A., Charleston, Oreg.: 1 lot of marine mollusks from Oregon (183883).

MACNEIL, F. STEARNS, Washington, D. C.: Lower jaw fragment of the Miocene horse, *Archaeohippus*, with second molar, collected about 1934 by donor, ¾ mile south of Plum Point, Calvert County, Md. (184808).

MAGRUDER, Mrs. F. C., Washington, D. C.: 81 plants from South Dakota (185814).

MALLERY, Capt. A. H., Washington, D. C., and J. V. HOWE, Jeffress, Va.: French-type iron padlock, 18th century, excavated from Nelson plantation near Clarksville, Va. (185016).

MALLOCH, JOHN R., Vero Beach, Fla.: Approximately 12,000 North American and exotic insects, mostly flies, representing 1,520 species and including 70 holotypes and 558 paratypes (183758).

MANLY, J. O., Durham, N. C.: 1 crayfish (186782).

MANTZ, CYRUS, Washington, D. C.: Fragment of molded salt-glaze stoneware Staffordshire plate, ca. 1760, excavated from site of Wakefield, Va. (187076).

MARBLE, Dr. JOHN P., Washington, D. C.: 150 invertebrate fossils of Paleozoic, Mesozoic, and Tertiary formations in Wales and England (184495); collection of anorthosite, sillimanite schist, serpentine, and other rocks from various localities in the British Isles, 7 specimens (186701). (See also under W. C. Paterson.)

MARDEN, LUIS, Washington, D. C.: A crab and a lobster (184749).

MARIN M., Dr. FELIPE, Cuzco, Peru: 115 plants from Peru (185988).

MARR, JOHN C. (See under U. S. Department of the Interior, *Fish and Wildlife Service*.)

MARSHALL, Sir GUY A. K. (See under British Government, *British Museum (Natural History)*.)

MARSHALL, Dr. N. B. (See under British Government, *British Museum (Natural History)*.)

MARTIN S., Dr. F. (See under Sociedad de Ciencias Naturales La Salle.)

MARTÍNEZ, Prof. MAXIMINO, Mexico, D. F.: 1 plant from Mexico (184152).

MARTON, L. L. (See under U. S. Department of Commerce, *National Bureau of Standards*.)

MARYLAND STATE DEPARTMENT OF RESEARCH AND EDUCATION, Solomons, Md.: 63 lots of miscellaneous marine invertebrates (183450); (through Galen H. Maxfield) 5 copepods (182975, 184719); 5 microscope slides representing approximately 5 copepods (186180).

MARYLAND STATE HORTICULTURAL DEPARTMENT, College Park, Md.: 28 snails from a greenhouse at Ridgeville, Md. (185918).

MASARYK UNIVERSITY, Brno, Czechoslovakia: 100 plants (bryophytes) (183458, exchange).

MATTHEWS, RANSOM, Los Angeles, Calif.: 5 carburetors (186697).

MATTOX, Prof. N. T., Mayagüez, P. R.: 5 polychaete worms (185374); approximately 100 type specimens of conchostracans (186490).

MAWSON, Sir DOUGLAS, Adelaide, South Australia: 2 specimens of calciocelsian and hyalophane in gneiss from Piggery, Broken Hill, New South Wales (186865).

MAXFIELD, GALEN H. (See under Maryland State Department of Research and Education.)

MAXWELL, MARY E. (deceased): Collection of 226 specimens of Oriental and European furniture, textiles, ceramics, and metalwork (175755, bequest).

MAY, J. F., Colorado Springs, Colo.: 19 grasshoppers (183692, exchange): 3 grasshoppers from the United States and 5 walkingsticks from Africa, India, and New Guinea (186105, exchange).

MAYER, FRITZ, Hamburg, Germany: 20 fishes from miscellaneous localities (184262).

MCALISTER, FRANCES. (See under Clemson College.)

MCCLAY, Prof. A. T., Davis, Calif.: 70 beetles (183344, 183464); 189 beetles from the United States (185828).

MCCONNELL, RICHARD B., New Orleans, La.: 1 plant from Ecuador (185463).

MCCORMICK, GOODHART L., Alexandria, Va.: Ceremonial or theatrical gong from southeast Asia, purchased by donor's mother in Washington, D. C., 25 years ago (184882).

MCELVARE, ROWLAND R., Port Washington, N. Y.: 17 moths from Texas and California (185260).

MCGILLYCUDDY, Mrs. JULIA B., Washington, D. C.: 1 small notebook containing colored ink drawings by Roan Eagle, Teton Dakota, collected by the late Dr. McGillycuddy, former Indian agent at Pine Ridge, S. Dak., and husband of donor (183373).

MCGONIGAL, VIRGINIA E., Ann Arbor, Mich.: Collection of 20 items of modern and antique Bulgarian folk art in weaving, embroidery, metalwork and carved and painted designs on wood (185606).

MCGREGOR, E. A., Whittier, Calif.: 2 type slides of mites, 1 each from California and Washington (186427).

MCKAIG, W. WALLACE, Cumberland, Md.: 1 wedding dress of 1880, 1 wedding dress of 1907, 2 evening dresses of the late 19th century, and 1 white silk shawl (184202).

MCLANE, Dr. WILLIAM M., Gainesville, Fla.: Approximately 159 marine invertebrates (185943). (See also under University of Florida.)

MCLAUGHLIN, KENNETH P., Pullman, Wash.: (Through Dr. Teng-Chien Yen) About 200 Pleistocene freshwater mollusks from Washington (185132).

MCMULLEN, Dr. DONALD B., Oklahoma City, Okla.: Approximately 10,000 fresh-water mollusks from various Michigan lakes (184429).

MEANLEY, BROOKE, Stuttgart, Ark.: 16 birds from Maryland and vicinity (185714); 25 birds from Maryland and Virginia (186985).

MEEUSE, Dr. A. D. J., The Hague, Netherlands: 2 land snails from Switzerland (184170).

MEGGERS, Dr. WILLIAM F. (See under U. S. Department of Commerce, *National Bureau of Standards.*)

MEHRING, ARNON L., Hyattsville, Md.: 27 land and fresh-water mollusks from New Jersey and Florida (184696).

MENDEZ A., Dr. J. L. (See under Sociedad de Ciencias Naturales La Salle.)

MENZIES, ROBERT J. (See under Pacific Marine Station and University of California.)

MERRILL, Dr. E. D., Jamaica Plain, Mass.: 41 grasses from Philippines (183560).

MERTENS, Dr. ROBERT. (See under Natur-Museum Senckenberg.)

MESEROLL, SARAH, Washington, D. C.: 1 pottery vase said to have been collected by Benjamin Zol (Zolotarewski) about 1910 "near the Persian frontier" (186982).

METROPOLITAN CAMERA CLUB COUNCIL, INC., New York, N. Y.: (Through Mildred B. Scales) 90 photographs in the 13th Annual Travel Salon of the Metropolitan Camera Club Council, exhibited during November 1949 (185005, loan).

METZGAR, JUDSON D., Los Angeles, Calif.: 1 Japanese color woodcut, Osumi, Sakurashima, No. 66 of "Views of the More Than Sixty Provinces" by Ando Hiroshige (185889).

MEYER, Dr. FRED G., St. Louis, Mo.: 38 plants from North and Central America (184380).

MIAMI, UNIVERSITY OF, Coral Gables, Fla.: (Through Prof. H. F. Strohecker) 1 fly larva from "living flesh of mature mango" in the region of Homestead, Fla. (183454); (through L. B. Isham) 12 tunicates and 30 copepods (186369).

Marine Laboratory: (Through Dr. F. G. Walton Smith and Frederick M. Bayer) Approximately 10 marine invertebrates (185235); (through Frederick M. Bayer) 8 marine mollusks from Soldier Key, Biscayne Bay, Fla. (187008).

MICHIE, ROSS, Kaitaia, Northern Auckland Province, New Zealand: 3 plants from New Zealand (184045).

MICHIGAN, UNIVERSITY OF, Ann Arbor, Mich.: 8 birds of 7 species from India representing forms new to the Museum (183867, exchange); 1 plant from Costa Rica (184382); 15 grasses and 1 lichen from Alaska (184534, 184664); 7 plants from Michigan (184681); 472 plants collected in the Brooks Range region, Alaska, by Dr. Louis H. Jordal (186148, exchange); (through Dr. Claude W. Hibbard) casts of 2 type specimens of mastodon from Mexico (185155, exchange); (through Dr. Robert R. Miller) 320 fresh-water fishes mostly from western North America (185718, exchange).

MILLER, GERRIT S., Jr., Washington, D. C.: 182 plants from Maine (184159).

MILLER, Dr. ROBERT R. (See under University of Michigan.)

MILLIRON, Dr. H. E., Glendale, W. Va.: 9 weevils from West Virginia (186281).

MILLS COLLEGE, Oakland, Calif.: (Through Dr. William M. Ingram) 23 lots of marine mollusks from Hawaii (183696, exchange); approximately 100 land and marine mollusks from various regions (186006, exchange).

MILLS, PHOEBE, Cuvu, Madroga, Fiji: Approximately 2,100 marine mollusks from Cuvu, Fiji (184693).

MILNE, Dr. GORDON G. (See under Dr. Brian O'Brien.)

MINISTÉRIO DA AGRICULTURA, *Divisão de Fomento da Produção Animal*, Rio de Janeiro, Brazil: 2 grasses from Brazil (185991, 186499).

MINISTERIO DE AGRICULTURA, Santiago, Chile: 252 photographs and fragments of grasses from Chile (183762).

MINISTERIO DE AGRICULTURA Y CRIA, *Di visión de Botánica*, Caracas, Venezuela: 1 plant from Venezuela (185077).

MINISTERIO DE LA ECONOMÍA NACIONAL, Bogotá, Colombia: Collection of 310 South American plants (180702, 182310).

MINNESOTA, UNIVERSITY OF, Minneapolis, Minn.: 178 plants mostly collected in Minnesota (186035, exchange).

MINTON, Mr. and Mrs. WALTER C.: English copper luster pitcher with blue band and raised painted floral sprays, ca. 1830–1840 (185607).

MIRSA, Dr. ATUR. (See under Instituto Nacional de Higiene.)

MISSISSIPPI STATE COLLEGE, State College, Miss.: 1 plant (184851).

MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: 1 plant from Panama (183378); 5 specimens of *Begonia* from Panama (183672); 327 plants from Panama mostly collected by Paul H. Allen (184047, exchange); 57 ferns from Minnesota, Wisconsin, and Ontario (184220, exchange); 1 specimen of selaginella from New Mexico (185813, exchange); 3 plants from Mexico (185908, 186268); 1 grass from Brazil (185997); (through Dr. R. M. Tryon,

Jr.) 3 fragments of type specimens of ferns (185381, exchange).

MITCHELL, DONALD F., Los Angeles, Calif.: Approximately 154 marine invertebrates and 1 lot of mollusks (183255).

MITCHELL, R. E., Washington, D. C.: 1 cultivated plant (183753).

MITCHELL, R. T. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

MITTLEMAN, M. B., New Rochelle, N. Y.: 2 reptiles, type and allotype, from Echol Canyon, Owen County, Ind., collected by Mr. and Mrs. Mittleman in August 1942 (186212).

MOHR, Dr. JOHN L., Los Angeles, Calif.: Approximately 351 amphipods and an insect larvae (183473).

MOLLBERG, BERNARD H., Houston, Tex.: Second-prize-winning print from the monochrome division, 3d International Photography-in-Science Competition, by donor (185478).

MONAGAN, Mrs. EDNA SPEARS (deceased): (Through First National Bank in Dallas) Stephen Decatur pitcher of Liverpool ware (185822, bequest).

MONRÓS, FRANCISCO, Tucumán, Argentina: 2 paratypes of a beetle (183690, exchange). (See also under Fundación Miguel Lillo.)

MONTANA STATE COLLEGE, Bozeman, Mont.: 4 grasses from Montana (184206, 185089).

MONTREAL BOTANICAL GARDEN, Montreal, Quebec: (Through James Kucyniak) 2 lichens (185567, 186010).

MOODY, Dr. W. DEAN, Gainesville, Fla.: 45 shrimps from Cedar Keys, Fla. (184969).

MOORE, Prof. WALTER G., New Orleans, La.: 18 marine invertebrates from Gillespie and Llano Counties, Tex. (185930).

MORLEY, RUSSELL A., Salem, Oreg.: 1 specimen of Willamette, Oreg., meteorite (100 grams oxidized material) and 1 specimen of josephinite from Josephine County, Oreg. (87 grams of pebbles) (185048, exchange).

MORRIS, Dr. EARL H., Boulder, Colo.: 1 Basket Maker III pitcher collected near Durango, La Plata County, Colo. (158027).

MORRISON, Dr. J. P. E. (See under Richard Byrne.)

MORTON, W. MARKHAM. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

MOSHER, CAROL A., Miami, Fla.: 10 sponges from Bimini (183111).

MOUREAU, CHARLES, Oklahoma City, Okla.: Brass crusie-type oil lamp (150997, deposit).

MUELLER, OSCAR O., Lewistown, Mont.: 6 samples of Colorado shale (Cretaceous) from Fergus County, Mont. (186862).

MUESEBECK, C. F. W. (See under U. S. Department of Agriculture, *Bureau of Entomology and Plant Quarantine.*)

MUMA, Dr. MARTIN H. (See under University of Nebraska.)

MUNRO, Dr. IAN S. R., Cronulla, New South Wales: 6 paratypes of gobioid fishes from Australia (185428, exchange).

MURILLO, LUIS MARÍA, Bogotá, Colombia: 1 lot of scale insects and 1 lot of ants (183433).

MURPHY, J. J. (See under Linde Air Products Co.)

MUSEÉ DU CONGO BELGE, Tervuren, Belgium: (Through Dr. Max Poll) 17 fishes from Africa (183422, exchange).

MUSEO ARGENTINO CIENCIAS NATURALES, Buenos Aires, Argentina: 1 Brazilian merganser (183507, exchange); (through Dr. Agustin Eduardo Riggi) 101 forms and 313 specimens of Argentine ants (184620, exchange).

MUSEO DE HISTORIA NATURAL "JAVIER PRADO," Lima, Peru: 252 plants from Peru (185049, 186810, gift-exchange).

MUSEO DE LA PLATA, Universidad Nacional de La Plata, La Plata, Argentina: 400 plants from Argentina (184798, exchange).

MUSEO NACIONAL, San José, Costa Rica: (Through Dr. Romulo Valerio Rodríguez) 3 specimens of alunite from

Cartago Province, Costa Rica (185163, exchange).

Museo Nacional de Ciencias Naturales, Madrid, Spain: (Through Dr. Dn. Emilio Fernendez Galiano) 6 meteorites from Spain: Barea (Logrono) 71 grams, Guarena (Badajos) 413 grams, Nulles (Zaragoza) 135 grams, Ojuelos Altos (Cordoba) 193 grams, Olemedilla de Alarcon (Cuenca) 91 grams, and Sena [Sigena] (Huesca) 163 grams (183890, exchange).

Museu Nacional, Rio de Janeiro, Brazil: (Through Dr. José C. M. Carvalho) 8 bugs, including 4 paratypes (182543, exchange); (through Dr. Haroldo Travassos) 27 fishes from Brazil (182800, exchange).

Museu Paranaense, Curitiba, Paraná, Brazil: 24 grasses from Brazil (184850).

Museu Paulista, São Paulo, Brazil: (Through P. E. Vanzolini) 97 frogs from Brazil collected by P. E. Vanzolini and Werner Bokermann (181800, exchange).

Muséum National d'Histoire Naturelle, Paris, France: (Through Dr. P. Chabanaud) 9 fishes, including 8 paratypes, from miscellaneous localities (183583, exchange); (through Dr. Gilbert Ranson) 2 portions of types of gorgonians (184855, exchange).

Musgrave, Dr. Paul N., Huntington, W. Va.: 5 flies from West Virginia (186847).

Myers, Dr. George S. (See under Stanford University.)

National Cotton Council of America, New York, N. Y.: (Through Margot Herzog) 29 cotton textiles produced by American manufacturers for 1950 (186991).

National Federation of Business and Professional Women's Clubs, Inc., New York, N. Y.: 1 marble cinerary urn, with lid, found at Anzio, Italy, on July 27, 1941, and ascribed to the late Roman Republican epoch (ca. 50 B. C.) and donated by the City of Rome to the Italian Business and Professional Women's Club (186640).

National Herbarium, Sydney, New South Wales: 33 plants from Australia (183561, gift-exchange); 1 plant from Australia (186775).

National Military Establishment:

Department of the Air Force, 207th Malaria Survey Department, San Francisco, Calif.: (Through Maj. Walter J. La Casse) 24 pinned adult mosquitoes from Japan and 11 slides of material (187181).

Department of the Army, Washington, D. C.: (See also under U. S. Department of Agriculture, *Alaska Insect Project.*)

Army Medical Corps: (Through Lt. Robert A. Harvey) 2 fishes from Canada (184263).

Army Medical Department Research and Graduate School: (Through Maj. Robert Traub) 98 mammals from Malaya (184623); 17 fleas, including types, together with 6 slides of mites from the Orient (185827).

Army Transportation Corps: (Through Maj. Gen. Frank A. Heilman) Portion of hull planking and copper sheathing of 18th-century English warship recovered from the James River, Yorktown, Va. (186503).

Chief of Engineers: 1 radio receiver, BC–24, complete with earphones, marked "Signal Corps, U. S. Army," 1918, and 1 calculating machine, hand-operated, Brunsviga pat. 1906 (185998); (through Ivan Donaldson) approximately 100 fresh-water mollusks and helminths from Bonneville Dam, Oreg. (185039).

406th General Medical Laboratory: (Through Col. George W. Hunter, III) Approximately 200 mollusks from Japan (184689).

Office of the Adjutant General: United States Army uniforms of the period of World War II (103 specimens) (183059).

Office of Chief Signal Officer: Signal Corps pigeon "Kaiser" (168722).

Office of the Quartermaster General: (Through Arthur E. DuBois) Shoulder sleeve insignia of the XVIII Corps, United States Army (186837).

Supreme Commander for the Allied Powers, Tokyo, Japan: 50 mosses from Japan (186266); (through Maj. Gen. Edward F. Witsell) 10 Japanese algae (186988).

Natural Resources Section: (Through Lt. Col. Hubert G. Schenck) 40 specimens of commercial woods of Japan (185318).

Department of the Navy, Washington, D. C.: (Through Martin W. Johnson and Mary Sears) 2 specimens, including 1 holotype, of siphonophores from Bikini (186676).

Bureau of Medicine and Surgery: 13 land mollusks from Madagascar, collected by Harry Hoogstrall (185540).

Bureau of Ships: Scale models of the U. S. S. *Washington* (CAII), U. S. S. *Yorktown* (CVIG), and 33 carrier planes, together with two exhibition cases (184922, loan).

"Crossroads" Project: (Through Dr. H. S. Ladd) 6 alcyonarians (186665).

Hydrographic Office: (Through Capt. Allen Hobbs) Approximately 150 land and marine mollusks from Portugal and the Azores (186818).

Office of Naval Research, Arctic Research Laboratory, Fairbanks, Alaska: (Through Vladimir Walters) 421 fishes from near Point Barrow, Alaska (184069); (through Prof. Neal A. Weber) approximately 314 fresh-water Crustacea from Point Barrow (184247); (through Prof. and Mrs. G. E. MacGinitie) approximately 1,146 marine invertebrates, 8 lots of Foraminifera, 3 fishes, together with echinoderms (184847); approximately 1,425 marine invertebrates together with fishes and echinoderms from the vicinity of Point Barrow, Alaska (186478); (through Mrs. G. E. MacGinitie) 120 marine mollusks from Alaska (187031).

U. S. Naval Air Station, Saipan, M. I.: (Through Capt. S. P. Sanford) 1 marine leech (184391).

National Photographic Society, Washington, D. C.: (Through Ann Katrine Shaw) 7th Annual Salon of the National Photographic Society, consisting of 64 monochrome prints and 42 color transparencies, for special exhibit during January 1950 (185721, loan).

National Speleological Society, Washington, D. C.: (Through Burton Faust) 60 prints from 3d Annual Salon of the National Speleological Society lent for exhibit during May 1950 (186835, loan).

Naturhistorisches Museum, Vienna, Austria: 100 cryptogams (183384, exchange); 2 lichens from the Wawra Expedition (184580, exchange); (through Dr. Friedrich Trauth) 764 Triassic brachiopods from Austria (183500, exchange).

Naturhistorisches Museum, Basel, Switzerland: (Through Dr. S. Schaub) Collection of 133 specimens and 3 casts representing about 12 extinct species of birds from the upper Aquitanian of France (185416, exchange).

Natur-Museum Senckenberg, Frankfurt-am-Main, Germany: (Through Dr. Richard Bott) 8 crayfishes (184934, exchange); (through Dr. Robert Mertens) 14 frogs from Brazil (186110, exchange).

Nayar, Dr. K. Nagappan, Madras, India: 104 amphipods (185174).

Nebraska, University of, Lincoln, Nebr.: (Through Dr. Martin H. Muma) 14 wasps from United States (186099); (through the Smithsonian Institution, *Bureau of American Ethnology, River Basin Surveys*) 14 colored plaster casts, reproducing a series of pre-pottery stone artifacts

found at the Allen Site, on right bank of Medicine Creek, approximately 1 mile upstream from Medicine Creek Dam, Fronteri County, Nebr. (186181).

NEBRASKA GEOLOGICAL SURVEY, Lincoln, Nebr.: (Through M. K. Elias) 3 specimens, representing paratypes of 2 species, of Pennsylvania bryozoans from Nebraska (184207);

NEEDLER, Mrs. ALFREDA B. (See under Canadian Government, *Fisheries Research Board.*)

NEIDORF, CHARLES, New York, N. Y.: 37 ferns from Westchester County, N. Y. (184221).

NEILL, W. T. (See under E. Ross Allen.)

NELSON, G. H., Takoma Park, Md.: 18 beetles from Kennewick, Wash. (185100).

NEWMAN, S. B. (See under U. S. Department of Commerce, *National Bureau of Standards.*)

NEW YORK BOTANICAL GARDEN, New York, N. Y.: 41 plants (183304, 183350); 25 specimens of cultivated Bromeliaceae (183330, 183677); 7 plants from Ecuador (183752); 2 plants from Mexico (184968, 185046); 9 plants from Peru (185457, 186990); 315 ferns from Ecuador (185546); 2 plants from Mexico and Brazil (185558); 298 plants collected in Ecuador by W. H. Camp (185812, 186494); 11 cultivated plants (186495); 10 photographs of plant specimens, types and isotypes (186591); 45 lichens collected by L. J. Brass in Africa (187023, exchange).

NEW YORK STATE MUSEUM, Albany, N. Y.: 2 grasses from Tennessee (183517); 35 miscellaneous grasses (184012); 127 miscellaneous grasses (185993, exchange).

NEW ZEALAND DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH, Wellington, New Zealand: 2 grasses from New Zealand (185999, exchange).

NICÉFORO MARÍA, Brother, Pamplona, Colombia: 1 tanager (183441).

NICHOLSON, H. P., Savannah, Ga.: 8 flies, all paratypes, from Minnesota (184167).

NICOLAY, ALAN S. (deceased), Upper Montclair, N. J.: 10,593 beetles mostly from North America (186644, bequest).

NININGER, H. H., Winslow, Ariz.: 1 specimen of the Rolla No. 2, Morton County, Kans., meteorite, weighing 10.8 grams (186625, exchange).

NISSON, W. H., Petaluma, Calif.: Specimen of veatchite from Lang, Los Angeles County, Calif. (186863).

NOLAN, EDMUND L., Cumberland, Md.: 60 land snails from Cumberland (183256).

NORTH CAROLINA, UNIVERSITY OF, Raleigh, N. C.: 3 plants (184792); 31 plants from North Carolina (186828, exchange).

Institute of Fisheries Research, Moorehead City, N. C.: (Through Carter Broad) 16 shrimps from Carolina coast (183301).

NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING, Raleigh, N. C.: 120 plants from North Carolina (187081, exchange).

NORTH DAKOTA, UNIVERSITY OF, Grand Forks, N. Dak.: (Through Prof. G. C. Wheeler) 4 toads from Manitoba (184966).

NORTH DAKOTA AGRICULTURAL COLLEGE, *Agricultural Experiment Station*, Fargo, N. Dak.: 200 plants from North Dakota (184885, exchange).

NUDELMAN, LOUISE. (See under Popular Photography.)

NUÑEZ, Dr. RENÉ. (See under Instituto de Pesca del Pacifico.)

NUTT, DAVID C. (See under Smithsonian Institution, *National Museum, collected by members of the staff.*)

OBERG, Mrs. RUTH, Oaxaca, Oaxaca: 1 green leaflike katydid from Mexico (185536).

O'BRIEN, Dr. BRIAN, and Dr. GORDON G. MILNE, Rochester, N. Y.: Third-prize-winning photograph, monochrome division, 2d Annual Photography-in-Science Competition of 1948, and photograph exhibited in the 3d Annual Competition of 1949, by Drs. O'Brien and Milne (185251).

OCHOA, Dr. C., Huancayo, Peru: 53 plants from Peru (186402).

Ohio State Museum, Columbus, Ohio: (Through Dr. Edward S. Thomas) 1 beetle from Guatemala (183273).

Ohio State University, Columbus, Ohio: (Through Prof. J. N. Knull) 124 beetles from North America (186423).

Ohwi, Dr. Jisaburo, Tokyo, Japan: 619 grasses from Japan (183675).

Oklahoma Agricultural and Mechanical College, Stillwater, Okla.: 1 grass from Oklahoma (183516).

Old, William E., Jr., Norfolk, Va.: 12 lots of land and fresh-water mollusks from North Carolina and the Solomon Islands (182865, exchange).

Old World Archeological Fund, Smithsonian Institution: 4 gold ornaments from Chiriquí Province, Panamá (184319).

Olmsted, Dr. A. J., Arlington, Va.: Motometer, made by the Motometer G. & E. Corp., Long Island City, N. Y., in the late teens and early twenties (186992).

Olop, Stephen, Washington, D. C.: 1 51–mm. disk of beryllium (184053, exchange); 2 Upper Cambrian cryptozoons (185534).

Olsen, John H., Perth Amboy, N. J.: Edison spark coil (186246).

Olsson, A. A., Philadelphia, Pa.: 1 Upper Cretaceous pelecypod from the Baculites zone, shore cliffs north of Tortuga village, south side of Paita Peninsula, Peru (184312).

Omer-Cooper, Prof J., Grahamstown, South Africa: Approximately 100 insects, mostly Diptera, collected in South Africa (184015).

Omwake, H. Geiger, Lewes, Del.: Nearly complete skeleton with skull and lower jaw of male Indian, from refuse pit on knoll at west end of field behind Fort Miles Station Hospital at Lewes (185305). (See also under Sussex Archaeological Association.)

Opperman, David R., Piper City, Ill.: 2 unused copies of United States postage stamps, 3-cent violet (Lincoln), 4-cent yellow-brown (Martha Washington) (184602).

Oregon State College, Corvallis, Oreg.: (Through Dr. Vincent D. Roth) 8 amphipods (185234).

Oregon State Fish Commission, *Research Laboratory*, Astoria, Oreg.: (Through George Y. Harry, Jr.) 3 rockfishes taken by the *Yaquina* in 150 fathoms off Newport, Oreg., May 1949 (183223).

Oregon State System of Higher Education, Eugene, Oreg.: 1 plant collected in beach drift in Oregon (185740).

Orndorf, Frank, Capon Bridge, W. Va.: 1 red-tailed hawk (184695).

Osborn, Ben O., San Angelo, Tex.: 1 lichen (183349). (See also under U. S. Department of Agriculture, *Soil Conservation Service.*)

Osborne, Dr. F. F., Quebec, Quebec: A specimen of hisingerite from Montauban les Mines, Portneuf County, Quebec (185206, exchange).

Osorio, Dr. José M., Habana, Cuba: 1 beetle from Cuba (184166).

Ott, Mrs. Christoph E., Arlington, Va.: United States National Ensign, 5 x 9 inches, silk ribbon, hand-sewed, 34 stars, period of 1862 (186578).

Oughton, Charles D. (See under Battelle Memorial Institute.)

Pacific Marine Station, Dillon Beach, Marin County, Calif.: (Through Robert J. Menzies) 65 isopods, all but 2 specimens representing types of new species (183251).

Panama Canal, The, *Health Department*, Balboa Heights, C. Z.: 14 mammals collected by Dr. Herbert C. Clark in the Chagres Valley, Panama (183312); skulls of 22 mammals from Panama, including porcupine, marmosets, howler monkey, white-faced capuchin monkey, and kinkajou (183494); 91 mammals collected in various localities of Panama by Dr. Herbert C. Clark (183706, 183946, 184084, 184323, 184645); 16 howler monkeys from Panama (183840); (through Dr. K. O. Courtney) 139 mammals from Panama (185554).

Pan American Sanitary Bureau, Washington, D. C.: (Through Dr.

Atilio Macchiavello) 32 mammals from Bolivia (182946).

PANGBURN, Lt. Col. CLIFFORD, St. Augustine, Fla.: 3 specimens and the egg cases of a marine snail and one crab from Florida (184318).

PARKER, ALBERT, Washington, D. C.: 28 Greek coins and 155 Roman coins (186419).

PARKER, L. P., Arlington, Va.: Skull of red fox from Maine (185031).

PATERSON, W. C., Denver, Colo.: (Through Dr. John P. Marble) 5 specimens of carnotite from the Yellow Circle Mine, near Moab, San Juan County, Utah (185093).

PEARSE, Dr. A. S., Durham, N. C.: Approximately 242 marine invertebrates from Black Rocks, off New River, N. C. (183351); approximately 471 marine invertebrates, including types, from North and South Carolina (183864); 3 alcyonarians (184330); approximately 200 marine mollusks from New River, N. C. (185621); approximately 80 copepods, 1 isopod, and hard corals (186492).

PEASE, Mrs. H. M., Washington, D. C.: 1 yellow-bellied sapsucker and 1 black-throated blue warbler (186953).

PECK, Mrs. BERTIE, San Jose, Calif.: Old pictorial, blue-printed linen square, entitled "The Veteran Defeated" (183492).

PENN, Prof. GEORGE HENRY, New Orleans, La.: Approximately 240 crayfishes (186891). (See also under Tulane University.)

PENNAK, Dr. ROBERT W., Boulder, Colo.: 14 flies in immature stages (184501).

PERRY, Dr. STUART H., Adrian, Mich.: 2 specimens of the Kearney, Nebr., meteorite, weighing 8.40 kilograms and 502 grams (185023); 2 specimens of meteoric iron beads from Havana, Mason County, Ill., a total weight 12.7 grams (185143); 1 specimen of the Densmore, Kans., meteorite, weight 13½ pounds (185474).

PERSHING, FRANCIS WARREN, New York, N. Y.: (Through Col. Ralph A. Curtin) 27 pieces of Moro, Bagobo, and Mandaya costume collected by Gen. John J. Pershing during his tours of duty in the Philippine Islands between 1899 and 1913, and 37 pieces of costume which he acquired from Peruvian and Bolivian Indians during a visit to South America in 1924–25 (187074).

PETERSON, MENDEL L., Arlington, Va.: 1 specimen of koa wood collected in November 1947 by the donor on Tutila Island, American Samoa (187171).

PETIT, J. H., Nakomis, Fla.: 17 lower cheek teeth and 3 upper teeth of fossil horse collected in Florida (186073).

PEYTON, Capt. GARLAND. (See under Georgia State Department of Mines, Mining, and Geology.)

PHELPS, W. H., Caracas, Venezuela: 5 birds from Venezula all representing forms new to the Museum's collection (183845, exchange); 1 Venezuelan night heron (183969).

PHILIP, Dr. C. B. (See under Federal Security Agency, *U. S. Public Health Service.*)

PHILIPPI B., Dr. R. A., Santiago, Chile: 1 Chilean hawk (183279).

PHILLIPS, HARRY, Washington, D. C.: 1 plant collected from plantation in Mississippi (186809).

PHIPPS, A. O., Dallas, Tex.: 1 large group of gypsum crystals from the junction of Cottle, Guthrie, and King Counties, Tex. (187099).

PICHI-SERMOLLI, Dr. R. E. (See under Istituto Botanico.)

PIERCE, Prof. E. LOWE, Gainesville, Fla.: 11 copepods (186603). (See also under University of Florida.)

PILOUS, ZDENĚK, Hostinné n. L., Czechoslovakia: 600 plants (bryophytes) (183459, exchange).

PILSBRY, Dr. HENRY A. (See under Academy of Natural Sciences of Philadelphia.)

PITELKA, Dr. F. A. (See under University of California, *Museum of Vertebrate Zoology.*)

PITTS, WILLIAM B., San Francisco, Calif.: 1 brilliant cut stone of labradorite from Utah, weighing 11.07 carats (185247, exchange).

Pizzini, Andrew, Washington, D. C.: Approximately 10 amphipods taken from a spring in Fairfax County, Va. (184751).

Plummer, Dr. Helen Jeanne, Austin, Tex.: 21 type specimens from the Pennsylvanian Brownwood shale of Bridgeport, Tex. (184211).

Poiley, Samuel. (See under Federal Security Agency, *U. S. Public Health Service.*)

Poll, Dr. Max. (See under Museé du Congo Belge.)

Polunin, Dr. Nicholas, Montreal, Quebec: 95 Canadian lichens (186213).

Polytechnic Institute of Puerto Rico, San Germán, P. R.: 59 plants collected by Dr. Ismael Vélez in the Lesser Antilles (185372); 23 plants of the Leeward Islands collected by Dr. Vélez (185936); 19 plants collected in the West Indies by Dr. Vélez (186951).

Pomona College, Claremont, Calif.: (Through Prof. William A. Hilton) 7 salamanders from Idaho, California, and Oregon collected by Professor Hilton (186667, exchange).

Pond, Mrs. Abbott S., Basin, Wyo.: 2 specimens of dahllite from Wyoming (185661).

Pope, Mrs. John A. (See under American Federation of Arts.)

Pope, Estate of Leander G., Fort Myers, Fla.: (Through S. C. Douglass) 1 calendar watch, marked "Waltham Perpetual" (159663, bequest).

Popular Photography, Chicago, Ill.: (Through Louise Nudelman) 107 pictorial photographs of the 5th *Popular Photography* Traveling Salon for special exhibition during February 1950 (185821, loan).

Post, E. J., Tampa, Fla.: 1 chalcedony nodule containing water from Tampa Bay, Fla. (184194).

Post, Hoyt G., White Plains, N. Y.: 1 myrtle warbler (185882).

Post Office Department, U. S., Washington, D. C.: 1 specimen each of postage stamps, etc., issued in foreign countries and described in Universal Postal Union Circular No. 14 dated May 17, 1949 (294 specs.) and 1 specimen each of 9 items of Canal Zone postage (183194); 1 specimen each of the postage stamps, etc., issued in foreign countries and described in the Universal Postal Bulletin No. 18 of July 19, 1949 (total 229 specimens) (183735); 1 specimen each of the postage stamps, etc., issued in foreign countries and described in Universal Postal Union Bulletins No. 21 of August 25 and No. 24 of September 27, 1949 (495 specimens) (184397); 1 specimen each of postage stamps, etc., issued in foreign countries and described in Universal Postal Union Bulletin No. 26 (104 specimens) and 1 specimen of 2-cent Canal Zone stamp with likeness of President Theodore Roosevelt placed in circulation October 27, 1949 (184898); 3 copies each of the following United States commemorative postage stamps: 3-cent Grand Army of the Republic, 3-cent Edgar Allen Poe, 15-cent Universal Postal Union, 10-cent Universal Postal Union (12 specimens) (185097); 1 specimen each of postage stamps issued in foreign countries and described in Universal Postal Union Bulletin No. 30 of November 29, 1949 (61 specimens) (185127); 1 specimen each of postage stamps issued in foreign countries and described in Universal Postal Union Bulletins Nos. 31 and 34 of November 30 and December 30, 1949 (507 specimens) (185935); 3 copies each of the following United States commemorative postage stamps: 25-cent Universal Postal Union, series 1949; 6-cent Wright Brothers Air Mail, series 1949; 3-cent American Bankers' Association, series 1950; 3-cent Samuel Gompers, series 1950 (185955); 1 specimen each of postage stamps issued in foreign countries and described in Universal Postal Union Bulletins Nos. 3, 7, and 8 of January 31, February 28, and March 7, 1950 (567 specimens) (186383); 1 specimen each of postage stamps issued in foreign countries

and described in Universal Postal Union Bulletin No. 10 of March 24, 1950 (268 specimens); album containing ordinary and commemorative stamps of the Republic of Korea issued since 1946 (44 specimens) (186609); 1 specimen each of postage stamps issued in foreign countries and described in Universal Postal Union Bulletin No. 13–IV dated April 21, 1950 (202 specimens) and 18 Polish postcards of 10 zloty each as listed in Universal Postal Union Bulletin No. 8–IV (186892); (through Greever Allen) 1 specimen each of postage stamps, etc., issued in foreign countries and described in Universal Postal Union Circular No. 15 dated June 30, 1949 (129 specimens) (183474).

POTTER, STANLEY, Alexandria, Va.: Combination spark plug and coil, "Perfex" model B, built by Samson Electric Co., Canton, Mass. (185470); a 5-tube toroid coil radio receiver (185886).

POULTER, Dr. THOMAS C., Stanford, Calif.: First-prize-winning print from the 2d Annual Photography-in-Science Competition, 1948, made by Dr. Poulter (185028).

POULTER, Dr. THOMAS C., and Dr. WALTER LAWTON, Stanford, Calif.: Third-prize-winning print, color division, 3d International Photography-in-Science Competition (185029).

POWELL, Dr. A. W. B. (See under Auckland Institute and Museum.)

POWELL, ELLA MAE, Washington, D. C.: A floral-and-fruit-decorated table cover in raised woolwork made by donor's mother, Mrs. Fielding Travis Powell, in 1855 (184386).

PRATT, Dr. HARRY D. (See under Federal Security Agency, *U. S. Public Health Service.*)

PRICE, JOHN. (See under Richard Jenkins.)

PRINCETON UNIVERSITY, Princeton, N. J.: (Through Dr. Glenn L. Jepsen) 1 cast of last upper molar of tillodont collected in Cathedral Bluffs tongue of Wasatch formation in South Wyoming, summer of 1949, by Bill Morris (186869).

PROCTOR, GEORGE R., New Castle, Del.: 45 plants (184995, exchange).

PROVINCIAL MUSEUM, Victoria, B. C.: (Through Dr. G. Clifford Carl) 16 amphipods (185580).

PRUITT, R. J., Washington, D. C.: 1 spider (184212).

PURDUE UNIVERSITY, Lafayette, Ind.: 1 plant collected in Texas (186563).

Agricultural Experiment Station: (Through J. J. Davis) 1 beetle from Isle of Pines, West Indies (186050).

QUINN, J. M., Jr., Washington, D. C.: 1 gray fox from near Accotink, Va. (184427).

RADO, Mrs. ADELAIDE DOROTHY WALL (deceased), East Orange, N. J.: (Through Adolph Rado) A chintz appliqué quilt made in 1837–38 by Mrs. James Lusby, Washington, D. C., grandmother of Mrs. Rado (186151).

RADO, ADOLPH. (See under Mrs. Adelaide Dorothy Wall Rado.)

RAEMAEKERS, Dr. R. H., Coquilhatville, Belgian Congo: 69 land, fresh-water, and marine shells mostly from the Belgian Congo and Europe (187193, exchange).

RAGEOT, ROGER, Newport, Md.: 14 small mammals collected at Newport (185492, 187190).

RAKOWICZ, M., Oakland, Calif.: 1 plant from Brazil (183907).

RAMSEY, JAMES A., Hyattsville, Md.: World War II German Army uniforms and accessories (35 specimens) (185483).

RANCHO SANTA ANA BOTANIC GARDEN, Anaheim, Calif.: 222 plants (185456, exchange).

RANEY, Prof. EDWARD C. (See under Cornell University.)

RANSON, Dr. GILBERT. (See under Muséum National d'Histoire Naturelle.)

RAPP, F. W., Vicksburg, Mich.: 14 grasses from Michigan (185371).

RAPP, FLOYD A., Washington, D. C.: 14 specimens of quartz, columbite, ishakawaite, uvarovite, and other species from various localities in Ja-

pan (186866); 2 Japanese manufactured synthetic rubies, one an oval mixed cut weighing 6.12 carats, and the other a round double cabochon weighing 3.40 carats (187100).

RASETTI, Dr. FRANCO, Baltimore, Md.: 150 Triassic invertebrate fossils from Italy (184892).

RAUSCH, ROBERT. (See under Federal Security Agency, *U. S. Public Health Service.*)

RAY, L. L., Washington, D. C.: 1 specimen of quartz paramorphs after tridymite in quartz-latite from Home, Colo. (186702).

RAYMOND, ALVAH, South Weymouth, Mass.: 1 grasshopper from Mount Burke, Vt. (283950).

REED, FRED, Christchurch, New Zealand: 1 sample of diatomaceous earth from Carmacks, New Zealand (184484).

REED, Mrs. JOHN FRANKLIN, Concord, N. C.: (Through cooperation of Mrs. Charles A. Cannon) A balance for weighing gold (185076).

REESE, ALBERT. (See under Kennedy & Co.)

REESIDE, Dr. JOHN B., Jr. (See under U. S. Department of the Interior, *Geological Survey.*)

REEVES, Dr. FRANK, Washington, D. C.: A specimen of altered iron shale ball from the Woolf Creek Crater, Australia, weighing 388 grams (184682).

REHDER, SUZANNE F., Wood Acres, Md.: 1 land shell from Wood Acres, Montgomery County, Md. (186903).

REINHARD, Dr. EDWARD G., Washington, D. C.: 3 shrimps (183034).

REINHARD, Prof. H. J., College Station, Tex.: 27 flies, including types from Mexico (185484, exchange); 8 flies from Texas (186705).

RENFROE, C. A., Little Rock, Ark.: 1 core sample from the Upper Cretaceous of Monroe County, Ark., and 1 sample from the Paleocene Midway formation of Pulaski County, Ark., collected by donor and Norman Williams (185026).

RESE, Mr. and Mrs. ALBERT A., New York, N. Y.: United States gold lifesaving medal awarded by an act of United States Congress to Albert Rese, June 18, 1922 (185722).

RESSLER, Capt. LOUIS, Salerno, Fla.: (Through Stewart Springer) Head and skin of an adult male thrasher shark taken at Salerno (183698).

RHODES UNIVERSITY COLLEGE, Grahamstown, South Africa: (Through Prof. J. L. B. Smith) 5 fishes, including two paratypes, from Delagoa Bay, East Africa (186274, exchange).

RICHARDS, Dr. HORACE G. (See under Academy of Natural Sciences of Philadelphia.)

RICHARDSON, Mrs. HENRY WALLACE, Chevy Chase, Md.: 2 white hand-embroidered specimens, an infant's christening robe and a small boy's dress, and a girl's dress decorated with examples of open braid work (183680).

RICHMOND, JAMES T., Mount Sherman, Ark.: Left half of deformed human skull and right innominate, found at bottom of natural limestone cave or jug, 135 feet deep in Newton County, Ark.; also right humerus of raven from same site (168156).

RICHTER, Dr. RUDOLF. (See under Senckenberg Museum.)

RICKER, EUGENE C. (See under Battelle Memorial Institute.)

RICKER, P. L. (See under J. Norman Spawn.)

RIGGI, Dr. AGUSTIN EDUARDO. (See under Museo Argentino de Ciencias Naturales.)

RIJKSMUSEUM VAN NATUURLIJKE HISTORIE, Leiden, Holland: (Through Dr. W. Vervoort) Approximately 155 copepods (184556, exchange).

RILEY, NORMAN D., London, England: (Through J. F. G. Clarke) 15,000 British moths (186959).

RINDGE, Dr. FREDERICK H. (See under American Museum of Natural History.)

RISER, Dr. NATHAN W., Philadelphia, Pa.: 1 hydroid type specimen (183844).

RITCH, Mrs. RUTH WATERMAN. (See under Marshall Nehimiah Waterman.)

RITCHIE, C. T. (See under U. S. Department of Agriculture, *Bureau of Entomology and Plant Quarantine.*)

ROBB, W. M., Guide Rock, Nebr.: Greater part of skull of Pleistocene (?) wolf collected 1 mile south of Guide Rock in Republican River project (185126).

ROBERTSON, G. A. (See under Mrs. James L. Blizzard.)

ROBINSON, J. H., Greenville, Ill.: 29 beetles, mostly from Texas (186157).

ROCHOW, T. G. (See under American Cyanamid Co.)

RODRÍGUEZ, Dr. ROMULO VALERIO. (See under Museo Nacional, San José, Costa Rica.)

ROEBLING FUND, Smithsonian Institution: A collection of 10 minerals consisting of gratonite, bismutite, cristobalite, etc., from various localities of the United States and the Island of Cyprus (183985); 16 minerals, xanthophyllite, rossite, carnotite, and hewetite from localities in California and Colorado (184052); 1 bar of old Spanish silver, 75 lbs. Troy (184055); 2 specimens of goldfieldite from Goldfield, Nev. (184163); 5 minerals, 1 specimen of searlesite from Green River, Wyo., and 4 specimens of mackayite from Goldfield, Nev. (184423); 10 specimens of creedite, hochschildite, danburite, alaskaite, jujuite, and vivianite from Bolivia (185210); a collection comprising 35 mineral specimens, such as enargite, danburite, galena, quartz, tellurite, and gold from various localities in Japan (185250); 2 specimens of adularia and 1 of fluorite on quartz, from Galenstock-Rhonegletscher, Switzerland (185616); 2 specimens of albite and 1 of muscovite from Minas Gerais, Brazil (185818); 1 specimen of calcite and aurichalcite from the Magdalena district, N. Mex. (185911); 1 9.04-carat green apatite from Canada and 1 polished slab of moss agate from India (186042); 4 mineral specimens, pachnolite, ivigtite, hagemannite, and gearksutite from Ivigtut, Greenland (186044); 2 minerals, aluminite from Wyoming and anthraxolite from Canada (186045); 1 specimen of murmanite from the Kola Peninsula, U. S. S. R. (186046); a collection of approximately 900 specimens of azurite, malachite, cerussite, anglesite, descloizite, dioptase, and other minerals from Tsumeb, South-West Africa (186286); 3 specimens of jadeite (approximately 300 pounds) from Kotaki Village, W. Kubiki Co., Niigata Prefecture, Japan (186294); 16 specimens of columbite, tantalite, bismutotantalite, magnesite, thomsonite, magnetite, euxenite, and other minerals from various localities in Africa (186411); 6 mineral specimens: Krausite, coquimbite, voltaite, roemerite, and halotrichite from Borate, San Bernardino County, Calif. (186412); 1 specimen of eglestonite from near Redwood City, San Mateo County, Calif. (186995).

ROGERS, Dr. C. M., Detroit, Mich.: 980 plants collected in the "Mesa de Maya Region" of Colorado, New Mexico, and Oklahoma (183176, 185729).

ROHRER, JOSEPHINE A., Washington, D. C.: 2 coins, Roman Denarius of T. Cloulius, B. C., 119, and Scudo of the Republic of Lucca, Italy, 1756 (186280).

ROLISON, C. L. (See under Estate of Mrs. Lizzie F. Lyon.)

ROSCH, MELVILLE C., White Plains, N. Y.: 19 photographic prints, 1 composite picture, 3 original paper negatives of the May 26, 1854, eclipse, and 24 paper negatives, 3 prints and photograph of the maker, Victor Prevost (51 specimens) (183293).

ROSENGURTT, Dr. BERNARDO, Florida, Uruguay: 50 plants from Uruguay (183761, 184039); 21 grasses from Uruguay (184038); 25 plants from Uruguay and Paraguay (184040).

ROSS, Dr. EDWARD S. (See under California Academy of Sciences.)

ROSS, Dr. H. H., Urbana, Ill.: 49 sawflies (184384). See also under the University of Illinois, *Illinois State Natural History Survey Division.*)

ROTH, Dr. VINCENT D. (See under Oregon State College.)

ROWLAND, D. H., Pittsburgh, Pa.: Scientific photograph by donor, "Experimental Galvanized Coating Formed by Immersing a Low Carbon Silicon-killed Steel for 10 Minutes in Molten Zinc at 840° F. (450° C.)" (186577).

ROWLEDGE, H. P., Perth, Western Australia: 2 specimens of bowleyite and duplexite from Western Australia (184099); a specimen of formanite (yttrotantalite) from Cooglegong, Western Australia (184497).

ROWLEY, ELMER B., Glens Falls, N. Y.: 1 specimen of hypersthene in garnet from North Creek, N. Y. (185014, exchange).

ROYAL ONTARIO MUSEUM OF PALEONTOLOGY, Toronto, Ontario: (Through Dr. L. S. Russell) Cast of skull and lower jaws of dinosaur from Canada, Upper Cretaceous, Belly River Series formation, collected by Levi Sternberg in 1935 (181620, exchange).

ROZEBOOM, Dr. LLOYD E., Baltimore, Md.: 4 mosquitoes, including types, from Colombia (184104).

RUCKES, Dr. HERBERT. (See under City College of New York.)

RUDD, VELVA E., Washington, D. C.: 173 plants from North Dakota (184043).

RUMSEY, FRED. (See under E. Knowles Jordan.)

RUNYON, ROBERT, Brownsville, Tex.: 55 plants from Texas (185946).

RUSSELL, Dr. L. S. (See under Royal Ontario Museum of Paleontology.)

RYAN, MATTHEW K., Washington, D. C.: An English Martini-Enfield bayonet and scabbard, model 1883 (186272).

SABROSKY, CURTIS W., Washington, D. C.: 2 flies, holotype and allotype, collected in Florida (185693); 8 flies, including types, from Kansas and Florida (186839).

SAEGMULLER, Mrs. GEORGE, Arlington, Va.: 2 zithers inlaid with bone, ebony, and mother-of-pearl, together with miscellaneous accessories, used by the father of the donor (186852).

SAHAMA, Dr. TH. G., Helsinki, Finland: 5 specimens of iron-hypersthene, chrometremolite, monrepite, and "silico-magnesio-fluorite" from Finland (184475, exchange).

SAILER, Dr. R. I. (See under U. S. Department of Agriculture, *Alaska Insect Project.*)

SALAT, CHARLES J. (See under Armour Research Foundation of Illinois Institute of Technology.)

SANFORD, Capt. S. P. (See under National Military Establishment, *Department of the Navy, U. S. Naval Air Station.*)

SARGENT, F. H., Falls Church, Va.: 1 plant from New Jersey (183518); 1 plant from New Brunswick (184097); 1 plant from Kansas (186245); 2 plants from Virginia (186271).

SARLES, E. H., Norwood, Ohio: 75 Devonian fossils from the vicinity of Sylvania, Ohio (184051); 1 fluorite specimen from Chinn Mine, Mundys Landing, Ky. (185611).

SASSCER, E. R. (See under U. S. Department of Agriculture, *Bureau of Entomology and Plant Quarantine.*)

SÂTO, Dr. M., Tsuruoka, Yamagata, Japan: 7 lichens from Japan (184488).

SAUNDERS, Mrs. G. B., Denver, Colo.: 6 grasses from Mexico (184793).

SAYLOR, L. W., Atlanta, Ga.: Approximately 620 miscellaneous insects (185824).

SBARBARO, CAMILLO, Genova, Italy: 59 lichens from Italy (184487, exchange).

SCALAMANDRÉ, FRANCO, New York, N. Y.: 7 yards of crimson silk damask, 50 inches wide, reproduction of 17th-century design, for upholstering the George Washington wing chair (184896).

SCALAMANDRÉ MUSEUM OF TEXTILES, New York, N. Y.: Special loan exhibit, "The Symbol of the Rose in Textile Design," including 22 antique fabrics and 53 new fabrics some of which are reproductions (183943, loan).

SCALES, MILDRED B. (See under Metropolitan Camera Club Council, Inc.)

SCATTERGOOD, Dr. LESLIE W. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

SCHAAF, DAN. (See under Hales & Hunter Co.)

SCHAUB, Dr. S. (See under Naturhistorisches Museum, Basel, Switzerland.)

SCHEDL, Dr. KARL E., Lienz, Ruefenfeldweg, Austria: 10 beetles from Brazil (182572, 185726, exchange).

SCHEFFER, Dr. VICTOR B. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

SCHENCK, Lt. Col. HUBERT G. (See under National Military Establishment, *Department of the Army, Supreme Commander for the Allied Powers.*

SCHILLING, WILLIAM, Washington, D. C.: 1 Bosch 6-cylinder dual magneto, type ZR–6, Serial No. 1,325,336, and 1 Bosch type C ignition coil, 6 volts, Serial No. 151,985 of the type used in conjunction with a Bosch dual magneto (186859).

SCHMIDT, JACK, Lake Worth, Fla.: 6 lots of marine mollusks from Florida to be used for school collections (183816, exchange); approximately 1,000 miscellaneous mollusks mainly from Florida (185032); 11 lots of miscellaneous mollusks from Florida (185841, exchange); 4 lots of land mollusks, including one cotype, from the H. C. Higgins collection (186123, exchange); 1 marine mollusk from South Africa (187010, exchange).

SCHMIDT, K. P. (See under Chicago Natural History Museum.)

SCHMITTER, EDUARDO, Mexico, D. F.: A specimen of paraguanajuatite with guanajuatite and scheelite from León, Guanajuato, Mexico (186864).

SCHOLANDER, Dr. P. F., Point Barrow, Alaska: 4 lichens from Colorado (184483).

SCHROEDER, WILLIAM C. (See under Harvard University, *Museum of Comparative Zoology.*)

SCHULE, STEWART, Palmyra, Pa.: 1 complete specimen of trilobite from Pennsylvania (187174).

SCHULTZ, Dr. ALARICH R., Porto Alegre, Rio Grande do Sul, Brazil: 3 plants (186241).

SCHULTZ, Mrs. JOHN, Washington, D. C.: Gold silk dress worn by Mrs. Samuel Bond at her wedding in 1855 (183870).

SCHWEICKERDT, Dr. H. D., Pretoria, Union of South Africa: 237 plants from South Africa (185715, exchange).

SCHWENGEL, Dr. JEANNE S., Greenwich, Conn.: 32 land, fresh-water and marine mollusks (184718); 13 marine mollusks, including types from the Indo-Pacific region (185620); 10 marine shells from the Pacific Islands (187195).

SCIENTIFIC MONTHLY, THE. (See under Smithsonian Institution.)

SCULLEN, Dr. H. A., Corvallis, Oreg.: 9 paratypes of wasps representing 5 species (185311).

SEAMSTER, Dr. AARON, Corpus Christi, Tex.: 4 copepods (186177). (See also under Del Mar College.)

SEARS, MARY. (See under National Military Establishment, *Department of the Navy.*)

SECRETARIA DA AGRICULTURA INDÚSTRIA E COMÉRICO, *Servico Florestal*, São Paulo, Brazil: 94 plants from Brazil (183316, 184161); 19 plants from Brazil, collected by Dr. D. B. Pickel (184158); 12 grasses from Brazil (187170).

SENCKENBERG MUSEUM, Frankfurt-am-main, Germany: (Through Dr. Rudolf Richter) 29 Devonian brachiopods from Germany (184071, exchange).

SERVIÇO DE PISCICULTURA, *Departamento Nacional de Obras Contra as Sêcas*, Fortaleza, Ceará, Brazil: 4 plants (184403).

SESHADRI, Dr. T. R., Delhi, India: 4 lichens from India (186663).

SHARPLEY, Mrs. G. H., Milwaukee, Wis.: 2 photographs of the plant *Viola angellae* (183759).

SHAW, ANN KATRINE. (See under National Photographic Society.)

SHAW, Dr. G. A., Fayetteville, N. C.: 1 coral snake from Fayetteville (183941).

Shell Factory, Bonita Springs, Fla.: (Through H. Crant) 6 specimens of a mollusk from Florida (183667).

Sherman, J. Rolland (deceased): (Through Mrs. Nellie M. Sherman) 1 specimen of smithsonite from the Magdalena district, N. Mex. 185817).

Sherman, John D., Jr., Mount Vernon, N. Y.: Collection of 994 reprints on Coleoptera for the T. L. Casey room (185337).

Sherman, Mrs. Nellie M. (See under J. Rolland Sherman.)

Shewell, Guy E. (See under Canadian Government, *Department of Agriculture, Division of Entomology.*)

Siamese Geological Survey, Bangkok, Siam: About 50 Paleozoic and Cenozoic invertebrates from Siam and 5 Cenozoic fossil fishes from Siam (180847).

Sinclair, Ralph M. (See under Tennessee State Department of Conservation.)

Siñeriz, Dr. Dn. José. (See under Instituto Geológico y Minero de España.)

Singeltary, Mary, Kissimmee, Fla.: 1 fern from Florida (183381).

Smallwood, Mrs. John P., Falls Church, Va.: 1 ovenbird (186854).

Smith, F. G. T., Brisbane, Queensland: 11 butterflies (183766, exchange).

Smith, Dr. F. G. Walton. (See under University of Miami, *Marine Laboratory.*)

Smith, Foster D., Jr., Caracas, Venezuela: 1 bird skin from Venezuela (185453).

Smith, Prof. J. L. B., Grahamstown, South Africa: 1 scale from rare fish holotype from South Africa (186831). (See also under Rhodes University College.)

Smith, Dr. Lyman B., Washington, D. C.: 185 plants from Maryland and Virginia (185995).

Smithsonian Institution, Washington, D. C.: Painting by Charles R. Knight, entitled "Reclining Tiger," bequeathed by Vernon Bailey (186004, deposit); 96 drawings and paintings made by Abbott H. Thayer illustrating protective coloration, received as a loan from the heirs of Abbott H. Thayer, through David Reasoner (186145, deposit); engraving and soft-ground, "Owl," by Sue Fuller, associate membership print of the Society of American Etchers, Gravers, Lithographers, and Woodcutters, 1950 (186999, deposit). (See also under University of Arizona, *Laboratory of Tree-Ring Research*, and the following funds: Abbott, Brown Library, Canfield, Chamberlain, Roebling, Springer, and Walcott.)

Bureau of American Ethnology: Archeological materials, consisting of stone artifacts and potsherds, from two prehistoric shell mounds near Monagrillo, Herrara Province, Republic of Panama, and including in the Monagrillo pottery series what is believed to be the earliest yet known from Panama, collected by Drs. M. W. Stirling and Gordon R. Willey during the 1948 Smithsonian Institution-National Geographic Society Expedition to Panama (182578); a collection of archeological material together with 250 geological specimens, 31 mammals, botanical specimens, 4 fishes, 20 insects, and approximately 64 marine invertebrates from Cornwallis Island, the Canadian Arctic, collected by Dr. Henry B. Collins, Jr., in the summer of 1949 on the National Museum of Canada-Smithsonian Institution Expedition (182845); 68 potsherds of various types from an archeological site, Crystal River, Citrus County, Fla., collected by Dr. Gordon R. Willey (183940); 2 beetles, 2 lizards, 1 snake, and 1 frog from Province of Chiriqui. Panama, collected by Dr. M. W. Stirling (185245); 11 original oil paintings of Yahgan, Ona, and Tehuelche Indians, Argentine prisoners, and scenes of the Furlong Expedition of 1908 to Tierra del Fuego, painted by Charles W. Furlong (185382); 4

dictaphones and phonographs including ones used by Alice C. Fletcher and Frances Densmore (186797).

Bureau of American Ethnology, River Basin Surveys: Surface material from aboriginal sites in Allatoona Reservoir Area, Cherokee, Bartow, and Cobb Counties, northwest Georgia, collected by Joseph R. Caldwell, November 1946 to April 1947 (175998); about 20 Eocene invertebrate fossils from Louisiana, collected by Carl F. Miller (185-249); (through Carl F. Miller) 12 fresh-water mollusks from northwestern Georgia, gathered in an Indian village site (185538); (through Dr. Frank H. H. Roberts, Jr.) 2 mosasaur skulls collected by Dr. T. E. White from upper Cretaceous deposits of the Lavon Reservoir area, 1 mile east of Culeoka, Collin County, Tex. (185627).

National Museum collected by members of the staff: 5,577 plants, together with approximately 4,100 insects and 3 frogs, collected by H. A. Allard in Peru (184140); holotype of a mollusk from Florida collected by Frederick M. Bayer (183398); 55 samples of diatoms collected by Paul S. Conger in the Chesapeake Bay region (184485); 33 small mammals from Ungava, Canada, collected by Carl R. Eklund (182573); 184 bird skins, 6 bird skeletons, 6 eggs, 99 mammals, approximately 216 marine invertebrates, 375 plants, 29 collections of invertebrate fossils, together with fishes and mollusks, collected by Charles O. Handley, Jr., at Prince Patrick Island, Northwest Territory, Canada (186945); fragment of a bird-skin garment with mammal-hide ornamentation collected by the late Dr. A. Hrdlička in 1937 from a cave on Kagamil Island, Four Mountain Group, Aleutian Islands, 3d Judicial Division, Alaska (185238); 15 mammals collected by Dr. David H. Johnson and Norman M. Miller in Rockbridge and Southampton Counties, Va. (184595); 1,028 plants from Florida, together with 1 spider and 2 beetles collected by E. P. Killip and Jason R. Swallen (186857); approximately 1,985 plants and 3 fishes from Alaska collected by Dr. George A. Llano (184520); approximately 3,925 miscellaneous marine invertebrates, approximately 5,000 mollusks, 12 fishes, 13 plants, 1 lot of tadpoles, 68 insects, and echinoderms collected by David C. Nutt in Arctic and sub-Arctic on board schooner *Blue Dolphin* (182783); 295 mammals, 21 birds, 2 reptiles, and ectoparasites from mammals from Costa Rica collected by Dr. Henry W. Setzer (183697); 26 plants collected by Dr. Lyman B. Smith in Brazil (186590); 2 arrowpoints and a fragment of cotton cloth from Bolivia and Peru, collected in July 1949 by Dr. T. Dale Stewart (183827); 1,780 plants from Texas collected by Jason R. Swallen (184834); 2 specimens of sulfur from "The Geysers," Sonoma County, and from Wilbur Springs, Colusa County, Calif, collected by Dr. George Switzer (183196); 2,282 plants collected by Dr. E. H. Walker in New Zealand (184283); 36 mammals, 2 birds, 83 fishes, and 2 crustaceans from Japan collected by Ford Wilke (184686).

National Museum, obtained by purchase: 1,596 plants from Colombia (183380); 1,338 photographs of plants from Taiwan from specimens deposited in the herbarium of the National Taiwan University (183670); 135 photographs of type specimens in European herbaria (183829); 650 plants from Mexico (184261); 8,729 miscellaneous moths from Western United States, mainly Channel Islands and California desert (185116); 1,883 plants from Mexico (185810, 186811); 122 Japanese plants (186805).

National Museum, made in the Museum: 6 photographs of type specimens from the V. L. Komarov Herbarium, Leningrad (183333); 31 prints of Bromeliaceae (183671); 147 photographs of plants (183828, 184492, 187095); cast of an original earthenware horse figurine from a shrine near Tikapur, western Nepal, collected January 9, 1949, by Volkmar Wentzel on the National Geographic Society–Yale University – Smithsonian Institution Expedition to Nepal (185450); 1 original negative and four 8 x 10-inch prints illustrating the paper negative process, made by Alexander J. Wedderburn (186417); 4 "Actinoprints" from a photographic printing process evolved by Alexander J. Wedderburn in the section laboratory (186418).

National Zoological Park: 47 birds (185019, 185204, 185454, 186954, 187079); 38 reptiles and amphibians (187110); 34 mammals (187183); (through Dr. W. M. Mann) approximately 32 lice from India (186594).

SMITHSONIAN INSTITUTION AND THE SCIENTIFIC MONTHLY, Washington, D. C.: 168 photographs making up the 3d International Photography-in-Science Competition cosponsored by the Smithsonian Institution and the *Scientific Monthly* (184684, loan).

SNELL, MRS. R. MARTIN, Van Nuys, Calif.: 7 sandstone concretions from California (184361).

SNYDER, DR. JOHN C. (See under Harvard University, *School of Public Health.*)

SOCIEDAD DE CIENCIAS NATURALES LA SALLE, Caracas, Venezuela: (Through Dr. J. L. Mendez A.) 16 marine invertebrates and 4 batrachians (183324); (through Dr. F. Martin S.) 10 crabs (185933).

SOLANO, Sister FRANCIS, Rochester, N. Y.: Approximately 50 cladocerans, together with insects (183472); approximately 40 amphipods (185570).

SOUKUP, Dr. J., Lima, Peru: 124 plants from Peru (184615, 185022).

SOUTH AFRICA, UNION OF, *Department of Agriculture,* Pretoria, South Africa: 50 grasses from South Africa (183676, exchange).

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY, Rapid City, S. Dak.: (Through James D. Bump) 5 fossil specimens from South Dakota (181905, exchange).

SOUTHERN CALIFORNIA, UNIVERSITY OF, *Allan Hancock Foundation,* Los Angeles, Calif.: 3 algae from Baja California (183359, exchange); 582 plants collected in Mexico by Howard S. Gentry (187086); (through Dr. Olga Hartman) 4 polychaete worms, including types (186791).

SOUTHERN METHODIST UNIVERSITY, Dallas, Tex.: 311 plants, mostly from Texas, collected by Dr. Eula Whitehouse (185205, exchange); 847 plants collected in Texas by V. L. Cory (185811, exchange).

SOUTHWORTH, CHARLES, Thedford, Ontario: 10 Devonian snails from southern Ontario (183959).

SOWERBY, ARTHUR DECARLE, Washington, D. C.: 6 fragments of semifossilized antlers of the deer *Elaphurus davidianus* (Milne-Edwards), found by Igor S. Pabidoff of Shanghai at Chapoo, Hangchow Bay, northeastern Chekiang, 90 miles south of Shanghai, August 1948, in mud flats at low tide, Pleistocene (?) (183812); approximately 900 marine mollusks, 17 barnacles, and 20 sponges from South Africa (183973); 2 mollusks from Singapore (184106).

SPAWN, J. NORMAN, Albuquerque, N. Mex.: (Through P. L. Ricker) 206 mounted and labeled photographs showing portraits and scenes of North American Indians of the Plains, Plateau, Southwest, and scenes in early Indian schools (Phoenix and Sherman Institute) (183804).

SPERRY, JOHN L., Riverside, Calif.: 11 geometrid moths from Oregon (185494).

SPILMAN, B. D., Riviera Beach, Fla.: 1 mollusk from Lake Worth, Fla. (185895).

SPRINGER, PAUL F. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

SPRINGER, STEWART. (See under Capt. Louis Ressler.)

SPRINGER FUND, Smithsonian Institution: 1 Mississippian crinoid from Kansas (177342); 75 type specimens of Pennsylvanian crinoids from Oklahoma (185475); 1 crinoid from the Silurian of Czechoslovakia (185476); 41 type specimens of Pennsylvanian crinoids from Oklahoma and Texas (185819); 126 Pennsylvanian and Ordovician crinoids, the majority of which are types (186998).

SPRUNT, ALEXANDER, Jr., Charleston, S. C.: 1 white-crowned pigeon (185809).

STACEY, L. B., Washington, D. C.: Demonstrating models of Marten-Freeman and Freeman davits and boat releasing gear (186830).

STANFORD UNIVERSITY, Stanford University, Calif.: (Through Dr. Myra Keen) 1 paratype of an echinoid from the Pliocene of Japan (184054).

Dudley Herbarium: 273 plants from Mexico, mostly collected by I. L. Wiggins (184044, exchange); 2 grasses from Ecuador (186620).

Natural History Museum: (Through Dr. George S. Myers) 10 fishes from Pará, Brazil, collected by E. C. Starks (186861, exchange).

STAPLES, Dr. LLOYD W., Eugene, Oreg.: 1 piece of Tertiary petrified wood containing cubic pseudomorphs of quartz after halite from Oregon (186576).

STATE, U. S. DEPARTMENT OF, Washington, D. C.: 235 specimens of plants collected in Liberia by Karl R. Mayer in 1947–49, in connection with the State Department's Mission to the Republic of Liberia (186040). (See also under President Harry S. Truman.)

Institute of Inter-American Affairs: 134 plants from Peru (183810, 186693).

STAZIONE SPERIMENTALE DI FLORICOLTURA "ORAZIO RAIMONDO," Sanremo, Italy: 1 cultivated plant (185469).

STEARNS, RICHARD E., Baltimore, Md.: Archeological material from sites in Baltimore, Harford, Kent, Calvert, and Montgomery Counties, Md.; and Loudoun County, Va., collected by donor (183968); archeological material from shell heap sites in Anne Arundel, Baltimore, Calvert, Charles, St. Marys, and Queen Annes Counties, Md., and from village sites along the Potomac in Frederick and Montgomery Counties, collected and presented by donor, together with small surface collection from Island of Aruba, B. W. I. (186144).

STEBBINS, Prof. ROBERT C. (See under University of California, *Museum of Vertebrate Zoology.*)

STENZEL, Dr. HENRYK. (See under University of Texas, *Bureau of Economic Geology.*)

STEPHENSON, Dr. L. W., Washington, D. C.: 23 marine and fresh-water mollusks from Japan (184690).

STEVENS, Dr. O. A., Fargo, N. Dak.: 200 plants from North Dakota (184886); 1 bee from North Dakota (186685).

STEVENS, R. E., Vienna, Va.: 1 specimen each of actinolite, columbite, and beryl from various localities in Japan (186502).

STEVENSON, Dr. FRANK C., Fort Smith, Ark.: About 500 Paleozoic and Mesozoic invertebrate fossils (187025).

STEVENSON, JAMES O., Washington, D. C.: (Through Dr. A. Wetmore) 2 golden-fronted woodpeckers (185239).

STEVENSON, JOHN A. (See under U. S. Department of Agriculture, *Bureau of Plant Industry, Soils, and Agricultural Engineering.*)

STEWART, ROBERT H., Plant City, Fla.: 1 lot including several hundred specimens of Bryozoa from the Caloosahatchie formation of Florida (183909).

STICKEL, Mrs. LUCILLE, Laurel, Md.: 4 shrews from Maryland (187184).

STIFLER, Mrs. J. M., Bradenton, Fla.: 1 fern (183051).

STIRLING, Dr. MATTHEW W., Washington, D. C.: 1 specimen of jade from an archeological site at San Lorenezo

Tenochtitlan, Rio Chiquito, Veracruz, Mexico (184587).

STODDARD, HERBERT L., Thomasville, Ga.: 158 bird skins from Georgia (182988).

STONE, BENTON, Talara, Peru: 2 cephalopods from the Upper Cretaceous Redondo formation from the Department of Piura, Peru (184504).

STROHECKER, Prof. H. F. (See under University of Miami.)

STURGEON, Dr. MYRON T., Athens, Ohio: 8 slides including 49 specimens of Pennsylvanian ostracods from Blaine Hill exposures, Belmont County, Ohio (186626).

SUD, Rabbi IRA, Arlington, Va.: Two sets, 6 specimens, of the new coins of the State of Israel (186836).

SUDO, Prof. TOSHIO, Tokyo, Japan: A collection of 18 specimens of hisingerite, halloysite, opal, pyrophyllite, sericite, and other minerals from various localities in Japan (186796, exchange).

SULLIVAN, Mrs. GEORGE, Washington, D. C: A collection of wire-recording machines and parts collected by the donor's husband, who was attorney for a stockholders' group of the Telegraphone Co. (187172).

SULLIVAN, ROBERT J. (See under Lenox, Inc.)

SUL ROSS STATE COLLEGE, Alpine, Tex.: 66 grasses from Texas (184153, 184800); 148 plants from Texas and New Mexico (184702).

SUSSEX ARCHAEOLOGICAL ASSOCIATION, Lewes, Del.: (Through H. Geiger Omwake) Collection of pottery, sherds, and pipe fragments, and human skeletal remains from the Townsend site, Lewes, Del. (187165).

SUTCLIFFE, WILLIAM H., Jr., Durham, N. C.: 5 lots of marine invertebrates (183252); 162 copepods, including types (183527, 186074); approximately 106 miscellaneous marine invertebrates (183598); approximately 72 specimens and 13 microscope slides of marine invertebrates (184569); 72 microscope slides of copepods containing approximately 107 specimens (186823).

SWALLEN, JASON R., Washington, D. C.: 325 grasses from southeastern United States (184833).

SWANN, Dr. EMERY F. (See under University of Washington, *Oceanographic Laboratories.*)

SWERDLOW, MAX. (See under U. S. Department of Commerce, *National Bureau of Standards.*)

SWOBODA, EDWARD R., Los Angeles, Calif.: 4 specimens of helvite in quartz and 4-quartz crystals showing inclusions and phantoms, all from Governador Valadares, Minas Gerais, Brazil (185208).

SZENDROI, THEODORE, New York, N. Y.: 5 sardina fish of Peruvian origin (187041).

TAGLE V., ISAÍAS, Santiago, Chile: 1 vial of mites (184338).

TAINTER, Mrs. CHARLES SUMNER, San Diego, Calif.: Collection of diaries, home notebooks, clippings, and awards of Charles Sumner Tainter, describing his work with Chichester A. Bell and A. G. Bell (186335).

TANG, Dr. CHUNG-CHANG, Baltimore, Md.: 2 fishes and approximately 75 copepods from Yung-an, Fukien, China (183233).

TASSIN, Mrs. MARY W., Washington, D. C.: 2 etchings by Mary Nimmo Moran entitled "A City Garden" and "The Covered Bridge" (187179).

TAWADA, SHINJUN, Shuri, Okinawa: 124 plants from Okinawa (185335).

TAYLOR & TAYLOR, PRINTERS, San Francisco, Calif.: (Through James W. Elliott) 4 specimens of letter-press printing and 1 duplicate (184102).

TELEPHONE CAMERA CLUB OF MANHATTAN, New York, N. Y.: (Through Joseph P. Lee) 56 pictorial photographs from the 15th Bell System Salon, exhibited during July 1949 (183392, loan).

TENNESSEE, UNIVERSITY OF, Knoxville, Tenn.: 1 fern from Guatemala (183768); 1 plant from Tennessee (184036, exchange); 19 plants from Mexico (184050, 184679, 184914, 185240, 186239); 1 lichen from Tennessee (184539); 508 grasses from

Tennessee (185054, 186807); 1 lichen from Kentucky (185455, exchange); 3 plants from Mexico (185990, exchange).

Department of Entomology: (Through Dr. A. C. Cole, Jr.) 36 ants from Virginia (185257, exchange).

TENNESSEE STATE DEPARTMENT OF CONSERVATION, Lucy, Tenn.: (Through Ralph M. Sinclair) 3 skins of turtles from Tennessee (185941).

TENNESSEE VALLEY AUTHORITY, Knoxville, Tenn.: (Through James E. Goddard) Approximately 100 freshwater mollusks from White Hollow Creek, near Norris Reservoir, Union County, Tenn. (187109).

TERHUNE, Dr. HUGH W. (See under U. S. Department of the Interior, *Fish and Wildlife Service.*)

TERMIER, Mrs. GENEVIEVE. (See under Université d'Alger.)

TESKEY, Mrs. P. H., Buffalo, N. Y.: 9 fresh-water snails from Port Maitland, Ontario (183972).

TETRICK, R. M., II, Buckhannon, W. Va.: 3 photographs of ferns (184033).

TEXAS, UNIVERSITY OF, Austin, Tex.: 24 grasses from Texas (181789, gift-exchange); 285 plants from Texas (183376, 184066, exchange); 76 grasses from Texas (183593); 33 plants collected in Texas by B. C. Tharp (187166, exchange).

Bureau of Economic Geology: (Through Dr. Henryk Stenzel) 230 plaster casts of Cretaceous type specimens from the collections of Bureau of Economic Geology (187027).

TEXAS COLLEGE OF ARTS AND INDUSTRIES, Kingsville, Tex.: 91 plants (182973, 185663); (through Dr. Edwin R. Bogusch) 166 phanerogams from Texas (185551).

THAMES, Dr. WALTER H., Jr. (See under University of Florida, *Everglades Experiment Station.*)

THOMAS, BEVERLY M., Washington, D. C.: 1 chalcedony cast after lithophyse from near Lakeview, Oreg. (184586).

THOMAS, C. R. (See under Corporación de Fomento de Producción of Chile.)

THOMAS, Dr. EDWARD S. (See under Ohio State Museum.)

THOMPSON, HAROLD LINCOLN, Los Angeles, Calif.: 35 pictorial photographs by Mr. Thompson lent for special exhibition during September 1949 (184058, loan).

THOMPSON, PAUL W., Birmingham, Mich.: 84 grasses from Michigan (185231).

THOMSON, Mrs. FRANCES JOSEPHINE, Washington, D. C.: Blown "off-hand" pitcher of aquamarine glass, attributed to Champlain Glass Co. of Burlington, Vermont, ca. 1827–30 (185687).

THURMAN, ERNESTINE B. (See under California State Department of Public Health.)

TIMBERLAKE, Prof. P. H., Riverside, Calif.: 70 bees, representing 14 species in the family Andrenidae and including types and paratypes (171270). (See also under University of California, *Citrus Experiment Station.*)

TING, PETER C., Sacramento, Calif.: 4 beetles representing 3 species and including 2 topotypes (184617, exchange). (See also under California State Department of Agriculture.)

TINKER, SPENCER, Honolulu, T. H.: 5 fishes from Oahu collected by donor (184454); approximately 500 marine mollusks from Likiep Atoll, Marshall Islands (186846). (See also under University of Washington, *Applied Fisheries Laboratory.*)

TINKER, SPENCER, and Dr. WILLIAM GOSLINE, Honolulu, T. H.: 75 fishes and 1 octopus from Pearl Harbor, Oahu, taken off a drydock hauled from Guam (186994).

TODD, B. E., Upper Darby, Pa.: 6 pieces of United States fractional currency (184812).

TRAIL, SHEILA, Wellington, New Zealand: 8 plants collected in New Zealand (187092).

TRAIN, Rear Admiral CHARLES RUSSELL. (See under Mrs. Myron W. Whitney.)

TRAINER, FRANK W., Palmer, Alaska: (Through Austin H. Clark) 16 northern wood frogs from Brazil Springs,

3 miles northwest of Palmer, collected by donor (183702).

TRAUB, Maj. ROBERT, Washington, D. C.: 2 holotypes of mites (183283). (See also under National Military Establishment, *Department of the Army, Army Medical Department Research and Graduate School.*)

TRAUTH, Dr. FRIEDRICH. (See under Naturhistorisches Museum, Vienna, Austria.)

TRAVASSOS, Dr. HAROLDO. (See under Museu Nacional.)

TREASURY, U. S. DEPARTMENT OF, Washington, D. C.:

Bureau of the Mint: 6 Booker T. Washington Commemorative half-dollars struck in 1950 at the San Francisco, Denver, and Philadelphia mints (186068); 26 specimens of United States coins struck at the Philadelphia, Denver, and San Francisco mints during the year 1949 (186155); 2 1949 nickels coined at the San Francisco mint (186207).

Bureau of Printing and Engraving: A set (25 specimens) of United States currency and Federal Reserve notes, current issue (183552).

TRESSELT, ERNEST F., Williamsburg, Va.: 2 jellyfishes from Matoaka Lake, near Williamsburg (183895).

TREWAVAS, Dr. ETHELWYNN. (See under British Government, *British Museum (Natural History).*)

TRIPP, B. ASHBURTON, Alexandria, Va.: 3 hand-lettered Christmas cards by donor reproduced in 2-color offset lithography (183765).

TRUMAN, President HARRY S., Washington, D. C.: Scrolls of the Law and silver and copper Ark to hold them presented to President Truman by Eliahu Elath, Ambassador of Israel, in the name of President Chaim Weizmann of Israel (185083, loan); (through U. S. Department of State) 1 mounted tiger presented to the President by the Netherlands Ambassador on behalf of Maj. Gen. P. Scholten, Royal Netherlands—Indonesian Army (184502).

TRUMBO, R. L., Warrenton, Va.: 1 radio receiving set, RCA Radiola Model III–A (183763); 1 Atwater Kent radio receiver (183811).

TRYON, Dr. R. M., Jr. (See under Missouri Botanical Garden.)

TULANE UNIVERSITY, New Orleans, La.: (Through Prof. George Henry Penn) 3 crayfishes (185502).

TUXEN, Dr. S. L. (See under Universitetets Zoologiske Museum.)

UHMANN, ERICH, Stollberg-Sachsen, Soviet Zone, Germany: 39 beetles, representing 34 named forms (185261).

ULKE, Dr. TITUS, Washington, D. C.: 4 fresh-water snails from Mitchell County, N. C. (184950).

UNDERHILL, Prof. R. A. (See under Walla Walla College.)

UNION DIESEL ENGINE CO., Oakland, Calif.: (Through O. H. Fischer) A small 4-cycle gasoline marine engine built about 1883–84 (187173).

UNION TRUST CO. OF THE DISTRICT OF COLUMBIA. (See under Estate of Bessie J. Kibbey.)

UNITED FRUIT CO., Washington, D. C.: 1 diorama depicting a tropical banana scene (186623).

Research Department, Palmar Sur, Costa Rica: 341 plants collected in Costa Rica by Paul H. Allen (182976, 187088); 511 plants from Costa Rica (185393); 23 plants collected in Honduras by Mr. Allen (186617); 61 plants collected in Colombia by Mr. Allen (186618).

UNITED STATES OF AMERICA TYPHUS COMMISSION, Washington, D. C.: 30 mammals from New Guinea (187182).

UNIVERSIDAD CENTRAL DE VENEZUELA, Caracas, Venezuela: 3 plants collected in Venezuela (186496).

UNIVERSIDAD DE LA REPUBLICA, Montevideo, Uruguay: 21 grasses from Uruguay (183760).

UNIVERSIDAD NACIONAL, *Facultad de Agronomía*, Medellín, Colombia: 1 plant (184148).

UNIVERSITÉ D'ALGER, Alger, Algeria: (Through Mrs. Genevieve Termier) 24 Devonian fossils from Morocco (183281, exchange).

UNIVERSITÉ DE LAUSANNE, *Musée Botanique*, Lausanne, Switzerland: 110 plants from Switzerland (184993, exchange).

UNIVERSITETETS BOTANISKE MUSEUM, Oslo, Norway: 912 Arctic and Norwegian lichens (185087, exchange).

UNIVERSITETETS ZOOLOGISKE MUSEUM, Copenhagen, Denmark: (Through Dr. S. L. Tuxen) 11 flies from Denmark (185489); 2 flies from Greenland (187001, exchange).

UNIWERSYTET WARSZAWSKI, Warsaw, Poland: (Through Dr. Roman Kozlowski) 3 brachiopods from Poland (186278).

UPPSALA UNIVERSITETS, *Institution for Systematisk Botanik*, Uppsala, Sweden: 150 plants, mainly from Sweden (186036, exchange).

URIBE URIBE, Dr. LORENZO, Bogotá, Colombia: 24 plants from Colombia (184048); 29 plants (186568).

VAIDEN, MERRITT G., Rosedale, Miss.: 2 woodpeckers (183114).

VALENTIN, CURT, New York, N. Y.: 12 prints by Stanley William Hayter lent for special exhibition during November 1949 (184589, loan).

VAN CLEAVE, Dr. HARLEY J., Urbana, Ill.: 14 slides, comprising 8 holotypes and 6 paratypes of 8 new species of digenetic trematodes from marine fishes from La Jolla, Calif. (183526).

VAN DER VECHT, Dr. J. (See under Institut voor Plantenziekten.)

VAN ELLS, M. E., Ann Arbor, Mich.: 11 specimens of Conchostraca together with insects (187015).

VAN EMDEN, Dr. F., London, England: 6 flies, representing 4 species, including 3 paratypes (182796, exchange); 145 beetles from West Africa, England, Germany, Italy, Austria, Switzerland, and New Zealand (186421, exchange). (See also under British Government, *British Museum (Natural History)*.)

VANZOLINI, P. E. (See under Museu Paulista.)

VARGAS C., Prof. CESAR, Cuzco, Peru: 101 plants collected in Peru (183730, 185689).

VARGAS, Dr. LUIS, Mexico, D. F.: 18 paratypes of blackflies from Mexico (185840).

VATIKIOTIS, SOZON, Tarpon Springs, Fla.: 4 marine mollusks from Cedar Keys, Fla. (185842); 18 marine mollusks from Cuba (186706); 1 marine mollusk, alcyonarians, and a crab from near Cedar Keys, Fla. (187196).

VERHOEFF, Dr. P. M. F., den Dolder, Holland: 109 specimens of Hymenoptera, representing 63 species of 6 families (182599, exchange).

VERRILL, A. HYATT, Lake Worth, Fla.: Florida marsh rabbit from Lake Worth (182847); 5 marine mollusks, including 1 paratype, from Dominica, B. W. I. (184720, 185043); 5 marine shells from Dominica (186816).

VERVOORT, Dr. W. (See under Rijksmuseum van Natuurlijke Historie.)

VIEKMAN, WILLIAM, Providence, R. I.: Stock certificate No. 52, dated July 30, 1866, for 5 shares in the Lowell Horse Railroad Co. (186501).

VINTON, KENNETH W., Balboa Heights, C. Z.: 48 lots of Pleistocene mollusks (echinoid spines and calcareous algae) from South Seymour Islands (Baltra), Galápagos Islands (180619).

VIRGINIA FISHERIES LABORATORY, Yorktown, Va.: (Through John Thornton Wood) 11 land shells from Yorktown (184246).

VOGE, MARIETTA, Berkeley, Calif.: A type specimen of a cestode from California (185917).

VON HUHN, RUDOLF, Washington, D. C.: 26 linoleum prints by Mr. Von Huhn, lent for special exhibition during November 1950 (187177, loan).

VONSON, M., Petaluma, Calif.: 1 glaucophane specimen from Marin County, Calif. (185615, exchange).

VOSS, EDWARD G., Granville, Ohio: 2 moths from Michigan (185723).

VOSS, GILBERT L., Coral Gables, Fla.: Holotypes of 2 new species of cephalopods (186817).

WAGNER, Dr. WILHELM, Hamburg, Germany: 51 leafhoppers from Palearctic region (186813).

WAKEFIELD, E. J., Kensington, Md.: 1 sharp-shinned hawk (186493).

WALCOTT, Dr. CHARLES D. (deceased): Bronze medal and diploma of the International League of Aviators, commemorating the supreme sacrifice of Benjamin Stuart Walcott in 1917 (183394).

WALCOTT FUND, Smithsonian Institution: 250,000 specimens of invertebrate fossils from the Paleozoic and Mesozoic of the north central Texas area (183388); 400 assorted invertebrate fossils from the Permian of Sicily (183389); 250 shale samples and 3,000 invertebrate fossils from the Pennsylvanian and Cretaceous of Texas and Oklahoma collected by Dr. Alfred R. Loeblich, Jr., and William T. Allen (183627); about 15,000 specimens of invertebrate fossils from the Ordovician, Silurian, Devonian, and Pennsylvanian strata of the Mississippi Valley in West Texas; and 59 blocks of Permian limestone from the Glass Mountains, Tex., collected by Dr. G. Arthur Cooper and William T. Allen (183893); approximately 705 specimens of fossil vertebrate remains, mostly mammal, from the Paleocene beds of the San Juan Basin of New Mexico and Lower Eocene Knight formation of western Wyoming, collected by Dr. C. Lewis Gazin's party (184432); 500 specimens of Ordovician invertebrate fossils from Pennsylvania and New York collected by Dr. G. Arthur Cooper, October 1949 (184503); fossil vertebrate remains of approximately 17 individuals, mostly of the giant ground sloth, *Megatherium*, but including material of *Toxodon* and fragmentary remains of horse, deer, glyptodont, rodent, and turtle, collected from the vicinity of Ocu and Pese in western Panama by Dr. C. Lewis Gazin and Dr. Theodore E. White, January to April, 1950 (185063); 10 samples of Cretaceous and Miocene shales from Virginia and North Carolina, and 50 Recent and Cretaceous mollusks from North Carolina (186703); approximately 840 fossils, including 140 fish and reptile specimens from upper Jurassic Jagua formation of Piñar del Río Province, 400 invertebrate specimens from Jurassic and Tertiary formations of Piñar del Río and Habana Provinces, and 300 Recent land snails from the Valle de Vinales, collected in Cuba by Dr. David H. Dunkle and Señor Juan Gallardo, during the winter of 1950 (186997).

WALKER, A. C. (See under Bell Telephone Laboratories.)

WALKER, Dr. E. H., Washington, D. C.: 14 plants from Maryland and Virginia given to Dr. Walker by various collectors (183563); 495 plants collected in the United States (186695). (See also under Dr. S. Hattori.)

WALKER, Dr. THEODORE J. (See under University of California, *Scripps Institution of Oceanography*.)

WALLACE, MAURICE H., Algiers, Algeria: About 500 Paleozoic, Mesozoic, and Cenozoic invertebrate fossils from Tunisia, Algeria, and the Sahara (185820).

WALLA WALLA COLLEGE, College Place, Wash.: (Through Prof. R. A. Underhill) 1 scolytid beetle from Toll Gate, Oreg. (185156).

WALLEY, G. STUART. (See under Canadian Government, *Department of Agriculture*, Division of Entomology.)

WALLIS, W. W., South Miami, Fla.: 1 plant cultivated in Florida (184796).

WALTER, R. O., Concord, N. C.: (Through Mrs. Charles A. Cannon) Assay furnace (185816).

WALTER, WALDEMAR M., Durham, N. C.: Approximately 60 fresh-water snails from Orange County, N. C. (186962).

WALTERS, VLADIMIR. (See under National Military Establishment, *Department of the Navy, Office of Naval Research, Arctic Research Laboratory*).

WARD, Mrs. HERBERT, Annapolis, Md.: 4 marine mollusks from Florida and the Philippines (186961).

WARTHIN, Dr. A. S., Poughkeepsie, N. Y.: 180 choice Devonian brachiopods from Michigan (186624, exchange).

WASHINGTON, UNIVERSITY OF, *Applied Fisheries Laboratory*, Seattle, Wash.: (Through Spencer Tinker) 11 marine mollusks from Likiep Island, Likiep Atoll, Marshall Islands (183991); (through Dr. Kelshaw Bonham) 34 amphipods (186125).

Oceanographic Laboratories, Friday Harbor, Wash.: (Through Dr. Emery F. Swann) 3 samples of diatoms (187084).

WATERMAN, MARSHALL NEHIMIAH, FRANCIS WATERMAN, and Mrs. RUTH WATERMAN RITCH, Summit, N. J.: Type D Tuner, c. 1906; audibility meter, c. 1910; polarized relay, 4 experimental electronic tubes; electraddiode tube and socket; Welsh Dollar detector tube; DeForest-Marconi audion, DeForest nickel based audion; DeForest tubular audion in clip holder; DeForest tubular audion in adapter; 6 DeForest tubular audions; 5 variable condensers; vario-transformer (187068); 1 still plate camera by Rochester Camera Co., patented July 21, 1896; 1 No. 1 Panoram-Kodak, patented September 25, 1894; 1 still camera by Monroe Camera Co.; 1 box camera, Boston Camera Manufacturing Company; 1 box camera, unidentified; 1 plate holder by Blair Camera Co., patented February 9, 1875; and 2 portfolios "American Pictorial Photography" (187180).

WATERS, JAMES A., Dallas, Tex.: 63 well samples from the Jurassic of Claiborne Parish, La. (186413).

WATKINS, Mrs. CHARLES H., Winchester, Mass.: 4 fragmentary molded terracotta pipe bowls, excavated by donor from site of pottery of John Taber (about 1864–1872) at East Alton, N. H. (187077).

WEBER, JAY A., Miami, Fla.: Approximately 10,000 bird skins from North America (186173); 121 salt-marsh snails from Massachusetts, South Carolina, Florida, Louisiana, Texas, Cuba, and the Bahamas (186581).

WEBER, Dr. NEAL A., Swarthmore, Pa.: 4 caddisflies from Alaska (184814); 101 ants, including 50 named forms, from Africa, South and Central America, and West Indies (186159). (See also under National Military Establishment, *Department of the Navy, Office of Naval Research, Arctic Research Laboratory.*)

WEEMS, HOWARD V., Jr., Sebring, Fla.: 11 beetles (184076).

WELTER, CHARLES, New York, N. Y.: 1 lower cheek tooth of the horse *Merychippus* sp. accompanying a lot of miscellaneous sharks' teeth, from the Calvert formation at Randle Cliffs on Chesapeake Bay, Md., collected in 1948 or 1949 (184807).

WENZEL, Dr. R. L. (See under Chicago Natural History Museum.)

WENZEL, WALTER J., Laramie, Wyo.: 7 small mammals from Wyoming (184399).

WEST, Dr. JOHN B., Monrovia, Liberia: 41 fishes from the vicinity of Monrovia (184226).

WEST, Mrs. MARIE, Washington, D. C.: Collection of ethnological specimens from the Sac and Fox Indians comprising materials given the donor while a teacher in the Indian School Service at Sac and Fox Agency, Stroud, Okla., in 1899–1900 (184154).

WEST, SADIE R., Northway, Alaska: 3 cryptogams (183385); 129 plants from Alaska (184204, 186409).

WEST VIRGINIA UNIVERSITY, Morgantown, W. Va.: 54 plants comprising the Eighth Distribution of Southeastern Plants (183806, exchange).

WETMORE, Dr. A., Washington, D. C.; 35 birds from Virginia (184260); 32 mammals from Shenandoah National Park, Va. (187189). (See also under James O. Stevenson.)

WHARTON, Dr. GEORGE W., Jr. (See under Duke University.)

WHEELER, Prof. G. C. (See under University of North Dakota.)

WHEELER, GEORGE and MARY, El Monte, Calif.: Green-glass vermouth bottle used as musical instrument (one of a

series of tuned bottles used for musical performances by the donors as a vaudeville team) (185018).

WHELAN, Mrs. DUANE, Nyack, N. Y.: 27 prints by Mrs. Whelan for special exhibition during March 1950 (186000, loan).

WHITE, MICHAEL J. D., Austin, Tex.: 4 gall midges, including types (185834).

WHITE, Mrs. NELLIE M., Fullerton, Calif.: Framed photograph of Angeline Seattle, sister of Seattle, chief of the Dwamish and allied tribes of the Puget Sound area (184155).

WHITE, Maj. THOMAS D., Washington, D. C.: 517 fishes from Mexico, collected by General White during November and December 1949 (184650); 4 fishes from approximately 1 mile south of Vernan Air Force Base, Jamaica, collected in March 1949 (184804).

WHITNEY, Rear Admiral JOHN P., Washington, D. C.: Camel saddle and a decorative hand-woven double saddle bag received by donor as a token of friendship from His Majesty, King Ibn Sa'ud of Saudi Arabia (185451).

WHITNEY, Dr. LEON F., Orange, Conn.: 7 fresh-water mollusks from near New Haven, Conn. (186843).

WHITNEY, Mrs. MYRON W., Mrs. AUGUSTUS N. HAND, and Rear Admiral CHARLES RUSSELL TRAIN, Washington, D. C.: A white quilted counterpane, "tree of life" design, "presented as a gift to the Smithsonian Institution by the children of Mrs. C. J. Train, deceased" (183386).

WHITTINGTON, Dr. HARRY B., Birmingham, England: 24 Paleozoic and Mesozoic brachiopods from England (184208).

WILKE, FORD. (See under Smithsonian Institution, *National Museum, collected by members of the staff.*)

WILKINS, Dr. DONALD H., Sherman Oaks, Calif.: 9 foreign coins (184315).

WILLAMETTE UNIVERSITY, Salem, Oreg.: 8 grasses from Oregon (186095).

WILLEY, Dr. GORDON R., Washington, D. C.: 1 pair of woven bracelets used by Kraho Indians near the confluence of the Tocantins and Araguaya Rivers, Brazil, collected by Da Costa Cabral-Metzenger in 1949 (187019). (See also under Mr. and Mrs. Lawrence F. Brown.)

WILLIAM JEWELL COLLEGE, *Department of Biology and Geology*, Liberty, Mo.: (Through L. J. Gier) 5 lichens from Kansas and Missouri (185666, 185669).

WILLIAMS, Dr. ALWYN, Glasgow, Scotland: An incomplete anterodorsolateral plate of the arthodiran fish *Holonema* and associated fragments from the Devonian Newton Creek beds and the Alpena quarry near Alpena, Mich., collected by donor in summer of 1948 (184810).

WILLIAMS, Dr. ARTHUR B. (See under Cleveland Museum of Natural History.)

WILLIAMS, Dr. F. X., Mill Valley, Calif.: 7 wasps from California (185831, 186284).

WILLIAMS, Dr. LOUIS G., Greenville, S. C.: 65 marine algae (184035, exchange).

WILLIAMS, RALPH B., Juneau, Alaska: 3 bird skins from Alaska (185306).

WILLIAMS, Dr. ROGER W., New York, N. Y.: 52 flies (184426); 244 Alaska flies (184619).

WILLIS, Mrs. ANNIE C., Washington, D. C.: 1 beetle from Washington, D. C. (185338).

WILSON, ORME and R. THORNTON, Washington, D. C.: 6 costumes of the period 1889–1910 (183685).

WILSON, ROBERT M., Washington, D. C.: 5 fresh-water snails with eggs (187194).

WILSON, R. THORNTON. (See under Orme Wilson.)

WINNE, Dr. WILLIAM T., Schenectady, N. Y.: 10 Liberian ferns (186616).

WINSHIP, WILLIAM M. (See under Brett Lithographing Co.)

WIRTH, WILLIS W., Washington, D. C.: 448 flies from California and Louisiana (185008).

WISCONSIN, UNIVERSITY OF, Madison, Wis.: 1 grass from Arkansas (184677); (through W. W. Howells) set of 69 kodachrome slides of speci-

mens of human and anthropoid material of interest to physical anthropologists (181575, exchange).

WITSELL, Maj. Gen. EDWARD F. (See under National Military Establishment, *Department of the Army, Supreme Commander for the Allied Powers.*)

WOLCOTT, Dr. GEORGE N., Río Piedras, P. R.: (Through Mrs. D. H. Blake) Holotype of a beetle (185491).

WOLFE, Col. L. R., San Francisco, Calif.: 93 birds from Japan (185021, 186238).

WOLFF, WAYNE W., Santa Barbara, Calif.: 3 lots of marine shells without data (183695).

WOOD, JOHN THORNTON, Yorktown, Va.: 145 snakes and 1 turtle from Ohio, collected mostly by donor (183498). (See also under Virginia Fisheries Laboratory.)

WOOD, RUSSELL M., Philadelphia, Pa.: 5 Middle Devonian invertebrate fossils from George W. Childs State Park near Dingmans Ferry, Pa. (184506).

WOODRUFF, HARRY L. (See under Frank Hoopes.)

WOODS, LOREN P. (See under Chicago Natural History Museum.)

WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, Mass.: 5 echinoderms (177458); 330 echinoderms from the mid-Atlantic, collected by the *Atlantis* during cruise No. 152 (181602); 18 echinoderms from the mid-Atlantic, collected by the *Atlantis* during cruise No. 150 (186899).

WOOLSEY, HEATHCOTE M., Kent, Conn.: 1 shell from Jamaica (183287, exchange); 2 lots of marine mollusks from Jamaica (183399, exchange); 6 marine mollusks from Jamaica (186844, exchange).

WORDEN, CLEE O., Baltimore, Md.: "Fractograph of Piezoelectric Single Crystal," photograph awarded honorable mention in the 3d International Photography-in-Science Competition, made by donor (184839).

WORTH, C. B., Tampa, Fla.: 2 narrow-mouthed toads from near Tampa, collected by donor in October 1949 (185500).

WORTHLEY, ELMER G., College Park, Md.: 33 plants from Maryland (186240).

WRIGHT, Mrs. EDWARD PULTENEY, Grosse Pointe Farms, Mich.: 9 brachiopods from the Devonian rocks of Arkona, Ontario (185336).

WRIGHT, LEON M., Enterprise, Fla.: 150 fresh-water mollusks and 1 snake from Florida (185493).

WYGODZINSKY, Dr. PETR, Tucumán, Argentina: 79 miscellaneous unidentified bugs from Brazil and Argentina (186579, exchange); 6 blackflies from Argentina (186595).

WYOMING, UNIVERSITY OF, Laramie, Wyo.: 42 grasses from northwestern United States (181625); 77 grasses from Wyoming (183123, 183997); 88 plants, mostly from Wyoming (186407, exchange).

YALE UNIVERSITY, *School of Forestry*, New Haven, Conn.: 12 plants collected in Surinam and Angola, Portuguese West Africa (186076); 16 plants collected in Brazil (186497).

YASUMATSU, Dr. KEIZO. (See under Kyushu University, *Entomological Laboratory.*)

YEN, Dr. TENG-CHIEN. (See under Dr. Daniel L. Axelrod and Kenneth P. McLaughlin.)

YOCHELSON, ELLIS, Lawrence, Kans.: 100 Mississippian, Paint Creek, invertebrate fossils from St. Clair County, Ill. (185473).

YOUNG, JOE, Mobile, Ala.: (Through Isaac Ginsburg) 4 cyprinid fishes from Double Branch, tributary to Mobile River, Mobile County, Ala., collected by donor April 24, 1950 (187096).

YOUNG, WILLIAM K. (See under William W. Young, deceased.)

YOUNG, WILLIAM W. (deceased): (Through William K. Young) 1 metal-headed tomahawk pipe from Indians of Pennsylvania or Ohio (186400).

ZETEK, JAMES. (See under Dr. Eric Graetz.)

ZOOLOGISCH MUSEUM, Amsterdam, Netherlands: 3 birds (183873, exchange).

PUBLICATIONS ISSUED BY THE UNITED STATES NATIONAL MUSEUM DURING THE FISCAL YEAR 1949–50

REPORTS

Report on the progress and condition of the United States National Museum for the year ended June 30, 1949. 8vo, pp. i–iii, 1–123. January 13, 1950.

BULLETINS

Bulletin 197. Life histories of North American wagtails, shrikes, vireos, and their allies. Order Passeriformes. By Arthur Cleveland Bent. 8vo, pp. i–vii, 1–411, 48 pls. June 21, 1950.

Bulletin 198. Catalog of the automobile and motorcycle collection of the Division of Engineering, United States National Museum. By Smith Hempstone Oliver. 8vo, pp. i–iv, 1–62, 18 pls. May 9, 1950.

PAPERS PUBLISHED IN SEPARATE FORM

FROM VOLUME 29, CONTRIBUTIONS FROM THE UNITED STATES NATIONAL HERBARIUM

Part 7. Studies in the Bromeliaceae, XV. By Lyman B. Smith. 8vo, pp. i–vii, 277–316, figs. 2–36. December 28, 1949.

Part 8. Studies of South American plants XII. By A. C. Smith. 8vo, pp. i–viii, 317–393. January 23, 1950.

Part 9. New grasses from Mexico, Central America, and Surinam. By Jason R. Swallen. 8vo, pp. i–v, 395–428. March 7, 1950.

FROM VOLUME 30, CONTRIBUTIONS FROM THE UNITED STATES NATIONAL HERBARIUM

Part 3. Additional phanerogams in the flora of Guam, with notes on unverified records. By Egbert H. Walker and Robert Rodin. 8vo, pp. i–vi, 449–468, pls. 8–9. August 25, 1949.

FROM VOLUME 97 OF THE PROCEEDINGS

Title page, table of contents, list of illustrations, and index. Pp. i–vii, 571–601. January 26, 1950.

FROM VOLUME 99 OF THE PROCEEDINGS

No. 3248. Additions to the echiuroid fauna of the North Pacific Ocean. By Walter Kenrick Fisher. Pp. 479–497, pls. 28–34. August 10, 1949.

No. 3249. A remarkable new species of trypetid fly of the genus *Ceratitis* (sensu stricto) from East Africa in the collection of the United States National Museum. By H. K. Munro. Pp. 499–501, fig. 39. July 5, 1949.

No. 3250. A new marine annelid from Florida. By Olga Hartman. Pp. 503–508, fig. 40. August 4, 1949.

No. 3251. A new species of apseudid crustacean of the genus *Synapseudes* from northern California (Tanaidacea). By Robert J. Menzies. Pp. 509–515, figs. 41–42. August 4, 1949.

No. 3252. Redescription of the shrimp *Bathypalaemonella pandaloides* (Rathbun), with remarks on the family Campyonotidae. By L. B. Holthuis. Pp. 517–523, fig. 43. August 25, 1949.

No. 3253. The Nearctic species of Evaniidae (Hymenoptera). By Henry Townes. Pp. 525–539, fig. 44. September 1, 1949.

FROM VOLUME 100 OF THE PROCEEDINGS

No. 3254. On a collection of Mallophaga from Guam, Marianas Islands. By M. A. Carriker, Jr. Pp. 1–24, figs. 1–5. November 29, 1949.

No. 3255. Observations on flatworms and nemerteans collected at Beaufort, N. C. By A. S. Pearse. Pp. 25–38, figs. 6–9. October 14, 1949.

No. 3256. Some Alaskan syrphid flies, with descriptions of new species. By C. L. Fluke. Pp. 39–54, figs. 10–11. October 11, 1949.

No. 3257. Two new gynandromorphs, with a list of previously recorded sexual aberrations in the scolioid wasps. By Karl V. Krombein. Pp. 55–59, pls. 1–2. November 16, 1949.

No. 3258. Fresh-water Ostracoda from Brazil. By Willis L. Tressler. Pp. 61–83, figs. 12–14. January 9, 1950.

No. 3259. The Nearctic species of Gasteruptiidae (Hymenoptera). By Henry Townes. Pp. 85–145, figs. 15–16. April 18, 1950.

No. 3260. Pycnogonida of the United States Navy Antarctic Expedition, 1947–48. By Joel W. Hedgpeth, Pp. 147–160, figs. 17–19. January 23, 1950.

No. 3261. Copepods from Lake Erh Hai, China. By Sidney C. Hsiao. Pp. 161–200, figs. 20–30. April 26, 1950.

No. 3262. Mosquitoes of the genus *Tripteroides* in the Solomon Islands. By John N. Belkin. Pp. 201–274, figs. 31–37. March 30, 1950.

No. 3263. A revision of the American clupeid fishes of the genus *Harengula*, with descriptions of four new subspecies. By Luis René Rivas. Pp. 275–309, pls. 3–5, figs. 38–41. March 28, 1950.

No. 3264. Moths of the genus *Cincia* and three new and closely related genera. By William D. Field. Pp. 311–326, pls. 6–9. March 10, 1950.

No. 3265. Mammals of Northern Colombia. Preliminary report No. 6: Rabbits (Leporidae), with notes on the classification and distribution of the South American forms. By Philip Hershkovitz. Pp. 327–375, figs. 42–43. May 26, 1950.

No. 3266. Some bird lice of the genera *Acidoproctus* and *Quadraceps* (Neotropical Mallophaga Miscellany No. 3). By M. A. Carriker, Jr. Pp. 377–386, figs. 44–45. January 26, 1950.

No. 3267. A review of the American clupeid fishes of the genus *Dorosoma*. By Robert Rush Miller. Pp. 387–410. March 7, 1950.

No. 3268. A contribution to the ornithology of northeastern Venezuela. By Herbert Friedmann and Foster D. Smith, Jr. Pp. 411–538, pls. 10–12, figs. 46–50. March 10, 1950.

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