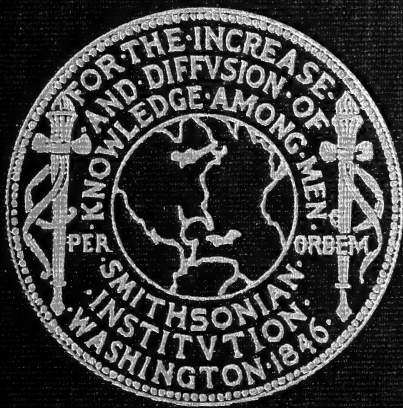


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REPORT OF
THE UNITED STATES
NATIONAL MUSEUM

1933

*(Part 2 of the Report of the Secretary of the Smithsonian Institution
to the Board of Regents for the fiscal year ended June 30, 1933)*



SMITHSONIAN INSTITUTION
WASHINGTON
D.C.

PART 2. REPORT ON THE PROGRESS AND CONDITION
OF THE UNITED STATES NATIONAL MUSEUM FOR THE
FISCAL YEAR ENDED JUNE 30, 1933

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OPERATIONS FOR THE YEAR

APPROPRIATIONS

PROVISION for the maintenance of the United States National Museum for the fiscal year ended June 30, 1933, made by appropriations carried in the Executive and Independent Offices Act approved June 30, 1932, was subsequently affected by the Economy Act (legislative appropriation act for 1933). Funds available for Museum operations were as follows:

Preservation of collections.....	\$617, 760. 00
Impounded deductions (returned to Treasury) ¹ ..	74, 031. 60
Amount available.....	543, 728. 40
Maintenance and operation.....	148, 370. 00
Impounded deductions (returned to Treasury) ¹ ..	12, 995. 74
Amount available.....	135, 374. 26
Printing and binding.....	22, 354. 00
Total appropriation available.....	701, 456. 66

¹ Legislative appropriation act of June 30, 1932.

For the Museum, the appropriations for 1933 were \$8,960 less than those for 1932, the reduction under preservation of collections being \$2,750 and under maintenance and operation \$6,210. Under preservation of collections, the reduction was taken from the amount available for supplies, and under maintenance and operation from the funds provided for repairs and replacements to buildings.

Under the Economy Act (pt. 2, legislative appropriation act for 1933), approved June 30, 1932, provision was made for the impounding of certain items connected with the funds allotted for personnel. Total amounts so impounded during the year under the National Museum were \$87,027.34, of which \$74,031.60 came from the appropriation preservation of collections and \$12,995.74 from maintenance and operation. Under preservation of collections, \$56,252.54 came from stipulated salary reductions and was thus made up by the personnel included under this appropriation. The remaining funds impounded under this heading totaled \$17,769.05 and consisted of salaries of vacant positions. The latter amount therefore was a direct reduction in appropriation, since it lowered the amount available for temporary personnel and made impossible the utilization of savings on the salary roll for the purchase of miscellaneous supplies, the allotment for which has always been inadequate. Under maintenance and operation, \$8,230.74 was impounded as a result of salary reductions, while \$4,764 resulted from the impounding of salaries of vacant positions. The latter amount was a direct reduction of the appropriation, since it lowered the amount available for temporary services and the purchase of supplies and equipment for the mechanics. The impounding of salaries for vacant positions thus withdrew \$22,534.06 from funds usually available.

The sum available for printing and binding was decreased \$27,646 below the amount of the previous year. This reduction is a serious one, since the printing of manuscripts is now greatly in arrears, and additional funds for this purpose are much needed.

No additions to the personnel of the Museum were made during the year, and a serious condition resulting from an undermanned force continued. More help is urgently needed in the clerical service and the guard and labor forces and also in the scientific personnel. The Museum is greatly overcrowded, and under present conditions the proper exhibition and care of the collections with the available personnel are becoming increasingly difficult.

Arrangements looking toward additional space for the Museum have been outlined in previous reports. Congress has authorized appropriations of \$6,500,000 for building wings at each end of the Natural History Building, but this authorization like all others was reduced 10 percent (legislative act for 1933, 212, sec. 320). Plans for the additions have been made by the Allied Architects, Inc., of

Washington, D.C., under an appropriation of \$10,000 in the second deficiency bill of 1931 and have been approved by the Fine Arts Commission. The building of these wings has been submitted as the principal construction project recommended for the Smithsonian Institution under the National Industrial Recovery Act. If the required funds are allotted, the first major step in the plan for adequate museums and galleries under the Institution will be under way, and work can begin on the construction without delay.

COLLECTIONS

Steady addition of excellent material to the collections continued throughout the year, the new accessions including hundreds of specimens of the most valuable kind. They came in 1,698 separate accessions, with a total of 348,012 specimens, divided among the various departments as follows: Anthropology, 4,877; biology, 295,782; geology, 37,555; arts and industries, 4,261; history, 5,537. Statement regarding some of the important additions will be found in the reports of the departments that follow, and they are all included in the accession list. The total increase for the previous year was 157,870 specimens of all kinds.

For examination and report 1,575 lots of material were received, including much of a botanical and geological nature, and many individual specimens. Part was returned by request to the senders, when it was not consumed during analysis, and part retained for the collections under arrangement with the donors.

Gifts of specimens to schools and other educational organizations numbered 5,558 specimens, including collections of mollusks and fishes, sets to illustrate rock weathering and soils, and illustrative groups of rocks, ores, and minerals. Exchanges of duplicate materials with other institutions and individuals totaled 45,872 specimens, and 12 specimens were transferred to other departments. Loans to workers outside of Washington numbered 24,552 individual specimens.

Following is a summary of specimens now covered in the Museum catalogs:

Anthropology.....	672, 022
Biology.....	10, 815, 307
Geology.....	2, 127, 718
Arts and industries.....	115, 467
History.....	488, 788
Total.....	14, 219, 302

EXPLORATIONS AND FIELD WORK

Investigations in the field covered the usual wide range of interests connected with man, the lower animals, and plants, both living and extinct. The work was carried on mainly through grants from the

general income of the Smithsonian Institution, assisted by contributions from individuals, while certain projects were financed through the income of special funds held as endowments by the Smithsonian. Financial assistance in field expenses from the annual governmental appropriations for the National Museum was small and concerned only part of the various projects. Funds to assist in these matters, especially from private sources, are one of the definite needs of our organization.

Archeological work in northern Alaska was continued during the summer of 1932 by James A. Ford under the general direction of Henry B. Collins, Jr. Mr. Ford arrived at Point Barrow late in August 1931, when the ground was beginning to freeze. He found ice conditions in the Arctic the worst in many years, and so remained at Barrow through the winter in order to allow a full season of excavation in the summer of 1932. He returned to Washington in November 1932. Barrow seems the most promising locality at which to find dependable evidence of the relationship between the old Bering Sea culture and the Thule, the dominant prehistoric Eskimo culture of the eastern Arctic regions. In addition to archeological material Mr. Ford obtained the skull of a bowhead whale and a series of birds.

From February 18 to June 5, 1933, Frank M. Setzler, assistant curator of archeology, continued archeological investigations in southwestern Texas, restricting this year's work to the Pecos River area, to trace the eastern limits of the cave culture. One large cave overlooking the Pecos and a medium-sized shelter near Deadmans Canyon were completely excavated. It is not yet practicable to evaluate the results of this third season in the Big Bend area, but the cultural material recovered obviously belongs to the same horizon as that found farther west. Though a general relationship to the Basket Maker culture of the Southwest is apparent in the material collected both in 1932 and 1933, enough distinct characteristics appear in the remains that Mr. Setzler has exposed in Texas to warrant a temporary designation as the Big Bend cave culture. Neither pottery nor any other class of artifact commonly used by archeologists in establishing a relative chronology has yet been found in association with remains peculiar to these cave dwellers of ancient Texas, and no bond has been discovered to connect them definitely with any other primitive group known in the Rio Grande drainage. One result of the 1932 expedition was the finding of 27 bones of the California condor (*Gymnogyps californianus*) associated with human remains in a cave on the south tip of Mule Ear Peaks. This is the first indication of the former existence of this bird in Texas and is the largest collection of bones recovered outside its present range. In his 1933 investigations, as in those of previous years, Mr. Setzler was greatly assisted by the staff of the United States Bureau of Plant Quarantine at San Antonio.

On his way to Washington late in May, Mr. Setzler spent a week in east-central Louisiana investigating mounds and village sites that available data indicated might be related to the so-called "Hopewell culture" of the northern Mississippi Valley. The results of this brief examination are such as to warrant more intensive research.

In order to complete the enormous task of reorganizing its collections and exhibits, the division of Old World archeology deferred actual field work for the year. Assistant Curator J. Townsend Russell, however, spent a brief period in France during midsummer in connection with the cooperative investigations inaugurated in November 1931 between the University of Toulouse and the Smithsonian Institution.

Dr. Aleš Hrdlička conducted an anthropological and archeological survey of Kodiak Island and made extensive excavations at Uyak Bay, Alaska. These excavations, which have already yielded much valuable and new material, are now more than a third finished.

Dr. R. S. Bassler, head curator of geology, spent several weeks in the Mississippi Valley collecting Silurian and Mississippian echinoderms for the Springer collection. Several hundred crinoids and blastoids and many specimens of other classes of fossils were obtained, and some interesting facts in silicification and related phenomena were checked.

Under the auspices of the Canfield fund, E. P. Henderson spent 4 months collecting minerals, rocks, and ores in the Rocky Mountain States, assisted by F. A. Gonyer, of Harvard University. Among the districts visited were the geode region about Keokuk, Iowa; the Black Hills of South Dakota; Butte and Helena, Mont.; Coeur d'Alene, Idaho; Park City, Bingham, Thomas Range, and other localities in Utah; the carnotite fields of Colorado and Utah; and Leadville, Breckenridge, Alma, and Cripple Creek, Colo. Among the material obtained were a huge quartz geode, numerous well-crystallized copper minerals, and rare vanadium minerals.

Dr. W. F. Foshag, accompanied by James Benn, visited the mica and gem mines about Amelia, Va., and collected a number of rare minerals. Mr. Benn also explored a newly discovered cave near Beaver Creek, Md., and obtained unusual stalagmitic growths of beautiful and perfect form.

Explorations for the division of stratigraphic paleontology were made by Dr. G. A. Cooper during 6 weeks spent in the richly fossiliferous country on Gaspé Peninsula, Quebec, resulting in the acquisition of many fine fossils. Following this Dr. Cooper made stratigraphic studies in New York State's classical sequence of Devonian rocks. Though supplementary to previous studies by Dr. Cooper in this State, this year's task was to trace the stratigraphic units eastward from the Unadilla Valley. The needed columnar sections were prepared, and many specimens, some new to science, were obtained.

As the field expedition under C. W. Gilmore, curator of vertebrate paleontology, extended well into the present year, only brief mention was made of it in last year's report. This expedition in the Oligocene of Montana, western Nebraska, southeastern South Dakota, and eastern Wyoming brought gratifying results in the acquisition of a large and representative collection of this important fauna. Outstanding among many valuable specimens is a nearly complete skeleton of an eagle of a type distinct from any hitherto known.

An important accomplishment of the department of biology was the organization of the Johnson-Smithsonian deep-sea expedition, under the direction of Dr. Paul Bartsch, curator of mollusks and Cenozoic invertebrates, and the successful completion of the first of a series of cruises planned for oceanographic work. Eldridge R. Johnson in the fall of 1932 placed his palatial yacht *Caroline* at the disposal of the Smithsonian Institution for the purpose of deep-sea exploration, together with funds for equipment of the vessel, necessary gear and instruments, and an adequate scientific staff. At the suggestion of Dr. Bartsch an oceanographic survey of the Puerto Rican Deep was undertaken. Various agencies of the Government interested in oceanographic work, including bureaus in the Navy, Agriculture, and Commerce Departments, rendered valuable assistance in the way of suggestions and material, as did the authorities of the Carnegie Institution of Washington, the Oceanographic Institution of Woods Hole, the American Museum of Natural History, Dr. William Beebe, and others. The gathering of equipment and its installation began in October, and on January 21, 1933, the *Caroline* left New York.

The program for the cruise was carried out successfully, and on March 14 the *Caroline* returned to Washington loaded with valuable collections, embracing many forms of life unknown to science, and with extensive observations in the various branches of oceanography, all of which are now in the hands of specialists for study. During the cruise more than 900 soundings were made, and serial gatherings of water samples and temperatures were taken down to 3,200 fathoms. Collections were made at 109 stations, mostly at depths below 200 fathoms, with gear ranging from tangles to dredges, beam trawls, otter trawls, and intermediate nets. Several cores were taken, and morning and evening observations of air draft were made by means of pilot balloons observed through a theodolite. It is planned to continue the work during another cruise in the same general area.

Another important marine expedition was that of Dr. Waldo L. Schmitt, curator of marine invertebrates, to the Galapagos Islands on the yacht *Velero III*, through invitation of Capt. G. Allan Hancock, owner of the ship and leader of the expedition. Dr. Schmitt embarked at Los Angeles on December 28, 1932, and returned on March 25, 1933. Fully equipped for scientific work both on land and sea

and with a staff representing several branches of zoology, the expedition visited 11 of the 16 principal islands of the Galapagos Archipelago and 13 other places on the coasts of South and Central America and Mexico, including the Malpelo, Cocos, and Isabel Islands. The expedition obtained large series of invertebrates of which a first set of Crustacea, to which Dr. Schmitt paid special attention, becomes the property of the National Museum. Many additions to scientific knowledge in this group are included in these collections.

Dr. Hugh M. Smith continued explorations in Siam covering various parts of the country not previously visited. The work included a trip up the tortuous Pasak River, which marks the boundary between central Siam and the eastern plateau, journeys to Sam Roy Yot (Three Hundred Peaks) in western Siam, and to the mountain-forest jungle of the northwestern corner of Siam. The large collections of mammals, birds, reptiles, and mollusks received testify to Dr. Smith's continued interest in the Museum and will yield many scientific novelties.

Collections received from Dr. D. C. Graham indicate that he has safely returned to his old field in western China and has resumed his zoological activities in behalf of the Smithsonian Institution. Continuation of his former explorations has been planned in cooperation with the recently established West China Museum.

Dr. Alan Mozley, awarded the Walter Rathbone Bacon traveling scholarship under the Smithsonian Institution for study of the land and fresh-water molluscan fauna of Siberia, had a successful season during the summer of 1932. Through the cooperation of local authorities he was enabled to carry out plans for a visit to the Akhmo-linsk Steppe and to the taiga north of Tomsk. Thanks to the generous assistance of the director of the limnological station at Lake Baikal, he was able to spend nearly 2 months in the Baikal region, where he circumnavigated the lake in the motor yacht of the station and made various land excursions. During the winter Dr. Mozley worked on his collections at the University of Edinburgh, where facilities were generously provided him.

Dr. Herbert Friedmann, curator of birds, through the courtesy of Hobart Ames, visited Grand Junction, Tenn., to study a curious red phase among the quail found in that locality. Dr. A. Wetmore, assistant secretary, during a trip to New Mexico and Arizona, collected series of bird skins and skeletons.

The beginning of the year found Dr. J. M. Aldrich, curator of insects, west of the Rocky Mountains collecting Diptera, work that was completed the middle of August. P. W. Oman, of the Bureau of Entomology, made an extended trip by automobile through the northwestern United States to obtain specimens of leafhoppers and other homopterous insects, and returned with many valuable additions to the Museum collections.

Dr. Waldo L. Schmitt spent the first 6 weeks of the year at the marine laboratory of the Carnegie Institution of Washington at Dry Tortugas, Fla., in continuation of studies of the crustacean fauna of the region. A comprehensive collection of marine invertebrates, mainly crustaceans, was brought back.

During the early part of the year Dr. Paul Bartsch continued studies of *Cerion* colonies on the Florida Keys, with the financial assistance of the Carnegie Institution of Washington. On his return he collected mollusks on several mountain peaks of the southern Alleghenies.

Austin H. Clark made several trips to the region included in the proposed Shenandoah National Park in furtherance of a project for coordinating and extending knowledge of the biology of the area, in cooperation with the National Park Service, the United States Bureau of Public Roads, and the Virginia State Commission on Conservation and Development.

In July and August 1932, J. R. Swallen, assistant botanist in the section of grasses, collected in Yucatan under a cooperative arrangement between the United States Department of Agriculture, the University of Michigan, and the Carnegie Institution of Washington, in connection with a biological survey of the Mayan area. The collection obtained, about 1,000 specimens, has increased the known grass flora of the region by more than 50 percent. C. V. Morton, aid in the division of plants, left in March for a 3-months' botanical exploration in Oaxaca. Because of an unfavorable season and Mr. Morton's illness, this work, which was conducted with the kind assistance of Dr. Emil Makrinius, of Pochutla, had to be considerably curtailed. The 2,000 specimens collected, however, will prove valuable, since they come from a region little represented in the National Herbarium.

During the summer of 1932, Prof. C. E. Burt, of Southwestern College, Winfield, Kans., carried on field work in herpetology designed to obtain series of turtles in the region of the upper reaches of the Cumberland and Tennessee Rivers. The Museum has long needed material from that portion of the Appalachian system. The trip, made by automobile, was eminently successful and resulted in large and important collections.

During the Peary Memorial expedition to the west coast of Greenland, under command of Capt. R. A. Bartlett, arranged by the Peary family, Arthur D. Norcross, and friends, Captain Bartlett obtained a large collection of marine invertebrates mostly from the vicinity of Cape York, which with customary generosity he presented to the Museum.

W. G. Sheldon and Richard Borden, during July, August, and September 1932, undertook a second expedition to the mountain

region in east-central British Columbia, reaching Mount Selwyn on the Peace River on July 17 and Hudson Hope on August 1. The Sukunka River, which drains the mountains just south of Pine Pass, was investigated to its source, and a grizzly bear was collected. The expedition, difficult and arduous, terminated at the railroad at Dawson Creek, and was highly successful in its collections, which included a moose, a grizzly bear, mountain goats, wolves, red fox, marten, weasels, marmots, rabbits, squirrels, and various smaller mammals.

EDUCATIONAL WORK

The National Museum during the year continued its customary activities in educational lines. Our exhibition halls display great series of objects so arranged as to demonstrate facts of many kinds, on subjects ranging from the tools and dress of primitive man to complicated modern machinery, examples of the life of strange lands, of the elements that compose the earth, fossil animals and plants of former ages, and many other things. Descriptive labels accompany all these, and there is constant change to keep them properly arranged and up to date. The whole serves as a compendium of reference to the student or as an attractive display to the one of more casual interest, from which all may profit according to their desires.

In addition, the Museum is constantly active in the dissemination of knowledge in response to many hundreds of inquiries that come by mail or from visitors. Classes from the city schools are guided through the halls, and groups of students from a distance are given similar service. Although the Museum does not maintain regular series of lectures, members of the staff are called on regularly to address meetings. Students throughout the country interested in definite problems come to work with our collections and libraries, and frequently workers from abroad are engaged in investigations here that sometimes continue for months. Thus it may be seen how widely varied is the range of our educational activities and how extensive the field that they cover.

VISITORS

The Museum buildings were open to visitors during the year on week days from 9 a.m. to 4:30 p.m. and on Sundays from 1:30 to 4:30 p.m., except the Aircraft Building, which was open only on week days. All the buildings were closed all day on Christmas and New Year's Days, and part of the day on December 24, 26, and 31, January 2, and March 4.

The total number of visitors to the various Museum buildings during the year was 1,427,358, or 202,672 less than during 1931-32, a decrease clearly reflecting economic conditions throughout the

country. The average attendance for week days was 3,825 and for Sundays 4,571. The number of visitors to the Smithsonian Building on week days was 183,928, a daily average of 591, and on Sundays 40,561, an average of 780; to the Arts and Industries Building 478,160 on week days (average, 1,537) and 103,642 on Sundays (average, 1,993); to the Natural History Building 426,514 on week days (average, 1,371) and 93,463 on Sundays (average, 1,797); and to the Aircraft Building 101,091, a daily average of 325.

Table 1 shows the number of visitors during each month for the past year.

TABLE 1.—Visitors to Museum buildings during the year ended June 30, 1933

Year and month	Smithsonian Building	Museum buildings			Total
		Arts and Industries	Natural History	Aircraft	
1932					
July.....	28, 251	70, 878	53, 540	13, 426	166, 095
August.....	33, 310	90, 225	66, 900	15, 967	206, 402
September.....	21, 250	54, 857	42, 911	9, 420	128, 438
October.....	15, 018	39, 861	38, 270	5, 947	99, 096
November.....	11, 024	27, 586	30, 397	4, 429	73, 436
December.....	6, 942	16, 422	17, 292	3, 516	44, 172
1933					
January.....	8, 503	21, 368	28, 925	4, 449	63, 245
February.....	8, 138	20, 302	23, 807	3, 787	56, 034
March.....	20, 538	45, 437	47, 853	8, 886	122, 714
April.....	33, 114	84, 684	65, 146	12, 457	195, 401
May.....	18, 863	56, 337	57, 388	9, 075	141, 663
June.....	19, 537	53, 845	47, 548	9, 732	130, 662
Total.....	224, 488	581, 802	519, 977	101, 091	1, 427, 358

PUBLICATIONS

The publications issued during the year include nine volumes, as follows: The Annual Report for 1932; Bulletin 39, part N (6th rev.), Directions for Preparing Specimens of Mammals, by Gerrit S. Miller, Jr.; Bulletin 100, volume 12, The Fishes of the Families Banjosidae, Lethrinidae, Sparidae, Girellidae, Kyphosidae, Oplegnathidae, Gerridae, Mullidae, Emmelichthyidae, Sciaenidae, Sillaginidae, Arripidae, and Enoplosidae Collected by the United States Bureau of Fisheries Steamer *Albatross*, Chiefly in Philippine Seas and Adjacent Waters, by Henry W. Fowler; Bulletin 158, The Copepods of the Woods Hole Region, Mass., by Charles Branch Wilson; Bulletin 163, American and European Swords in the Historical Collections of the United States National Museum, by Theodore T. Belote; Bulletin 164, The Canadian and Ordovician Formations and Fossils of South Manchuria, by Riuji Endo; and small

editions for office use of the complete volumes 79, 80, and 81 of the Proceedings of the National Museum. Forty-one separate papers published include 2 in the Bulletins and 39 in the Proceedings.

The distribution of volumes and separates to libraries and individuals on the regular mailing lists aggregated 71,294 copies; while in addition 14,256 copies of publications issued during this and previous years were supplied in response to special requests. The mailing lists have been revised to avoid loss in distribution.

During the year 504,770 forms, labels, and other items were printed and 970 volumes were bound.

LIBRARY

In the library system of the Smithsonian Institution, the National Museum Library is second in importance only to the Smithsonian deposit in the Library of Congress. Its collections, concerned chiefly with natural history and technology, were increased during the year by 2,436 volumes and 786 pamphlets, and now number 84,580 volumes and 110,748 pamphlets. The accessions came, as usual, from four sources: Purchases, gifts, exchanges, and binding periodicals.

Gifts were received from many members and associates of the Museum staff. Mrs. Charles D. Walcott gave the library many publications, as did also the late Dr. William H. Holmes, former director of the National Gallery of Art, his gifts for the year totaling more than 600. Important gifts also were received by assignment from the Smithsonian Institution. One was a collection of letters written by Asa Gray, John Torrey, Charles Pickering, Capt. Charles Wilkes, and others of the United States exploring expedition, 1838-42, to William D. Brackenridge, a prominent botanist of the expedition. The collection was presented to the Institution by Mrs. Isabel Brackenridge Hendry, acting for the grandchildren of Mr. Brackenridge. It constitutes a valuable addition to the manuscript material on the subject already in the library.

The staff kept the current work up to date and performed certain extra activities. They entered 10,458 periodicals, or 1,433 more than in 1932. Among these were 204 volumes and 1,092 parts that they obtained by special exchange letters in the process of completing standard sets. They also began 86 new exchanges for the Museum; sent 795 volumes to the bindery; cataloged 2,108 volumes, 954 pamphlets, and 15 charts; and added 20,242 cards to the catalogs and shelf lists. Until toward the close of the year the library work for the National Gallery of Art was done, as usual, by the main library staff; it consisted of entering 428 periodicals and cataloging 344 volumes and 93 pamphlets. The number of volumes and parts sent to the sectional libraries for filing was 5,901. The number of intramural loans was

8,344, of which more than a third were made at the loan desk in the Arts and Industries Building. Of these, 2,359 publications were borrowed from the Library of Congress and 535 from other libraries, including those of the Department of Agriculture, Geological Survey, Army Medical Museum; and the Boston Public Library, Cleveland Public Library, John Crerar Library, Newberry Library; the libraries of the Academy of Natural Sciences of Philadelphia, American Museum of Natural History, Arnold Arboretum, Field Museum of Natural History, Museum of Comparative Zoology, Peabody Museum; and Columbia, Harvard, Johns Hopkins, Michigan, Pennsylvania, Princeton, and Yale Universities. In all, 42 publications were borrowed from libraries out of town, and 30 lent to them. The number of publications returned to the Library of Congress was 2,526 and to other libraries 608.

The staff filed the Wistar Institute cards to date and sorted and distributed the systematic set of the Concilium Bibliographicum cards to the sectional libraries. They began the rearrangement and classifying of the contents of the manuscript case, taking up first the Berlandier manuscripts, consisting of several thousand pages mainly on the natural history of Mexico. They returned hundreds of publications no longer needed to the Superintendent of Documents, and transferred other hundreds to the Library of Congress, the Patent Office, and Howard University.

One of the most important tasks of the staff during the year was making analyticals for the first 36 volumes of the Proceedings of the National Museum. This work was undertaken in cooperation with the Library of Congress, to which the 1,694 manuscript cards prepared were sent for printing, and completes the analysis of this well-known set of Museum publications. Library-of-Congress printed cards will soon be available for all the publications that have been issued by the Smithsonian Institution and its bureaus. Several sets of these cards are being received by the library, of which two are being filed in the union and Museum catalogs. One is also being used as the basis of the dictionary index that was begun at the Smithsonian early in the year. Finally, the difficult task of reorganizing the technological library in the Old Museum was notably advanced. The wooden shelving in the north gallery on the third floor was replaced by steel to the extent of 1,134 linear feet, the collections were reshelved, and a careful reading of the shelves was begun, preparatory to taking an inventory.

As time permitted, the staff continued to render special assistance in solving the problems of the sectional libraries, including those of the divisions of mammals, botany, and physical anthropology.

PHOTOGRAPHIC LABORATORY

The photographic laboratory made during the year 3,025 negatives, 20,037 prints, 867 lantern slides, and 104 enlargements; developed 98 rolls of film and 48 film packs; and dry-mounted 39 prints. This work represents a slight increase over last year in the number of negatives and prints made, and was required by the National Museum and by the National Gallery of Art and the Bureau of American Ethnology, whose photographic needs are supplied by the laboratory through a cooperative arrangement.

BUILDINGS AND EQUIPMENT

Repairs and alterations.—Among the more important repairs and alterations to Museum buildings performed during the year are the following:

The exterior walls of the Natural History Building were washed by a detail of firemen from the District of Columbia Fire Department.

The plaster ceiling and side walls in the north lobby, Natural History Building, were given three coats of paint, and other painting was done as needed, both interior and exterior, including the tin roofs of the Arts and Industries Building and the Smithsonian Building.

The women's comfort room in the Natural History Building was thoroughly renovated.

The large second-floor east-corner room and the small room adjoining it, in the Arts and Industries Building, were remodeled in the spring of 1933 for the occupancy of the associate director and his assistants. The small anteroom was also renovated. Also, room 90 was remodeled for the use of the new illustrator.

The cafe dining room in the Arts and Industries Building was remodeled, the walls and ceiling covered with composition board, and new fixtures installed.

Work was completed on the installation of the pneumatic collecting and conveying system in the two woodworking rooms in the carpenter shop for removing sawdust.

The work of dismantling the George Washington Bicentennial Art Exhibit was completed in January. The two stone lions on the pedestals at each side of the south steps, Natural History Building, were removed and shipped to Newport News, Va., for permanent exhibition. Several of the plaster figures remained in the rotunda, having been presented to the National Gallery of Art.

Heat, light, and power.—The heat, light, and power plant, located in the Natural History Building, was in continuous operation for about 8 months of the year. The consumption of coal was somewhat more than it was last year, but not above the average for the past few years. For heat, light, and power production 3,297.1 tons of bituminous coal were purchased at \$4.62 a ton.

The electric current purchased for the Arts and Industries Building during the year amounted to 124,790 kilowatt-hours and cost \$2,849.66, while the current purchased during the summer for the other buildings was 264,310 kilowatt-hours and cost \$4,645.08, which makes a total of 389,100 kilowatt-hours purchased at a cost of \$7,494.74. The rate per kilowatt-hour was 1.93 cents, which is materially less than for last year, owing primarily to the fact that the current for the Arts and Industries Building was on a different schedule. The current generated in the Museum plant was 621,384 kilowatt-hours, produced at a cost of 1.63 cents a kilowatt-hour.

When the new lead-covered cables were purchased last year for enlarging the connection between the Museum lines and the Potomac Electric Power Co. cables where they enter the Natural History Building on the north side, the central line was not increased. To make this connection safe, a new 500,000 circular mils cable was bought and will be installed during the coming year.

A good deal of electrical repair work has been done during the year, including not only regular repair and upkeep, but also installation of new wiring systems where the old wires have been found to be overloaded or defective.

Repair work too has been necessary on some of the elevators, especially the automatic push-button elevator in the east end of the Smithsonian Building, which for safety's sake should be replaced by a manually operated car at the earliest possible time.

New electric-light equipment to be installed includes 191 ceiling fixtures purchased for the third floor of the Natural History Building.

The lighting of the stamp collection, in the Arts and Industries Building, which has been desired for a long time, has now been completed. This consists of white porcelain-lined inverted trough reflectors supported from the tops of the cases in such a way as to deflect the light down against each surface of the slides on which the stamps are mounted. The method has proved very satisfactory and efficient.

To provide convenient connections for the twelve 500-watt reflectors purchased last year for added interior illumination of the dome of the Natural History Building, 12 outlet boxes with twin receptacles have been installed around the rotunda on the fourth floor, with direct control in the engine room.

The installation of small, low-voltage lamps for microscopic work in the National Herbarium has gone forward. This method of furnishing light for such work was begun last year, and has proved so satisfactory that it has been called for by other workers.

The new heating system at the north front of the Smithsonian Building was completed and was in operation throughout the year. Further improvement in heating efficiency was effected by replacing with new low radiators, in various offices in the Natural History

Building, the radiators of the taller type, some of which were badly situated. Work has progressed, too, on the installation, begun last year, of new pipe in the hot-water system in the Natural History Building. This pipe, brass instead of galvanized iron, will tend to retard the accumulation of scale and dirt and thus aid in the proper flow and distribution of the water. Because of the congested location of the old equipment, the tank and other new apparatus are to be placed in the east end of the engine room.

Ice production.—The refrigerating machine, located in the basement of the Natural History Building, for manufacturing ice for all the Museum buildings, was operated a total of 4,058 hours during the year and produced 413.9 tons of ice at a cost of \$827.68, or at the rate of \$2 a ton (35 cents a ton less than for last year). During the extremely hot weather, it was necessary to purchase 12½ tons of ice, at a cost of \$3.80 a ton.

Fire protection.—The fire alarms in the various Museum buildings have been regularly inspected and tested, the fire hose examined and the plugs flushed, and the sprinkler system in the Aircraft Building properly cared for.

In the Arts and Industries Building some progress was made in reducing fire hazards along lines recommended by the Federal Fire Council. The improvements include filling window openings and open arches with plaster block, replacing wooden partitions with plaster block, replacing old electric wiring with modern wiring, and replacing wooden library shelves with steel shelves. Although many of the fire hazards still remain, especially in the Smithsonian Building and the Arts and Industries Building, they are being removed as rapidly as funds permit, and fire protection is being generally improved.

Furniture and fixtures.—The furniture added during the year included 10 exhibition cases, 365 pieces of storage, office, laboratory, and other furniture, and 2,373 drawers, boxes, and frames of various kinds. During the same period, 19 exhibition cases and bases, 93 pieces of storage, office, and laboratory furniture, and 112 wooden drawers were condemned as unfit for further use.

An inventory of furniture on hand June 30, 1933, showed 3,743 exhibition cases and bases, 17,001 pieces of storage, office, and laboratory furniture, and 103,062 drawers, boxes, and frames.

MEETINGS AND RECEPTIONS

The facilities of the auditorium and lecture room are offered by the Museum to scientific and educational organizations for regular and special meetings, and whenever possible it assists in carrying out their programs. Ninety-five such meetings were held in the auditorium and lecture room during the year by a wide range of societies and organizations.

Memorial meeting.—To commemorate the many years of service in the Smithsonian Institution of Prof. William Henry Holmes, who died on April 20, 1933, a memorial meeting was held on the morning of April 22, Dr. Abbot presiding. The meeting was widely attended by his coworkers and friends.

Receptions.—On the evening of January 26, 1933, a reception was held by the Washington Real Estate Board in connection with the convention in Washington of the National Organization of Real Estate Boards. The foyer and all the first floor of the Natural History Building were open for the occasion.

About 1,775 persons attended an informal reception given on the evening of March 28, 1933, in the Natural History Building by the American Chemical Society, convening in Washington at that time. Music was furnished by the United States Marine Band, and motion pictures on chemical subjects were shown in the auditorium.

The Congress of Physicians and Surgeons held a reception for Members of Congress on the evening of May 9, 1933, in the rotunda, art gallery, and auditorium of the Natural History Building. Nearly 1,500 persons attended.

Gellatly Art Collection opening.—The official opening of the Gellatly Art Collection took place in the Natural History Building on the evening of June 22, 1933. Secretary and Mrs. Abbot, Assistant Secretary and Mrs. Wetmore, and the Acting Director of the National Gallery of Art and Mrs. Tolman received.

Special exhibits.—The annual forestry notebook contest, under the auspices of the public schools of the District of Columbia, was held in the foyer of the Natural History Building, November 16 to 28, 1932. Some of the notebooks were attached to Museum floor screens, while others were exhibited on temporary tables furnished by the Museum.

The wooden screens forming alcoves on both sides of the foyer in the Natural History Building were used from December 10, 1932, until January 10, 1933, for an exhibit of architectural drawings from the architectural departments of colleges and schools in the District of Columbia, which was held under the auspices of the Washington Chapter of the American Institute of Architects. The exhibition was opened on the evening of December 10, with a reception in the foyer. Drawings were exhibited by the following institutions: George Washington University, University of Maryland, Central High School, Catholic University of America, Gallaudet College, and McKinley High School.

From March 30 to April 14, 1933, four alcoves on the west side of the foyer were assigned for an exhibit of material collected under the direction of Dr. Paul Bartsch on the Johnson-Smithsonian deep-sea expedition. The deep-sea specimens, in jars, were placed on plain wooden shelves installed on the semipermanent screens.

The foyer was occupied from April 17 until May 5, 1933, for an exhibition of public school art under the auspices of the Eastern Arts Association, and from May 8 to 20 part of the foyer was given over to an exhibition of colored posters on wild-flower preservation, under the auspices of the Wild Flower Preservation Society.

CHANGES IN ORGANIZATION AND STAFF

The changes this year in organization and staff were caused chiefly by the compulsory retirement on June 30, 1932, of a number of employees in key positions. The retirement of W. deC. Ravenel deprived the department of arts and industries of its director and the division of history of its administrative supervisor. The duties of both of these offices were on July 1, 1932, temporarily assumed by J. E. Graf, associate director of the Museum. On September 6, 1932, the position of director of the department of arts and industries was replaced by a new position of head curator—bringing the department in line with the natural history departments—and Carl W. Mitman, curator of engineering, was advanced to the head curatorship. Frank A. Taylor, assistant curator of engineering, succeeded Mr. Mitman as curator of the division of engineering. The division of history continued to remain an independent division, reporting to the head of the Museum through the associate director.

In the department of biology, the assistant curatorship of the division of fishes, vacated by the retirement of Barton A. Bean on June 30, 1932, was filled on January 3, 1933, by the appointment of Dr. George S. Myers. Dr. Horace G. Richards, assistant curator in the division of mollusks, resigned on September 10, 1932.

In the department of anthropology, the position of scientific aide that had been held by Richard A. Allen was abolished, and the clerical force was strengthened by the appointment of an assistant clerk-stenographer for the division of ethnology.

In the department of geology, James Benn was made scientific aide on March 1, 1933, taking over part of the work formerly done by Miss Margaret W. Moodey.

In the mechanical shops, H. C. Taylor, head of the paint shop, who retired on June 30, 1932, was succeeded on September 6, 1932, by William Crossingham, who had been associated with this branch of the Museum work for over 30 years.

In the administration office, James G. Traylor, appointment clerk, was retired on June 30, 1932, but he continued as clerk to the Board of Regents of the Smithsonian Institution. On January 16, 1933, the appointment work of the Smithsonian Institution was consolidated with the classification and retirement work, and Miss Helen A. Olmsted, from the administrative office of the Museum, was made personnel officer of the Institution.

On August 29, 1932, Carl W. Mitman was appointed contact officer to represent the Smithsonian Institution in its participation in the Century of Progress Exposition, Chicago, June 1 to November 1, 1933. On June 15, Roderic F. Davis was made special agent under Mr. Mitman for work in Chicago.

Honorary connections with the national collections were conferred on several scientists of note. David I. Bushnell, Jr., long associated with the ethnological and archeological work of the Institution, was given an honorary appointment as collaborator in anthropology on July 27, 1932. J. Townsend Russell, who had for several years held an honorary position as collaborator in Old World archeology, was made honorary assistant curator of that subject on May 13, 1933.

In the department of biology, the work of Dr. Charles Branch Wilson, who has collaborated on Museum collections for a quarter of a century, was recognized by his honorary appointment on June 30, 1933, as collaborator in Copepoda.

In the department of geology, the active interest for many years of Dr. August F. Foerste was again recognized, this time by his honorary appointment on September 29, 1932, as associate in paleontology. Dr. Foerste served the Museum in an honorary capacity as collaborator in paleontology from April 16 to December 31, 1928.

The Smithsonian was fortunately able, after her retirement from active Government service, to take advantage of Miss Margaret W. Moodey's long experience in identifying, classifying, and cataloging geological specimens by procuring her services under the income of the Springer fund as aide for work on the Springer collection of fossil echinoderms.

Four employees were retired during the year under the provisions of the Civil Service retirement act. Of these Frank T. Wright, laborer, was retired for disability on August 31, 1932. Others were retired because of age limitation, as follows: Margaret W. Moodey, aide in the department of geology, on December 31, 1932, after over 30 years of service; Ambrose Green, guard, on March 31, 1933, with nearly 38 years of service; and Walter A. Barkley, guard, on January 15, 1933, after 2 years at the Museum but with other civil and military service for the Government.

The Museum lost through death 2 active workers and 3 others long associated with its activities. George Emmert, guard, died on February 1, 1933, and John J. Veit, guard, on April 26, 1933, after services of 14 and 15 years, respectively. The death should be recorded, also, of Dr. Marcus Benjamin, retired, for many years editor of the National Museum, on October 22, 1932.

DETAILED REPORTS ON THE COLLECTIONS

REPORT ON THE DEPARTMENT OF ANTHROPOLOGY

(WALTER HOUGH, *Head Curator*)

Many things of exceptional value came to the department of anthropology during the year, mostly by gift. Though exploration, the source of first-grade scientific material, was curtailed, archeological work on Kodiak Island and at Point Barrow, Alaska, and exploration of caves in Texas was continued; a reconnaissance was made of remains of Indian irrigation projects and house structure in southern Arizona; and cooperative archeological investigations were pursued in Europe.

ACCESSIONS FOR THE YEAR

The division of ethnology received 48 accessions and 961 specimens, compared with 60 accessions and 931 specimens last year. Noteworthy among them is a series of Philippine material, including Moro and other Malay textiles collected by Gen. Tasker H. Bliss while Governor of Moro Province, 1905-9, and presented by Mrs. Bliss; textiles and beadwork of the Moro, Bagobo, and Igorot Tribes collected by the late Capt. Lewis Patstone and presented by Miss M. A. Patstone; and several embroidered garments of Pina cloth, donated by Miss Sarah S. Metcalf. From Cambodia, Indo-China, came a crossbow and from China and Japan large and artistic collections of lacquer, porcelains, brasses, bronzes, ivory carvings, and many objects of minor art. Africa is represented by an inscribed gold ring from the Gold Coast and by a miscellaneous ethnological collection from the Kivu district, Belgian Congo, presented by Miss Ellen I. Burk. A headdress and war club from Rapa Island, Society Group, came as the gift of Stanley W. Bird. Russia is the source of a small collection of brasses, including an excellent samovar, teapot, and tray, the gift of Mrs. F. Ostrach. Mexican material received includes Guadalajara earthenware, the gift of Miss Susan P. Keech, and horse trappings of braided horsehair.

By transfer from the Bureau of American Ethnology, a unique collection was received from the Chama Indians of the Ucayali River area of Peru and from several Jivaro groups of eastern Ecuador. This material was obtained by M. W. Stirling, chief of the Bureau, while a member of the Latin-American expedition to eastern Ecuador

and Peru, and scientifically is the outstanding collection of the year, though intrinsically the gift of imperial Chinese porcelains, brasses, and other objects of high art secured in Peiping by Gen. Charles A. Coolidge in 1900, and presented by Mrs. Coolidge, is of first rank. The Mrs. Alexius McGlannan collection of Japanese, Chinese, and European folk and minor arts is likewise highly valuable.

The bequest to the National Museum by the late Osage chief, Tom Baconrind, of his personal belongings and ceremonial paraphernalia aroused unusual interest, as Chief Baconrind was prominent in Oklahoma and learned in the ceremonial lore of his tribe. He assisted the late Francis La Flesche, of the Bureau of American Ethnology, in his studies of the Osage language. The Baconrind gift includes decorative embellishments of native Indian, peyote, and Christian cult elements. A valuable addition to the collection of historical and comparative religious art is the large gift from the estate of Mrs. Alice Pike Barney.

In the division of archeology 64 new accessions, totaling 2,737 specimens, were added, as against 69 accessions and 6,712 specimens during the previous year. The following are worthy of special notice: 339 stone, bone, and wooden implements, basketry, and other materials collected by Frank M. Setzler from six caves in Brewster County, Tex.; 477 flint implements from Aurignacian, Upper Paleolithic, and other early cultural horizons in two caves at the foot of Mount Carmel, Palestine, collected by the American School of Prehistoric Research and received as a loan from the Archaeological Society of Washington; 789 stone, bone, and ivory implements and ornaments collected by Dr. Aleš Hrdlička on Kodiak Island, Alaska; 58 specimens of stone and copper implements and pottery collected in Ecuador by M. W. Stirling; 218 stone artifacts from Monasukanough and other Indian village sites, mostly in Albemarle County, Va., collected and presented by D. I. Bushnell, Jr.; 58 stone, shell, and earthenware objects from five village sites in Puerto Rico, collected by Gerrit S. Miller, Jr.; 26 earthenware vessels and stone implements from Ometepe Island, Lake Nicaragua, presented by Corp. Emil M. Krieger; 9 wood carvings, copper pins, and an earthenware effigy collected at Pachacamac and other prehistoric sites in Peru and presented by George Hewitt Myers; a quipu, or knotted string record, and 15 fragments of textiles from Pachacamac and Trapiche ruins, Peru, a gift from Mrs. J. P. Compton; 38 lots of potsherds, bone projectile points, and implements from the Gran Chaco of Argentina, from E. R. Wagner, Museo Arcaico Provincial, Santiago del Estero, Argentina.

In the division of physical anthropology 18 accessions, 658 specimens, included important skull and skeletal material from Kodiak Island, Aleutian Islands, Point Barrow, and St. Lawrence Island,

Alaska, and from California and New Mexico. A series of 262 photographs of Filipinos came from Dr. R. B. Bean.

Two accessions were received in the section of musical instruments; 7 (378 specimens) in the section of ceramics, including 80 pieces of older glass and pottery and 143 pieces of Irish and American Belleek ware; and 8 (141 specimens) in art textiles, including noteworthy embroideries and laces.

INSTALLATION AND PRESERVATION OF COLLECTIONS

New exhibits were arranged for each of the major exhibition halls assigned to ethnology. South American exhibits were enriched by a large collection of Chama pottery from a group once believed not to practice pottery manufacture. The collection shows them to be the equal of the Coneba in producing a thin-walled, creamy-textured ware. This and three additional exhibit units resulting from the Latin-American expedition to eastern Ecuador have been installed. Material included is from various groups of Jivaro and comprises blowguns, looms and weaving apparatus, woven textiles, decorated pottery, and pottery-making implements, objects of personal adornment, and various objects representing decadent stages in the art of head-hunting. Mexican folk pottery and examples of the folk arts of Mexican, Nicaraguan, and Guatemalan peoples were assembled to form a new exhibit in the Mexican alcove. This includes textiles, wood carving, model figures in wax, and objects of personal adornment. The Colombian and Panamanian exhibits were improved through the addition of the W. W. Archer Choco collection and the M. W. Stirling Tule and Choco material.

A case was arranged to show historical Indian sculpture from modern Indian tribes. Masks and figurine carvings in wood collected by Gibbs, Stuckley, and Wilkes from tribes of the Columbia Valley and the Pacific Northwest are shown, as well as a portrait bust of himself modeled by the Ute, Chief Shem, and the famous Haida slate carving known as the "Bear Mother."

During the year the division of archeology concentrated its efforts on complete revision of the hall devoted to Old World prehistory. An important feature is the synoptic series, portraying diagrammatically the cultural evolution of man in relation to geological events, from Pliocene times to the period of modern civilization, and including type artifacts, charts showing environmental conditions, and water-color sketches suggesting characteristic human activities and industries of the successive periods. Other major exhibits installed deal with the following cultures: Eolithic, pre-Chellean, Chellean, Acheulian, Micoqien, Mousterian, Aurignacian, Magdalenian, Azilian, Final Capsian, Maglemosian, the Proto-

Neolithic of France and Italy (Campignian), of Scandinavia (Ertebølle), and of Central Africa and India, the Neolithic of western, northern, and Alpine Europe, of North Africa, Indo-China, Japan, and Siberia, and the later Sumerian-Babylonian.

Five charts tracing the correlation between cultural and geological events in the Old World, 5 illustrations for the synoptic series, 13 maps showing cultural distributions, and 6 maps depicting the range of glacial advance and retreat were prepared and incorporated in the exhibits.

Study collections of the Paleolithic and Neolithic periods were reclassified and the accompanying records corrected wherever necessary to include new information. These have also been regrouped into cultural-geographical series, so that students may examine the material with greater ease and effectiveness. The collection from Casa Grande, southern Arizona, secured early in the present century by the late Jesse Walter Fewkes, was reexamined, and the exhibit illustrating the material culture of this famous ruin was greatly improved.

In the division of physical anthropology a temporary exhibit of 6 cases was arranged from the newly recovered Alaska (Kodiak Island) materials, and 3 cases of new exhibits were added to the permanent display. A case of exhibits prepared for the National Academy of Sciences meeting in April remained for 2 weeks on view in the academy. Two cases of exhibits were prepared for the meeting of the American Surgical Association.

INVESTIGATION AND RESEARCH

In ethnology, Henry B. Collins, Jr., continued the study of Eskimo archeology, particularly on materials collected by himself, J. A. Ford, and M. B. Chambers. For several years the Smithsonian Institution has conducted archeological studies along the west Alaskan coast, to obtain data on the chronological sequence of certain early phases of Eskimo culture. During this year and last the scene has been shifted to the north Alaska coast in the vicinity of Point Barrow. Here the problem involved concerns the historical sequence of Punuk and Thule phases of Eskimo culture. James A. Ford spent the winter of 1931-32 at Point Barrow on the Arctic coast and devoted the following summer to excavating at several old Eskimo sites in the region. Point Barrow has for some time been recognized as one of the most important places archeologically in Alaska, since it was the westernmost limit of the extinct Thule culture, which centered in northern Canada, and also the most eastward point to which the Old Bering Sea culture extended. Mr. Ford's excavations were the first of a systematic nature to be carried on at this strategic point, and the material obtained throws

light on the relationships between the Thule, Punuk, and Old Bering Sea cultures. Mr. Collins also devoted some time to research on southeastern archeology, and participated in the conference on southern prehistory held by the National Research Council at Birmingham, Ala., in December.

Phases of Arawakan occupation of the Greater Antilles have become known through five seasons of active field work by Smithsonian expeditions sponsored by Dr. W. L. Abbott in the Dominican Republic, Haiti, and Cuba. Problems involved concern the inter-relationships among Ciboney, Arawak, Carib, and perhaps other tribal cultures in central and western Cuba. H. W. Krieger during the year studied material assembled on these expeditions and belonging to these tribal cultures. The greater problem of northern and southern affiliation of the prehistoric Antillean cultures is much nearer a solution, but much work remains to be done in Venezuela, Puerto Rico, the Bahamas, and perhaps Florida. The 1932 season's work, during which Mr. Krieger investigated mounds, earthworks, and kitchenmiddens in central and western Cuba, has confirmed the belief of students that Mayan influence did not reach western Cuba. It was also found that pre-Arawak cultures of the Ciboney type are much more extensive than had previously been known. The principal evidence for this is the large number of village sites yielding no pottery.

Art design areas of North America and of Oceania and certain problems connected with the distribution of aboriginal application of design were other topics of research by Mr. Krieger. The quilled and painted designs on the George Catlin collection of Indian costumes from unidentified northern Plains tribes, and the costumes displayed in the Indian portraits by George Catlin, also received his attention. The culture of the historic tidewater Indians of Virginia, Maryland, and the Carolinas continues of major interest. The strictly prehistoric cultures and the physical anthropology of this area are receiving the attention, respectively, of Frank M. Setzler and Dr. T. Dale Stewart.

The curator of archeology, Neil M. Judd, continued work on his report on the Pueblo Bonito explorations of the National Geographic Society. Assistant Curator Setzler studied archeological material he had previously collected in the Big Bend region of Texas and published a description of certain fragmentary vessels from east-central Louisiana collected in 1926 by the late Gerard Fowke. The importance of these fragments lies in their definite resemblance to a type of pottery generally designated by archeologists as "Hopewell" and heretofore reported only from the northern Mississippi Valley.

Research by the curator of physical anthropology, Dr. Aleš Hrdlička, was concentrated on his field work in Alaska and on study

of the skeletal materials brought back. He also finished an extensive work on "The Anthropology of the Pueblos", measured the collection of Chinese skeletons, and prepared for publication a monograph on "Ear Exostoses: Contribution to Racial Pathology." The assistant curator, Dr. T. D. Stewart, measured the tympanic plate and external auditory meatus in the Eskimo, California Indians, and related groups; tested the skull-capacity machine and studied the skull-capacity problem in general; studied the vertebral column in the Eskimo; and continued research on the hair directions of primates.

DISTRIBUTION AND EXCHANGE OF SPECIMENS

Four gifts made to other institutions included 72 specimens. One lot consisted of prehistoric Eskimo objects collected in duplicate by Dr. Hrdlička and Mr. Collins. Two small gifts representing the history of the Japanese Red Cross Society were made to the National Red Cross Museum of Washington, D.C., and a large collection was sent to the City Museum of Talladega, Ala. Sixteen specimens were transferred to the divisions of textiles and archeology.

During the year eight lots of archeological material (612 specimens) were sent out in exchange or as gifts to educational institutions, as follows: 104 specimens (gift) for scientific purposes to Rev. David C. Graham, Suifu, Szechwan, China; 167 specimens (gift) to the City Museum of Talladega, Ala.; 1 cast of a slate tube to Dr. Charles Back, Montezuma, Ind., in exchange for permission to make and retain a cast of the original; 4 lots of potsherds (gift) to the Antelope Valley Museum, Lancaster, Calif.; 3 casts of Easter Island wooden tablets as a gift to the Musée d'Ethnographie, Palais du Trocadero, Paris; 4 casts (2 sendings) to W. J. Curtis, Piqua, Ky., in exchange for permission to make similar replicas; 329 Old World archeological specimens (gift) to the Hastings College Museum, Hastings, Nebr.

NUMBER OF SPECIMENS UNDER DEPARTMENT

During the year the department received 131 accessions, a total of 4,877 specimens. Of these, 4 accessions comprising 510 specimens were loans. The material was distributed as follows: Ethnology, 48 accessions (961 specimens); archeology, 64 accessions (2,737 specimens); physical anthropology, 18 accessions (658 specimens); musical instruments, 2 accessions (2 specimens); ceramics, 7 accessions (378 specimens); and art textiles, 8 accessions (141 specimens).

On June 30, 1933, the total number of specimens in the department of anthropology was as follows:

Ethnology.....	187, 919
Archeology.....	440, 817
Physical anthropology.....	33, 497
Musical instruments.....	2, 074
Ceramics.....	6, 178
Art textiles.....	1, 528
Anthropology (not assigned).....	9
Total.....	<hr/> 672, 022

REPORT ON THE DEPARTMENT OF BIOLOGY

(LEONHARD STEJNEGER, *Head Curator*)

The past year promises to open a new era in the development of the divisions which deal with marine fauna, especially of the deeper waters of the ocean. Thanks to Eldridge R. Johnson's initiative and offer of the use of his yacht *Caroline*, together with generous funds for its equipment for oceanographic work, the first Johnson-Smithsonian deep-sea expedition, under the direction of Dr. Paul Bartsch, curator of mollusks, made a successful cruise of exploration of the Puerto Rican Deep, which resulted in greatly enriching the Museum collections, in addition to giving observations bearing on biological, chemical, and physical problems of the ocean.

Capt. G. Allan Hancock generously offered the Museum participation in the Hancock Galapagos expedition on the yacht *Velero III* during a 3-months' oceanographic cruise to the Galapagos Islands and the western coast of Central America. Dr. Waldo L. Schmitt, curator of marine invertebrates, was detailed for this service and returned with much valuable material, chiefly crustacean, for the Museum collections.

ACCESSIONS FOR THE YEAR

There were 1,200 accessions for the year with a total of 295,782 specimens, more than double the number received during the previous year. Through the two expeditions alluded to, the scientific importance of the invertebrate material is probably greater than that of the vertebrate, though the high scientific value of some of the fish collections should be emphasized, as well as the acquisition of material of various classes from French Indo-China, important on account of the locality being hitherto poorly represented in the Museum. Dr. Hugh M. Smith's collections of Siamese mammals, birds, and mollusks maintain their standing as first-class contributions, and the first collections from Dr. D. C. Graham after his return to his old field in China are coming up to the expectations raised by previous experience. Many of the plant collections accessioned during the year are scientifically of a high order.

Mammals.—The outstanding accession was the skull, with six blades of baleen, of the bowhead whale (*Balaena mysticetus*), collected by J. A. Ford at Point Barrow, Alaska. This is the first skull of its kind to come to any museum from the Pacific side of

the Arctic Ocean, and the only bowhead in any American museum, while in European museums the species is represented by less than half a dozen specimens. From Dr. Hugh M. Smith in Siam 151 mammals, supplementing the large collections of previous years, were received. By exchange with H. J. V. Sody, Buitenzorg, Java, 59 mammal skins with skulls from Java and Celebes, were obtained, mostly forms new to the Museum. W. G. Sheldon and Richard Borden presented 63 specimens collected in British Columbia. Dr. R. K. Enders collected in Panama 51 mammals for the Museum, two species being new to the region. Noteworthy among the many specimens obtained from the National Zoological Park by transfer were a young mountain gorilla, *Cacajao calvus*, *Hylobates agilis*, and a young fur seal born at the park. Two gibbons (*Hylobates hoolock*), a species new to the Museum, were obtained in exchange, and a skeleton of a dugong, from Australia, by purchase.

Birds.—The 456 birdskins and 2 skeletons from Siam sent by Dr. Hugh M. Smith take first place. James Ford collected 169 birdskins in Alaska, and Dr. A. Wetmore 95 skins and 38 skeletons in the southwestern United States, besides about 100 local birds. A number of species and genera new to the Museum were obtained by exchange, including an Hawaiian honey creeper (*Paroreomyza flammea*), 10 forms of hummingbirds, and 13 of other birds. A skin and skeleton of the rare Hawaiian goose (*Nesochen sandvicensis*) were presented by the Commissioners of Agriculture and Forestry at Honolulu, and the first known nestling wandering tattlers (*Heteroscelus incanus*), collected by Joseph S. Dixon, came from the National Park Service. Among transfers of specimens from the National Zoological Park was an egg of the California condor. Eggs of 148 forms hitherto not represented in the Museum were obtained in exchange. Percy Shufeldt placed a valuable collection of 2,316 birdskins on deposit in the division.

Reptiles and amphibians.—The largest additions of the year came from Dr. C. E. Burt, the most important being collected for the Museum during a trip to the upper reaches of the Tennessee and Cumberland Rivers, when he obtained 1,491 specimens. He also donated 1,325 specimens from the West. An important collection from Puerto Rico containing topotype material of some recently described frogs was the result of G. S. Miller's visit to that island early in 1932. Three small herpetological collections obtained from French Indo-China are highly important as the locality was not represented in the Museum collections previously, except for a few specimens recently received. From the National Zoological Park the division received by transfer an unusually interesting lot of animals, among which is a series of the pipa, or Surinam toad. A splendidly preserved series of Californian *Batrachoseps* is of great

value for the study of that difficult group of salamanders. A good collection of reptiles and amphibians from Kansas was contributed by H. K. Gloyd.

Fishes.—Of special importance was the fine collection of fishes obtained by the Johnson-Smithsonian deep-sea expedition off Puerto Rico, containing many remarkable deep-sea forms, among them a new genus and species of Triacanthidae, the second one of the family to be recorded from the New World. Another collection of great interest is a lot of 67 specimens presented by Dr. George S. Myers, assistant curator of fishes, consisting mostly of type specimens of West African and South American fresh-water fishes described by the donor and others. Holotypes of 2 species, cotypes of 8, and paratypes of 13 are included. Altogether this accession brings to the Museum 26 species, 13 genera, and 1 family hitherto not represented in its collections. From the United States Bureau of Fisheries a fine series of 1,177 fishes from the Catawba and Tuckasegee Rivers, N.C., including the type of a new darter, and another lot consisting of 3 type specimens from the Gulf of Mexico, were received by transfer. C. R. Aschemeier obtained 1,959 fresh-water fishes in Florida, partly collected for the Museum, partly as a gift. The British Museum presented two paratypes of *Notobranchius kiyawensis*. Two paratypes of a new smelt were a gift from Dr. L. P. Schultz, of the University of Washington. A specimen of *Gempylus serpens*, a species new to the Museum, was presented by Eastham Guild, Papeete, Tahiti. From Dr. D. C. Graham came a collection of fishes from Szechwan, China.

Insects.—The outstanding accession of the year was the Edward T. Owen collection of Lepidoptera, comprising about 40,000 beautifully preserved specimens and including many species new to the Museum. The collection represents the life work of Professor Owen and was received from the executor of his estate. Frank Johnson, of New York City, made several gifts of rare species of Lepidoptera of great value, numbering in all 1,030 specimens, of species not previously in the Museum or poorly represented. Two important donations of Microlepidoptera, including about 600 specimens each, were obtained from the British Museum and Edward Meyrick. M. W. Stirling, Chief of the Bureau of American Ethnology, brought back from his South American trip 350 Lepidoptera from Peru. The collection of the late Prof. P. R. Lowry, Durham, N.H., comprising 908 slides of insects, mostly plant lice, was donated by his widow. By exchange with O. Ringdahl, Haelsingborg, Sweden, 273 named Diptera of the family Anthomyiidae, in which he is a distinguished specialist, were obtained, an accession furnishing a large representation of the northern European fauna. Two lots of miscellaneous insects, comprising about 3,800 specimens, came from Indo-China, an im-

portant addition as the Museum has little material from that region. L. D. Christenson, Wellsville, Utah, donated a collection of 4,550 Cuban insects, and D. S. Bullock of Angol, Chile, continued his liberal contributions. About 15,000 insects were transferred to the Museum by the United States Bureau of Entomology, being miscellaneous material received for identification from field workers.

Marine invertebrates.—The total number of specimens received was 15,160, of which the following accessions were of special interest: From the estate of the late Dr. Charles Dwight Marsh, his important collection of 3,307 slide mounts of copepods was acquired, including representative material of 26 new species. Capt. Robert A. Bartlett, New York City, presented a large collection of miscellaneous marine invertebrates taken in northwest Greenland waters. Dr. Waldo L. Schmitt collected series of specimens at the Tortugas, Fla., and also a large collection of Crustacea from the Galapagos Islands, during the cruise of the *Velero III*, of which mention has already been made. The collections brought home by the Johnson-Smithsonian deep-sea expedition, under direction of Dr. Paul Bartsch, were highly important. Dr. R. E. Coker, University of North Carolina, presented alcoholic specimens of copepods, comprising holotypes, paratypes, and other important material representative of species to be described by him. P. Hummelinck, of Utrecht, Holland, contributed 85 crustaceans, including types, from the Dutch islands off the coast of Venezuela. The deposition of type specimens of new species included the type of a new sponge, by Dr. James T. Penney, University of South Carolina; the type of new species of crab, described by Dr. Mary J. Rathbun, donated by the Museu Paulista, Sao Paulo, Brazil; and the type and 3 paratypes of a new species of parasitic copepod by Wilbur M. Tidd, Ohio State University. An important collection of 60 microscopic slide mounts and 49 alcoholic specimens of isopods was obtained from Dr. K. W. Verhoeff, Pasing, Bavaria.

Mollusks.—One of the most important accessions of the year is that of 5,550 mollusks taken principally from the Puerto Rican Deep, during the Johnson-Smithsonian deep-sea expedition. Four accessions, 100,500 specimens, are credited to the Frances Lea Chamberlain fund, including material from the Maynard collection of Cerions. Dr. Hugh M. Smith contributed 575 specimens of mollusks from Siam; Brother Daniel, Colegio de San José, Medellin, Colombia, 66 specimens of land, fresh-water, and marine shells; and Walter F. Webb, Rochester, N.Y., 161 specimens from the United States and Australia. A donation from Mrs. Isabel B. Hendry, Rosslyn, Va., contains about 3,100 specimens of land, fresh-water, and marine shells, and 1 from Miss Florence S. Gilson, Nyack, N.Y., 1,400 specimens, mostly marine mollusks. From Dr. C. G. Aguayo, Habana, Cuba, were received 67 specimens of land shells from that

island, and from the zoological section of the University of Stellenbosch, South Africa, 140 specimens. The type and paratype of a new fresh-water mussel from Florida were presented by Berlin Hart Wright, Penn Yan, N.Y.; 16 paratypes from Santo Domingo by Dr. H. A. Pilsbry, Academy of Natural Sciences of Philadelphia, and 3 cotypes from the Philippine Islands by Dr. Fred Baker, Point Loma, Calif.

Corals.—More than 200 specimens were received, nearly all from the Johnson-Smithsonian deep-sea expedition.

Helminths.—The total number of helminths accessioned is 1,068.

Echinoderms.—The most important of the 10 accessions received during the year is that from the Johnson-Smithsonian deep-sea expedition, including a large number of specimens of species from moderately deep water in the Caribbean region that have not been collected since the explorations of the *Blake* in 1877–80, the *Albatross* in 1884–87, and the *Fish Hawk* in 1899.

Plants.—Accessions for the year comprised 56,125 specimens, most important of which are as follows: 24,124 specimens were transferred by the United States Department of Agriculture, mostly from the Bureau of Plant Industry, 4,062 being grasses and 15,308 Argentine specimens collected by Venturi. About 3,600 duplicate specimens of the historic Mutis Herbarium, received as an exchange with the Botanical Garden at Madrid, Spain, through the efforts of E. P. Killip, will be of great importance in the study of South American plants. A considerable number of South American plants were obtained from the British Museum (Natural History). Several other tropical American collections were received in exchange, among them 765 specimens of the Ecklon-Zeyler expedition from the Natural History Museum at Vienna, Austria; 530 plants from the Royal Botanic Gardens, Kew, England; 984 plants from the Botanical Museum at Copenhagen, Denmark; 1,141 specimens from the Natural History Riksmuseum in Stockholm, Sweden; 1,257 specimens, mainly from Peru, from the Field Museum of Natural History, Chicago; 1,709 specimens from British Honduras, Guatemala, and Sumatra from the University of Michigan. Similarly, 1,619 Chinese plants were received from Lingnan University, Canton, and 500 from the University of Nanking, China; 744 plants collected in the Hawaiian, Fiji, and Society Islands from the Bernice P. Bishop Museum in Honolulu; and 886 mainly Chinese, West African, and Cuban plants from the Arnold Arboretum, Harvard University. C. V. Morton collected 1,897 plants for the Museum at Oaxaca, Mexico, with the assistance of Dr. Emil Makrinius. The University of Vermont gave the National Herbarium 306 specimens collected in Mexico by C. G. Pringle, the lot consisting of numbers not previously represented in the collections. Among the numerous gifts by institutions and

individuals were 464 specimens from the Death Valley region, Calif., by the National Geographic Society; 470 specimens from Nicaragua, by the Instituto Pedagógico de Varones, Managua; 449 specimens from the Santa Marta region, Colombia, by Dr. William Seifriz, University of Pennsylvania; 279 specimens from eastern Peru, by Guillermo Klug, Iquitos; 244 specimens from Colombia, by Baltazar Guevara Amortegui; 341 specimens from Panama, by Brother Paul, Colegio de la Salle; and 576 specimens from the State of Washington, by J. William Thompson, Seattle.

INSTALLATION AND PRESERVATION OF COLLECTIONS

The main work of the taxidermists was the mounting of a hippopotamus and the construction of a biological group of the Haitian ground iguana. The District of Columbia faunal exhibit continued under the care of Dr. Bartsch, who kept it current and made additions, notably a mounted specimen of the Louisiana heron.

Additional half-unit cases were supplied in the division of mammals for the rearrangement of the primate skins, all of which are now grouped together. Considerable work was done in rearranging smaller mammal skins, especially rodents and carnivores. The skeleton collection also was rearranged. The carnivore and larger rodent skulls of the Merriam collection, which has hitherto been kept intact as a separate unit, were intercalated in the general collection. Twelve large and medium-sized mammal skins were tanned on outside contract, and 13 skins were tanned by taxidermists of the Museum, who also degreased and made up 79 skins, skinned or prepared for skeletons 26 mammals, and removed 15 sets of gibbon leg bones. Fifty-five skeletons, mostly large, 145 skulls, and 14 sets of leg bones were cleaned. Contract work on small and medium-sized skulls and skeletons resulted in cleaning 695 skulls and 130 skeletons.

About two thirds of the birdskins received during the year were distributed in the study series. Of collections previously held up as separate units awaiting identification and study, the nonpasserine birds of the Roosevelt and Aschmeier African collections were identified and distributed. About one fourth of the large Siamese collections was worked up and distributed, as well as the rest of the Museum's Chinese birds. The skeletal material collected by H. B. Collins, Jr., on St. Lawrence Island was also identified. The work of expanding and rearranging the crowded parts of the study series included many groups of birds. The collection of alcoholic specimens was completely overhauled and all unidentified material culled out. The work of the preparators included skinning 108 birds, degreasing and remaking 158 skins, mounting two birds for the District collection, cleaning 292 skeletons, skeletonizing 220 birds, and blowing 40 eggs.

In the division of reptiles and batrachians, 6,310 newly identified specimens were incorporated in the collection. Dry preparations were added to the turtle collection as follows: 6 skeletons, 121 skulls, 59 shells; 71 study skins were also prepared, and a number of other reptile skins and skeletons made.

The division of fishes, during the vacancy caused by B. A. Bean's retirement on June 30, 1932, was ably cared for by E. D. Reid, under the immediate supervision of the head curator, until Dr. G. S. Myers, the new assistant curator, took charge. The large collection, mostly of *Albatross* fishes, for many years at Stanford University for study by the late David Starr Jordan and Charles Henry Gilbert, was packed and forwarded to Washington by Dr. Myers.

Dr. J. M. Aldrich, curator of insects, whose work was confined to Diptera, considerably improved the arrangement of several families. Dr. Alan Stone transferred all the mosquito collection to standard museum insect drawers and metal-covered cases and further rearranged the family Tabanidae. In the Coleoptera, H. A. Barber rearranged and expanded special groups and made a preliminary rearrangement of Philippine hispids. Dr. M. W. Blackman rearranged the Museum collection of 22 genera of the family Scolytidae. Dr. A. G. Böving continued to supervise the coleopterous larval collection. Nearly 3,000 jars of this material have been prepared and filled in the past 2 years. L. L. Buchanan studied and rearranged specimens of *Hylobius* and *Lepidophorus*, of the carabid genus *Monoferonia*, of the long series of granary weevils of the genus *Sitophilus*, and of the coffee-bean weevil. In addition he selected a synoptic series of the species of the genus *Calendra* and identified and arranged more than 3,000 North American specimens of the weevil genus *Apion*. Dr. E. A. Chapin made progress in arrangement of the scarabaeid beetles of the subfamilies Melolonthinae, Dynastinae, and Cetoniinae. W. S. Fisher completed rearrangement of the Mexican, Central American, and South American species of Cerambycidae and rearranged and to some extent classified the Oriental Cerambycidae.

In Lepidoptera the specialists proceeded with the incorporation of the great Owen collection into the general Museum series. Foster H. Benjamin consolidated all the North American Noctuidae of the subfamily Catocalinae, which now occupies 67 large drawers and 36 standard museum drawers. A similar rearrangement for the North American Noctuidae of the subfamily Agrotinae was partially completed. August Busck completed the incorporation of the Microlepidoptera from the Barnes collection into the general Museum series. Carl Heinrich added the Barnes collection material of the subfamilies Calleriinae and Macrothecinae to the general collection. Dr. William Schaus was active in expanding and rearranging the exotic Macro-

lepidoptera in order to care for the additional specimens that have become available during the year. He also completed a new arrangement of the family Epiplemidæ and did much work on the Owen collection.

In Hymenoptera R. A. Cushman expanded and rearranged some of the groups and subfamilies in the Ichneumonidae. A. B. Gahan undertook some rearrangement due to the addition of material. C. F. W. Muesebeck arranged the Braconidae of the subfamily Aphidiinae and the exotic specimens of the subfamily Microgasterinae. Miss Grace A. Sandhouse completely rearranged the collections of aculeates. In addition, the aculeate Hymenoptera of the old Fitch collection were worked over and incorporated into the regular Museum collections. The North American material of the genus *Pemphredon* was identified and arranged; and the neotropical species of *Trypoxylon* were incorporated in the collection. Many undetermined Psammocharidae were sorted and grouped into genera, and the North American specimens of the genus *Pepsis* were identified and arranged.

In orthopteroids and neuropteroids, A. N. Caudell continued arrangement of the regular Museum material and made some progress in working up the Baker Philippine material. Dr. H. E. Ewing undertook to arrange the spider collection and sorted out and properly segregated various mixed lots of material in the groups assigned to him. In Hemiptera, H. G. Barber rearranged the entire Heteroptera collection. He now has the true bugs in a satisfactory natural order so that material is readily accessible. P. W. Oman rearranged Museum material in the Homoptera, involving various United States and Canadian Fulgoridae, and supervised the transfer of the extensive North American Psyllidae collection to trays and partly rearranged this material. He also arranged the South American species of leafhoppers of the genus *Agallia* and its relatives, as well as a large part of the West Indian and Central American Cicadellidae.

The alcoholic collection in the division of marine invertebrates is in excellent shape, owing chiefly to the efficient services of the laborer recently assigned to the division. Temporary clerical assistance made it possible to bring the cataloging of identified specimens about up to date. Work on the study collection of the division of mollusks has progressed steadily but slowly. Members of the zoological division staff of the United States Bureau of Animal Industry gave the helminthological collection its periodical overhauling. The usual curatorial work was done in the collection of echinoderms.

About 25,000 mounted phanerogams were added to the main herbarium, mostly recent South American material; 33,883 mounted specimens were stamped and recorded, preparatory to incorporation in the collection. The segregation of type specimens of American

phanerogams was continued by E. P. Killip and E. H. Walker, 18,768 types of new species and varieties having now been labeled, cataloged, and placed in heavy individual covers. Also 4,225 photographs of type specimens of American plants in other herbaria (chiefly European) were mounted separately on herbarium sheets for distribution into the herbarium. As in previous years, E. C. Leonard, in addition to his ordinary duties, regularly devoted some time to the moss collection, and recently began similar curatorial work on the Hepaticae, of which a large number await incorporation in the herbarium.

The C. G. Lloyd mycological collection has been maintained in accordance with the terms of agreement under which it was deposited. There is great need of a comprehensive index of Mr. Lloyd's mycological writings, which consist to a great extent of scattered notes, the indexes to the separate volumes into which his writings were collected being neither complete nor uniform in style. Manuscript of a detailed index to the seven volumes was therefore prepared during the year and will be issued shortly by the Lloyd Library at Cincinnati. As a further step in clarifying and rounding out Mr. Lloyd's mycological work, a complete list of his new fungus species and new combinations, totaling about 1,500, is being made. This will include for each species (1) citation of place of publication; (2) other references in the literature by Lloyd and other mycologists, with comment; (3) citation of type and other specimens, with accompanying data. This work, to be ready shortly, will also be published by the Lloyd Library.

During the year 22,290 specimens were mounted by adhesive straps, all but 6,100 of these by contract; 3,412 specimens were glued (by contract); and 28,428 fully prepared specimens were turned out, all of which were stamped and recorded and are now ready for incorporation in the herbarium. Of material intended for the herbarium, there are on hand more than 20,000 specimens that are wholly unmounted; also 2,500 that have been glued but not stamped.

RESEARCH BY MEMBERS OF THE STAFF

The research of G. S. Miller, Jr., curator of mammals, was on the primates. The large collection of gibbons (mostly brought together by Dr. W. L. Abbott) was reexamined and reidentified in the light of recent studies by Pocock and Kloss; and a special study of the remarkable color variation was made. A short note on the classification of the gibbons was published. The opportunity to examine a fresh gorilla's foot, afforded by the death of a young mountain gorilla in the Zoological Park, furnished the stimulus to a new study of the problem of the origin of the human foot (whether or not from a mechanical type like that found in the great apes). Dr. Remington Kellogg reexamined and identified the hair seals in the Museum col-

lection; prepared for publication three reports on cetaceans in the Los Angeles Museum of History, Science and Art, the Condon Museum of the University of Oregon, and the Field Museum of Natural History; and cooperated with specialists in other groups in the preparation of a tentative draft of the zones comprising the California Tertiary.

The curator of birds, Dr. Herbert Friedmann, completed work on the birds collected by the Smithsonian African expedition under Theodore Roosevelt, and also the report on the birds collected in Gaboon by the Garner expedition. He also reported on a large collection of bird bones from St. Lawrence Island, and on three smaller lots from the mainland of Alaska and from Kodiak Island; and began work on the remaining parts of Ridgway's unfinished work "The Birds of North and Middle America" and nearly completed the compilation of literature for all the groups remaining to be published on. He also wrote papers relating to the nictitating membrane of the domestic pigeon, to parasitic cowbirds and cuckoos, to early observations on North American birds, to racial variations in certain African shrikes, to the display of Wallace's bird of paradise, and other subjects. The associate curator, J. H. Riley, studied and identified the large collections of Siamese birds sent in by Dr. H. M. Smith and published descriptions and notes on some of the novelties and more interesting forms. A. C. Bent, collaborator, completed the manuscript of the tenth volume of his "Life Histories of North American Birds", on part of the falconiform birds. Dr. Wetmore published on the birds collected by the Parish-Smithsonian expedition in Cuba and Haiti; described several new forms of fossil birds from North America; continued his editorial work on Swann's "Monograph of the Accipitres", part of which was issued during the year; and wrote various other articles.

The curator of reptiles and batrachians, Dr. L. Stejneger, worked on a revision of the Testudinata of North and Middle America; finished a report on some collections from the Galapagos Islands and Polynesia; and in collaboration with Dr. Thomas Barbour, of the Museum of Comparative Zoology, brought out the third edition of their "Check List of North American Amphibians and Reptiles." Dr. Doris M. Cochran, assistant curator, completed a report on the herpetology of Hispaniola and published several descriptive papers on new species.

Dr. G. S. Myers, assistant curator of fishes, nearly completed a revision of the genera of oviparous cyprinodonts, a group of small fishes of great value in the destruction of malarial and yellow-fever mosquitoes in the Tropics. He also began work on the deep-sea fishes obtained by the Johnson-Smithsonian deep-sea expedition and on the fishes from western China collected by Dr. D. C. Graham.

Dr. J. M. Aldrich, curator of insects, prepared a paper on the dipterous family Tachinidae of the Patagonian region, based on our material and that of the British Museum; published several short papers describing new species from various parts of the world and including notes on synonymy and nomenclature; made a catalog of the muscoid flies of the Old World except Europe; and studied the species of botflies of the genus *Cuterebra*, in collaboration with Maj. E. E. Austen, of the British Museum. C. T. Greene worked on a revision of the genus *Anastrepha* of the family Trypetidae, of definite importance because of the discovery of members of the genus in the southernmost parts of the United States, including Florida and the Brownsville area in Texas. Foster H. Benjamin completed a manuscript discussing the classification and biology of the native Trypetidae of Florida, based on extensive collections made during the effort of the Department of Agriculture to exterminate the Mediterranean fruit fly. Dr. Alan Stone undertook a critical revisionary study of the genus *Tabanus*. Dr. A. G. Böving prepared numerous notes on and illustrations of beetle larvae, including two Puerto Rican species of *Phyllophaga*, the coccinellid beetle *Ortalistes rubidus*, and the larvae of *Rhinomacer pilosus*, *Tetrigus fleutiauxi*, and *Nicobium castaneum*. One paper, describing the larva of the coccinellid beetle *Decadiomus pictus*, was published. L. L. Buchanan began a critical revisional study of the weevil genus *Conotrachelus*. Dr. E. A. Chapin prepared a key to the species of *Chlaenobia* present in the Museum collections, and continued his revisional work on various groups of West Indian Scarabaeidae, especially on those of Puerto Rico. W. S. Fisher completed a study on the genus *Exocentrus* from Java, prepared descriptions for a number of new species of Mexican Buprestidae, and made minor studies in various small groups to facilitate identification.

In the section of Lepidoptera, Dr. W. Schaus continued study of the Puerto Rican Macrolepidoptera, in the course of which he prepared descriptions for many new species. Foster H. Benjamin worked on various North American lepidopterous groups, and prepared a number of short papers. August Busck continued work on the family Tortricidae and took up the genus *Aristotelia*, which contains a number of species of economic importance. Carl Heinrich continued study of American Phycitinae. R. A. Cushman undertook a revision of the genus *Polyaenus*, did some work on the tribes Lissonotini and Glyptini, and published one paper on the identity of several Oriental parasitic ichneumonids of economic importance. A. B. Gahan devoted much time to a paper on the parasites of the Hessian fly. C. F. W. Muesebeck worked on a revision of the braconid subfamily Euphorinae and progressed in work on the subfamily Exothecinae and the genus *Rogas*. Miss Grace A. Sandhouse

continued studies on the North American Halictinae, particularly on certain subgenera of the genus *Halictus*, during which she made many dissections and from these permanent preparations for the collection. She completed work on the North American *Augochlora* and worked out a synoptic key to the North American *Pemphredon*. William Middleton worked on sawflies and prepared descriptions of some new species.

A. N. Caudell published a report on the Orthoptera of the Pinchot expedition; carried on some investigational work on neuropteroids, in the course of which he prepared a description for one new species; and studied specimens of Decticinae from California. He finished and submitted for publication an alphabetical index to the orthopterous insects of North America published subsequent to the year 1900 to and including 1925.

Dr. H. E. Ewing made taxonomic studies on both mites and sucking-lice during the year, during which he completed for publication four papers on the classification of various genera or groups.

In Hemiptera H. G. Barber carried on investigations in a variety of groups, including Nearctic and Neotropical Phymatidae, Neotropical Coreidae, Notonectidae and Belostomatidae (with the assistance of Prof. H. B. Hungerford), and Halobatinae, in connection with the Carnegie Plankton expedition, and made considerable progress with the study of the races of the chinch bug (*Elissus leucopterus* Say). P. W. Oman undertook preliminary studies in a number of genera in both the Cicadellidae and the Fulgoridae. His most important contribution during the year is an extensive paper on classification of the North American agallian leafhoppers. Dr. P. W. Mason continued his study of the aphid tribe Macrosiphina.

In the division of marine invertebrates, Dr. Mary J. Rathbun, associate in zoology, was actively engaged in the preparation of the fourth of her series of comprehensive monographs on American crabs. In addition she determined nearly all the current sendings of recent Brachyura and fossil Crustacea and submitted for publication a paper describing seven new species from the Gulf of California. Dr. Waldo L. Schmitt, curator, published a review of the distribution of the larger fresh-water shrimps of the United States, and also prepared for publication the new species in his report on the macruran and anomuran Crustacea of Puerto Rico and the Virgin Islands and an account of two new species of pycnogonids. A revision of the genus *Emerita* was likewise submitted for publication. The assistant curator, C. R. Shoemaker, completed several studies on amphipods; others he has in progress, with a view to bringing taxonomic knowledge of these long neglected Crustacea up to date for the east coast of North America. The report being prepared by J. O. Maloney, aide, on the isopods collected in the course of the various expeditions that Capt.

R. A. Bartlett has made to Greenland in the past several years is rapidly approaching completion, while his descriptions of two new species of isopod crustaceans from California appeared in print during the year. Dr. J. A. Cushman, honorary collaborator, made progress on further parts of his monographs of the tropical Pacific foraminifera. In addition to handling a large volume of paleontological material, he identified various lots of recent foraminifera. Dr. W. H. Longley, collaborator, spent nearly 4 months abroad, chiefly in London, Paris, and Berlin, in part in connection with his studies on evolution.

Most of the time of the curator of mollusks, Dr. Paul Bartsch, was required in planning, equipping, and directing the Johnson-Smithsonian deep-sea expedition and in caring for the material obtained. The identification of material sent in for report occupied the time of the rest of the staff not otherwise taken up by curatorial duties.

The curator of echinoderms, Austin H. Clark, continued work on parts 4 and 5 of his monograph of the existing crinoids, with a view to their completion in the near future, and studied and identified a part of the material collected by the Johnson-Smithsonian deep-sea expedition.

In the division of plants Dr. W. R. Maxon, associate curator, carried on studies of tropical American ferns; E. P. Killip, associate curator, continued work on a monograph of the American species of Passifloraceae, besides studies of certain genera of Urticaceae and Boraginaceae; E. C. Leonard, assistant curator, studied West Indian flora; C. V. Morton, aide, investigated several tropical American families of phanerogams, especially the Solanaceae; and E. H. Walker, aide, practically finished a revision of Chinese Myrsinaceae, besides carrying on bibliographic work. Here may be mentioned also the study by Mr. Killip of a series of about 3,600 duplicate specimens of the historic Mutis Herbarium received from the Jardin Botánico, Madrid, through his active interest. The Mutis collection, made in Colombia between 1760 and 1808, contains specimens upon which many early species were proposed. In return for the valuable duplicates sent to this Institution, Mr. Killip has undertaken to identify the specimens, and to date has reported upon about 2,000 of the 3,600 received.

DISTRIBUTION AND EXCHANGE OF SPECIMENS

Duplicate specimens distributed to museums, high schools, colleges, and similar institutions aggregated 1,351 specimens and 43,578 exchanges were sent out, of which 1,073 were zoological specimens. The 42,505 plants distributed went to 104 institutions and correspondents, of which 46 were in the United States, and 58 in 22 countries abroad.

NUMBER OF SPECIMENS UNDER DEPARTMENT

The number of specimens under the department of biology, so far as has been ascertained by count and estimate, is now more than 10,800,000. The actual number is probably much greater, since several collections, as the corals, have not been included, nor does the number of plants given below include duplicates and unmounted material of the lower cryptogams. In several of the divisions, such as those of marine invertebrates and mollusks, lots consisting of minute organisms are frequently counted as single specimens though they may contain hundreds or even thousands of individuals, the enumeration of which would serve no useful purpose.

Mammals.....	221, 425
Birds:	
Skins.....	252, 456
Alcoholics.....	8, 961
Skeletons.....	13, 378
Eggs.....	87, 562
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	362, 357
Reptiles and amphibians.....	100, 842
Fishes.....	741, 341
Insects.....	4, 141, 686
Marine invertebrates.....	897, 602
Mollusks.....	2, 497, 401
Helminths.....	144, 255
Echinoderms.....	158, 035
Plants.....	1, 550, 363
	<hr/>
Total.....	10, 815, 307

REPORT ON THE DEPARTMENT OF GEOLOGY

(RAY S. BASSLER, *Head Curator*)

The past year was notable for the quantity and value of geological material acquired, particularly in the mineralogical division, where several endowment funds were used rather freely to take advantage of favorable market conditions. In quality of specimens acquired through field work and exchange, this has been the most outstanding year in the history of the division of vertebrate paleontology. Explorations were undertaken in both of the paleontological divisions and in the mineralogical division, the latter under the auspices of the Canfield fund. All resulted in the acquisition of desirable material both for exhibition and study.

ACCESSIONS

In both specimens and accessions the aggregate is greater than last year, numbering 255 accessions with an estimated total of 35,555 specimens. The number for the various divisions is as follows: Mineralogy and petrology, 100 accessions, 728 specimens; geology, systematic and applied, 33 accessions, 706 specimens; stratigraphic paleontology, 92 accessions, 33,805 specimens; vertebrate paleontology, 30 accessions, 316 specimens.

The year's accessions include the following minerals not previously represented: Alkansul, alleghanyite, ardealite, bianchite (type), corvusite (type), galaxite, leucophosphite, minyulite, oxykertschenite, pisekite, rilandite (type), rosickyite, and tuhualite.

There were 31 accessions to the Roebling collection through the income from the Roebling fund, totaling 114 specimens. Perhaps the finest item is a 2½-pound pink spodumene (kunzite) of good crystal form and almost flawless. Four fine black opals from Lightning Ridge, New South Wales, are partly polished to show the wonderful fire that makes these Australian stones most highly prized of all opals. Two 1.7-carat diamonds were added to the American series, 1 from Huntsville, Tex., and 1 from the gold washings of Brown County, Ind. A fine cinnamon-brown crystal of topaz from Burma weighs 2¼ pounds. A huge mass of native copper from the Lake Superior region shows numerous unusually large and well-formed crystals. Other noteworthy additions are a specimen of quartz with attached crystals of euclase and topaz from Brazil; 3 specimens of California gold showing unusually fine crystals; a beautiful

crystal of pink and green tourmaline from Madagascar; and 2 large loose crystals of the rare silicate euclase from Brazil. Through the interest of Gilbert LaBine, discoverer of the rich radium deposits at Great Bear Lake, Canada, a 75-pound mass of the radium ore pitchblende, crusted with colorful alteration products, and a rich mass of native silver from the same locality, were added.

Several fine-cut gems were acquired through the Roebling fund, including a rare Brazilian rose-red topaz of 18 carats, a Madagascar ruby tourmaline of 30 carats, a flawless Brazilian pink tourmaline of 62 carats, and an unusual pink amethyst of 49 carats.

To the Canfield collection through the Canfield fund came 13 accessions totaling 235 specimens. The outstanding one comprises three masses of crystallized gold from Breckenridge, Colo., the largest being a slab of fine mossy leaf gold weighing 22.6 troy ounces. A large group of brilliant azurite crystals from Aranzazu, Zacatecas, Mexico, was obtained through the interest of Samuel Sokobin, American consul at Saltillo, Coahuila. Other notable specimens are a group of azurite crystals; a crystal of cerussite from Tsumeb, Southwest Africa; the copper oxychloride atacamite from Chile; a rare phosphate of iron, strengite, and the phosphate of lead, pyromorphite, in unusually large crystals, both from Germany; a group of large and brilliant crystals of tin oxide, cassiterite, on a white quartz crystal base, from New South Wales; a huge crystal of pyrite from Arizona; and a rich example of the rare manganese silicate ganophyllite from Franklin, N.J. Over 200 Bolivian minerals, including excellent crystallized cassiterite, ferberite, and bismuthinite also were acquired.

The finest stone added to the Isaac Lea collection, through the Frances Lea Chamberlain fund, is a flawless golden beryl of fine color from Madagascar, weighing 46 carats. Also, 2 red tourmalines from Madagascar, an engraved emerald of 11 carats, an old carving in Burmese amber, a rare ruby-red feldspar, and 2 unusually deep-colored citrine quartzes were added.

Other additions to the gem collection include 3 cabochons of white grossularite garnets, 3 of Whitby jet, 3 of amazonstone, and several pieces of jasper. The Oregon Agate and Mineral Society contributed an unusual cut agate showing iridescent rainbow colors; Martin L. Ehrmann presented a dish of yellow precious serpentine; and John H. Willing 3 gold stickpins fashioned as a pick, a shovel, and a pan, stated to have been made in 1855 and worn by early California gold miners.

A huge quartz geode, almost 3 feet in diameter and with a crystal-lined cavity 18 inches deep, from Keokuk, Iowa, was presented by William M. Thomas and his son, Beverly Thomas. Mr. Thomas, a veteran geode collector, states that this is the finest geode he has ever seen. W. E. Lockhart gave a huge slab of amazonstone, meas-

uring about 3 feet square, from Colorado. The following persons likewise added unusually fine material to the collection: Ernest Schernikow, a slab of precious opal from Honduras; F. F. Bradley, a fine group of celestite crystals from Clay Center, Ohio; Mark Bandy, a large specimen of the rare iron sulphate quetenite, from Chile; Boodle Lane, a specimen of galena showing parallel growth, and John C. Wells, specimens of new phosphate minerals from the Black Hills.

Twenty-two specimens, including 14 falls new to the collection, were added to the meteorite series. Two of exceptional interest are from Meteor Crater, Canyon Diablo, Ariz., one a complete individual weighing 1,011 pounds, one of the largest masses recovered at this famous crater, the other the mass from which were obtained the first diamonds found in a meteorite. Another example is the largest individual of a shower that fell at Archie, Mo., on August 10, 1932, during the Perseid meteor shower. This is the second known instance of the fall of a meteorite during a meteor shower. Other meteorite accessions are one half (23½ pounds) of the Altonah, Utah, fall; Beardsley, Kans. (945 grams); Bear Lodge, Wyo. (3,120 grams); Bencubbin, Australia (242 grams); Coya Norte, Chile (16 pounds 10 ounces); Henbury, Australia (31 pounds); Huizopa, Mexico (2,774 grams); Melrose, N.Mex. (990 grams); Nagy Vazsony, Hungary (36 grams); New Almelo, N. Mex. (1,550 grams); Oroville, Calif. (262 grams); Pinon, N.Mex. (1,410 grams); and Tlacatopec, Mexico (2,430 grams), acquired through exchanges and gifts.

The United States Geological Survey transferred several described sets of rocks and ores, the following districts being represented: Ellijay quadrangle, North Carolina; eastern Oregon; Squaw Creek, Silver Peak, and Antonio districts, Oregon; and southwestern Idaho. Through the interest of Dr. Josiah Bridge, the Museum obtained from Ramie Inman two large blocks of a handsome diabase porphyry from Fredericktown, Mo. Dr. Robert W. Sayles presented two large exhibition blocks of a glacial conglomerate, the Squantum tillite, and Dr. Tom Barth collected two large exhibition blocks of gneiss in Norway.

The outstanding accessions in economic geology are as follows: A pegmatite dike from Ohio City, Colo., containing large sheets of lepidolite mica obtained through E. B. Eckel, of the United States Geological Survey, from Messrs. Werner and Disberger, of Ohio City; a 600-pound mass of gold ore from the Homestake Mining Co., Lead, S.Dak.; two large and colorful potash ores, sylvinite and carnallite, from the Minas de Potasa de Suria, Spain; several specimens of halite and related minerals from Hallstatt, Austria, sent by Bergrat Karl Krieger; a series of copper ores and minerals including some large specimens from Butte, Mont., presented by A. L. Bigley and A. E. Blair, of the Anaconda Copper Co.; and a number of

specially selected Bisbee copper ores from William P. Crawford, of Bisbee, Ariz. Frank L. Hess, honorary custodian of rare metals, continued his interest by adding over 50 specimens of rare metal ores and minerals from Canada, the Kola Peninsula, Karelin, Brazil, and other districts.

Several notable accessions came to the division of stratigraphic paleontology: 26 exchanges arranged largely by the assistant curator to fill gaps in the brachiopod series were received. The British Museum and Dr. R. Kozłowski at Warsaw and Dr. A. Hadding at Lund supplied fine Jurassic and Cretaceous brachiopods. The National Museum at Melbourne and the Dominion Museum at Wellington furnished two fine collections from the Tertiary of the Australian realm, and the Paleontological Institute of Vienna a small collection of rare Triassic forms. From Harvard University was obtained a large suite from the Middle Paleozoic of Bohemia. Collections from the Devonian were furnished by Dr. A. Öpik in Estonia and by the Muséum Royal d'Histoire Naturelle de Belgique, Brussels. Finally, two sizable lots from the Universities of Oklahoma and New Mexico placed in our collection a more adequate representation of Upper Paleozoic brachiopods from these States.

Among the other exchanges were two lots of Bohemian fossils from Charles University, Prague; an excellent representation of the Norwegian Cambrian from Oslo; a series of topotypes of Carboniferous fossils from the University of London; and an interesting series from the University of Adelaide. Dr. H. Justin Roddy again furnished an extraordinary collection from the Lower Cambrian of the Lancaster region in Pennsylvania.

Several valuable collections were presented, most notable being the fifth shipment of the private collection of Dr. A. F. Foerste, numbering some 10,000 specimens of invertebrate fossils of which over 1,000 are types. Particularly notable is the valuable acquisition of several fine fossil starfishes collected by the late Dr. Albert Perry Brigham, of Colgate University, and presented by Mrs. Brigham and Mr. and Mrs. L. V. Roth. Dr. J. Brookes Knight, of Yale University, gave about 125 brachiopods from the Pennsylvanian of Missouri, and Prof. G. M. Kay, at Columbia University, a collection of Trenton brachiopods. Through the interest of Dr. Mary J. Rathbun, six lots of fossil crustaceans were donated, among which those furnished by Dr. Hubert G. Schenck, of Stanford University, and some pinnotherid crabs, including types, gift of E. W. Galliher, Pacific Grove, Calif., were of most importance.

Among other gifts were a collection of Pennsylvanian gastropods from J. Brookes Knight, of Yale University; a small lot of Pennsylvanian fossils from Ralph H. King, University of Texas; a large exhibition slab crowded with the gastropod *Lecanospira* found in Virginia

by Dr. A. A. L. Mathews, Oberlin College; examples of the fresh-water limestone crowded with fossils, used to build the new Mormon Church in Washington, secured through the builders; and finally a valuable lot of Tennessee Cambrian fossils collected by Prof. George M. Hall, University of Tennessee.

The Springer fund purchased the important Keyte collection of Paleozoic fossil crinoids from Colorado. The assistant curator during his field expedition obtained 10,000 to 15,000 fossils in Gaspé and New York. These supplied many important specimens for the biologic and stratigraphic series and also needed material for exchange. A trip into the Ohio Valley by the head curator also furnished a valuable lot of late Paleozoic fossils.

Of the eight accessions of fossil plants, mention may be made of those received from Prof. Ralph Chaney, University of California, which contain many counterparts of types described in several papers. Prof. G. R. Wieland, of Yale, donated two examples of the interesting fern *Tempskya*, and the Santa Barbara Museum of Natural History gave some Pleistocene plants excellently preserved in asphalt.

Material resulting from the field expedition of 1932 is of first importance in the division of vertebrate paleontology, especially benefiting the mammalian collections. Specimens worthy of especial mention are: Much of the skeleton of a hawklike bird, of which the skull, lower jaw, pelvis, sternum, and other bones are present, unquestionably the most perfect skeleton of a bird yet collected from the Oligocene of North America; a skull and skeletal parts of *Eusmilus*, a rare saber-toothed cat of which only three or four specimens were previously known; two articulated skeletons of *Mesohippus*; two articulated skeletons of *Merycoidodon*; one skeleton each of *Lepptomeryx* and *Ischyromys*; 120 skulls, many partial skeletons, articulated limbs and feet, in all representing more than 20 genera of vertebrates. Some forms new to science will probably be found when a study is made of these materials.

Through exchanges arranged with various institutions, the division obtained a number of specimens of outstanding merit. From the American Museum of Natural History came a mountable skeleton of *Moropus*, a rare mammal from the Miocene of Nebraska, and a skeleton of the giant reptile *Gorgosaurus libratus* from the Upper Cretaceous of Canada. The former has all the broken and missing bones restored so that the skeleton is ready for mounting. Both genera were previously unrepresented in our collections. The Los Angeles Museum of History, Science and Art furnished a mountable composite skeleton of *Equus occidentalis*, from the famous Rancho La Brea asphalt deposits; and the Colorado Museum of Natural History, Denver, a composite skeleton of the Oligocene rhinoceros, *Trigonias osborni*. From the Royal Ontario Paleontological Museum were

obtained two duck-billed dinosaur skulls (*Edmontosaurus* and *Prosaurolophus*), both new in the collections, and from the National Museum of South Africa four skulls and limb and foot bones of *Lystrosaurus* and *Dicynodon*, extinct reptiles from the Triassic. Remains of these genera are rarely found in paleontological collections of North America. A beautifully preserved skull of *Equus alaskae* Hay from Point Barrow, Alaska, was collected for the Museum by James A. Ford. A fossil frog skeleton from the Miocene of Nevada, the most perfect example of an extinct frog yet found on this continent, was presented by R. M. Catlin. A skull of a large cetacean from California, presented by Dr. A. P. Ousdal, forms a valued addition to the series of cetacean remains. By purchase from George F. Sternberg a beautiful example of the extinct fish *Ichthyodectes hamatus* was obtained, and similarly the mosasaur series was enriched by a mountable skeleton of the large sea lizard *Platecarpus*.

INSTALLATION AND PRESERVATION OF COLLECTIONS

A rearrangement of the systematic mineral collection, reported last year as under way, was completed, and much new and striking material from the Roebing and Canfield collections was incorporated. The 2,892 specimens of this series include 837 distinct mineral species and comprise high-quality material only. The new arrangement permitted the introduction of some new exhibits in refractories, lithium, beryllium and rare-earth ores. Several large specimens of ores from important mining districts were installed on new bases. Five large meteorites, previously exhibited on individual bases, were reinstalled on a single long base to harmonize with previous installations. Some striking exhibits on individual pedestals include a large geode from Iowa fitted with interior lighting, radium ore from Canada, and a group of carved corals.

The head curator prepared a new set of slides on geological subjects for the stereomotorgraph, assembled a set of small, polished samples of foreign building stones, both ancient and modern, and prepared various sets of Cenozoic and recent bryozoans for exchange with the British Museum, in the course of which many specimens were identified and added to the collections. He also continued building up a library of pamphlets on general geology, stratigraphy, and invertebrate paleontology.

In revising the exhibition series of ores it was found necessary to expand the study series to accommodate material removed from exhibition, during which the classification, cataloging, and distribution of the important collection of rare metal ores assembled during many years' collecting by Frank L. Hess were completed by the assistant curator. This is probably the finest collection of rare-metal ores extant.

Dr. W. F. Foshag, assisted by James Benn, selected material for an exhibit illustrating the fluorescence of minerals under ultraviolet light. Since only an occasional specimen shows a satisfactory degree of fluorescence, it was necessary to examine hundreds of samples before the best possible effect could be achieved. A satisfactory lighting system was devised by L. B. Clark, of the Division of Radiation and Organisms.

The head curator completed the preparation and installation of the biologic series of fossil plants, a case illustrating the geology of a coral island, one showing various types of geological structures, another with imitative forms of fossils, and one each of the peculiar extinct merostome crustaceans and unusual cephalopods. He likewise installed on a single exhibition base large, showy examples of various kinds of conglomerates and glacial boulder clays.

Dr. C. E. Resser, with the help of Dr. Josiah Bridge, assembled an exhibit illustrating the life of the Ozarkian and Canadian periods, thus filling a long-existing gap. In cooperation with Dr. Roland Brown and Dr. C. B. Read, of the United States Geological Survey, available material also was assembled to illustrate fossilized fruits and flowers.

Dr. G. A. Cooper placed 30 lithologic samples in the stratigraphic exhibition series, revised the exhibit of stromatopores, and, at the close of the year, went over the entire exhibition series in preparation for the International Geological Congress. Dr. C. B. Read continued his voluntary rearrangement of the Lacoe plants. Dr. Charles Butts arranged his extensive collections of Paleozoic fossils so that they are readily available.

Following her retirement from the Government service at the end of December 1932, Miss Margaret Moodey was appointed, under the Springer fund, to take up the long-delayed work of cataloging the unrivaled Springer collection of echinoderms. Two months were spent in bibliographic work and 4 months in checking and cataloging. At the end of the year, 8 families of the Camerata, comprising 115 standard drawers, were completed.

The exhibition series in vertebrate paleontology was increased by the addition of a 5-foot skeleton of *Ichthyodectes hamatus*, skulls of *Edmontosaurus regalis* Lambe and *Prosaurolophus maximus* Brown; skull and lower jaws of *Hyrachodon* and a skull of *Ovibos*.

Assistant Curator C. L. Gazin continued his rearrangement of the mammal collection. The Cumberland Cave collection, consisting of several hundred specimens, is now completely cataloged, labeled, and arranged in standard trays; the *Plesippus* materials have been assorted and, with the exception of the skulls, assembled as a single unit; the Cook collection from Idaho and the Gidley collection from Florida were assorted, labeled, and many of the specimens cataloged. Dr. Gazin also has identified many of the Bridger specimens.

INVESTIGATION AND RESEARCH

By members of the staff.—The head curator completed the preliminary study and illustrations of the Hederellidae, a new group of fossil Bryozoa; brought up to date his bibliographic index of Paleozoic Ostracoda, being published by the Geological Society of America; prepared an address on the development of invertebrate paleontology in America; and forwarded for publication a monograph of the Tertiary Bryozoa of Australia, prepared in collaboration with the late Ferdinand Canu.

Dr. W. F. Foshag completed investigations on the rare minerals searlesite, bakerite, ganophyllite, and sulfohalite and continued work on the borate minerals of the West, in which it was necessary to analyze a number of marls. Several doubtful minerals were studied and their true nature determined.

E. P. Henderson announced two new mineral species, corvusite and rilandite, and nearly completed work on two other new species. Many partial analyses were made for identification, and some material was found worthy of more detailed examination.

Dr. C. E. Resser assisted R. Endo in preparing a paper on the Cambrian of Manchuria. He completed a paper presenting a preliminary generalized time scale for the Cambrian and began a description of the fossils from the *Olenellus* zone in the Appalachians. These last papers were presented at the Boston meeting of the Geological Society of America.

Dr. G. A. Cooper prepared a preliminary paper on the results of his field work in eastern New York and another, written jointly with Dr. Lawrence Whitcomb, of Lehigh University, describing a new genus of brachiopod.

Dr. E. O. Ulrich continued his studies of early Paleozoic faunas. A grant from the Geological Society of America made possible the temporary employment of Dr. H. S. Ladd, who since February was engaged in labeling and photographing fossils and in organizing materials so that Dr. Ulrich's many uncompleted manuscripts, including joint papers with Drs. Foerste, Cooper, Bridge, and others, may finally be printed.

Dr. A. F. Foerste continued his cephalopod studies, unearthing much important information. He will soon reach the point when the cephalopod series can be generally overhauled and classified.

C. W. Gilmore completed a manuscript describing dinosaurian remains from the Cretaceous of Mongolia, which has been sent to the American Museum of Natural History for publication. A beginning was made on a study of turtle specimens from Mongolia for that institution. This will complete our part of the cooperative arrangement between the two institutions whereby for work done

on the Mongolian fauna, Dr. G. G. Simpson will study and describe the Museum's collection of Paleocene mammals.

Dr. C. L. Gazin completed his extended study of the Cumberland Cave Pleistocene fauna and submitted it for publication. Two papers, "A New Shrew from the Upper Pliocene of Idaho" and "The Status of the Extinct American Eland" were published, and a manuscript, "New Felids from the Upper Pliocene of Idaho" was submitted for publication. Some progress was made on his study of the *Plesippus* materials, as well as a beginning in the study of other portions of the Idaho collections, particularly the mustelids and lagomorphs.

Dr. Remington Kellogg, as in previous years, continued his researches on the cetacean collection, this past year being more particularly applied to the zeuglodonts.

Research by outside investigators aided by Museum material.—During the year 1,767 specimens were lent for study, and 463 lots of material were received for examination and report.

In the paleontological division, Dr. David White was engaged on a description of the Pottsville flora of Illinois. Dr. R. W. Brown continued the study of the Fort Union flora and wrote papers describing the flora of the Miocene of the Blue Mountains, Oreg., and of the Salmon, Idaho, region. Jointly with Dr. C. B. Read, he nearly completed a revision of the Cretaceous fern genus *Tempskya*. Dr. Read prepared papers on the floras in the Mosquito Range, Colo., and in the New Providence shale and on *Trichopitys*. Dr. L. W. Stephenson was engaged in a study of the Navarro fauna of the Texas Cretaceous, and Dr. Edwin Kirk continued his studies on crinoids and completed several papers.

Dr. T. Kobayashi remained here throughout the year continuing his studies of Korean and Manchurian fossils. Much new information of critical importance is constantly coming to light in his studies.

Abbé Georges Le Maitre, the Belgian scientist, studied the meteorite collection; Dr. M. K. Elias, of the Kansas State Geological Survey, spent some weeks studying Carboniferous and Tertiary plants. A. L. Morrow, of Yale University, R. W. Imlay, of the University of Michigan, and Prof. H. A. Meyerhoff, of Smith College, studied the Mesozoic collections; Dr. A. R. Barwick, of Catholic University, studied the invertebrate fossil collection in general; Dr. J. A. Cushman the foraminifera; Dr. Cecil Kindle, of the College of the City of New York, and Dr. Lawrence Whitcomb, of Lehigh University, the Paleozoic invertebrates; and Prof. P. E. Raymond and Henry C. Stetson, of Harvard University, spent a few days working on certain Burgess shale specimens.

Dr. George G. Simpson made considerable progress in his study of the Paleocene mammal collection. A locality map, printed as a

result of his field trip to Montana for the Museum this past summer, adds greatly to the value of the collection in definitely locating all the specimens both geologically and geographically. Dr. R. S. Lull, director of the Peabody Museum of Natural History, utilized the horned dinosaur collections in connection with his monographic revision of the Ceratopsian dinosauria. Barnum Brown, of the American Museum of Natural History, likewise made use of the collections in connection with his study of the armored dinosauria.

Assistance to Government bureaus and private individuals.—Mineralogical material was furnished to members of the Geological Survey, the Department of Agriculture, and the Geophysical Laboratory, and Dr. Resser continued his services to the Geological Survey as adviser on Cambrian questions. Requests from Prof. George M. Hall, of the University of Tennessee, for identification of age and species in Cambrian collections necessitated considerable study of the Nolichucky fossils. Thereby, for the first time, definite information was obtained regarding the faunal characteristics of this widespread southern Appalachian formation. A large series of highly important Cambrian fossils was obtained by the Princeton Summer School, at Red Lodge, Mont., and forwarded to the Museum for preliminary identification.

DISTRIBUTION AND EXCHANGE OF SPECIMENS

The following distribution of geological specimens was made: Gifts, 3,456 specimens; exchanges, 2,278; loans for study, 1,767. As transfers to other Government bureaus, 21 specimens were sent.

NUMBER OF SPECIMENS UNDER DEPARTMENT

The estimated total of specimens in the department is as follows:

Mineralogy and petrology.....	140,736
Geology, systematic and applied.....	95,493
Stratigraphic paleontology.....	1,864,167
Vertebrate paleontology.....	27,322
Total.....	2,127,718

REPORT ON THE DEPARTMENT OF ARTS AND INDUSTRIES

(CARL W. MITMAN, *Head Curator*)

For the first 2 months of the year, following the retirement of W. deC. Ravenel on June 30, 1932, the department of arts and industries was administered by J. E. Graf, associate director. On September 6, 1932, the office of head curator was established and an administrative set-up created similar to that of the natural science departments of the Museum. C. W. Mitman, who had spent 3 months of the summer in a general survey of technical, industrial, and science museums of western Europe, was advanced from the position of curator of engineering to the new position; and Frank A. Taylor was promoted from assistant curator of engineering to curator.

• ACCESSIONS FOR THE YEAR

Valuable historical specimens of textiles, engineering, and graphic arts that never would have come to light in boom times were brought to the department's attention during the year and acquired when possible. Slack business, on the other hand, practically prevented the acquisition of new industrial exhibits, but permitted many who had cooperated with the Museum in the past to renew their exhibits.

Specimens added to the department's collections during 1933 totaled 4,261, about one third more than in 1932. The distribution of these among the divisions and sections was as follows: Engineering, 312; textiles, 708; organic chemistry, 764; wood technology, 365; foods, 2; history of agriculture, 252; medicine, 425; graphic arts, including photography, 1,433.

Engineering.—The 312 specimens included in the 82 accessions of this division were assigned to the sections as follows: Aeronautics, 174; mechanical technology, 130; mineral technology, 8.

In aeronautics, the most prominent object acquired was the gondola, or car, of the *Pilgrim*, the first dirigible designed for inflation with helium gas. It is complete with the Laurence 3-cylinder radial engine and the 4-blade metal propeller used with it, and was presented by the Goodyear Tire & Rubber Co.

The collection pertaining to the early history of balloons was augmented by the gift of Miss Emma Durant, of New York City, of a number of original illustrations and records describing the work of her father, Charles F. Durant, the first professional American aeronaut, who made his first ascent from Castle Garden, New York City,

in 1830. Two structural sections from the airships *Shenandoah* and *Akron*, showing two forms of trusses, came from Howard Minker, Washington, D.C., and the Goodyear Tire & Rubber Co., respectively.

To the collection of aircraft engines the Pratt & Whitney Co., Hartford, Conn., added a sectioned operating example of their "Wasp" engine. Seven airship propellers were transferred from the War Department; an adjustable metal airplane propeller of 1914 was presented by Inglis M. Upperco, Keyport, N.J.; and a modern hollow steel blade from a Dicks propeller was given by the Pittsburgh Screw & Bolt Corporation. A departure from the usual form of lift and propulsion is illustrated by a wind-tunnel model of a rotary airfoil, presented by its inventor, I. B. Laskowitz, Brooklyn, N.Y.

Although several full-size airplanes were offered to the Museum during the year, none could be accepted because of limited space. To the collection of airplane models, however, many new types were added, including a beautifully constructed miniature of a "Travelair" biplane of 1930, one eighth size and half skeletonized to show the construction. It is one of the finest models in the collection and was loaned by its maker, Herbert Atkinson, of New Bedford, Mass. The acquisition of a Curtiss pusher model of the 1908 type and a Curtiss "Hawk" model of 1928, both made to the same scale, permits an interesting contrast of airplane design over a 20-year period. These models were received from Edward Reeves and Richard Hooper, respectively, of Washington, D.C. Another model received from Mr. Reeves illustrates the old "Antoinette" type, a French monoplane of 1909, which made remarkable flights in the early days of aviation. A German World War bombing airplane is represented by a model of a "Gotha", made and presented by Isaac H. Henry, of Easton, Md. Modern military types are shown by a "Condor" bomber model from Harris Taylor, Clarendon, Va.; a Boeing low-wing monoplane model from Robert McGregor, Clarksburg, W.Va.; and a Navy Vought "Corsair" model made by Edwin Geigan, Washington, D.C., and received from Miss E. M. Luers, Bowie, Md. The series of models illustrating the winners of the famed Schneider trophy for seaplanes was increased by a miniature of the Supermarine *S-6-B*, which won the trophy in 1931 at a speed of 340 miles an hour. The model was made and presented by Ivan Lettner, Anacostia, D.C.

With the assistance of the War Department, A. G. Spalding Co., New York, Sternheimer Bros., Richmond, Va., and the Transcontinental and Western Air, Inc., Kansas City, Mo., a display of fliers' helmets was prepared showing the evolution of pilots' headgear from the old crash helmets of the early days to the uniform cap of the modern transport pilot.

The Beverly Hills (Calif.) Chamber of Commerce presented the parachute with which the flier Rodman Law made a demonstration

jump from an airplane in 1912, one of the first instances of its kind. This accession provides the Museum with an example of the old "bundle" type of parachute, antedating the several pack types already exhibited.

Col. Charles A. Lindbergh added to his previous gift of the *Spirit of St. Louis* the maps and personal equipment that he carried during his Pan American flight of 1927-28. Much of this material was intended for emergency use in event of a forced landing in the jungles of Central America.

The largest single group of accessions in the section of mechanical technology was in the class of material relating to land transportation. The sole full-size vehicle added this year was a Columbia electric buggy of about 1903-6, the gift of Mrs. Sewell M. Johnson, Washington, D.C. This vehicle is a well-preserved example of the light electric automobile that in its day was so much more dependable than the unperfected gasoline automobile that it was the choice of conservative and professional people. Other automotive material included the steam engine built by the Mason Regulator Co. in 1897 for the first Stanley steam automobile; and a Stanley steam automobile engine of about 1923 from L. J. Hathaway, Cherrydale, Va.

The railroad and locomotive collection was enhanced by the addition of three models of English locomotives of about 25 years ago. They are the gift of Frank A. Wardlaw, Jr., Inspiration, Ariz., and Frank A. Wardlaw, New York City, and include the *Locomotive Greyhound* of the L. & N.W. Ry. Co., and the *Locomotive 146* of the F.C.O. Rr. (Argentina) of 1905, which were made by Mr. Wardlaw, Sr.; and the Caledonian Railroad Co.'s *Locomotive 903*. These locomotives exhibit many features foreign to American practice not heretofore shown in the collections. An unusual railroad item was a Japanese drawing in color of a Norris locomotive, tender, and car of 1853, the gift of C. P. Clausen, Washington, D.C. The Japanese date of the picture indicates that it was made about 1853 and consequently only a year or two after Commodore Perry negotiated the treaty with Japan. Miss Martha Hopkins, Damariscotta, Maine, presented an old single-ox yoke, a type not many of which are known to exist.

The watercraft collection received only one addition during the year—a nicely executed model of the champion ice yacht *Debutante III*, presented by John D. Buckstaff, Oshkosh, Wis., and Douglas Van Dyke, Milwaukee, Wis. The original is the present holder of the Stuart trophy and the world's record over a 20-mile triangular course.

In the class of electrical material the additions to the collection of incandescent lamps are of considerable interest. Frank A. Wardlaw, New York City, an associate of Thomas A. Edison, presented 2 originals of the Edison paper horseshoe filament lamp of 1879, 2

of the bamboo filament lamps of 1880, and an original wooden-screw socket for each type. The paper filament lamps, one of which is intact, are of the first type made after the successful experimental lamp of October 1879, and the bamboo filament lamps, one of which is intact, are the first commercial type. Donald F. Poole, Washington, D.C., presented two early Maxim lamps with sockets. A more modern note in electric lighting is represented in a display panel of eight rare gas discharge tubes, the gift of the Air Reduction Sales Co., New York City. Two fans received show early stages in the development of this electrical appliance. One, made by Leo Daft, electrical pioneer, and dating from before 1890, is the gift of Mrs. Matilda Daft Williams, Albany, N.Y. It is small, with an unguarded fan wheel mounted on the shaft of a small motor with long vertical field coils. The other is a Holtzer Cabot fan of about 1900, in which the earlier type of motor and same general arrangement are still evident though dressed up in a heavy cast-iron base and grilled housing. This fan is the gift of Mrs. Mae I. English and Mrs. L. F. Speich, Washington, D.C.

A Merritt typewriter of about 1890, one of the first few machines made by the Merritt Typewriter Co., Springfield, Mass., and a commercial form of a machine formerly represented in the collection by a Patent Office model only, was the only addition to the typewriter collection. It was presented by C. C. Merritt, nephew of the inventor.

Two Edison phonographs were added to the collections. One, an original of the tin-foil record type, was presented by Frank A. Wardlaw; the other, a nicely preserved "Amberola-50" of about 1915, the gift of Clarence Beyer, Baltimore, Md., represents the final development of the wax-cylinder record type, and is complete with a group of select records.

Among the additions to the collection of surveying and astronomical instruments is the Herschelien reflecting telescope made by Amasa Holcomb, of Southwick, Mass., about 1835. The reflector, about 8 inches in diameter and having a focal length of about 9 feet, is of speculum metal and has a remarkably well preserved surface. It is the gift of Mrs. Grace E. Holcomb Steere and Mrs. Eva C. Holcomb Storey, Southwick, Mass., who also presented an astronomical transit and instrument tripod by the same maker. From the War Department came an interesting form of large reconnoitering telescope and an astronomical transit, both about 60 years old.

Among the watches added to the timekeeping collections is an English silver case watch dated 1794, the movement of which is marked "Effingham Embree, New York." Not many watches in the collection dating from 1800 carry the names of American makers or importers. It is the gift of Mrs. Gertrude O. S. Cleveland, Quinebaug, Conn. Clocks added to the collection include two tall case

clocks of the early nineteenth century, one the gift of Mrs. Daniel Gardner, Newburgh, N.Y., the other of Mrs. James R. Van Horn, Washington, D. C. An early electric master-clock system, which was installed in the Arts and Industries Building when erected and which was removed during the past year, was added to the collection for its technical interest.

To the section of mineral technology the Carborundum Co., Niagara Falls, N.Y., gave a model of a carborundum grain sifter as an addition to the splendid models that the same company presented last year to show the processes of manufacture of carborundum abrasive products. A group of lathe tools made with "Firthite" alloy cutting edge inserts, a small piece of "Firthite", and a wire drawing die with a "Firthaloy" insert were added to the metallurgy exhibits by L. Gerald Firth, McKeesport, Pa. Philip McKenna, Latrobe, Pa., presented a lathe tool with a "Vascaloy" insert.

Textiles, organic chemistry, wood technology, foods, history of agriculture, and medicine.—Because of the increasing interest of the public in early American textiles, efforts were made to carry out the plans proposed in last year's report for special exhibitions of home handicrafts in textiles. Mrs. William S. Corby, Chevy Chase, Md., loaned for this purpose part of her collection of early American coverlets. These examples of a household industry, which began in Colonial days and continued until the Civil War, were collected in Virginia, Massachusetts, Pennsylvania, Indiana, Maryland, and Florida. Other coverlets for this exhibition were loaned by Capt. James A. Stader, Neosho, Mo., and C. H. Popenoe, Silver Spring, Md.

Beautiful examples of artistic needlework, made before the days of the sewing machine, were received as gifts as follows: From Mrs. Kate Vinson a silk applique quilt designed and made in Baltimore, Md., 1845, by the donor's mother; from Miss Isabelle M. Erwin and Miss Mildred A. Erwin a white quilted counterpane and a cotton patchwork quilt, pieced in "Irish Chain" pattern, both made in South Carolina in 1850; and from Mrs. Mary E. Lyddane linen samplers made in 1804 and 1833. Mrs. Laurence Stabler, Alexandria, Va., loaned two appliqued cotton quilts, one in "Tree of Life" design made in 1802, the other in 1830; and a small linen sampler worked in 1733. Mrs. Daniel Gardner added 27 miscellaneous textile articles. The Museum is indebted to Miss Susan P. Keech for a cotton coverlet, made of a monochrome copper cylinder print—the so-called "Toile de la Bastille"—which has been in the Keech family of Harford County, Md., for 70 years or more.

The Cotton-Textile Institute continued its valued cooperation by the presentation of two series of modern cotton fabrics produced by American manufacturers. Further additions to the display of seasonal cotton dress goods were made by Galey & Lord, who presented

specimens of fancy weave cotton and rayon fabrics. The Celanese Corporation of America contributed a new series of examples of piece-dyed dress materials to replace the specimens presented last year. To the Flatau Fabrics Corporation the Museum is indebted for examples of warp-printed, novelty silk crepe fabrics, finished by a special process to give the material a sandy feel when handled. The cooperation of Sidney Blumenthal & Co. was continued by the gift of specimens of upholstery and drapery pile fabrics, cloaking and velvet dress fabrics, and a printed velour bathmat, these to replace some of the specimens contributed by this firm during the past 19 years.

The Armstrong Cork Co. presented a full series showing the manufacture of linoleum and suggestions for the interior decoration of different types of rooms; the Standard Textile Products Co. specimens illustrating the manufacture of wall and table oilcloth and uses to which these materials may be put; and M. J. Whittall Associates a series of specimens illustrating the manufacture of wool carpet yarns. The Universal Winding Co. sent examples of windings of bare and insulated wires for electrical purposes, which had been wound on winders of different types.

Through the courtesy of T. A. Keleher, a live exhibit of about 300 half-grown silkworms was set up in the textile hall. They were placed on shelves in a special glass case, where they were fed fresh mulberry leaves every few hours until the cocoons were spun, the first week of June.

Specimens of new rubber products and a historical series illustrating the development of rubber pneumatic tires from 1904 to the present time were contributed by the B. F. Goodrich Rubber Co. The United Shoe Machinery Corporation added to its exhibit a new series showing a recently perfected shoemaking method.

For the collections pertaining to agricultural history were received three models of the Cyrus Hall McCormick grain reaper constructed, one eighth size, according to the specifications of United States Patents Nos. 3895 and 5335, issued June 21, 1834, January 31, 1845, and October 23, 1847. The first was the gift of Secretary Abbot; the others of the McCormick Historical Association, which also presented three groups of documents, one relating to the development of two hillside plows, patented by Cyrus Hall McCormick in 1831 and 1833; one to the development of the reaper by Cyrus Hall McCormick; and one to a threshing machine invented by Robert McCormick in 1834.

An interesting specimen was received from Miss Anna Tiede in the form of a blank book of veneer cut from western white pine. The sheets were cut with a slicing knife, but, ingeniously, were not cut entirely through, just enough wood being left at the back to bind them. The sheets are not glued at any point.

Gerrit S. Miller, Jr., collected in Puerto Rico during March and April 1932 for the section of wood technology 74 woods from a region heretofore only scantily represented in the collection. These specimens are backed by herbarium material in the division of plants. The University of Poznan sent a set of 63 samples of the woods of Poland in exchange for a collection of woods of the United States. At the suggestion of Mr. Miller, E. N. Bancroft, surveyor general of Kingston, Jamaica, collected for the Museum wood samples of Jamaican trees, most of which are backed by herbarium material in the division of plants. Most of these are generous trunk sections.

Other woods received from various contributors for the study collection comprise single billets or trunk sections. One is a 17-inch section of the rare Chonta palm from Juan Fernandez Island off the coast of Chili, obtained by Dr. W. L. Schmitt. Prof. T. Jonson, of the Royal Swedish Forestry School, Stockholm, contributed a fine trunk section of European white birch from the demonstration forest of the College of Forestry at Garpenberg, Province of Dalarna, Sweden. In exchange for a study sample of *Ginkgo* wood sent to him in August 1932, F. K. Dalton sent a piece of the wood of kaikawaka, or New Zealand cedar, which burns very slowly and is used locally for fire doors and similar purposes. A piece of German oak cut from a dugout built on the Elbe between 800 and 900 A.D., and attesting the great durability of this species, was received from R. D. Hess as an exchange.

A collection of homeopathic pharmaceutical preparations, from Boericke & Tafel, arranged to illustrate the history and principles of homeopathy, was the largest gift received by the division of medicine during the year. The specimens included consist of pharmaceuticals of all kinds from the animal, mineral, and vegetable kingdoms. The division is indebted to Dr. F. B. Kilmer, of Johnson & Johnson, for the contribution of type specimens of the earliest antiseptic surgical dressings made on a commercial scale in the United States. The first type, carbolated gauze, introduced the new Listerian system of antiseptic dressings. The others illustrate improved forms of dressings with corrosive sublimate and boric acid as the medicinal agents.

The pharmacy collection was improved by the addition of considerable material, including a druggist's mortar contributed by Magnus, Mabee & Reynard, and a series of six photographic enlargements of murals depicting the progress of pharmacy, a gift of the Philadelphia College of Pharmacy and Science.

Accessions for the materia medica section included a gift of a set of photographs especially prepared by Eli Lilly & Co. to illustrate steps in the manufacture of insulin; a contribution of Merck & Co. of a series of cinchona alkaloids and alkaloidal salts; and donations

of crude drugs by the United States Department of Agriculture, R. Hillier's Son Corporation, J. L. Hopkins & Co., S. B. Penick & Co., Peek & Velsor, and Johnson & Johnson.

Additions to the section of public health were: A group of models and a panel transferred from the United States Children's Bureau; a partial set of specially prepared placards and a series of strip films received from the Metropolitan Life Insurance Co.; and additional colored transparencies donated by the American Hospital Association.

Graphic arts.—The 51 accessions, 4 more than last year, totaled 1,433 specimens, of which the gifts, purchases, transfers, and deposits made a permanent addition to the collections of 482 specimens. The most important accession was 200 old etchings collected by J. Kay, London, in 1826. The lot contains prints by such famous artists as Rembrandt, Claude, Hollar, Cornelius, Bego, and Castiglione, and many by lesser artists, quite a few of which are of much better quality than those by the more famous etchers. Etchings and dry-points by American artists were received from Joseph C. Claghorn, Mrs. Sybilla M. Weber, and Robert Lawson.

In connection with the new installation of the photomechanical and substitute processes, the following accessions were obtained: Photographs of the inventors Frederic E. Ives, Max Levy, Louis E. Levy, and Karl Kletsch; 36 prints made by the Photogravure and Color Co., of New York, from 3 old photomechanical plates etched about 1860 by Fox Talbot. The Meriden Gravure Co. gave 18 specimens of their work in collotype, and 5 specimens of excellent European work were purchased and incorporated in the exhibit. The Laboratory Press of Carnegie Institute of Technology, Pittsburgh, presented 7 examples of the work being done in the school of printing, and 2 large highlight water-marked samples of paper were the gift of the Japan Paper Co.

Of the 26 accessions received by the section of photography during the year, the most important and valued was the gift of Mary O. Petrocelli, Brooklyn, N.Y., of 86 beautiful bromoil and resinotypia prints made by her late husband, Joseph Petrocelli, between 1921 and 1928. They are all suitably and effectively framed, and were presented in the hope that they would stimulate a desire to carry on this type of work, of which Mr. Petrocelli was a master.

An important addition to the motion-picture exhibit was a complete early Edison projection kinoscope acquired from John P. Daniels, Crisfield, Md.

Three burnishers used by the late John F. Jarvis, Washington, D.C., the gift of Mr. Jarvis' daughters, Mrs. Mae I. English and Mrs. L. F. Speich, illustrate the development of this once useful article in photography. M. Schneckenberger, chief photographer for the Buffalo Museum of Science, Buffalo, N.Y., loaned two im-

portant cameras, one a Kodak No. 210 and the other an E. & H. T. Anthony No. 1025. Dr. Robert Taft gave a portrait of Hamilton H. Smith, the inventor of the tintype, which is a copy of a self-portrait (1889) printed on platinum paper of Smith's preparation.

A 35-mm moving-picture film, the gift of Geophysiches Institut, Prague, illustrates the copying of books in this compact form, each page being copied on one frame and projected onto a screen for study. Libraries are using this method to copy rare old books, thus to preserve the originals and make them available for others. Another film acquired from the Universal Talking Newsreel, New York, illustrates the method of locomotion of a walrus in the San Diego Zoo.

Mrs. Hazel Englebrecht, Des Moines, Iowa, specialist in X-ray photography, presented to the section 2 photographs of flowers and 9 negatives of various assorted subjects. DeLancey Gill, Alexandria, Va., for many years illustrator of the Bureau of American Ethnology, upon his retirement on June 30, 1932, gave the collection a Thornton Pickard shutter, a Triplex shutter, an old focusing glass, and a Watkins meter. Eugene Augustin Lauste, Bloomfield, N.J., pioneer inventor of sound and sight motion pictures, presented 22 photographic copies of his early inventions. Ida F. Arnold, Canton, Mass., presented a collection of 4 daguerreotypes, 4 ambrotypes, 2 tintypes, and 1 cabinet portrait.

Loeb collection of chemical types.—Miss Aida M. Doyle, of the section of organic chemistry, devoted 2 days a week to the Loeb collection of chemical types under the head curator's direction, and by the close of the year had made satisfactory progress toward completing a technical catalog of the collection, which now numbers 1,336 specimens.

INSTALLATION AND PRESERVATION OF COLLECTIONS

Engineering.—In the section of aeronautics the erection of the gondola and part of the envelop of the airship *Pilgrim* was the largest new installation. In addition, the collection of kites was installed in metal swinging frames and a complete series of illustrations portraying the evolution of the parachute was added. In mechanical technology the most popular new arrangement was the addition of a horse, harness, and liveried driver to the hansom cab presented last year by Mrs. James Parmelee. Mrs. Parmelee donated a nicely carved wooden horse, the original harness, and the driver's livery. The large tower-clock movement presented last year by the city of Frederick, Md., was installed at the level of the "clock gallery" on the top of a steel tower erected from the main floor, and will be operated during the coming year. The glass and metallurgy exhibits of the section of mineral technology were completely rearranged.

An attractive exhibit portraying the early work of Joseph Wharton in the development of nickel refining and manufacturing processes was installed.

Textiles, organic chemistry, wood technology, foods, and medicine.—In all, 35 installations of new material and 13 rearrangements or re-installations of specimens received in previous years were made in the textile halls. In the section of organic chemistry 17 exhibits were dismantled and revised, replacing some specimens with new material of more recent manufacture. Three new installations were made in the section of foods. A new colony of bees was installed in the observation hive in the spring, the bees in the old colony having nearly all perished in the previous cold winter.

In wood technology a new cork exhibit was installed from material contributed by the Armstrong Cork Co., the walnut airplane propeller and accompanying parts, received in 1917 from the American Propeller & Manufacturing Co., were rearranged; and parts of the exhibit of the Hammernill Paper Co., illustrating the manufacture and use of sulphite wood pulp for writing papers, were revised. This year 203 woods were received, primarily for the study collection. Of these, 65 were of such size that they could be placed in the regular drawers with little or no cutting, 133 were cut to size and all duplicates put in storage, while 5 await seasoning. A total of 308 hand samples were prepared for the study collection, 2,087 duplicates for distribution and exchange, and 318 thin sections were made for the division of plants.

Important of the new or improved installations in the division of medicine are models illustrating various phases of child welfare; exhibits devoted to the portraying of general hygiene, preventive medicine, and vital statistics; the Arabian period of medical history; the history of pharmacy; the evolution of pharmacopoeias, dispensaries, and formularies; and improved insulin, surgical dressings, and crude drug exhibits.

Graphic arts.—Besides conducting 8 special exhibitions, the members of the staff of the division of graphic arts devoted 4½ months to the arrangement and installation of the photomechanical prints. Many of the early specimens are rare, and to insure their careful preservation they were covered with glass and bound with passe partout. This method, once started, made it necessary to cover all specimens in order to make the exhibition uniform. Nearly all the old material and much new was rematted and covered with glass.

INVESTIGATION AND RESEARCH

Dr. F. L. Lewton, curator of textiles, continued his botanical studies of certain undescribed plants related to the cottons; the assistant curator of wood technology, W. N. Watkins, carried on

investigations of the utility of certain tropical Florida woods and gave special study to the anatomy of other species of woods; the assistant curator of medicine, Dr. Charles Whitebread, pursued his studies of Arabian medicine and the history of pharmacy; R. P. Tolman, curator of graphic arts, devoted some time to further research on the artist Malbone; and the assistant curator of engineering, Paul E. Garber, found time to give to his researches in aeronautical history.

Many individuals and industrial organizations made use of the department's collections during the year, some in connection with their studies on various phases of industrial and technologic history and transportation, involving in some cases the comparison of specimens in the collections with privately-owned objects, and others in connection with the preparation of historical exhibits for the Century of Progress Exposition in Chicago. Assistance of this sort was rendered also to a number of Federal agencies, including the United States Shipping Board, the Bureau of Public Roads, the Bureau of Navigation and Steamboat Inspection, and the Aeronautics Branch of the Department of Commerce. Much time too was required to comply with requests for the identification of specimens brought or sent in by individuals and Federal bureaus. Such assistance included identification of woods for the United States Bureau of Plant Industry, the National Committee on Wood Utilization, the Bureau of Standards, and the Bureau of American Ethnology. Seeds of foreign cottons were identified for the Division of Foreign Plant Introduction and rare drugs for the Division of Botany, United States Bureau of Plant Industry. In addition, many lots of material, such as paintings, sculpture, ship models, tools, textile fabrics, machinery, electrical and mechanical equipment, watches and clocks, and scientific apparatus, were identified and appraised.

DISTRIBUTION AND EXCHANGE OF SPECIMENS

The distributions from the department of arts and industries during the year aggregated 2,091 specimens, of which 39 were gifts in aid of education, 8 exchanges for material which has or will be received, and 1,595 loans for educational or research purposes. Also 449 specimens that had been temporarily in the department were returned to their owners.

NUMBER OF SPECIMENS UNDER DEPARTMENT

The number of specimens in the department was 115,467, assigned as follows:

Engineering.....	15, 025
Textiles.....	13, 754
Wood technology.....	8, 294
Organic chemistry and animal products.....	20, 108
Foods.....	1, 092
Agricultural history (estimated).....	1, 202
Medicine.....	16, 622
Graphic arts, including photography.....	38, 034
Loeb collection of chemical types.....	1, 336
	<hr/>
Total.....	115, 467

REPORT ON THE DIVISION OF HISTORY

(THEODORE T. BELOTE, *Curator*)

In 1921 the division of history was removed from the department of anthropology and placed as a separate unit under the department of arts and industries, its report since 1925 for convenience having been combined with that of that department. With a reorganization during the present year, the division of history now renders a separate account of its activities.

The historical collections have been divided into the following units: Art, antiquarian, costume, military, naval, numismatic, and philatelic. These terms refer to the intrinsic character of the historical materials and indicate categories for the classification, installation, preservation, and future development of the immense mass of objects of various types now in the care of the division. The arrangement of the material in each of these groups has been greatly facilitated during recent years by the assignment of suitable exhibition and storage space in the Arts and Industries Building for the entire historical collections. Much of the time of the historical staff has been occupied with transferring materials from the Natural History Building to the Arts and Industries Building, but the rearrangement of all this material has not yet been completed.

ACCESSIONS FOR THE YEAR

Additions to the collections during the year were smaller in numbers than in recent years, chiefly because of lack of exhibition and storage space for new specimens of bulky size, the necessity of depending upon gifts for material that has become comparatively scarce and valuable, and the adoption of a high standard for material accepted. Specimens added numbered 5,537, or 519 less than for the previous year.

In the antiquarian collections several objects of special interest were added. One of these is a small compass in a leather case which was carried by William Clark during the Lewis and Clark expedition to the Pacific coast, 1804-6, and presented by Miss Mary McCabe. Another is a silver vase given to Maj. Gen. Silas Casey, when captain of the Second Infantry, United States Army, in recognition of his services during the War with Mexico. It was lent to the Museum by Miss Sophie Pearce Casey. Seven pieces of chinaware owned during the early part of the nineteenth century by President James Madison

were presented by John H. Gray. Mrs. Daniel Gardner added 77 specimens of china, glass, and miscellaneous tableware to the antiquarian material presented by her in 1931.

An interesting collection of feminine wearing apparel of the latter part of the nineteenth century was donated by Mrs. Gertrude O. S. Cleveland. A frock coat and vest worn by William McKinley, prior to his election as President of the United States in 1896, were presented by George A. Troll.

A United States flag carried on the boat *Emma Dean* by Maj. J. W. Powell and his party during their exploring expedition down the Green and Colorado Rivers, 1871-72, was presented by Frederick S. Dellenbaugh.

Two military belt buckles of more than the usual historical importance were received. One of these, presented by Virginia B. Lewis and Emily B. Leaf, was owned during the War of 1812 by Maj. Gen. Jacob Brown. The other, a gift of B. F. O'Rourke, was worn by Thomas O'Rourke, Company E, Eighty-eighth New York Volunteers, during the Battle of Cold Harbor, Va., and bears on its surface a rifle bullet that was embedded in it during that engagement. The military collection was also increased by a saber carried during the Civil War by Lt. Thomas D. Jellico, One hundred and sixty-ninth New York Volunteer Infantry, presented by Mrs. Clara Jellico Bevers, and by a Spanish carbine and sword of the period of the Spanish-American War, presented by Mrs. Arthur Foraker. The Polish Government presented a series of uniforms and accessories of types now used in the Polish Army.

A number of relics of unusual historical interest relating to the career of Commodore Thomas Macdonough, added to the naval collection, include a gold watch owned by him; a silver pitcher and six goblets presented to him by the citizens of Lansingburg, N.Y., in commemoration of his victory on Lake Champlain, September 11, 1814; and a handsome gold-mounted sword, a scabbard, and belt presented to him by the crew of the U.S.S. *Guerriere*, July 8, 1819. These items were lent by Rodney Macdonough. A naval sword, received as a gift from Mrs. J. A. Starkweather, was owned during the early part of the nineteenth century by Dr. Thomas Williamson, United States Navy.

Among the additions to the numismatic collection was a Portuguese half-dobra gold piece struck in Brazil in 1761, presented by Phillip Elting. From the International Nickel Co. came a collection of 48 nickel coins illustrating the types of coins of this metal now circulating in Albania, Austria, Belgium, Ecuador, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Luxembourg, Montenegro, Morocco, Poland, Siam, Switzerland, Turkey, and Vatican City. The United States Mint transferred two examples each of the gold, silver, and

bronze coins struck in the Denver, Philadelphia, and San Francisco Mints during 1932.

Two bronze copies of the medal of award of the United States George Washington Bicentennial Commission, 1932, were presented by the commission. The directors of the French Mint presented an exceptionally artistic medal commemorating the tercentennial anniversary of the birth of Benedict Spinoza. A special collection of 186 British medals commemorating the exploits of Admiral Edward Vernon, R.N., during his expedition against the Spanish possessions in the Caribbean Sea, 1739-41, was lent for temporary exhibition by L. McCormick-Goodhart.

A number of additions were made to the collection of military decorations. From the War Department came two examples of the recently reestablished United States military decoration, the Purple Heart. From the New Mexico National Guard, through Maj. Frederick R. Lafferty, the Museum received two examples of the long-service medal and drill-attendance medal of the type awarded to members of that guard. Six military decorations and six exquisitely executed miniatures of these decorations, all owned during the World War by Maj. Gen. George M. Burr, were presented by Mrs. Lydia K. Burr.

The philatelic collections were increased by 3,971 specimens received from the Post Office Department, including examples of many United States and foreign commemorative stamps of more than the usual historical interest.

INSTALLATION AND PRESERVATION OF COLLECTIONS

The transfer of historical materials from the Natural History Building to the Arts and Industries Building has complicated the problem of adequate space and furniture, but the arrangement has been greatly improved by the transfer. The art material has offered the greatest difficulties, as it is difficult to arrange busts, portraits, and historic scenes in a satisfactory manner owing to the architectural features of the walls of the building. Part of the collection of busts is shown on the tops of wall cases.

The only series of paintings now shown with entire success is the Ferris collection of American historical subjects for which special alcoves were provided 2 years ago. This collection makes a splendid showing and harmonizes well with the costumes material exhibited in the same hall.

The antiquarian material has been united and now includes a fine series of china, glass, silverware, and furniture relating to the development of the American home from about 1750 to 1850. The pieces of greatest importance are those associated with noted personages of American history, and material of this character is given the most

prominent location in the exhibition scheme. This section includes materials owned by George Washington, Thomas Jefferson, Alexander Hamilton, James Madison, and many other important figures in American history.

An exhibit of unusual historical interest installed during the year included examples of coins, tokens, and paper currency issued by local and State authorities and by private individuals and commercial firms in the United States from the Colonial period to the present time. Of equal importance are many examples of metal currency known as "tokens" that were produced in the United States during the financial panic of 1837 and during the Civil War. This special exhibit also included coins and currency made during the period of the Confederation prior to the establishment of the United States Mint and the first issue by that establishment of the official series of United States coins, which began in 1793.

The value of the philatelic material for exhibition purposes was greatly increased by the installation of a special series of electric fixtures, which not only light the cabinets but also the nearby wall cases containing the Richard Mansfield collection of historical theatrical costumes.

NUMBER OF SPECIMENS UNDER DIVISION

During the past year 5,537 specimens were received and 227 specimens were returned to the owners. The number of specimens included in each of the classes of materials assigned to the division is given below. The library material, which includes documents and publications of historical interest, has received few additions in recent years, as material of this character is no longer included in the field of work of the division.

Art.....	4, 546
Antiquarian.....	10, 996
Costumes.....	4, 090
Library.....	2, 225
Military.....	27, 488
Naval.....	2, 510
Numismatic.....	45, 802
Philatelic.....	391, 131
Total.....	488, 788

ACCESSIONS DURING THE FISCAL YEAR 1932-33

[EXCEPT WHEN OTHERWISE INDICATED THE SPECIMENS WERE PRESENTED, OR WERE TRANSFERRED IN ACCORDANCE WITH LAW BY BUREAUS OF THE GOVERNMENT]

ABBOT, Dr. CHARLES G., Washington, D.C.: Scale model of grain reaper patented by Cyrus McCormick, June 21, 1834. Constructed by Roderic Davis from specifications of U.S. patent (121105).

ABBOTT, Prof. C. H., Redlands, Calif.: 21 isopods from California (121215).

ABBOTT, WILFRID C., Bloemfontein, South Africa: 4 flake implements from near Bloemfontein (124660).

ABEL, Dr. O. (See under Palaeontologisches Institut der Universitat.)

ABRAHAM, STUART, Alexandria, Va.: 1 ground skink from Broad Creek, Md. (120789).

ABRAMS, Prof. LEROY. (See under Stanford University.)

ACADEMY OF NATURAL SCIENCES, Philadelphia, Pa.: 1 specimen and 2 photographs of plants (121102, exchange); 4 insects, all paratypes, of 4 species (122084, exchange); 83 plants, collected by Steinbach in Bolivia (122525, exchange); (through Dr. H. A. Pilsbry) 16 land shells, of 4 species, from Santo Domingo (123953).

ADELAIDE, UNIVERSITY OF, Adelaide, South Australia: 35 fossil plants and invertebrates from Australia (95495). Exchange.

AGRICULTURAL RESEARCH INSTITUTE, Pusa, India: 20 Hymenoptera (120284). Exchange.

AGRICULTURE, U.S. DEPARTMENT OF:
Bureau of Animal Industry: (Through Dr. E. W. Price) 126 fresh-water shells; 12 fresh-water shells, of 2 species, from Louisiana (120711,

121936, 122188); (through Dr. W. H. Krull) 18 fresh-water mollusks raised in aquaria at Beltsville, Md., from local parentage (123360); 5 photographs of peafowl, geese, and pigeon for feather exhibit (123815).

Bureau of Biological Survey: 118 fresh-water and marine shells and 9 egg masses of Diptera (118921); 2 skeletons of trumpeter swan (119772); (through W. L. McAtee) 70 plants; about 500 plants from Wisconsin, collected mostly by Neil Hotchkiss (120173, 122104); 1 nest and 4 eggs of goldfinch (120971); 78 plants collected in Alaska by L. J. Palmer (121031); 12 isopods, 9 amphipods, 7 copepods, 10 crabs (121770), 150 insects, chiefly reindeer botflies but also bumblebees and wasps from Alaska (122215); 4 German fitch skulls (123077); (through Clarence Cottam) 2 species, many specimens, of land and fresh-water shells from Florida and Ohio (123460); 1,668 beetles, 233 species (123280); (through Dr. J. E. Shillinger) 1 Cape Barren goose (123469); skin and skull of antelope (124326); 2 skins with skulls of American pronghorn (124502); 65 plants collected in Alaska by W. B. Miller (124590); 283 mammals transferred and entered in Museum catalog (nos. 250475-250757, new series).

Bureau of Entomology (through W. W. Yothers): 1 green snake collected by A. H. Smith, of

Orlando, Fla. (119766); 10 land snails from roses and lilies in Greece (120400); (through G. H. Bradley) 15 mosquitoes (121222); (through W. W. Baker) 20 beetles (124446); 15,000 miscellaneous insects (124815).

Forest Service (through Sam R. Broadbent): Egg capsules of "lightning conch" from Florida (120262); 1 plant (121388); (through E. R. Ware) 9 plants from Colorado (123191, 124092); (through Dr. F. V. Coville) 5 plants from Western United States (124643).

Bureau of Plant Industry: 6,667 plants collected in Argentina by Dr. S. Venturi (110605); (through Dr. A. S. Hitchcock) 4,062 grasses; 1 plant from Texas; 1 plant from Pennsylvania (119993, 120344, 124270); (through Paul G. Russell) 8 plants from Chile collected by C. O. Erlanson and H. F. Macmillan; 1 plant from Texas; 1 plant; 1 plant from District of Columbia; 14 plants collected in China by F. P. Liu; 8 plants from Panama (120149, 120210, 120239, 120381, 121748, 123347); (through Lyster H. Dewey) 26 fiber-producing plants (120150); (through Dr. F. V. Coville) 286 plants (chiefly Compositae) from Western United States; 4 plants from Chesapeake Bay region; 1 plant from Maine; 1 plant from Alaska; 8 plants collected in New Hampshire by Dr. F. V. Coville; 3,333 plants from Argentina collected by Dr. S. Venturi; 5,308 plants from Argentina; 4 plants from Southwestern United States (120154, 120866, 121852, 121091, 121266, 121292, 122207, 122528, 122552, 123724); (through W. W. Eggleston) 595 plants from Western United States (120249, 120369); (through Dr. S. F. Blake) 20 plants from Oregon, California, and Arizona; 113 botanical speci-

mens (17 plants, 56 photographs, and 40 fragmentary specimens) (120333, 122382, 122121, 122136); (through J. A. Stevenson) 273 plants, chiefly mosses; 46 plants, chiefly from Hawaiian Islands; 1 alga from Germany (120374, 121226, 122054); 12 worms (Naididae) (120398); 5 isopods from various localities and 3 land mollusks, 2 species, from Belgium and Holland (121218); 1 plant from Maine (121266); (through Dr. T. H. Kearney) 1,192 plants from Western United States (122036, 122037, 122065, 122200, 122367, 123112, 123113, 123125, 123252, 123253, 124587); 265 plants collected in Death Valley region, Calif., by Dr. F. V. Coville and M. French Gilman in 1932 (122038); (through Dr. F. L. Lewton) 3 specimens of a malvaceous plant from Haiti (122137); (through George M. Darrow) 1 plant from California (122368); (through Dr. Carl O. Erlanson) 13 photographs of South American plants (123566); 114 plants collected by Dr. David Fairchild in Mediterranean region, 1930-31 (123706); (through P. L. Ricker) 41 photographs and 32 fragmentary plants (123818); (through H. N. Vinall) 1 plant from Texas (123970); (through H. C. Skeels) 854 plants collected in tropical America by Dr. David Fairchild, 1931-32 (124315); 1 royal salep (124586).

Bureau of Plant Quarantine: 18 lots of material, comprising 147 crustaceans, mollusks, lizards, insects, and plants intercepted at various ports and forwarded for identification (117066, 117229, 119520, 119817, 120293, 120340, 120403, 120698, 121400, 121663, 121873, 122193, 122542, 122813, 122973, 123965, 124252, 124492).

Hawaii Agricultural Experiment Station, Honolulu, Hawaii (through Dr. W. T. Pope): 1 plant (121227).

- AGUAYO, Dr. C. G., Habana, Cuba: 67 Cuban land shells of 11 species (123465).
- AIR REDUCTION SALES Co., New York, N.Y.: 8 rare gas tubes, mounted (124234).
- ALABAMA POLYTECHNIC INSTITUTE, Auburn, Ala. (through Prof. F. S. Arant): 2 flies from Alabama (120595).
- ALASKA AGRICULTURAL COLLEGE AND SCHOOL OF MINES, College, Alaska: Human skeletal material excavated by Otto W. Geist on St. Lawrence Island, 1931-32 (114040); 3 fishes and 1 insect from Alaska (122815).
- ALDRICH MUSEUM, Balboa, Calif.: 1 lot of mollusk eggs from California (120263).
- ALEXANDER, W. C., Bellbuckle, Tenn.: 1 fossil hydroid coral from Ordovician rocks of Tennessee (121272).
- ALLEGANY SCHOOL OF NATURAL HISTORY, Quaker Bridge, N.Y. (through R. E. Coker): 1 beetle from New York (120818).
- ALLEN, C. C., St. Petersburg, Fla.: 44 fresh-water mussels from Florida (123088, 124498).
- ALLEN, E. R., Silversprings, Fla.: 4 snakes and 11 crustaceans from Florida (121647, exchange); 2 bats (122735).
- ALLEN, JOHN, Philadelphia, Pa.: 1 print, "Old Man River" (123689).
- ALLEN, Miss SALLY, Durham, N.C.: 2 nematodes (123509).
- AMERICAN HOSPITAL ASSOCIATION, Chicago, Ill. (through Richard P. Borden): 3 colored transparencies for illustrating hospitalization (122042).
- AMERICAN MUSEUM OF NATURAL HISTORY, New York, N.Y.: 93 decapods and 81 amphipods from Puerto Rico and Virgin Islands (113579); 11 flies (114799, 123091); 8 beetles new to the collections (120326); 1 lemur skin and skull (120372, exchange); 2 rare Alaskan butterflies (122085); 1 mounted skeleton of dinosaur from Upper Cretaceous of Alberta and 1 skeleton of fossil mammal from Lower Miocene of Nebraska (123258, exchange).
- AMERICAN NUMISMATIC ASSOCIATION, New York, N.Y.: 9 coins of Danzig, Germany, Portugal, Syria, and Tibet (120384). Loan.
- AMERICAN WOOLEN Co., INC., New York, N.Y.: 1 fleece of Ohio Delaine wool, and 1 specimen each of scoured wool, combed tops, and noils (123975).
- AMES, HOBART, Grand Junction, Tenn.: 1 red quail (122658).
- AMORTEGUI, BALTAZAR GUEVARA, Bogota, Colombia: 2 moths (119770); 308 plants, 20 birds, and 1 lizard from Colombia (120902, 121251, 121652, 122421).
- ANDREWS, E. A., Baltimore, Md.: 9 mussels from Jamaica (123363).
- ARANT, Prof. F. S. (See under Alabama Polytechnic Institute.)
- ARCHAEOLOGICAL SOCIETY OF WASHINGTON, Washington, D.C.: 477 paleolithic artifacts collected by American School of Prehistoric Research in Europe (121286). Loan.
- ARMINGTON, A. A. (See under Universal Winding Co.)
- ARMOUR & Co., Chicago, Ill.: 1 chart and 28 specimens illustrating manufacture of soap (124816).
- ARMSTRONG CORK Co., Lancaster, Pa.: Samples of corkwood and cork products (120350); specimens illustrating steps in manufacture of plain, printed, and inlaid linoleum (120351).
- ARMSTRONG, F. K. (See under Creamery Package Manufacturing Co.)
- ARNOLD, Miss IDA F., Canton, Mass.: 2 Iroquois beaded bags (120983); 4 daguerreotypes, 4 ambrotypes, 2 tints, 1 cabinet portrait, 1 nurse's badge, and a cast-iron dragon candlestick made about 1870 (121418, 121676).
- ARSENE, Rev. Brother G., Las Vegas, N.Mex.: 50 plants from Mexico (124642).

- ARTHUR, S. C., New Orleans, La.: 1 manatee skull from Louisiana (106951).
- ASCHEMEIER, C. R., Washington, D.C.: 61 mammals and 534 fishes collected in Florida, December 1932 (124577); 2 birds (120221, 121468). (See also under Herman Gunter, and Smithsonian Institution, U.S. National Museum.)
- ASHLEY, T. F., Oakland, Calif.: 1 plant from California (121681).
- ASSOCIATED TELEPHONE CAMERA CLUBS, Washington, D.C.: 58 photographs, for exhibition during March 1933 (123495). Loan.
- ATKINSON, HERBERT, New Bedford, Mass.: Model, $\frac{1}{8}$ size, of "Travel-air" biplane of 1930, with 2-place, open cockpit, half skeletonized (122275). Loan.
- AUSTEN, Maj. E. E. (See under British Government, British Museum.)
- AUSTRALIA, BUREAU OF SUGAR EXPERIMENT STATIONS, Queensland, Australia (through E. Jarvis): 36 flies from Australia (119829).
- BABASHAN, Miss MARY, Washington, D.C.: 1 Milbert's shark collected at Solomons Island, Md., by Benny Babashan (121054).
- BABCOCK, H., Columbia, S.C.: Head of large-mouth black bass (123695).
- BACKUS, Miss CONSTANCE A., Glen-carlyn, Va. (through Prof. R. F. Griggs): 1 plant from Virginia (120377).
- BACON, Mrs. CAROLINE E., Washington, D.C.: Small collection of family and personal relics (123260); black satin dress of 19th century (123854).
- BACONRIND, Estate of Chief Tom (through W. H. McKenzie): Personal wearing apparel of the late Chief Tom Baconrind (120063).
- BADDER, JOHN, Lebanon, Syria: Bronze coin of Constantine I, 306-337 A.D., and silver coin of Macrianus, Junior, 261-262 A.D. (123840).
- BAILEY, Dr. C. R., Gatesville, Tex.: 2 Indian skulls, male and female, from dry rock shelter near Gatesville, Tex. (123283).
- BAILEY, VERNON. (See under Mrs. Ynes Mexia.)
- BAIRD, Mrs. CORNELIA H., Yonkers, N.Y.: (See under Estate of Mrs. James S. Harlan.)
- BAKER, F. C., Urbana, Ill.: 3 lots, 2 species, of mollusks, from Illinois (123203). (See also under University of Illinois.)
- BAKER, Dr. FRED, Point Loma, Calif.: 3 mollusks from Philippine Islands (123393).
- BAKER, HOWARD, Washington, D.C.: 1 cut-throat finch (123491).
- BAKER, W. W., Puyallup, Wash. (See under U.S. Department of Agriculture, Bureau of Entomology.)
- BALDWIN, J. T., Jr., Keysville, Va.: 1 beetle from Virginia (119858).
- BALL, Wm. H., Washington, D.C.: 23 birdskins (120019, 120286, 121387, 122391, 122405); 4 bird skeletons (120370); 2 land shells from Ontario (120849).
- BALLIET, LETSON, Tonopah, Nev.: 5 insects from Nevada (120583).
- BANCROFT, E. N., Kingston, Jamaica: 56 wood samples of Jamaican trees (32 accompanied by herbarium specimens) (114780).
- BANDY, MARK C., Chuquicamata, Chile: 1 specimen of quetenite with green coquimbite and 1 vial of efflorescent halotrichite (123698). Exchange.
- BARBOUR, THOMAS, Rock Point, Md.: Collection of reptiles, amphibians, fishes, mollusks, insects, and marine invertebrates (119873).
- BARLOW, Miss CATHERINE B., Washington, D.C.: Tortoise-shell lorgnette of 19th century (123703).
- BARLOW, ROBERT, Washington, D.C.: 1 moth and 2 butterflies (including a rare form) from District of Columbia (122051).
- BARNES, R. M., Lacon, Ill.: 28 moths (119972, 122691).

- BARNEY, DAUGHTERS of Mrs. ALICE PIKE, Washington, D.C.: Antiquarian material presented in memory of their mother, the late Mrs. Alice Pike Barney (124063).
- BARROWS, R. A., Philadelphia, Pa.: 2 photographs, "Dunes" and "Shrouds" (123717).
- BARTH, Dr. TOM, Washington, D.C.: Examples of rocks chiefly from Norway, collected by donor (121836).
- BARTLETT, Prof. H. H. (See under University of Michigan.)
- BARTLETT, Capt. R. A., New York, N.Y.: 5 hydroids, 1 anemone, 25 amphipods, 50 isopods, 24 barnacles, 100 shrimps, 100 mysids, 50 marine annelids, 3 bryozoans, 10 townet samples, 25 ascidians, 13 bottom samples, 2 pycnogonids, 65 mollusks, bird stomachs, mammal stomachs, fish stomachs, fish, echinoderms, parasitic worm, plants, insects, collected on coast of Greenland, 1932 (119359).
- BARTRAM, E. B., Bushkill, Pa.: 108 mosses from Hawaiian Islands (121279). Exchange.
- BARTSCH, Dr. PAUL, Washington, D.C.: 1 mole from Bluemont, Va. (120965); 2 plants from Virginia (120989, 121941); 2 birds (121562, 124314); 1 nest of warbling vireo (124619). (See also under Smithsonian Institution, National Museum.)
- BASSLER, Dr. R. S. (See under Smithsonian Institution, National Museum.)
- BATES, MARSTON, Cambridge, Mass.: 6 flies, 2 species, all paratypes (124658). Exchange.
- BAYLIFF, Prof. W. H., Annapolis, Md.: 1 slide of tapeworm (122842).
- BAYNARD, OSCAR, Plant City, Fla.: 2 cotton rats (122734).
- BEACH, W. N., New York, N.Y.: 2 Rocky Mountain sheep skins with skulls and leg bones, from White River, Alaska (120730).
- BEAN, B. A. (See under Norman R. Hoffman.)
- BEAN, Dr. R. B., University, Va.: 262 photographs, mostly of Filipinos (122063).
- BEATON, Dr. C., Para, Brazil. (See under Companhia Ford Industrial do Brasil.)
- BECKHAM, W. P., Salisbury, N.C.: 12 flies from North Carolina (119315).
- BEHRE, Dr. E. H., Baton Rouge, La.: 8 medusae, 1 anemone, 2 phyllopo-ods, 1 porcellanid, 1 crab, 3 shrimps, 5 marine annelids (115967).
- BELCHER, Sir CHARLES F., Port of Spain, Trinidad: 1 Trinidad fly-catcher (121862).
- BELLUE, M. P., Sacramento, Calif.: 2 plants from California (120863).
- BENEDICT, J. E., Jr., Linden, Md.: 6 frogs, 1 crayfish, 23 insects from southern United States (120288, 120373); 1 plant from near Petersburg, Va. (121228); 1 fish from Tall Timbers, Md. (122300).
- BENESH, BERNARD, Chicago, Ill.: 6 beetles (122593). Exchange.
- BENGTSON, Dr. IDA A. (See under U.S. Treasury Department, Bureau of the Public Health Service.)
- BENJAMIN, F. H. (See under Otto Buchholz and Fred W. Walker.)
- BENN, JAMES. (See under Smithsonian Institution, National Museum.)
- BENSON, LYMAN, Bakersfield, Calif.: 2 ferns from California (123268).
- BEQUAERT, Dr. JOSEPH, Boston, Mass.: 2 flies new to the collection (121084); 21 flies of 10 species (124569).
- BERNICE P. BISHOP MUSEUM, Honolulu, Hawaii: 4 rats in alcohol (2 with skulls removed) from Marquesas Islands (118700); 396 plants from Fiji and Society Islands (123402, exchange); 348 plants from Hawaiian Islands (123961, 124193, exchange).
- BERRY, Mrs. C. M., Sanford, Fla.: 1 plant (120828).
- BERRY, C. T., Baltimore, Md.: 1 metatarsal of fossil horse (121271):

- BETTER BEDDING ALLIANCE OF AMERICA. (See under International Bedding Co.)
- BEVERLY HILLS CHAMBER OF COMMERCE, Beverly Hills, Calif.: Original parachute and harness used by Frederick Rodman Law in his demonstration jump from a Burgess-Wright airplane at Marblehead, Mass., April 13, 1912 (123992).
- BEVERS, Mrs. CLARA JELICO, Oleta, Calif.: Saber carried during Civil War by Lt. Thomas D. Jellico, 169th New York Volunteer Infantry (113435).
- BEYER, CLARENCE, Baltimore, Md.: Edison "Amberola-50" phonograph of about 1915 and 11 "Amberol" cylinder records (121498).
- BIGLEY, A. L., Butte, Mont.: (through E. P. Henderson): Series of copper minerals from Butte district, Mont. (122088).
- BIRD, STANLEY W., Salt Lake City, Utah: War club and native hat from Society Islands (124514).
- BISELL, Mrs. ELEANOR WOLFLEY, Mrs. CAROLINE WOLFLEY SHANNON, and Mrs. ELIZABETH WOLFLEY HARMAN, Washington, D.C. (through Thomas J. Shannon): 1 brass mortar and pestle (121412); 3 personal relics of Surgeon Lewis Wolfley, U.S.N., and Lt. Col. (Surgeon) William I. Wolfley (121866); 1 silver-mounted, ivory physician's call-record pocket-book (124473).
- BLAIN, Prof. W. L. (See under South-eastern Teachers College.)
- BLAIR, A. E., Butte, Mont. (through E. P. Henderson): Examples of enargite and other minerals from Butte district, Mont. (122089).
- BLAKE, Dr. S. F., Washington, D.C.: 32 plants from United States (123594). Exchange. (See also under U.S. Department of Agriculture, Bureau of Plant Industry.)
- BLISS, Mrs. TASKER H., Washington, D.C.: Philippine ethnological material collected by Gen. Tasker H. Bliss while governor of Moro Province, 1905-1909 (124602).
- BLOMQUIST, Prof. H. L. (See under Duke University.)
- BLOUNT MANSION ASSOCIATION, Knoxville, Tenn.: Plans and specifications of Gov. William Blount Mansion (120409).
- BLUMENTHAL AND CO., SIDNEY, INC., New York, N.Y.: 24 upholstery and drapery pile fabrics, 14 cloaking and velvet dress fabrics, and a printed velour bathmat (123720).
- BLUTHGEN, P., Naumburg, Germany: 4 bees, 4 species (123184). Exchange.
- BOERICKE & TAFEL, INC., Philadelphia, Pa.: 123 homeopathic pharmaceutical preparations (121543).
- BOLUS HERBARIUM, Newlands, South Africa: 100 plants from Africa (124588). Exchange.
- BOND, R. M., New Haven, Conn.: About 75 amphipods (124290).
- BOOTH, F. S., Tokyo, Japan (through Sidney Morgan): 2 mounted crabs (121765).
- BOOTH, L. M., Balboa Island, Calif.: 2 plants from California (120309).
- BORDEN, RICHARD. (See under W. G. Sheldon.)
- BORDEN, R. P., Fall River, Mass.: (See under American Hospital Association.)
- BOSS, N. H. (See under Smithsonian Institution, National Museum.)
- BOTANIC GARDENS, Sydney, New South Wales: 268 plants from Australia (122995, 123206). Exchange.
- BOTANICAL INSTITUTE OF CHARLES UNIVERSITY, Prague, Czechoslovakia: 100 plants from Czechoslovakia (122201). Exchange.
- BOTANISCHES INSTITUT DER UNIVERSITÄT, Riga, Latvia: 13 plants from Latvia (122732). Exchange.
- BOTANISCHES MUSEUM, Berlin-Dahlem, Germany: 1 plant, *Cordia*, collected by Weberbauer (121469). Exchange.

- BOWMAN, H. B., Ithaca, N.Y.: 176 fishes from New York (124208).
- BOX, H. E., Antigua, British West Indies: 42 ferns from Antigua and St. Kitts (120343, 121536, 122073).
- BOYDEN, Lt. H. D., Port-au-Prince, Haiti: Lustre-ware pitcher excavated from old French ruin near St. Marc, Haiti (122834). Loan.
- BRADLEY, F. F., Toledo, Ohio (through E. P. Henderson): 21 specimens of celestite from Clay Center, Ohio (120248).
- BRADLEY, G. H. (See under U.S. Department of Agriculture, Bureau of Entomology.)
- BRAECKLEIN, J. G., Kansas City, Kansas: Unfinished boat-stone (121043).
- BRANDT, B. B., Washington, N.C.: 2 frogs from North Carolina (123276).
- BRANT, JACK, Lower Matacumbe, Fla.: 1 land shell from Lower Matacumbe Key, Fla. (120865).
- BREAKEY, E. P., Columbus, Ohio: 34 bugs, 15 species (8 represented by 17 paratypes) (118324).
- BRIDGE, Dr. JOSIAH. (See under Dr. Asa L. Mathews and Ramie Inman.)
- BRIDWELL, J. C., Washington, D.C.: 1 mussel from Bull Run, Va. (123737).
- BRIGHAM, Mrs. A. P., and Mr. and Mrs. L. V. ROTH, Hamilton, N.Y.: 25 trilobites from Hamilton and Utica formations, and 22 brachiopods, 3 starfishes, and 2 blastoids, from Devonian rocks of New York (120695).
- BRIGHT, JOHN, Pittsburgh, Pa.: 16 plants mainly from California and Nevada (123396).
- BRISCO, N. M., Marion, Va.: Archeological specimens collected by donor in Smyth County, Va. (122991).
- BRITISH GOVERNMENT:
British Museum (Natural History), London, England: 12 flies from Patagonian region of South America (114608, exchange); stem of echinoderm from south of western Timor (118756); about 40 Bryozoa (119699, exchange); 375 Ordovician and Silurian fossils from Girvan (119709, exchange); 45 wasps (120251, exchange); specimens of 6 species of early Paleozoic corals (120217); (through Maj. E. E. Austen and Herbert Stringer) about 600 specimens, of same number of species, of Microlepidoptera, mostly type material (121027); 1 crab (122529, exchange); (through Miss Helen Muir Wood) 163 Jurassic brachiopods from England (123336, exchange); (through Dr. J. B. Reeside, Jr.) 2 specimens of rare Cretaceous fossil (123563, exchange); (through J. R. Norman) 2 fishes (123856); 1,088 plants, collected chiefly in Colombia by J. Triana (124044, exchange); 2 gibbon skins with skulls from Assam and Burma (124065, exchange).
Imperial Forestry Institute, Oxford, England: 81 plants, chiefly from Africa (122383). Exchange.
Royal Botanic Gardens, Kew, England: 458 plants largely from South America (122126); 37 prints and portions of specimens, mainly of types in Kew Herbarium (123568); 35 photographs of herbarium specimens, mostly types (123714). Exchange.
Science Museum, London, England: 2 photographic prints of lithographs illustrating method intended for launching Henson's proposed aircraft of 1842 (120250).
- BROADBENT, S. R. (See under U.S. Department of Agriculture, Forest Service.)
- BROADWAY, W. E., Trinidad, British West Indies: 3 plants from Trinidad (121474, 121945).
- BRODIE, Miss LAURA, Leesville, S.C.: 8 box turtles from Leesville, S.C. (124644).
- BRONAUGH, C. B., Afton, Okla.: 10 brachiopods, 1 bison tooth, and 1 horse tooth (121660); 3 specimens of fossil shell and teeth (123571); interior of dorsal valve of brachiopod from Craig County, Okla. (124286).

- BROOKLYN BOTANIC GARDEN, Brooklyn, N.Y.: 3 plants from Plummers Island, Md. (121382). Exchange.
- BROOKS, MAURICE, French Creek, W.Va.: 1 fern from West Virginia (120898).
- BROOKS, Dr. S. T., Pittsburgh, Pa.: 5 amphipods from Quebec (120981)
- BROWN, E. J., and S. K. BROWN, Eustis, Fla.: 1 snake from Florida (120790).
- BROWN, ESTATE OF Mrs. GRACE DUFOUR, Washington, D.C. (through Miss Violet A. Marshall): 12 hummingbirds and 1 trogon, mounted (120011).
- BROWN, S. K. (See under E. J. Brown.)
- BROWN, W. L., Washington, D.C. 3: birds (121090, exchange); 2 fishes from Cobb Island, Md. (122299).
- BRUCH, Dr. CARLOS, Olivos, Argentina: 1 fly from South America (123373).
- BRUNER, Prof. S. C., Habana, Cuba: 5 bugs from Cuba (121571, exchange); 11 beetles, 4 new species (all paratypes and 2 types) (123185).
- BUCHANAN, L. L., Washington, D.C.: 3 isopods from Chesapeake Bay (121394); 1 Australian Coleoptera new to Museum (122850).
- BUCHER, W. F., Washington, D.C.: 15 framed photographs of trees, the wood forming the frame being in most cases of same species as tree photographed (124450). Loan.
- BUCHHOLZ, OTTO, Westfield, N.J. (through F. H. Benjamin): 14 moths, 13 holotypes (121029). Exchange.
- BUCKSTAFF, J. D., and DOUGLAS VAN DYKE: Rigged model of ice yacht *Debutante III* (123076).
- BUFFALO MUSEUM OF SCIENCE, Buffalo, N.Y.: 3 isopods from body of tarpon (120304).
- BUFFALO NUMISMATIC ASSOCIATION, Buffalo, N.Y.: Bronze token of the association struck in 1932 (122442).
- BULLOCK, D. S., Angol, Chile: 320 miscellaneous insects from Chile (118372).
- BUNTON, PAUL, Washington, D.C.: 14 Miocene corals from Yorktown, Va. (123809); 1 slab of echinoids from Tertiary rocks of Mississippi (124601).
- BURK, Miss ELLEN I., Belgian Congo, Africa: 16 ethnological specimens from natives of Kivu district, Belgian Congo (119570).
- BURKENROAD, M. D.: 40 lots of miscellaneous invertebrates (121489).
- BURLEIGH, Mrs. ROBERT, Jeanerette, La. (through Charles W. Rees): 1 drumfish from near Weeks Island, La. (119861).
- BURNS, Prof. G. P., Burlington, Vt.: (See under University of Vermont.)
- BURR, Mrs. LYDIA K., Washington, D.C.: 15 military decorations and certificates awarded to Maj. Gen. George M. Burr, U.S.A., in recognition of services during War with Spain and World War (121467).
- BURT, Dr. C. E., Winfield, Kans.: 3 turtles from Kansas (119531); 31 amphibians and reptiles, mostly from Texas (119562); 1 salamander from Harz Mountains, Germany (121287); 1,257 reptiles and amphibians, 3 crayfishes, 67 insects, and 39 mollusks from Kansas and Western States (122414, 122715, 124285, 124463); 64 reptiles and amphibians (123510); collection of reptiles and amphibians, mostly from Kentucky, North Carolina, and Tennessee, and 4 crayfishes (120556, collected for the Museum).
- BUSCK, AUGUST, Washington, D.C.: 1 parasitic isopod from fish (121472).
- BUSHNELL, D. I., Jr., Washington, D.C.: Archeological material collected by donor in Virginia (122092), 123352); 2 archeological specimens from mound near Chinchuba Creek, north of Lake Pontchartrain, La. (123810).
- BUTLER, ROBERT, Boston, Mass.: 1 unusually complete specimen of *Scaphites* from Cretaceous of Montana. (123513).

- CABRERA, DR. ANGEL L., La Plata, Argentina: 200 plants from Argentina (123229). Exchange.
- CALDERON, DR. SALVADOR, San Salvador, Salvador: 1 jumping viper from Salvador (120880); 1 plant (123567).
- CALIFORNIA ACADEMY OF SCIENCES, San Francisco, Calif.: 2 plants (124592). Exchange.
- CALIFORNIA DEPARTMENT OF AGRICULTURE, Sacramento, Calif.: 2 flies from California (123681, 124516).
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.: Examples of sloth dung (fossil) (121948). Exchange.
- CALIFORNIA, UNIVERSITY OF, Berkeley, Calif.: 181 specimens of American willows, prepared by Dr. C. R. Ball for distribution (120023, exchange); 397 plants (120285, 122093, exchange); 63 fossil plants, chiefly from Oregon (120783); 273 plants from California and Alaska (122819, exchange).
- CAMERA CLUB, Chicago, Ill.: 60 prints for exhibition during December 1932 (122059). Loan.
- CAMERA CLUB, New York, N.Y.: 50 photographs for exhibition in June 1933 (124541). Loan.
- CAMPBELL, BERRY, Baltimore, Md.: 395 reptiles and amphibians, 1 bat, and 3 lots of fishes mostly from California (122374).
- CAMPBELL, DR. C. B., Washington, D.C.: Miniature boat stone found in Loudoun County, Va. (121553).
- CAMPOS R., DR. F., Guayaquil, Ecuador: 61 insects (122098).
- CANADIAN GOVERNMENT:
Department of Agriculture, Entomological Branch, Ottawa: 4 flies paratypes of 2 species (121859); 12 moths, 8 new species (11 paratypes) (123070, exchange).
Geological Survey of Canada, Ottawa: 15 plaster casts of Canadian Cretaceous types (123466).
National Museum of Canada, Ottawa: 11 plants from Arctic America (124547). Exchange.
- CANAL ZONE EXPERIMENT GARDENS, Summit, Canal Zone: 41 plants from Panama (121019, 124087).
- CANFIELD FUND, Smithsonian Institution: 1 specimen of epidote from Traversalla, Piedmont, Italy (120145); 1 large pyrite crystal (120170); 1 gold nugget and 6 specimens of gold-bearing altered pyrite from South Carolina (120172); 4 specimens of linarite from Southside mine Galena, Kans. (120784); 3 gold nuggets from Breckenridge, Colo. (121235); 1 specimen of malachite from Bisbee, Ariz. (121937); a third of Ahfeld collection of Bolivian minerals (207 specimens) (123574); 1 specimen each of McGovernite and zincite crystals (123708); 5 minerals, one each of azurite, atacamite, cerussite, strengite, and pyromorphite (124297) a group of crystals of cassiterite from New South Wales (124321); 1 specimen of ganophyllite and 1 of ganophyllite and riebeckite (124487); a specimen of lapis lazuli from Siberia, 1 of jade from Siberia, and 1 of gadolinite (124555).
- CANNON, M. D., Ithaca, N.Y.: 1 slab of Devonian crinoids from Ithaca formation near Ithaca, N.Y. (123400)
- CARBORUNDUM Co., Niagara Falls, N.Y.: Model of a carborundum grain sifter (120850).
- CARDENAS, Prof. M., Potosi, Bolivia: 179 plants from Bolivia (124549).
- CARNEGIE INSTITUTION OF WASHINGTON, Washington, D.C.: 88 isopods, 1 lizard, 14 echinoderms, and a small lot of corals collected by the *Carnegie*, 1928-29 (116211); 5 colored plates of pottery vessels (120348); 3 skulls and a partial skeleton of blackfish from Tortugas, Fla. (120788).
- CARR, F. S., Medicine Hat, Alberta: 6 beetles, 3 species (123359).
- CARROLL, F. M., New Orleans, La.: 43 birds in alcohol (118836).
- CASE, R. E., New York, N.Y. (See under International Nickel Co.)
- CASEY, MRS. LAURA WELSH, Washington, D.C.: 2 Pima Indian baskets (121253).

- CASEY, Miss SOPHIE P., Washington, D.C.: Silver vase presented to Maj. Gen. Silas Casey when captain, 2d Infantry, U.S.A., in recognition of his services during war with Mexico (120812). Loan.
- CASH, Miss LILLIAN C., Washington, D.C.: 1 moss from New York (123463).
- CASS, C. A., Lake Placid, Fla.: 1 giant whip-scorpion from Florida (120587).
- CASSEDY, E. G., Washington, D.C.: Projectile points and blade fragments found in a plowed field on Maryland side of Potomac River near Chain Bridge (123960).
- CATLIN, R. M., Sr., Piedmont, Calif.: 1 fossil batrachian from Elko shales, Elko, Nev. (120006).
- CAWSTON, Dr. F. G., Durban, Natal, South Africa: 15 specimens, 3 species, of marine and fresh-water shells from Natal (121157).
- CAUM, E. L., Honolulu, Hawaii: 20 eggs and 1 skin of Laysan rail (121525).
- CELANESE CORPORATION OF AMERICA, New York, N.Y.: 14 piece-dyed Celanese dress fabrics (124576).
- CEYLON, DEPARTMENT OF AGRICULTURE, Peradeniya, Ceylon (through J. C. Haigh): 60 Ceylon plants, collected by G. H. K. Thwaites (124302). Exchange.
- CHAMBERLAIN FUND, FRANCES LEA, Smithsonian Institution: About 100,000 mollusks, being half of Maynard collection of cerions, purchased jointly with Museum of Comparative Zoology (109260); gem stones of labradorite and feldspar (119990); 2 cut stones of citrine quartz (120171); 1 engraved emerald weighing 11.42 carats, and 1 carved tourmaline (120324); 91 mollusks collected in Uganda by Dr. Hale Carpenter (120893); a carving of old Burmese amber (121255); 1 yellow beryl and 2 tourmalines from Madagascar (121666); 83 lots, 157 specimens, of mollusks from Gulf of Oman and South Africa (123110); 1 amber pendant (124269).
- CHAMBERS, F. V., Philadelphia, Pa.: Collection of photographs comprising 25 oils by Leonard Misonne and 32 portraits by Minya Dührkoop, for exhibition during April 1933 (123812). Loan.
- CHAMPION SILLIMANITE, INC., Laws, Calif.: A specimen of rutile, diaspore, and pyrophyllite, from Champion Mine, White Mountain, Calif. (121860). Exchange.
- CHANDLER, Dr. A. C., Houston, Tex.: 11 land mollusks, of 5 species, from Texas (120227).
- CHARLESTON MINING CO., Richmond, Va.: About 10 pounds of Curacoa phosphate rock (123712).
- CHASEN, F. N., Singapore, Straits Settlements. (See under Raffles Museum and Library.)
- CHETHAM, H. R., Somerville, Mass.: A wireless telegraph wave-length conversion rule and a Marconi V-24c radio vacuum tube (122097).
- CHITWOOD, Dr. B. G., Washington, D.C.: 12 fresh-water mollusks from near Alexandria, Va. (120405); 50 edible land and marine snails, of 3 species, from Europe, bought in market in New York City (120838).
- CHOPRA, Dr. B. N. (See under India, Zoological Survey of.)
- CHRISTENSON, L. D., Wellsville, Utah: 4,550 insects, mostly beetles, from Baragua, Cuba, May-June 1932 (118608).
- CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS, Washington, D.C.: Specimens of fresh-water limestone from near Thistle Junction, Utah (123996).
- CIA MEXICANA DE PETROLEO "EL AGUILA", S. A., Tampico, Mexico: Small collection of mammal teeth from near Vera Cruz, Mexico (121549).
- CIFERRI, E., Santiago, Dominican Republic: 1 alcoholic specimen of goat-sucker (123487).

- CINELOG CORPORATION, New York, N.Y.: Photographic print of a diver ready to descend in search of sponges from a vessel engaged in sponge industry at Tarpon Springs, Fla. (123816).
- CLAGHORN, J. C., Cabin John, Md.: 1 etching by donor, "From the South Portico of the White House" (a print from the plate done for President and Mrs. Hoover and used by them for their Christmas card, 1931) (120028).
- CLARK, A. H., Washington, D.C.: 1 brown bat from District of Columbia (120966); 2 hawks (123739).
- CLARK, M. H., Newark, N.J.: 1 specimen each of pectolite and calcite and 2 specimens of prehnite from West Paterson, N.J. (123459); 1 lot of clay stone concretions from a clay pit about 2 miles north of Basking Ridge, N.J., and 4 specimens of prehnite and 1 of pectolite (123858).
- CLARKE, J. F., Pullman, Wash.: 27 Lepidoptera from Washington (122197).
- CLAUSEN, C. P., Washington, D.C.: A Japanese drawing in color of a Norris locomotive, tender, and car of 1853, probably made within a few years after that date (122056).
- CLENCH, W. J. (See under Harvard University, Museum of Comparative Zoology.)
- CLEVELAND, Mrs. GERTRUDE O. S., Quinebaug, Conn.: American wearing apparel of 19th century, a watch, and a piece of homespun linen (122830).
- CLINTON, H. G., Manhattan, Nev.: 6 bees (122960); 1 lot of miscellaneous antimony and arsenic ores and minerals from White Caps Mine, Manhattan, Nev. (124186).
- COCHRAN, Dr. DORIS M., Washington, D.C.: 1 plant (123817). (See also under Jack O'Hare.)
- COCKERELL, Prof. T. D. A., Boulder, Colo.: 4 bees, representing 4 named species (123069).
- COE, Capt. C. H., Washington, D.C.: Male Indian skull from Florida (124449).
- COKER, R. E. (See under Allegany School of Natural History.)
- COKER, Dr. R. E., Chapel Hill, N.C.: 56 slides and about 75 alcoholic specimens of copepods (holotypes, paratypes, and other representative material) (121405).
- COLBURN, B. S., Biltmore, N.C.: 3 conical objects of fired clay found near base of Etowah Mound, Cartersville, Ga. (120009); crystals of torbernite from Mitchell County, N.C. (120323); miscellaneous minerals from North Carolina (120406); 1 specimen of torbernite from Pine Mountain Mine, Spruce Pine, N.C. (124582).
- COLBURN, G. L., Norfolk Downs, Mass.: Relics of stone and iron rail used on Granite Railway at Quincy, Mass., about 1826 (120214).
- COLE, F. H., Washington, D.C.: A carpenter's framing chisel of about 1860, and a carpenter's hand brace and spoon bit of about 1870 (122532).
- COLE, Mrs. PEARL, Washington, D.C.: Potsherds collected by donor on Boca Siga Island, Fla. (120282).
- COLE, W. T., Hutchinson, Kans.: 1 snake from Kansas (121247).
- COLLINS, H. B., Jr. (See under Paul Silook, and Smithsonian Institution, National Museum.)
- COLLINS, Miss SUSANNAH C., Washington, D.C.: Carved wooden corset bone made in England in 1720 (123824).
- COLLUM, Mrs. W. B., Payson, Ariz.: 9 plants from Arizona (120692, 124480).
- COLORADO AGRICULTURAL COLLEGE, Fort Collins, Colo.: (Through Prof. E. C. Smith) 47 plants (120706, exchange); 27 reared insects from Colorado (122666, 124202).
- COLORADO MUSEUM OF NATURAL HISTORY, Denver, Colo.: Skeleton of fossil rhinoceros *Trigonias*, from

- Weld County, Colo. (122520). Exchange.
- COLORADO SCHOOL OF MINES, Golden, Colo.: Specimens of zeolites from Table Mountain, Colo. (122536). Exchange.
- COLORADO, UNIVERSITY OF, Boulder, Colo.: 3 flies, types of 2 species, described by M. T. James (122826).
- COMMERCE, U.S. DEPARTMENT OF:
Bureau of Fisheries (through Dr. J. S. Gutsell): About 66 marine invertebrates, comprising crabs, crayfishes, shrimps, amphipods, isopods, callianassa, leeches, and 6 beetles (114354, 123270); 115 lots of plankton from Gulf of Maine and east coast of United States taken by *Grampus*, *Halcyon*, *Fish Hawk*, and *Albatross* (116785); 2 fishes (120273); (through Dr. S. F. Hildebrand) 8 amphipods, 25 isopods, 50 copepods, 8 hippas, 2 shrimps, 13 crabs from Beaufort, N.C. (120328, 121384); a box turtle found on highway off Indian Sound, Apalachicola Bay, Fla., by Isaac Ginsburg (120359); 1 sturgeon from La Crosse, Wis. (120597); 6 medusae, 14 crabs, 1 hermit crab, 2 porcellanid crabs (121051); 1,177 fishes from Upper Catawba and Tuckasegee River Basins of North Carolina and 1 turtle (121124); 129 lots of plankton samples collected by *Grampus* in 1916 (121854); (through P. R. Needham) about 235 amphipods and 21 isopods from west coast (122213, 122862); 3 type specimens of fishes (122964); 3 salamanders from South Carolina (123370); 4 photographs illustrating sponge industry in Florida (124251); 1 crab with deformed claw, taken in Elizabeth River, Va., by W. L. Hughes, Portsmouth, Va. (124676). (See also under Department of Health of Virgin Islands.)
Bureau of Foreign and Domestic Commerce. (See under Prof. T. Jonson.)
- Bureau of Mines*. (See under R. A. Logan.)
- COMPANHIA FORD INDUSTRIAL DO BRASIL, Para, Brazil (through Dr. C. Beaton): 462 pinned mosquitoes and 167 other insects, 69 slides, and 3 capsules (124210).
- COMPTON, Mrs. J. P., Washington, D.C.: 15 archeological specimens, mainly textile, from Peru (124557).
- CONNAWAY, CASS, New York, N.Y.: 2 bronze casts from which were made medals awarded to winners of interallied games held in Pershing Stadium, Paris, France, in 1919, and 2 portrait medalets of General Pershing by Mlle. Anie Mouroux (121140).
- CONOVER, H. B., Chicago, Ill.: 13 birds (121325). Exchange.
- COOK, H. J., Agate, Nebr.: 2 fossil shells, holotype and paratype (124618).
- COOK, Lt. Commander S. S., Washington, D.C. (See under J. H. Ivey.)
- COOLIDGE, Mrs. CHARLES A., Washington, D.C.: Collection of Chinese ceramics, brasses, etc., presented as a memorial to her late husband, Brig. Gen. Charles Austin Coolidge, U.S.A. (123704).
- COOPER, Dr. G. A., Washington, D.C.: 5 specimens of Devonian trilobite (123954). (See also under Smithsonian Institution, National Museum.)
- CORBY, Mrs. WILLIAM S., Chevy Chase, Md.: 14 early American woven coverlets, 1 "Declaration of Independence" coverlet corner, and 1 "Tree of Life" cotton applique quilt (123842). Loan.
- CORNELL UNIVERSITY, Ithaca, N.Y. (through Prof. Robert Matheson): 5 mosquitoes, with 3 slides of genitalia (123399).
- CORY, Prof. E. N. (See under University of Maryland.)
- COSTA LIMA, Dr. A. DA, Rio de Janeiro, Brazil: 14 insects from Brazil (121757).

- COTA, F. M., San Diego, Calif.: 52 plants from California and Lower California (122043, 123840).
- COTTAM, CLARENCE, Washington, D. C.: 2 marine mollusks from Long Island, N. Y. (122653). (See also under U.S. Department of Agriculture, Bureau of Biological Survey.)
- COTTON-TEXTILE INSTITUTE, INC., New York, N. Y.: 35 cotton fabrics (121032); 43 cotton fabrics produced by American manufacturers for spring and summer of 1933 (123492).
- COVILLE, Dr. F. V. (See under U.S. Department of Agriculture, Forest Service, and Bureau of Plant Industry; Pomona College and National Geographic Society.)
- COWLES, EUGENE, Shelbyville, Ky.: A Newell patent powder-proof bank lock of about 1851 (122956).
- CRAIG, Miss MARY C., Keymar, Md.: Trunk section of coffeetree (121116).
- CRAWFORD, Miss E. JANE, La Porte, Ind.: Bronze portrait badge of Abraham Lincoln and Andrew Johnson (122822).
- CRAWFORD, W. P., Bisbee, Ariz.: 7 copper ores from Bisbee, Ariz. (121938); examples of cerussite and hetearolite from Arizona (122654).
- CREAMERY PACKAGE MANUFACTURING Co., Philadelphia, Pa. (through K. F. Armstrong): Chart or sectional sketch of a modern dairy plant (123843).
- CREASER, Dr. E. P., Ann Arbor, Mich. (See under University of Michigan.)
- CROFFUT, Mrs. W. A., Washington, D. C.: Tinned-iron chafing dish of about 1812 (120010).
- CROSS, J. C., San Marco, Tex.: 2 plants from Texas (120979); 1 seed (123682).
- CURTISS AEROPLANE & MOTOR Co., Inc., Buffalo, N. Y.: Blueprints of 7 types of air-mail planes (121764).
- CURTISS-WRIGHT AIRPLANE Co., Robertson, Mo.: 2 "Robin" airplane wing ribs and a "Moth" airplane wing slot (124386).
- CUSHMAN, R. A., Washington, D. C.: 1 plant from Virginia (124282).
- DAILEY, SAMUEL, Turtle Creek, Pa.: 1 worm (110567).
- DAKE, Dr. C. L., Rolla, Mo. (through U.S. Geological Survey): 11 fossil invertebrates from Texas, used to illustrate a report by Dr. Josiah Bridge on stratigraphy of Texas (120964).
- DALTON, F. K., Toronto, Ontario: Wood sample of kaikawaka (New Zealand cedar) (120551).
- DALY FUND, Smithsonian Institution: 2 birds new to collection (121668); 1 Ugandan rail (122035); 1 birdskin (124187).
- DAMMERS, Commander C. M., Riverside, Calif.: 293 insects (122206, 122865).
- DAMPF, Dr. ALFONS, Mexico, D. F.: 1 fly from Mexico (123181). (See also under Oficina Federal para la Defensa Agricola.)
- DANFORTH, Dr. S. T., Mayaguez, Puerto Rico: 45 beetles (121541). Exchange.
- DANIEL, Brother, Medellin, Colombia: 1 species, 2 specimens, of fresh-water mollusks from Jerico, Colombia (119508); 19 miscellaneous insects and 1 slide of amphipod (119558); 3 snakes from Colombia (120335); 2 land shells from Colombia (121477); 66 land, fresh-water, and marine shells from Colombia (122976, 124327).
- DA ROCHA, Prof. DIAS, Ceara, Brazil: 12 beetles from Brazil (119448); 40 beetles, 22 species, from Brazil (121527); 7 Lepidoptera from Brazil (122437).
- DARROW, G. M., Washington, D. C. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)
- DEAM, C. C., Bluffton, Ind.: 1 short-tailed shrew from Bluffton, Ind. (120709); 2 plants from Indiana (121670, exchange); 10 plants (121673, exchange).

- DEARDEN, WILLIAM, Putnam, Conn.: 2 insects (grasshopper "tick") from Connecticut (123946).
- DECK, C. J., Washington, D.C.; 1 specimen of Virginia black serpentine (123808).
- DEGENER, OTTO, Honolulu, Hawaii: 11 ferns from Hawaiian Islands (105654).
- DEIGMAN, H. G., Washington, D.C.: 3 bats (121282); 1 *Ooperipatus* from Lake Barrine, Queensland (122729).
- DELLENBAUGH, F. S., New York, N.Y.: Flag carried on boat *Emma Dean* by Maj. J. W. Powell and his party during their exploring expedition down Green and Colorado Rivers, 1871-72 (103820).
- DEL VECCHIO, DOMENICO, Washington, D.C., 1 silver-case English watch of 1768 (122835).
- DEMAREE, Prof. DELZIE, Indianapolis, Ind.: 171 plants from California (121036); 705 plants from Arkansas (121109, 121567, 121769, 122127, 122318, 122664); 141 plants from Florida (124550).
- DEMING, M. F., Tappan, N.Y.: 6 concretions and examples of calcareous algae (122379).
- DENLEY, C. F., Silver Spring, Md.: 1 Elliot's pheasant (120014); 1 golden pheasant and 1 albino peacock (120153); 1 Bornean argus pheasant (120207); 1 Reeves's pheasant (121273); 1 green peafowl (122657); 1 peacock (124080).
- DENMARK, C. R. (See under Smithsonian Institution, National Museum.)
- DERNEDE, Prof. K., Hanover, Germany: 10 hummingbirds of forms new to the Museum (122530). Exchange.
- DEWEY, L. H. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)
- DICKSON, Dr. D. F., Lewistown, Ill.: 1 dog skull from Indian mound, Fulton County, Ill. (121120).
- DINNING, E. L., Towson, Md. (through F. L. Hess): 1 specimen of rutile from near Pylesville, Md. (122852).
- DIXON, H. N., Northampton, England: 90 mosses (121210). Exchange.
- DIXON, JOSEPH S., Berkeley, Calif.: 6 bird skeletons (121372). (See also under U.S. Department of the Interior, National Park Service.)
- DOBBIN, FRANK, Shushan, N.Y.: 32 plants from New York (121113).
- DOMINION MUSEUM, Wellington, New Zealand: 103 Tertiary brachiopods from New Zealand (122086). Exchange.
- DONALDSON, C. S., Avon Park, Fla.: 1 plant from Florida (124003).
- DONER, MELVIN, Sturgeon Bay, Wis.: 4 Hymenoptera (119560).
- DOONER, R. T., Philadelphia, Pa.: 48 advertising and illustrative photographs for exhibition during May 1933 (124284). Loan.
- DORSEY, HARRY, Hyattsville, Md.: 1 sparrow hawk (124448).
- DRAKE, Prof. C. J., Ames, Iowa: 25 bugs, including 19 paratypes of 7 species (122119, 122967); 2 bugs, paratypes of 2 species, from South America (123335, exchange).
- DRUMMOND, G. L., Washington, D.C.: Model of a Napoleonic coach (123943). Loan.
- DRUSHEL, Dr. J. A., New York, N.Y.: 96 plants (121654, 123201).
- DUGAND, Dr. ARMAND, Barranquilla, Colombia: 6 plants from Colombia (124331).
- DUKE UNIVERSITY, Durham, N.C. (Through Prof. H. L. Blomquist): 252 plants from North Carolina (121695).
- DUNCAN, G. A., Jr., Pensacola, Fla.: 1 lot of potsherds and stone implements collected by donor at Terriere Rouge, Haiti (123462).
- DUNN, L. H. (See under Gorgas Memorial Laboratory.)
- DU PONT DE NEMOURS & Co., E. I., Inc., Newburgh, N.Y.: 17 articles

- showing applications of Fabrikoid (123250).
- DU PONT VISCOLOID Co., Inc., Arlington, N.J.: 476 specimens of pyralin in sheets, rods, and tubes, and a series of articles showing numerous applications of this material (124240).
- DURANT, Mrs. EMMA, New York, N.Y.: Data on ascensions of Charles F. Durant, first professional American aeronaut, comprising portrait, news clippings, and magazine article (120851).
- DUTTON, E. C., Washington, D.C. (See under Estate of Beatrice Meegan.)
- DWIGHT, R. D. (See under James B. Lund.)
- DYE, Mrs. DANIEL S., Wallingford, Pa.: 1 White's thrush from Szechwan, China (122659).
- EAST AFRICAN AGRICULTURAL RESEARCH STATION, Amani, Tanganyika Territory (through R. E. Moreau): 5 skins of East African birds (121098).
- EBY, KERR, Westport, Conn.: 47 etchings and drypoints for exhibition. March 27 to April 23, 1933 (123482). Loan.
- ECKEL, E. B., Golden, Colo.: 1 specimen of lepidolite from Ohio City, Colo. (123089).
- EDFELDT, G. E., District Heights, Md. (through G. I. Hightower): 1 marsh hawk (121834).
- EDMONDSON, Dr. C. H., Honolulu, Hawaii: 10 fresh-water shrimps (115507, 121048); 5 corals from Washington Island, Fanning Group (120392).
- EDMUNDSON, Miss M. INEZ, Houston, Tex.: 1 plant from Texas (121052).
- EGGLESTON, W. W. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)
- EHRENBERG, Dr. K. (See under Palaeontologisches Institut der Universität.)
- EHRHARDT, Mrs. NANCY, Washington, D.C.: Sitting Bull's catlinite pipe and wooden stem, beaded knife sheath, and beaded pipe pouch (120862).
- EHRMANN, M. L., New York, N.Y.: Carving of precious serpentine (122052); 1 specimen of villaumite from French Guinea and 1 of malacon from Madagascar (124499); chert hoe from St. Clair County, Ill. (124661).
- ELIAS, Brother, Barranquilla, Colombia: 105 plants from Colombia (120947, 122423).
- ELLIOTT, Mrs. I. W., Talladega, Ala.: String of glass trade beads found in Indian grave in Talladega County, Ala. (121275).
- ELTING, PHILLIP, New York, N.Y.: Portuguese half-dobra gold piece struck in Brazil in 1761 (123205).
- ENDERS, Dr. R. K., Swarthmore, Pa.: Collection of mammals from Panama (118207). Collected for the Museum.
- ENGBRECHT, Mrs. HAZEL, Des Moines, Iowa: 2 radiographs of flowers (122058); 9 X-ray negatives of specimens, some of which were obtained from the Museum (124504).
- ENGLISH, Mrs. MAE I., and Mrs. L. F. SPEICH, Washington, D.C.: Collection of old photographic apparatus comprising 3 burnishers, 1 view camera, and 2 plate holders; also an electric fan (123707).
- ERLANSON, Dr. C. O., Washington, D.C. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)
- ERWIN, Miss ISABELLE M., and Miss MILDRED A. ERWIN, Washington, D.C.: All-white quilted counterpane made in 1850 at Lancaster County, S.C., for Mary T. Barnes, mother of donors, for her dower chest (120169); 1 cotton patchwork quilt pieced in "Irish Chain" pattern and made in 1850 in Lancaster County, S.C., for dower chest of Mary T. Barnes (122856).
- ERWIN, Miss MILDRED A. (See under Miss Isabelle M. Erwin.)
- ERWIN, R. P., Boise, Idaho: 4 scorpions from Idaho (118009).

- ESKEY, Dr. C. R., Honolulu, Hawaii: 23 rats from Hawaiian Islands (119977); 38 murine rodents from Hawaii (122963).
- ESTES, C. H., Sperryville, Va.: 4 pieces of old wooden mill gearing (121864).
- EVERETT, WALTER, Washington, D.C.: 1 albino crab (124629).
- FARNHAM, Dr. C. M., Barre Plains, Mass.: 8 miscellaneous minerals from Peru and 1 specimen of opalized porphyry from Mexico (124247). Exchange.
- FEATHERLY, Prof. H. I., Stillwater, Okla.: 4 ferns from Oklahoma (119969).
- FELIPPONE, Dr. F., Montevideo, Uruguay: 1 isopod, 5 species (7 specimens) of land and fresh-water shells, 2 bats, and 5 Lepidoptera from South America (120143); 1 hydroid, 2 fragments of alcyonarian, and 2 bryozoans (120300); 12 Lepidoptera from Uruguay (122428); 3 snakes from Uruguay (123474).
- FELT, Dr. E. P., Stamford, Conn.: 22 flies (on 2 slides) from California (121665); 6 slides of gall midges, 2 species (122404).
- FERNALD, Dr. H. T., Orlando, Fla.: 16 flies, 11 species, determined by Dr. C. P. Alexander (120963).
- FIDUCCIA, C. S., New Orleans, La.: 8 mollusks from swamps of St. Bernard Parish, La. (123497); 1 spider from New Orleans, La. (124049).
- FIELD MUSEUM OF NATURAL HISTORY, Chicago, Ill.: 7 parasitic copepods from Parana River, Argentina (100966); 40 plants from Hawaii (121020, 124194, exchange); 1,210 plants chiefly from South America (121056, exchange); 1 fern from Guatemala (121148, exchange); 1 slice of Oroville meteoric iron, Butte County, Calif., 262 grams, and 1 slice of Nagy-Vazsony meteoric iron, Hungary (122293, exchange); 6 plants from Ecuador (123384, 123981, exchange); 375 photographs of plant type specimens in European herbaria (123962, exchange).
- FIRTH, L. G., McKeesport, Pa.: Specimens of "firthite" and examples of its use as inserts in production tools (122553).
- FISCHER, CARLOS R., Sao Paulo, Brazil: 8 flies of 3 rare species (123827).
- FISHER, Dr. A. K., Washington, D.C. (See under Eastham Guild.)
- FISHER, G. L., Houston, Tex.: 55 plants from Texas (123986).
- FISHER, G. S., Finleyville, Pa.: Fragmentary male human skeleton (123404).
- FISHER, Dr. W. K., Pacific Grove, Calif.: 34 amphipods, 2 isopods, 1 pycnogonid (123394).
- FLAGG, Mrs. L. L., Takoma Park, Md.: 1 albino gray squirrel from Takoma Park, Md. (124451).
- FLATAU FABRICS CORPORATION, New York, N.Y.: 8 specimens of novelty, warp-printed, silk crepe (122844).
- FLEETWOOD, R. J., Elkhart, Ind.: 1 shrew and 1 big brown bat from Elkhart, Ind. (121281, 121750).
- FLETCHER, F. C., Minneapolis, Minn.: 131 beetles (120734).
- FLORIDA GEOLOGICAL DEPARTMENT, Tallahassee, Fla.: 2 insect larvae from Florida (121566); (through Herman Gunter) 2 fox squirrels and 1 gray squirrel from Tallahassee, Fla. (123743).
- FLORIDA, UNIVERSITY OF, Agricultural Experiment Station, Gainesville, Fla.: 3 insects from Florida (123580).
- FLORIN, Dr. RUDOLF. (See under Naturhistoriska Riksmuseet.)
- FOERSTE, Dr. A. F., Dayton, Ohio: About 10,000 fossils, including types from donor's private collection (120245).
- FOHRMAN, Mrs. MILTON H. (See under Mrs. Catherine M. Henney.)
- FORAKER, Mrs. ARTHUR, Washington, D.C.: Spanish carbine and sword of Spanish-American War period (120325).
- FORBES, Miss LEILA G., Washington, D.C.: 2 moths (120002).

- FORD, J. A. (See under Stanley Morgan and Smithsonian Institution, National Museum.)
- FOSHAG, Dr. W. F. (See under Smithsonian Institution, National Museum.)
- FOSTER, J. G., Lyerly, Ga.: 2 insects from Georgia (120000).
- FOX, Dr. CARROLL, Rosebank, Staten Island, N.Y. (See under Treasury Department, U.S. Public Health Service).
- FRACHIA, ENRIQUE, Lomas, Peru: 14 earthenware vessels from prehistoric sites near Lomas, Peru (120383).
- FRANCE, GOVERNMENT OF, *Directors of the Mint* (through French Embassy, Washington, D.C.): Bronze medal commemorating tercentennial anniversary of birth of Benedict Spinoza, Dutch philosopher, 1632-1677 (124543).
- FRANKLIN, J. M., Washington, D.C.: 1 bobwhite nest and 18 eggs (120220).
- FREER, R. S., Lynchburg, Va.: 2 plants from Virginia (121863, 122068).
- FRENCH EMBASSY. (See under Government of France.)
- FRIEDMANN, Dr. HERBERT, Washington, D.C.: 2 white-throated sparrows (123814).
- FROST, C. A., Framingham, Mass.: 42 insects from New England (122652).
- FULLER, H. S., Washington, D.C.: 1 fly from Sagamore Beach, Mass. (122968).
- FULLER, LEO H., INC., Long Island City, N.Y.: 2 specimens of silk stencil printing in water color (120027).
- FULLER, Mrs. NETTIE, Breedsville, Mich.: 54 insects from Michigan (113556, 120142).
- FULTON, H. C., London, England: 2 fresh-water mussels from Uruguay (123464). Exchange.
- FURTOS, Miss NORMA C., Cleveland Heights, Ohio: 51 amphipods and 7 isopods from fresh-water pools in Ohio (123985).
- GABRIEL, C. J., Abbotsford, Victoria: 13 marine shells, of 6 species, from Victoria (120606).
- GALEY & LORD, INC., New York, N.Y.: 6 three-yard cuts of fancy weave cotton and rayon dress goods, "Jerselle" and "Nuance" (120793).
- GALLAGHERS, SEARS, Boston, Mass.: 50 etchings and drypoints for exhibition November 28, 1932, to January 1, 1933 (122094). Loan.
- GALLARDO, J. A., Washington, D.C.: About 500 land, fresh-water, and marine shells from Puerto Rico (123968).
- GALLIHER, E. W., Pacific Grove, Calif.: 12 pinnotherid crabs, including types of new species described by Dr. Mary J. Rathbun (110166). Exchange.
- GARBER, PAUL E., Washington, D.C.: Reproduction of a Korean kite reel (124672).
- GARDNER, Mrs. DANIEL, Newburgh, N.Y.: Glassware, silverware, jewelry, and a carved ivory penholder (12 specimens) (121291); chinaware, glassware, silverware, and miscellaneous tableware (65 specimens), and 27 specimens of textile material (121578); tall case clock with wooden works, a watch, and 45 miscellaneous specimens of costume accessories (123794).
- GARDNER, I. C. M., Dehra Dun, India: 5 beetle larvae (122989).
- GARDNER, J. H., Tulsa, Okla.: 1 large slab containing Pennsylvanian fucooids (120212).
- GARDNER, Dr. JULIA A., Washington, D.C. (See under Texas Petroleum Co.)
- GARFIELD, C. A., Peconic, N.Y.: 1 conch shell from Long Island, N.Y. (120683).
- GARNIER, Brother A., Managua, Nicaragua. (See under Instituto Pedagógico de Varones.)
- GATES, Prof. F. C., Manhattan, Kans. (See under Kansas State Agricultural College.)
- GATEWOOD, Mrs. C. B., Sr., Los Gatos, Calif.: 4 pieces of old lace (118080).

- GEE, Prof. N. GIST, New York, N.Y.: Collection of fresh-water sponges from China and Philippines (118078).
- GEOLOGICKO-PALEONTOLOGICKY USTAV, Karlovy University, Prague, Czechoslovakia: 140 Bohemian fossils (118816); about 220 invertebrate fossils (123847). Exchange.
- GEOLOGISK-MINERALOGISKA INSTITUT I LUND, Lund, Sweden: 67 Cretaceous brachiopods from Sweden (124312.) Exchange.
- GEOPHYSICHES INSTITUT, Prague, Czechoslovakia: 1 film, showing application of motion-picture film in copying books (122533).
- GEORGE WASHINGTON UNIVERSITY, Washington, D.C. (through Prof. R. F. Griggs): 2 plants from Alaska (121749). Exchange.
- GERHARD, W. J., Chicago, Ill.: 2 tiger-beetles (121822). Exchange.
- GIANELLA, V. P., Reno, Nev. (through K. E. Lohman): 2 specimens of diatomaceous earth from Nevada (122120).
- GILBERT, C. M., Ithaca, N.Y.: About 1,000 mollusks from near Lake George, N.Y. (121008). (See also under Smithsonian Institution, National Museum, Dr. Paul Bartsch.)
- GILBERT, Mr. and Mrs. WALTER, Washington, D.C.: 110 land snails, of 8 species, from Chichen Itza, Yucatan (123841).
- GILBERTSON, Prof. GEORGE, Brookings, S.Dak. (See under South Dakota State College of Agriculture.)
- GILL, DELANCEY, Alexandria, Va.: Specimens of early photographic apparatus, viz, 1 Thornton Pickard shutter, 1 triplex shutter, 1 focusing glass, and 1 Watkins meter (120278); 1 pair of cotton hand cards collected by donor in Chester, S.C. (120875).
- GILMORE, C. W. (See under Smithsonian Institution, National Museum.)
- GILSON, Miss FLORENCE S., Nyack, N.Y.: 1,400 mollusks, mostly marine, collected by donor's mother, Minnie A. Gilson (118652).
- GLASSELL, S. A., Beverly Hills, Calif.: 2 crabs and 1 annelid worm from California (121956); 25 amphipods from California (124091, exchange).
- GLEASON, M. C., Washington D.C.: 1 fossil bison tooth from near Virginia Beach, Va. (121542).
- GLOYD, H. K., Ann Arbor, Mich.: 35 salamanders, 121 frogs, 68 lizards, 74 snakes, 5 turtles (121042).
- GNAEDINGER, E. G., Wallace, Idaho (through E. P. Henderson): Specimens of plattnerite, cerussite, and pyromorphite, from Mammoth Mine, Wallace, Idaho (122091).
- GOLDMAN, Dr. MARCUS I. (See under Bergrat Karl Krieger.)
- GOODRICH RUBBER CO., B. F., Akron, Ohio: 111 specimens of wild and plantation rubber, rubber druggists' sundries, bathing suit, caps, belts, sandals, gloves, mats, balls, dolls, and pneumatic tires showing development since 1904 (124662).
- GOODYEAR TIRE & RUBBER CO., INC., Akron, Ohio: Gondola of the *Pilgrim*, first airship designed for helium gas, 1925 (119497); a duralumin girder joint as used in U.S. Navy airships *Akron* and *Macon* (123075).
- GORGAS MEMORIAL LABORATORY, Ancon, Canal Zone: 31 insects (117505); (through L. H. Dunn) 2 insects (119973).
- GOSLIN, ROBERT, Lancaster, Ohio: 3 batskins with skulls from Indiana (122678); 31 small mammals from Ohio (123950, 124053).
- GRAHAM, Dr. D. C., Chengtu, Szechwan, China: 121 mammals, 57 fishes 9 snakes, 1 lizard, 17 bird skins, and 7 bird skeletons from China (124378).
- GRAY, J. H., Statesville, N.C.: 7 pieces of chinaware owned by James Madison (123685).
- GRIEPENTROG, E. L., Salem, Oreg.: 33 birds' sterna (120743).

- GRIGGS, Prof. R. F. (See under Constance A. Backus, George Washington University, and C. H. Marvin.)
- GROSS, RUD., Berlin, Germany: 277 plants from Europe, Brazil, and East Indies (123855). Exchange.
- GUILD, EASTHAM, Papeete, Tahiti (through Dr. A. K. Fisher): 1 dried specimen of fish (121823).
- GUNTER, HERMAN, Tallahassee, Fla. (through C. R. Aschemeier): 2 turtles from Lake Jackson, Fla. (120329). (See also under Florida Geological Department and Clarence Simpson.)
- GURLOFF, A., Hughesville, Mo.: About 100 Cladocera and 10 isopods, taken from cistern (120885).
- GUTSELL, Dr. J. S., Beaufort, N.C. (See under U.S. Department of Commerce, Bureau of Fisheries.)
- HAAS, Miss FLORA A., Conway, Ark.: 6 plants from Arkansas (123860, 124306).
- HAIGH, J. C. (See under Ceylon, Department of Agriculture.)
- HALL, Prof. G. M., Knoxville, Tenn.: 117 Upper Cambrian fossils from Thornhill section, near Knoxville, Tenn. (122814).
- HALL, R. D., East Wenatchee, Wash.: Archeological specimens from along Columbia River in Kittitas and Grant Counties, and the Grand Coulee in Douglas County, Wash. (122656).
- HAMMERMILL PAPER Co., Erie, Pa.: 8 specimens illustrating manufacture and use of sulphite wood pulp for writing papers (124665).
- HANCOCK, Capt. G. ALLAN. (See under Smithsonian Institution, National Museum, Dr. W. L. Schmitt.)
- HANDY, W. K., Barcroft, Va.: 1 young loggerhead turtle taken in Chesapeake Bay near Reedville, Va. (120815).
- HAPEMAN, Dr. H., Minden, Nebr.: 5 plants from Nebraska (121355).
- HARLAN, ESTATE of Mrs. JAMES S. (through Mrs. Cornelia H. Baird, Yonkers, N.Y.): 39 embroideries, 8 fans, and 2 illuminated manuscript music sheets on parchment (124192).
- HARLAND, S. E., Norfolk, Va.: 1 porpoise skull from Virginia (118408).
- HARLEY, HUGH J., Pottsville, Pa. (through Dr. C. S. Ross): Sample of dickite from near Pottsville, Pa. (121126).
- HARMAN, Mrs. ELIZABETH WOLFLEY. (See under Mrs. Eleanor Wolfley Bisell.)
- HARPER, Dr. FRANCIS, Swarthmore, Pa.: 1 tree toad from Georgia (121537).
- HARPER, Dr. R. M., University, Ala.: 20 plants mainly from Alabama (120375).
- HARRINGTON, Dr. J. P., Santa Ana, Calif.: 1 alga from San Diego County, Calif. (120881).
- HARVARD UNIVERSITY, Cambridge, Mass. (through Dr. Percy Raymond): 525 Paleozoic brachiopods from Bohemia and Montana and Mesozoic brachiopods from northern Europe (124323). Exchange.
- Arnold Arboretum*, Jamaica Plain, Mass.: 12 fragmentary Asiatic plants (115965); 20 ferns collected in Cuba by J. G. Jack (121046); 763 plants mainly from Cuba and China (123716); 91 plants from western Africa (124256). Exchange.
- Gray Herbarium*, Cambridge, Mass.: 159 plants chiefly from tropical America (122535); 65 plants from Southeastern United States (122690); 244 plants from New England and South Carolina (123956). Exchange.
- Museum of Comparative Zoology*, Cambridge, Mass.: 6 turtles from Cienfuegos, Cuba (119586); 1 Hawaiian honey creeper, new to the collection (120016, exchange); 2 cotypes of turtles (122083, exchange); 1 skin of flycatcher (122672, exchange) (through W. J. Clench); 6 mollusks (122974); 7 flies, all cotypes, 7 species (123512).
- HASKIN, J. R., Auburndale, Fla.: 51 butterflies, also biological material

- in alcohol (122309); 2 butterflies and larval material (122376).
- HATHAWAY, L. J., Cherrydale, Va.: A 20-horsepower Stanley steam automobile engine of about 1923 (121968).
- HAWAII, COMMISSIONERS OF AGRICULTURE AND FORESTRY, Honolulu, Hawaii: 1 skin and skeleton of Hawaiian goose (119828).
- HAWEIS, STEPHEN, Mount Joy, Dominica: 54 plants from Dominica (114166).
- HAZARD, Miss EDITH C., Salem, Oreg.: 5 plants from Oregon (123591, 124073, 124488).
- HEIKES, V. C. (See under Manhattan Gold Mines Co.)
- HEINRICH, Dr. GERD, Borowki, powiat Sepolno, Poland: 16 Hymenoptera of 14 species and including 4 paratypes, from Celebes, Madagascar, and Europe (120549). Exchange.
- HEIZER, R. F., Sacramento, Calif.: Archeological and skeletal remains from Indian village sites in Sacramento Valley, Calif. (122648). (See also under Sacramento Junior College.)
- HENDERLITE, H. B., Baton Rouge, La.: Skeletal material found in a mound near Bayou Sorrell in Atchafalaya Basin, La. (123099).
- HENDERSON, E. P. (See under A. L. Bigley, A. E. Blair, E. G. Gnaedinger, J. D. Sawyer, Smithsonian Institution, National Museum, and J. C. Wells.)
- HENDERSON, Prof. JUNIUS, Boulder Colo.: 5 fresh-water shells, 2 species, from Venezuela (124526).
- HENDRY, Mrs. ISABEL B., Rosslyn, Va.: About 3,100 land, fresh water, and marine shells (123948).
- HENIG, LUDWIG, Kissimmee, Fla.: Potsherds and skeletal remains from mound at Alligator Lake, Fla., excavated by L. J. Denning, Benjamin Miller, and donor (120517).
- HENNEY, Mrs. CATHERINE M., De Smet, S.Dak. (through Mrs. Milton H. Fohrman): Early 19th century linen damask towel of patriotic design, commemorating American independence and Presidency of Washington, presented to donor by her grandmother, Catherine Van Ness of Connecticut (120206). Loan.
- HENRY, I. H., Easton, Md.: Models of two World War airplanes, a German "Gotha" and an Allies "Spad" (124671).
- HERON, Mrs. LULU A., Bethel, Alaska: Inlaid whalebone snow knife (121165).
- HERRE, A. W., Stanford University, Calif.: 87 crabs, 288 shrimps, 2 hermit crabs, 20 stomatopods, 1 isopod, 20 crustacean larvae; worms, echinoderms, and mollusks (122953).
- HERRERA, Prof. F. L., Cusco, Peru: 87 plants from Peru (120237).
- HERRING, Mrs. GRACE G., Washington, D.C. (See under Miss Sarah S. Metcalf.)
- HESS, F. L., Washington, D.C.: 6 specimens of microlite from Custer, S.Dak. (120247); columbite from Mitchell County, N.C. (120346); 10 rocks and minerals from Northwest Territories and elsewhere (123204); 4 specimens of graphite from Ceylon and 1 of tellurium from New Mexico (124600). (See also under E. L. Dinning, and S. I. Perham.)
- HESS, R. D., Fairmont, W.Va.: Sample of discolored oak wood from Germany cut from log found along Elbe River and originally used in a dugout built between 800 and 900 A.D. (115889). Exchange.
- HIBBARD, R. R., Buffalo, N.Y.: Rare crinoid collected at 18 Mile Creek, Erie County, N.Y. (120164). Exchange.
- HIGDON, Major, Cullasaja, N.C.: 1 specimen of rhodolite from Masons Mountain, N.C. (123697).
- HIGH, G. H., Chicago, Ill.: 67 prints for exhibition during August 1932 (120352, loan); 3 pictorial photographs, "Lady Burney", "A Genial Friend", and "Street in Montrueil" (121483).

- HIGHTOWER, G. I. (See under G. E. Edfeldt.)
- HILDEBRAND, Dr. S. F. (See under U.S. Department of Commerce, Bureau of Fisheries.)
- HILL, C. C., Carlisle, Pa.: 1 slide of parasitic copepods (120877).
- HILL, R. A., Allentown, Pa.: 4 specimens of calamine (123010).
- HILLIER'S SON CORPORATION, R., New York, N.Y.: 13 crude vegetable drugs (121106).
- HITCHCOCK, Dr. A. S. (See under U.S. Department of Agriculture, Bureau of Plant Industry, and J. G. Myers.)
- HODGE, Mrs. RUTH P., Philadelphia, Pa.: 47 lots of diatom material from specimens of tadpoles in National Museum (119687).
- HOEHNE, Dr. F. C. (See under Instituto Biologico.)
- HOFFMAN, N. R., Bainbridge, Pa. (through B. A. Bean): Chert spearhead or knife picked up near Bainbridge, Pa. (124542).
- HOLLINS COLLEGE, Hollins, Va.: 1 louse collected on mouse in Virginia (117829).
- HOLLINGSWORTH, R. V. (See under University of Oklahoma.)
- HOLLISTON MILLS, INC., Norwood, Mass.: Series of Holliston sample books of bookbinding cloths and cabinet holding them (123494).
- HOLMES, P. H., Clarendon, Va.: 2 small baskets of white-oak splints, made by donor in Edinburg, Va., in 1900 (122406).
- HOLROYD, ROLAND, Philadelphia, Pa.: 12 plants from Peru (122436).
- HOMESTAKE MINING Co., Lead, S.Dak.: 1 large specimen of gold ore (119951).
- HOOPER, RICHARD, Washington, D.C.: Model of a Curtiss "Hawk" airplane, a type now in use for pursuit flying by U.S. Army Air Corps (122057). Loan.
- HOPE PROFESSOR OF ZOOLOGY, Oxford, England: 2 male and 2 female flies from West Greenland (123389).
- HOPKINS & Co., J. L., New York, N.Y.: 12 vegetable drugs (121546).
- HOPKINS MARINE STATION, Pacific Grove, Calif. (through Dr. Tage Skogsberg): 3 anemones from the Pacific (122096).
- HOPKINS, Miss MARTHA, Damariscotta, Maine (through T. L. Jackson): A single ox yoke of about 1845 (120613).
- HOPPIN, C. A., New York, N.Y.: Lithograph copy of portrait of Mary Ball Washington by Robert Edge Pine (123990).
- HORN, Dr. WALTHER, Berlin-Dahlem, Germany: 4 flies (121952)
- HORTER, EARL, Philadelphia, Pa.: 36 etchings for exhibition October 31 to November 27, 1932 (121751). Loan.
- HORTON, F. W., Washington, D.C.: Specimen of silver from Molly Gibson Mine, Aspen, Colo. (121097). Exchange.
- HOSCHECK, Dr. A. B., Sevnica, Yugoslavia: 7 beetles, of 7 species (122139). Exchange.
- HOTTES, F. C., Decatur, Ill.: 24 slides of plant lice, 14 species, all types (123341).
- HOUGH, Dr. WALTER, Washington, D.C.: 20 basketry trays and mats made by Hopi Indians of Arizona (121940); 2 Indian blankets (124585).
- HOUSTON MUSEUM OF NATURAL HISTORY, Houston, Tex.: 60 plants collected in Texas by G. L. Fisher (123735).
- HOWELL, A. H., Washington, D.C.: 1 set of 3 eggs of Macgillivray's seaside sparrow (120167).
- HRDLIČKA, Dr. A., Washington, D.C.: Needle case, 2 needles, and a thimble of fossil ivory, from upper Bering Sea region (122709). (See also under Lt. H. B. Hutchinson, H. B. Loeff, C. Mathews, and Smithsonian Institution, National Museum.)
- HUBBARD, Dr. L. L., Houghton, Mich.: 1 cluster of bryozoans (121754); 1 hermit crab (123381); 1 crab,

- largest specimen in Museum collections, and 1 hermit crab in bryozoan housing, both specimens collected by sponge fishermen at Sanibel, Fla. (124512).
- HUBBS, Dr. C. L. (See under Dr. G. S. Myers.)
- HUBRICH, LESLIE, St. Louis, Mo.: 1 flatworm (122101); about 40 mollusks from St. Louis, Mo. (123115).
- HUMMELINCK, Dr. P., Utrecht, Netherlands: 85 Crustacea from Bonaire, Aruba, and Curaçao (115839).
- HUNGERFORD, Prof. H. B., Lawrence, Kans.: Paratypes of 2 insects (121402).
- HUSTON, Prof. R. C., East Lansing, Mich. (See under Michigan State College.)
- HUTCHINS, R. E., State College, Miss.: 27 land and fresh-water shells from Mississippi and Montana (121776).
- HUTCHINSON CHAMBER OF COMMERCE, Hutchinson, Kans.: Sheaf of hard red winter wheat grown by R. M. Woodruff, Hutchinson, Kans., which took first award at grain and hay show, International Livestock Exposition, Chicago, 1931 (120240).
- HUTCHINSON, Lt. H. B., Washington, D.C. (through Dr. A. Hrdlička): Archeological specimens from Alaska (123196).
- HYDE, F. B., Coconut Grove, Fla.: 1 rare moth (122841).
- IDAHO, UNIVERSITY OF, Moscow, Idaho: 8 flies from Idaho (118456).
- ILLINOIS, UNIVERSITY OF, Urbana, Ill. (through F. C. Baker): 10 specimens, paratypes, of fresh-water shells; 30 specimens (in 5 lots, including 3 lots of paratypes) of fresh-water shells from United States and Canada; 9 mollusks (120380, 121163, 123183).
- INDIA, ZOOLOGICAL SURVEY OF, Calcutta, India (through Dr. B. N. Chopra): 6 shrimps (120401). Exchange.
- INMAN, RAMIE, Fredericktown, Mo. (through Dr. Josiah Bridge): 2 large blocks of porphyry from near Fredericktown, Mo. (120219).
- INSTITUTO BIOLOGICO, Sao Paulo, Brazil (through Dr. F. C. Hoehne): 132 plants from Brazil (111362). Exchange.
- INSTITUTO GEOLOGICO Y MINERO DE ESPANA. (See under Minas de Potasa de Suria.)
- INSTITUTO PEDAGÓGICO DE VARONES, Managua, Nicaragua (through Brother A. Garnier): 470 plants from Nicaragua (121414).
- INSTITUUT VOOR PLANTENZEIKTEN, Buitenzorg, Java (through Dr. S. Leefmans): 43 flies from Java (118537).
- INTERIOR, U.S. DEPARTMENT OF THE: *Geological Survey*: Types and figured specimens of Tertiary invertebrates described by W. C. Mansfield in U.S. Geol. Surv. Prof. Paper 170-D (120032); 1 specimen of albite replacing green microcline from Morefield mine, Winterham, Va. (120033); specimens described and figured in U.S. Geol. Surv. Prof. Paper 167 (120034); miscellaneous collections by Arthur Keith, L. LaForge, H. G. Ferguson, G. R. Mansfield, and E. S. Larsen (120316); 76 Ozarkian and Canadian invertebrates described by Drs. E. O. Ulrich, A. F. Foerste, and Josiah Bridge (120690); samples descriptive of a report on non-metallic mineral resources of eastern Oregon and other materials from same region (121130); specimens and slides of Triassic diabase from Quakertown-Doylestown Quadrangle, Pa. (121951); specimens illustrating a report by H. G. Ferguson on geology and ore deposits of Tybo district, Nev. (122079); 103 specimens representing rocks and ores of copper deposits of Squaw Creek and Silver Peak districts, and Almeda mine, in Oregon, described in a bulletin of the Survey (122296); 3 suites aggregating 34 specimens representing rocks and associated ores described in U.S. Geol. Surv. Bull. 842 (122431); 95 specimens representing 9 small lots of Cambrian

- fossils from Afton Quadrangle, Wyo., collected by W. W. Rubey (122839); 1 lot of type specimens of minerals from Utah (123247); sundry lots of matrix with foraminifera (123813); 5 lots of Cambrian invertebrates collected in Delamar district, Nev., by Eugene Callaghan (124047). (See also under Dr. C. L. Dake.)
- National Park Service* (through Joseph S. Dixon): 49 plants from Alaska (122064); 31 bird skins and 6 mammal skins with skulls (124308).
- INTERNATIONAL BEDDING Co., Baltimore, Md. (through Better Bedding Alliance of America): 9 feathers, showing principal commercial grades, 1 standard-size pillow of goose feathers, and 1 of chicken feathers (123354).
- INTERNATIONAL NICKEL Co., INC., New York, N.Y. (through R. E. Case): 47 nickel coins of Albania, Austria, Belgium, Ecuador, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Luxembourg, Montenegro, Morocco, Poland, Siam, Switzerland, Turkey, and Vatican City (123285).
- IOWA, STATE UNIVERSITY OF, Iowa City, Iowa: 55 plants chiefly from Iowa (122731). Exchange.
- IVES, FREDERIC E., Philadelphia, Pa.: 1 photograph of donor (123496).
- IVES, J. D., Jefferson City, Tenn.: 10 cave insects from Tennessee (123093).
- IVEY, J. H. (through Lt. Comdr. S. S. Cook): 5 snakes, 4 lizards, and 5 insects from Nicaragua collected by himself—including type of a new species of skink (122681).
- JACKSON, T. L., Silver Spring, Md.: 2 old spoke shaves and a wooden grooving plane (120354); a surgeon's scarificator of type used in 18th century (121573). (See also under Miss Martha Hopkins, Reuben Sibley, and Charles Sproul.)
- JAEGER, E. C., Riverside, Calif.: 3 Lepidoptera from California (122308).
- JANES, W. N., Oxen Hill, Md.: 1 ground skink from Fort Foote, Md. (124505).
- JAMES, M. T., Boulder, Colo.: 3 flies (121949).
- JAPAN PAPER Co., New York, N.Y.: 2 specimens of paper bearing Italian watermarks by Fabriano (123979).
- JARDIM BOTANICO, Madrid, Spain: 3,639 plants collected by Jose Celestino Mutis in Colombia between 1760 and 1808 (118075). Exchange.
- JARVIS, E. (See under Australia Bureau of Sugar Experiment Stations.)
- JENNISON, Prof. H. M. (See under University of Tennessee.)
- JEPSON, Prof. W. L., Berkeley, Calif.: 4 plants from California (122671). Exchange.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.: 4 plants from Guatemala (122820, 123124). Exchange. *Medical School* (through Dr. A. H. Schultz): 7 embalmed mammals (123742).
- JOHNSON & JOHNSON, New Brunswick, N.J.: 54 specimens of surgical dressings (120413); specimens of belladonna root (122978).
- JOHNSON, ELDRIDGE R., Camden, N.J.: A specimen of ammonite from Lower Jurassic of France (123969). (See also under Johnson-Smithsonian Deep-Sea Expedition.)
- JOHNSON, FRANK, New York, N.Y.: 600 Lepidoptera, chiefly Neotropical (120003); 373 Lepidoptera including 2 pairs of rare and valuable Ornithoptera (121053, 121410, 122366); 47 butterflies from South America (121759).
- JOHNSON, Mrs. SEWELL M., Washington, D.C.: A Columbia electric buggy of about 1903-1906 (123348).
- JOHNSON-SMITHSONIAN DEEP-SEA EXPEDITION, Washington, D.C.: Collection of reptiles, fishes, mollusks, crustaceans, insects, echinoderms, worms, bryozoans, brachiopods, parasites, corals, stony corals, coelenterates, sponges, protozoans, dia-

- toms, algae, and bottom samples (124263).
- JOHNSTON, Prof. H. G. (See under Agricultural and Mechanical College of Texas.)
- JONES, N. F., Landover, Md.: Pair of candlesticks and vinegar cruet of blue glass, and a brittania-ware molasses jug (122439).
- JONSON, Prof. T., Stockholm, Sweden (through U.S. Department of Commerce, Bureau of Foreign and Domestic Commerce): trunk section of European white birch from demonstration forest of College of Forestry, Garpenberg, Sweden (122384).
- JORGENSEN, N. W., Hampton Roads, Va.: 269 mollusks from Guam (120280).
- JULIO, Rev. Brother, Cochabamba, Bolivia: 92 plants from Bolivia (120238); 66 miscellaneous insects (120275).
- KANSAS STATE AGRICULTURAL COLLEGE, Manhattan, Kans.: (Through Prof. F. C. Gates) 52 plants from Kansas (123595, exchange); 1 fly bred in Kansas (121777).
- KANSAS, UNIVERSITY OF, Lawrence, Kans.: 20 bugs, 9 species, all but 6 being paratypes (121507, exchange); 26 bugs, 11 species, of which 2 are represented by paratypes (122403, exchange); 25 bugs (123684); 2 moose from Minnesota, skulls with scalps (122776, exchange).
- KAY, Dr. G. M., New York, N.Y.: 29 brachiopods from Trenton limestone (123361).
- KEADLE, EMMETT, Williamson, W.Va.: Blueprint indicating dimensions of a white oak in Mingo County, W.Va. (124534).
- KEARNEY, Dr. T. H. (See under U.S. Department of Agriculture, Bureau of Plant Industry, and Pomona College.)
- KEECH, SUSAN P., Washington, D.C.: 4 earthenware containers and a coverlet (123277).
- KEEFER, P. B., Washington, D.C.: 1 junco (123998); section of railroad rail (hollow rail) laid on Isthmus of Panama about 1852 (124389).
- KELEHER, T. A., Washington, D.C.: 300 live silkworms (124464).
- KELLOGG, Dr. REMINGTON, Washington, D.C.: 1 skeleton of common loon (120012). (See also under Smithsonian Institution, National Museum, N. H. Boss.)
- KELLY, Dr. HOWARD A., Baltimore, Md.: 1 wasp (121661).
- KENNEDY, Miss M. H., Washington, D.C.: A Miocene echinoid from Fairhaven, Md. (121386).
- KEPPELL & Co., INC., FREDERICK. (See under Cadwallader Washburn.)
- KIEKHOFFER, Prof. W. H., Madison, Wis.: (See under Estate of Edward T. Owen.)
- KIESEL, C. W., Honolulu, Hawaii: An aircraft instrument termed a "balometer"; a combined lateral and vertical inclinometer for use in blind flying. Invented by donor (121059).
- KILLIP, E. P., Washington, D.C.: 84 plants from United States (121403).
- KILMER, Dr. F. B., New Brunswick, N.J.: 3 specimens of surgical dressings representing introduction of anti-septic surgical dressings in this country (121752).
- KINCAID, Dr. TREVOR, Seattle, Wash.: 5 anemones from Puget Sound (121758).
- KING, R. H., Austin, Tex.: 14 fossils of Pennsylvanian age, from Wise County, Tex. (122643).
- KLUG, GUILLERMO, Iquitos, Peru: 279 plants from Peru (118785).
- KNAPPEN, Miss PHOEBE, Washington, D.C.: 13 birdskins (121672).
- KNIGHT, Dr. J. B., New Haven, Conn.: Plesiotypes and paratypes of Pennsylvanian gastropods (120007); about 125 brachiopods from Pennsylvania Outlier, St. Louis, Mo. (123096); 160 Pennsylvania gastropods (124553).
- KNIGHT, W. A., Biltmore, N.C.: 1 fern (121038).
- KNOTT, Dr. JAMES. (See under Department of Health of Virgin Islands.)

- KNOWLES, W. A., Washington, D.C.: 1 fresh-water mussel from Great Falls, Va. (121465); 8 valves, 2 species, of mussels from Shenandoah River, W.Va. (121763).
- KNOWLTON, F. G., Barksdale, Wis.: 1 fern from northern Michigan (122443).
- KOVACH, CHARLES, St. Brides, Va.: Unfinished plummet plowed up near Blackwater Creek, Princess Anne County, Va. (121030).
- KRAEMER, ADOLF, Arnsberg, Germany: 75 conodonts from Westphalia, Germany (122999).
- KRIEGER, BERGRAT KARL, Hallstatt, Austria (through Dr. Marcus I. Goldman): Specimens of halite from Germany (122081).
- KRIEGER, Corp. EMIL M., Washington, D.C.: Earthenware vessels and stone objects collected on southwest shore of Ometepe Island, Lake Nicaragua, Nicaragua (123959).
- KRULL, Dr. W. H. (See under U.S. Department of Agriculture, Bureau of Animal Industry.)
- KRYGER, I. P., Gentofte, Denmark: 36 beetle larvae (120279).
- LABOR, U.S. DEPARTMENT OF: *Children's Bureau*: 6 models and 1 panel illustrating phases of child welfare (120211).
- LABORATORY OF ANTHROPOLOGY, Santa Fe, N.Mex.: Photograph of Navaho silversmith, Bai-ie-schluch-a-ichin, with some of his handicraft (122930).
- LABORATORY PRESS, Pittsburgh, Pa.: 7 specimens of fine printing, all the work of students of Carnegie Institute of Technology (120026).
- LAFFERTY, Maj. F. R., Santa Fe, N.Mex. (See under New Mexico National Guard.)
- LAMKIN, Dr. E. E., Vienna, Md.: 1 tiger salamander from Nanticoke River at Vienna, Md. (123178).
- LANE, BOODLE, Galena, Kans.: Specimens of galena with covellite and cerussite, from Galena, Kans. (122128); specimen of crystallized galena with dolomite and spalerite on chert (122198).
- LANEY, Dr. F. B., Salt Lake City, Utah: Collection of cassiterites and country rocks from pegmatites of South Carolina (123071).
- LANGWORTHY, Dr. C. F., Elizabeth, N.J. (through Mrs. Anna S. Thompson): Collection of glassware and pottery (120236). Bequest.
- LASKOWITZ, I. B., Brooklyn, N.Y.: Model used in wind-tunnel tests of a rotary airfoil system invented by donor (124004).
- LAUBENFELS, Dr. M. W. DE, Pasadena, Calif.: 63 alcoholic and 16 dry sponges taken at Tortugas, Fla., in 1927-28 (120814); a "yellow" sponge, preserved with flesh intact and cut to illustrate interior canals and method of feeding (prepared specially for sponge exhibit) (121574); 95 lots of sponges, in alcohol, taken at Tortugas, 1932 (122066).
- LAUSTE, E. A., Bloomfield, N.J.: 21 photographs of Mr. Lauste's inventions in silent and sound motion pictures, 1 portrait of Mr. Lauste, and a copy of the Journal of the Society of Motion Picture Engineers, October 1931 (124316).
- LAWSON, ROBERT, Westport, Conn.: 41 etchings, trial proofs, and drawings for exhibition during January 1933 (122385). Loan.
- LEAF, EMILY B., and VIRGINIA B. LEWIS, Washington, D.C.: Brass belt buckle owned during War of 1812 by Maj. Gen. Jacob Brown, U.S.A. (120008).
- LEE, E. J., Minneapolis, Minn.: Photograph of a composite wooden vase turned by donor (122095). Exchange.
- LEE, Mrs. MARY H., Fairhope, Ala.: 2 plants from Alabama (122210).
- LEEDS, UNIVERSITY OF, Leeds, England: 57 plants from New Zealand (122440, 122992). Exchange.
- LEEFMANS, Dr. S. (See under Instituut voor Plantenziekten.)

- LEFFINGWELL, Prof. D. F., Pullman, Wash.: 1 vial of parasitic worms taken from bird at Rochester, Alberta (106025).
- LELLMAN, K. V., Stanley, Falkland Islands: 4 jars of stomach contents, 1 fish, a small collection of plants, and 4 fragmentary bryozoans (120618).
- LEMMER, FRED, Irvington, N.J.: 281 Lepidoptera (120004, 124059). Exchange.
- LENINGRAD INSTITUTE OF MINERALOGY, MOSCOW, U.S.S.R. (through Soviet Union Information Bureau, Washington, D.C.): Specimens of Russian minerals leuchtenbergite, oxykertschenite, L-kertschenite, and B-kertschenite (121506). Exchange.
- LEONARD, A. B., Lawrence, Kans.: 2 fly larvae taken from cottontail rabbit in Oklahoma (122196).
- LEONARD, E. C., Washington, D.C.: 719 flowering plants from Ohio and near Washington, D.C. (121374, 124501).
- LERCH, RUDOLPH, New York, N.Y.: A tongue saw from Hungary, a peculiar type in use there now (120222).
- LETTNER, IVAN, Anacostia, D.C.: Model, $\frac{1}{16}$ size, of English seaplane, Supermarine S.6.B., fastest vehicle thus far developed and final winner of Schneider trophy at 340 miles an hour in 1931 (121471).
- LEVY, B., Wankie, Southern Rhodesia: 2 plants from Southern Rhodesia (122422).
- LEVY, H. S., Philadelphia, Pa.: 2 photographs, 1 of Max Levy and 1 of his brother, Louis E. Levy, two early workers in photomechanical processes (123819).
- LEWIS, VIRGINIA B. (See under Emily B. Leaf.)
- LEWTON, Dr. F. L., Washington, D.C.: Wood samples of big scentless mock-orange and Japanese honeysuckle, collected by donor at Takoma Park, Md. (124622). (See also under U.S. Department of Agriculture, Bureau of Plant Industry.)
- LI, FENG-SWEN, Chekiang, China: 10 mosquitoes (121747).
- LIGHT, Dr. S. F., Berkeley, Calif.: 4 stomatopods and 1 starfish (119048).
- LILLY & Co., ELI, Indianapolis, Ind.: 2 framed and 16 unframed photographs illustrating manufacture of insulin (122855); 1 title card and 15 photographs illustrating progressive steps in manufacture of insulin (124664).
- LINCOLN, F. C., Washington, D.C.: 1 skeleton of chimney swift (120015); 6 ducks (122208).
- LINDBERGH, Col. CHARLES A., New York, N.Y.: Personal equipment carried in *Spirit of St. Louis* on flight from Washington, D.C., to Mexico City and around Caribbean Sea in 1927-28 (123709); series of 36 maps used by Colonel Lindbergh on his Pan American flight of 1927-28 (124385).
- LINGNAN UNIVERSITY, Canton, China (through Prof. F. P. Metcalf): 2,263 Chinese plants (123702). Exchange.
- LINSLEY, E. G., Oakland, Calif.: 3 beetles, all paratypes (124060). Exchange.
- LITTLE, E. L., Jr., Weatherford, Okla.: 1 plant from Oklahoma (120292).
- LITTLE, V. L., College Station, Tex.: 6 grasshoppers from Walker County, Tex. (122205).
- LITTLETON, FRANK, Aldie, Va.: 1 small slab of shale containing dinosaur tracks from Virginia (123072).
- LLOYD, R. H., North Tonawanda, N.Y.: Brass store card of Robert Hapworth Lloyd, North Tonawanda, N.Y., 1932 (122655).
- LOCKHART, W. E., Ashland, Ky.: 3 slabs of limestone containing fossils (120894); a slab of amazonstone from Colorado (121262).
- LOGAN, Miss AMY D., Washington, D.C.: 2 beetle larvae (121248).
- LOGAN, R. A., Ship Harbor Lake, Nova Scotia (through U.S. Bureau of Mines): 4 specimens of algal-iron-manganese deposit from Nova Scotia (121462).

- LOHMAN, K. E. (See under V. P. Gianella.)
- LONDON, UNIVERSITY OF, London, England: 75 Carboniferous fossils (topotypes) from England (123319). Exchange.
- LONG, W. S., Lawrence, Kans.: 6 bird skeletons (122667).
- LOOFF, H. B., Oak Harbor, Wash. (through Dr. A. Hrdlička): Archaeological specimens from Alaska and Washington (123097).
- LOS ANGELES MUSEUM OF HISTORY, SCIENCE AND ART, Los Angeles, Calif.: Composite skeleton of fossil horse from Rancho La Brea (118478). Indefinite loan.
- LOWE, H. N., Long Beach, Calif.: 1 fragment of alcyonarian, 5 shrimps, 15 isopods (118911).
- LOWRY, Mrs. DORIS G., Durham, N.H. (See under Prof. Philip R. Lowry.)
- LOWRY, Prof. PHILIP R. (through Mrs. Doris G. Lowry): 637 slide mounts of scale insects, of which 486 are determined and 151 undetermined; and 271 slide mounts of aphids, of which 170 are determined and 101 undetermined (121808).
- LOWRY, Q. S., Boston, Mass.: 1 helminth (120960).
- LOWRY, Dr. R. C., Boyle, Miss.: Lot of potsherds from a village site west of Blaine, Miss. (121651).
- LUEDERWALDT, Dr. H., Sao Paulo, Brazil. (See under Museu Paulista.)
- LUERS, Miss E. M., Bowie, Md.: A model, $\frac{1}{17}$ size, of a Vought "Corsair" airplane, 1929 (124670). Loan.
- LUISIER, Rev. Father A., Caldas da Saude (Minho), Portugal: 24 mosses from Portugal and Madeira (123593). Exchange.
- LUND, J. B., and R. D. DWIGHT, Chicago, Ill.: A propeller blade, wing rib, and control mechanism from a tandem quadruplane designed and constructed by donors in 1911 (116671).
- LYDDANE, Mrs. MARY E., Washington, D.C.: 1 sampler made in 1804 by Sarah Kurtz, grandmother of donor, 1 sampler made November 9, 1833, by Elizabeth Orme, daughter of Sarah Kurtz and aunt of Mrs. Lyddane (124663).
- LYLE, CLAY, State College, Miss. (See under State Plant Board of Mississippi.)
- LYNN, Dr. W. G., Baltimore, Md.: 31 frogs and 6 lizards from Jamaica (124066).
- MACCREARY, DONALD, Newark, Del.: 2 flies reared by L. A. Stearns (121556).
- MACDONOUGH, RÓDNEY, Boston, Mass.: Gold watch, gold-mounted sword and belt, and 7 pieces of silverware owned by Commodore Thomas Macdonough, U.S.N. (113607). Loan.
- MACGINITIE, Dr. G. E., Corona Del Mar, Calif.: About 35 isopods, 125 amphipods, 1 crab, 2 *Nebalia*, 125 shrimps, 10 hermit crabs (120848).
- MACNEIL, F. S., Washington, D.C.: Marine invertebrates from lower Potomac: 2 hydroids, 30 anemones, 4 bryozoans, 75 amphipods, 10 isopods, 100 barnacles, 12 shrimps, 10 crabs, ascidians, annelids, sponges, and ostracods (121118).
- MAGNUS, MABEE & REYNARD, INC., New York, N.Y. (through J. B. Magnus): A druggist's mortar (122694).
- MALAISE, Dr. RENE, Stockholm, Sweden: 25 sawflies, 17 species, 11 of which are represented by paratypes, all new to the collection (123334). Exchange.
- MALLOCH, J. R., Washington, D.C.: 1 fly, a paratype, from New Zealand (120810).
- MANHATTAN GOLD MINES Co., San Francisco, Calif. (through V. C. Heikes): 1 specimen of gold in quartz from Manhattan District. Nye County, Nev. (123713).
- MANN, Miss CAROLINE, Lakemont, Ga.: 1 plant from Georgia (120602).
- MANN, Dr. W. M., Washington, D.C.: Bark beehive used by natives of Tanganyika, East Africa (120356).

- (See also under Mrs. Gordon McCreagh.)
- MANNING, Mrs. J. S., Washington, D.C.: Child's white pique cap and coat embroidered in early 1860's in New Orleans, La. (120165).
- MANTER, H. W., Lincoln, Nebr.: 2 specimens, types, of trematodes from Tortugas, Fla. (123193).
- MANUEL, Miss MARGARET, Lake Grove Long Island, N.Y.: 50 drypoints and etchings for exhibition during February 1933 (122829). Loan.
- MARI, Dr. JOSE GINER, San Agustin, Balearic Islands, Spain: 70 mollusks from Balearic Islands (114637). Exchange.
- MARSHALL, B. C., Imboden, Ark.: 25 Cladocera (111143); 6 shrimps from Arkansas (117324); 64 aphids (119809, 122566, 123256); 4 parasitic worms from gizzard of a chicken (119815); 27 specimens, 27 species, of fresh-water mussels from Arkansas (120271); 4 fly larvae (121369); 55 specimens, 25 species, of land, fresh-water, and marine shells from Florida, Arkansas, etc. (123576).
- MARSHALL, ERNEST, Washington, D.C. 3 skeletons of birds (123592).
- MARSHALL, PATRICK, Wellington, New Zealand: 2 specimens of rock containing the new mineral tuhualite and 2 containing riebeckite and aegerine (123468). Exchange.
- MARSHALL, Miss VIOLET A., Washington, D.C.: (See under estate of Mrs. Grace D. Brown.)
- MARVIN, CLOYD H., Jr., Washington, D.C. (through Prof. R. F. Griggs): 1 plant from Washington, D.C. (120376).
- MARYLAND CONSERVATION DEPARTMENT, Baltimore, Md. (through Dr. R. V. Truitt): About 200 crabs from Cape Charles and Hampton, Va., and Crisfield and Rock Hall, Md. (124520).
- MARYLAND GEOLOGICAL SURVEY, Baltimore, Md.: 3 type specimens of fossil cetaceans (122214). Deposit.
- MARYLAND, UNIVERSITY OF, College Park, Md. (through Prof. E. N. Cory): 4 beetles from Preston, Md. (120404); (through Mrs. F. W. McFarland) 9 original water-color sketches as suggestions for textile fabrics designed by members of 1933 class in principles of design (124624). Loan.
- MASARYK UNIVERSITY, *Botanical Institute*, Brno, Czechoslovakia: 100 plants from Czechoslovakia (122993). Exchange.
- MASON REGULATOR Co., Boston, Mass.: Steam automobile engine built by donor company in 1897 for first Stanley automobile (120060).
- MATHESON, Prof. ROBERT, Ithaca, N.Y. (See under Cornell University.)
- MATHEWS, Dr. A. A. L., Oberlin, Ohio (through Dr. Josiah Bridge): Large exhibition slab of fossiliferous chert from early Paleozoic rocks of Virginia (121096).
- MATHEWS, C., San Francisco, Calif.: Stone hammer from Olga Bay, Kodiak Island, Alaska (123098).
- MAXON, Dr. W. R., Washington, D.C.: 2 plants from Maryland (123479). (See also under Smithsonian Institution, National Museum.)
- MCATEE, W. L. (See under U.S. Department of Agriculture, Bureau of Biological Survey.)
- MCCABE, Miss MARY, Blairsville, Pa.: Compass carried by William Clark during Lewis and Clark expedition to Pacific coast (122864).
- MCCORMICK-GOODHART, LEANDER, Washington, D.C.: British medals commemorating exploits of Admiral Edward Vernon, R.N., during his expedition against the Spanish possessions in Caribbean Sea, 1739-1741 (186 specimens) (128061). Loan.
- MCCORMICK HISTORICAL ASSOCIATION, Chicago, Ill.: 3 groups of documents relating, respectively, to invention and development of 2 hillside plows, invented and patented by Cyrus Hall McCormick in 1831 and

- 1833; invention of reaper by Cyrus Hall McCormick in 1831 and its subsequent development; and a threshing machine invented by Robert McCormick in 1834 (124605); models of reapers patented January 31, 1845, and October 23, 1847, by Cyrus Hall McCormick. Constructed on a scale of $\frac{1}{8}$ according to specifications of U.S. Patents nos. 3895 and 5335, by Roderic Davis, Takoma Park, Md. (124615).
- McCRARY, O. F., Raleigh, N.C.: 1 plant from North Carolina (124466).
- McCREAGH, Mrs. GORDON, New York, N.Y.: 83 African insects, distributed through 7 orders, received through Dr. W. M. Mann (124568).
- McFARLAND, Mrs. F. W. (See under University of Maryland.)
- McGLANNAN, Mrs. ALEXIUS, Baltimore, Md.: Japanese and Chinese carvings (14 specimens) (124300); collection of ethnological and art textile specimens, consisting mainly of Chinese and Japanese art handicraft (124621).
- McGREGOR, ROBERT, Clarksburg, W.Va.: Model, $\frac{1}{16}$ size, of Boeing P-26 low-wing military airplane, latest type adopted for pursuit service in U.S. Army Air Corps (121601).
- McINTOSH, ALLEN, Washington, D.C.: 18 birds (121225, 121258); 1 bat from Washington, D.C. (124258).
- McKENNA, PHILIP, Latrobe, Pa.: A specimen of "Vascoloy", showing its use as an insert in a lathe tool (122555).
- McKENZIE, W. H. (See under Estate of Chief Tom Baconrind.)
- McLEAN, Mrs. LUCILLE S., Shrub Oak, N.Y.: 10 marine shells, 2 species, from Jamaica (121114).
- MEEGAN, BEATRICE, ESTATE OF (through E. C. Dutton): Pair of Huguenot scissors (109467).
- MELL, Dr. C. D., New York, N.Y.: 92 plants from Mexico (124467).
- MERCK & Co., INC., Rahway, N.J.: 1 specimen of quinine dihydrobromide (121283); 12 specimens of cinchoan alkaloids and alkaloidal salts (121058).
- MERIDEN GRAVURE Co., Meriden, Conn.: 18 examples of collotype, 1 with overtint imprinted by letterpress, 1 with airbrush color, 1 with airbrush color and varnish, and 15 in black and white (121496).
- MERRITT, C. C., Larchmont, N.Y.: A Merritt typewriter of about 1890, originally the property of donor's father, William J. Merritt (119845).
- METCALF, Prof. F. P., Canton, China. (See under Lingnaa University.)
- METCALF, Senator and Mrs. JESSE H., Washington, D.C.: An 18th-century brass Sabbath lamp (123376).
- METCALF, Miss SARAH S., Washington, D.C.: Examples of Philippine applique embroidery, white cotton on range of pineapple fiber (123977); (through Mrs. Grace Graves Herring) 2 examples of Bagobo unfinished beadwork on looms and 5 beadwork necklaces (124603).
- METROPOLITAN LIFE INSURANCE Co., New York, N.Y.: 5 strip films entitled "How to Live Long", "Life of Louis Pasteur", "Life of Florence Nightingale", "Life of Walter Reed", and "Life of Edward L. Trudeau", for health exhibits (124082); 60 health placards illustrating personal and general hygiene (124626).
- METROPOLITAN MUSEUM OF NATURAL HISTORY, Nanking, China: 282 Chinese plants, chiefly from Kweichow (120022, 124388). Exchange.
- MEXIA, Mrs. YNES, Berkeley, Calif.: 97 plants from Alaska (122381); (through Vernon Bailey) 2 snake skins and 1 lizard skin from Brazil (124246).
- MEYRICK, EDWARD, Thornhanger, England: About 600 specimens, of about an equal number of species, of Microlepidoptera, mostly type material (121028).
- MICHIGAN, UNIVERSITY OF, Ann Arbor, Mich. (through Prof. H. H. Bartlett):

- 27 West Indian plants, collected by Gordon Finch (119985), 470 plants from Guatemala and British Honduras; 520 plants from Sumatra collected by Rahmat Si Toroes (119895, 120619, 120786, 124333, exchange); 28 plants collected by C. L. Lundell in Peten, Guatemala (122411, exchange); 63 mosses from Central America (122551, exchange); 1 head bone and 2 interspinal bones of an extinct angelfish from Bone Valley, Grand Phosphate deposits, Polk County, Fla. (123284); 36 plants from Yucatan (123508, exchange); (through Dr. E. P. Creaser) 2 crabs and 3 porcellanid crabs from Yucatan (124291); 565 plants from Sumatra (124666, exchange).
- MICHIGAN STATE COLLEGE, East Lansing, Mich. (through Prof. R. C. Huston): 26 chemicals for the Loeb collection of chemical types (120187).
- MILLE, Rev. Father LUIS, Guayaquil, Ecuador: 28 plants from Ecuador (122132, 124288).
- MILLER, G. S., Jr. (See under Smithsonian Institution, National Museum.)
- MILLER, HUGH, Washington, D.C.: A Korean kite collected about 1920, a type used for sport in kite-fighting contests (123971).
- MILLER, WALTER, Tucapau, S.C.: 3 species, 4 specimens, of land shells from South Carolina (122105).
- MILLER, W. J., Von Ormy, Tex.: About 4 pounds of bentonitic clay (122823).
- MILLIER, ARTHUR, Los Angeles, Calif.: 50 prints, for exhibition during October 1932 (121294). Loan.
- MILLS, Capt. J. W., Miami, Fla.: 5 shrimps from Miami River (122534, 122710, 124452).
- MINAS DE POTASA DE SURIA, Suria (Barcelona), Spain (through Instituto Geologico y Minero De Espana, Madrid): 2 specimens of potash minerals, 1 of sylvinite and 1 of carnalite, from potash mines at Suria (123733).
- MINERALOGICKY USTAV KARLOVY UNIVERSITY, Prague, Czechoslovakia (through Prof. F. Slavik): 7 mineral specimens from coal basin of Kladno, Czechoslovakia (124292). Exchange.
- MINKER, H. L., Washington, D.C.: A 75-inch length of a girder from the *Shenandoah*, first American-built rigid airship, wrecked over Ava, Ohio, in 1925 (122699). Loan.
- MINNESOTA, UNIVERSITY OF, Minneapolis Minn.: 116 plants from Minnesota (123261). Exchange.
- MISSISSIPPI, STATE PLANT BOARD OF, State College, Miss.: 6 snails from Pascagoula, Miss. (124277); (through Clay Lyle) 2 species, 8 specimens, of fresh-water shells from Mississippi (124522).
- MOFFETT, HENRY, Herndon, Va.: 5 blacksmith's and wheelwright's tools (123726).
- MOLFINO, Prof. JOSE F., Buenos Aires, Argentina: 6 plants from Argentina (123942).
- MOONEY, ROBERT, Washington, D.C. (See under D. F. Poole.)
- MOORE, Commodore J. M., Washington, D.C.: 53 items of northwest coast basketry and ivory carvings (120347); grass mat from Aleutian Islands and an ivory carving from Point Hope (124570).
- MORAES, Dr. L. J., Rio de Janeiro, Brazil: Specimen of dennisonite from Damasio, near Diamantina, Minas Geraes, Brazil (120334).
- MORAND, F. W., McKinley Park, Alaska: 1,925 miscellaneous insects from Alaska (109995).
- MOREAU, R. E. (See under East African Agricultural Research Station.)
- MORGAN, BRENT, Washington, D.C.: 3 pipits (122216).
- MORGAN, PAUL, Washington, D.C.: A round case shelf clock made by Ingraham & Co. about 1871 (123254). Loan.
- MORGAN, SIDNEY. (See under F. S. Booth.)

- MORGAN, STANLEY, Barrow, Alaska (through J. A. Ford): Collection of Eskimo ethnological material manufactured about 1928-29 by John Semigloak for Sergeant Morgan (122301). Loan.
- MORRIS, J. S., San German, Puerto Rico: 2 bats from Corozal and a small collection of bones from Utuado and San German (120379).
- MORRIS, Dr. R. T., Stamford, Conn.: 2 moles (121470).
- MORROW, W. C., West Palm Beach, Fla.: 20 photographs (124098).
- MORSCHER, L. N., Washington, D.C.: 1 ovenbird (124281).
- MORTON, C. V. (See under Smithsonian Institution, National Museum.)
- MOSES, Mrs. ZEBINA, Washington, D.C.: Small collection of laces (124238).
- MOSSOP, M. C., Pretoria, South Africa: 293 insects and a small collection of shells from South Africa (122387).
- MURBARGER, W. B., Oroville, Calif.: 1 western ring-necked snake from California (123503).
- MURRAY, ARLTON, Washington, D.C.: 1 fern from Montgomery County, Md. (122994); 1 silicified fossil log from Northwest Branch, Washington, D.C. (124500).
- MUSEO NACIONAL, San Jose, Costa Rica: 5 plants from Costa Rica (122075); 6 leeches from Costa Rica (120341).
- MUSEU PAULISTA, Sao Paulo, Brazil (through Dr. H. Luederwaldt): Type specimen of crab (123272).
- MUSÉUM NATIONAL D'HISTOIRE NATURELLE, Paris, France: 12 plants (120708); 1 bird, *Pitta* (121899). Exchange.
- MUSEUM OF NORTHERN ARIZONA, Flagstaff, Ariz.: Collection of potsherds illustrating several types described by Lyndon L. Hargrave in his paper, "Guide to Forty Pottery Types" (122828).
- MUSÉUM ROYAL D'HISTOIRE NATURELLE DE BELGIQUE, Brussels, Belgium: 211 specimens and 48 casts of invertebrate fossils (119374). Exchange.
- MUSGRAVE, Prof. PAUL, Fairmont, W. Va.: 15 beetles (123583).
- MYERS, G. H., Washington, D.C.: Ancient Peruvian wood carvings, copper pins, and a pottery human effigy (121099).
- MYERS, Dr. G. S., Washington, D.C.: 67 fishes representing types, cotypes, and paratypes of species mostly not previously represented in national collections (124667).
- MYERS, Dr. G. S., Dr. C. L. HUBBS, and E. D. REID, Washington, D.C.: 23 fishes from southern Maryland (124668).
- MYERS, J. G., Trinidad, British West Indies (through Prof. A. S. Hitchcock): 11 plants chiefly from British Guiana (124384).
- MYERS, W. S. (See under T. R. Steinen.)
- NAGAO, Dr. T., Sendai, Japan: 2 fossil shells (121164). Exchange.
- NANKING, UNIVERSITY OF, Nanking, China: 500 Chinese plants (115630). Exchange.
- NATIONAL AERONAUTIC ASSOCIATION, Washington, D.C.: Photographic copy of a chart showing types of early balloons (120332). Exchange.
- NATIONAL CARBON CO., INC., New York, N.Y. (through W. H. Wilson): 13 photographs of early lighting devices (120368).
- NATIONAL GEOGRAPHIC SOCIETY, Washington, D.C. (through Dr. F. V. Coville): 464 plants from Death Valley region, Calif., collected in 1931 by Dr. Coville, M. French Gilman, and A. F. Gilman (121972, 122053); 2 lantern flies from Guayacurus, Brazil (122737).
- NATIONAL MUSEUM, Bloemfontein, South Africa: 10 vertebrate fossils, *Lystrosaurus* and *Dicynodon* (121576). Exchange.

- NATIONAL MUSEUM, Melbourne, Victoria: 154 Tertiary brachiopods (123251). Exchange.
- NATURHISTORISCHES MUSEUM, Vienna, Austria: 765 plants of the Ecklon-Zeyher collection from South Africa (123741). Exchange.
- NATURHISTORISKA RIKSMUSEET, Botaniska Avdelning, Stockholm, Sweden: 349 plants from Scandinavia (122522, 123100, 123480); 338 plants, chiefly from South America (122733); 449 plants from South America collected chiefly by Dusen (123515); (through Dr. Rudolf Florin) 1 plant fragment of type (124616). Exchange.
- NEEDHAM, P. R., Palo Alto, Calif.: 32 shrimps and 14 mysids (123282). (See also under U.S. Department of Commerce, Bureau of Fisheries.)
- NELSON, Dr. E. W., Washington, D.C.: 1 red quail (122660). (See also under A. D. Sproat.)
- NEON, Brother, Lafayette, La.: 80 mosses from Louisiana (121851, 123585).
- NEUMANN, W. A., Washington, D.C.: 1 young Canadian warbler (121055).
- NEW MEXICO NATIONAL GUARD (through Maj. F. R. Lafferty): Long-service medal and drill-attendance medal of type awarded to members of New Mexico National Guard (124527).
- NEW MEXICO, UNIVERSITY OF, Department of Geology, Albuquerque, N. Mex.: 178 Carboniferous brachiopods from New Mexico (123671). Exchange.
- NEW YORK BOTANICAL GARDEN, New York, N.Y.: 13 fragmentary specimens of Asiatic plants (111952); 29 plants from Puerto Rico (120021); 47 plants from China (121092); 1 plant from Colombia (121133); 263 ferns from western Himalayas (121158, 121267, 121280); 9 photographs of types or authenticated specimens of plants (121229); 15 plants from Florida (121276); 52 plants from Mexico (121277); 2 fragmentary specimens of Chinese plants (121568); 1 plant from Ecuador (124465). Exchange.
- NEW YORK STATE AGRICULTURAL EXPERIMENT STATION, Geneva, N.Y.: 11 flies (121868).
- NEW YORK STATE COLLEGE OF AGRICULTURE, Ithaca, N.Y.: 39 plants from New York (121101, 121278). Exchange.
- NEW YORK STATE MUSEUM, Albany, N.Y.: 67 plants from New York (124265). Exchange.
- NIELSEN, Dr. K. B., Copenhagen, Denmark: Examples of opercula of serpulids from Upper Cretaceous of Denmark (122818).
- NININGER, H. H., Denver, Colo.: 16-pound 10-ounce section of an iron meteorite from Chile (121969). Exchange.
- NOGARA, A. J., Washington, D.C.: 1 ruby-throated hummingbird (124280)
- NORMAN, J. R., London, England: 1 European sardine from Bahia de Algeciras, Spain (122392). (See also under British Government, British Museum.)
- NORTH DAKOTA AGRICULTURAL COLLEGE, Fargo, N. Dak.: 2 phyllopods from pools (123516).
- NORTH DAKOTA, UNIVERSITY OF, Grand Forks, N. Dak.: 21 insects from North Dakota (119975).
- NORTON, Prof. J. B. S., College Park, Md.: 1 plant (120707).
- NOVA SCOTIA DEPARTMENT OF AGRICULTURE, Truro, Nova Scotia: 12 flies taken from foliage of apple, hawthorn, and blueberry (122954).
- NUSSMANN, Rev. O., Wichita, Kans.: 1 fox skull from India (123290).
- ODENWALD BIRD Co., New York, N.Y.: 1 fish from aquarium (124628).
- OFICINA FEDERAL PARA LA DEFENSA AGRICOLA, San Jacinto, Mexico (through Dr. Alfons Dampf): 4 flies from Mexico (119771).
- OGGIANO, RALF, Bronx, N.Y.: 71 portrait photographs for exhibition during January 1933 (121760). Loan.

- O'HARE, JACK, Hyattsville, Md. (through Dr. Doris M. Cochran): Small collection of worms from near Hyattsville (124552).
- O'HARRA, DR. C. C. (See under South Dakota State School of Mines.)
- OHAUS, DR. F., Mainz, Germany: 8 specimens, 6 species, of beetles, 3 represented by 4 cotypes (122152). Exchange.
- OKLAHOMA, UNIVERSITY OF, School of Geology, Norman, Okla. (through R. V. Hollingsworth): 200 brachiopods from Devonian and Pennsylvanian of Oklahoma (123721.) Exchange.
- OLD WORLD ARCHEOLOGY FUND, Smithsonian Institution: 31 photographs of paleolithic cave art of Ariège and Haute Garonne, France (121411).
- O'LEARY, A. L., Washington, D.C.: 1 robin (124325).
- OLIVARES, ALEJANDRO, Jr., Bogota, Colombia: Sample of diatomaceous earth (122563).
- OLIVER, J. O., Rock Point, Md.: 4 fishes from Potomac River at Cobb Island, Md. (120873).
- ÕPIK, DR. A., Tartu, Estonia: 26 Ordovician and Devonian brachiopods from Estonia (123122). Exchange.
- OREGON AGATE AND MINERAL SOCIETY, Portland, Oreg.: 1 iris agate (123366).
- O'ROURKE, B. F., Brooklyn, N.Y.: Belt buckle worn at Battle of Cold Harbor, Va., by Thomas O'Rourke, Company E, 88th New York Volunteers, and bearing a rifle ball embedded during that engagement (123388).
- OSBORN BOTANICAL LABORATORY, New Haven, Conn.: 41 plants from Jamaica (122055). Exchange.
- OSBORN, Prof. HERBERT, Columbus, Ohio: 249 bugs of 70 species, 22 of which are represented by 35 types, paratypes, etc. (124330).
- OSTEN, C., Montevideo, Uruguay: 1 plant from Uruguay (122202).
- OSTRACH, Mrs. F., Atlantic City, N.J.: An old samovar and tray, and a teapot (119827).
- OUSDAL, DR. A. P., Santa Barbara, Calif.: Skull of fossil whale (121417).
- OVER, EDWIN, Jr., Colorado Springs, Colo.: 2 specimens of bismuthinite from Clear Creek district, Colo. (122310).
- OVINGTON, EARLE, Santa Barbara, Calif.: An envelope carried by air mail by donor on 20th anniversary of first American air-mail flight, which he piloted in 1911, and a recent photograph of donor (121293).
- OWEN, ESTATE OF EDWARD T. (through Prof. W. H. Kiekhofler): About 40,000 Lepidoptera (124298).
- PACIFIC BIOLOGICAL LABORATORIES, Pacific Grove, Calif. (through E. F. Ricketts): 9 isopods, 95 amphipods, and 6 copepods from California (117520).
- PAGAN, O. E., Washington, D.C. (through Mrs. O. E. Pagan): 1 mounted white-tailed deer from Butternut Lake, Wis. (119668).
- PAINTER, Prof. R. H., Manhattan, Kans.: 35 specimens, all types (1 paratype), of 19 species of insects (122805). Exchange.
- PALAEONTOLOGISCHES INSTITUT DER UNIVERSITÄT, Vienna, Austria (through Drs. O. Abel and K. Ehrenberg): 39 Triassic brachiopods from Austria, Hungary, and Italy (122172). Exchange.
- PALEONTOLOGISK MUSEUM, Oslo, Norway: 42 Cambrian fossils from Norway (120180). Exchange.
- PARSONS, RHEA, Bonny Blue, Va.: 6 Pennsylvanian invertebrate fossils from Bonny Blue, Va. (121476).
- PATRICK, DR. LEON, Orange, Calif.: 1 yellow-bellied mountain parakeet (122661); 3 Bolivian seed-snipe (122739); 1 blue-winged grass parakeet (123375); 1 red-capped parrot (124373).
- PATSTONE, Miss M. A., Washington, D.C.: A collection of material from Philippine Islands presented in memory of donor's father, the late Capt. Lewis Patstone, U.S.A., 46th Volunteer Infantry (122394).

- PAUL, Rev. Brother, Panama City, Panama: 341 plants from Panama (121490, 122965, 124611).
- PEABODY MUSEUM, New Haven, Conn.: 4 complete fossil brachiopods from Anticosti Island (123121). Exchange.
- PEEK & VELSOR, INC., New York, N.Y.: 8 specimens of vegetable drugs (121104).
- PELLOUX, ALBERTO, Genoa, Italy: 14 minerals from Italy (122837). Exchange.
- PENFOUND, Dr. W. T., New Orleans, La. (See under Tulane University of Louisiana.)
- PENICK & Co., S. B., New York, N.Y.: 10 specimens of vegetable drugs (121544).
- PENNEY, Dr. J. T., Columbia, S.C.: 1 alcoholic specimen and 3 slides (type material) of a new sponge (118594).
- PENNSYLVANIA STATE TEACHERS COLLEGE, Millersville, Pa.: 12 Lower Cambrian fossils (121832). Exchange.
- PEREZ, G. S., Manila, Philippine Islands: 4 shells from Laganglilang, Abra Province, Philippine Islands (122377).
- PERHAM, S. I., West Paris, Maine (through F. L. Hess): Specimen of rose quartz from Maine (121778).
- PERRYGO, W. M., Washington, D.C.: 1 gray fox from Oxen Hill, Md. (124257).
- PETELOT, Prof. A., Hanoi, Indo-China: 15 plants from Indo-China (120156); 180 plants from Indo-China (123955, exchange).
- PETERS, J. F., Washington, D.C.: A man's woolen shawl of Civil War period (122389).
- PETERSON, A. B., Richmond, Va.: Wood samples of common castorbean (120295).
- PETROCELLI, Mrs. MARY O., Brooklyn, N.Y.: 86 framed pictorial prints as follows: 1 transfer, 3 resinotipias, 81 bromoils, 1 portrait of Mr. Petrocelli (117570).
- PFLUEGER, AL, Miami, Fla.: 1 porpoise skull (122409).
- PHENIX AIRCRAFT PRODUCTS Co., Williamsville, N.Y.: Brass token of Buffalo Numismatic Association struck in 1933 (123387).
- PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE, Philadelphia, Pa.: 6 photographic enlargements of murals, depicting progress of pharmacy (123688).
- PHILIPPINE ISLANDS GOVERNMENT, Bureau of Science, Manila, P.I.: 35 plants from Philippines (124203). Exchange.
- PHILIPPINE SUGAR ASSOCIATION, La Carlota, Occidental Negros, P.I.: 6 flies from Philippines (120135); 8 flies, reared from grasshoppers in Philippines (122179).
- PHOTOGRAPHIC SOCIETY OF PHILADELPHIA, PA.: 60 photographs for exhibition during October and November 1932 (121389). Loan.
- PICCINELLI, Dr. PIERO, Bergamo, Italy: 29 specimens of Italian minerals (119859). Exchange.
- PICKEL, Prof. D. BENTO, Pernambuco, Brazil: 94 plants from Brazil (120697, 121103, 122531, 122817, 124332).
- PICKENS, A. L., Greenville, S.C.: 3 insects from California and 2 lots of parasitic worms (119454).
- PICTORIAL PHOTOGRAPHERS OF AMERICA, New York, N.Y.: 100 pictorial prints for exhibition during February 1933 (122866). Loan.
- PIELTAIN, Dr. C. BOLIVAR, Madrid, Spain: 11 slides of 5 species of *Colombola* from American caves (121967).
- PILSBRY, Dr. H. A., Philadelphia, Pa.: 2 fresh-water mussels from Belgian Congo (121560). (See also under Academy of Natural Sciences.)
- PIRION, P. ANASTASIO, Santiago, Chile: 101 flies from Chile (122560).
- PITTSBURGH SCREW & BOLT CORPORATION, Pittsburgh, Pa.: 1 blade of a Dicks hollow-steel propeller (124232).

- PIZZINI, ANDREW, Washington, D.C.: 100 shrimps, 15 crabs, 1 parasitic isopod, 23 isopods, 5 marine annelids, 500 amphipods, from Cobb Island, Md. (121375); 36 amphipods and 25 isopods from a spring west of Georgetown, D.C. (121413); 31 crabs, 7 shrimps, 200 amphipods, and 15 isopods from Florida (122736).
- POKORNY, FRANK, Spencer, Nebr.: 2 fragmentary lower jaws representing 2 Neocene equids (121531).
- POLAND, GOVERNMENT OF (through the Polish Embassy): Polish military uniforms and accessories (114295).
- POLEY, H. S., Colorado Springs, Colo.: 7 photographs of Pueblo Indian subjects (123830).
- POLISH EMBASSY, Washington, D.C. (See under Government of Poland.)
- POMONA COLLEGE, Claremont, Calif. (through Dr. T. H. Kearney) 10 plants from southern California (122524); (through Dr. F. V. Coville): 1 plant from southern California; 24 plants from Death Valley region, Calif. (121971, 122523). Exchange.
- POOLE, A. J., Washington, D.C.: 11 birdskins (120704).
- POOLE, D. F., Washington, D.C. (through Robert Mooney): 2 Maxim incandescent electric lamps of about 1885 and 2 sockets for same (121545).
- POPE, Dr. W. T. (See under U.S. Department of Agriculture, Hawaii Agricultural Experiment Station.)
- POPENOE, C. H., Silver Spring, Md.: 1 parrot (122730); 1 lovebird (122853); 1 Cooper's hawk from Virginia (123401); cotton and wool hand-woven coverlets in overshot weave, 3 made in Stewart, Va., about 1815, by Mary Martin, and 1 woven about 1830 at Horse Creek, Tenn., by Lavina Rogers (124301, deposit); a collection of miscellaneous insects, assembled by Mr. Popenoe's father, who was professor in the Kansas Agricultural College from about 1872 to 1909 (124532).
- POPOV, Dr. A. M., Leningrad, U.S.S.R.: 9 fishes (120879). Exchange.
- POPOV, VLADIMIR, Leningrad, U.S.S.R.: 11 bees, of 7 species (122686). Exchange.
- PORTER, Dr. C. E., Santiago, Chile: 4 flies from Santiago (121397).
- POST OFFICE DEPARTMENT, U.S., Washington, D.C.: 11 sets of specimen stamps in triplicate (4,950 specimens), received by Post Office Department from International Bureau of Universal Postal Union, Berne, Switzerland (120276, 120358, 120775, 121381, 121783, 122192, 122721, 122849, 123386, 123848, 124491); 3 specimens each of 3-cent and 5-cent postage stamps issued in honor of Olympic Games (120298); 3 specimens each of 8-cent air mail, Daniel Webster commemorative and William Penn commemorative stamps (122181); 3 specimens each of 3-cent George Washington stamp and 3-cent General Oglethorpe commemorative stamp (123343); 6 Delft ware tiles from Danish West Indies (123514).
- POZNAN, UNIVERSITY OF, Poznan, Poland: Institute of Forest Engineering (through Prof. Julian Rafalski): 63 samples of woods of Poland (119686). Exchange.
- PRATT & WHITNEY AIRCRAFT Co., Hartford, Conn.: A "Wasp" radial aircraft engine, sectioned to show construction, and driven, for exhibition purposes, by a small electric motor (115991).
- PREFONTAINE, Prof. GEORGES, Montreal, Canada: 1 leech and 35 echinoderms (122371). (See also under Station Biologique du St.-Laurent.)
- PRICE, Dr. E. W., Washington, D.C. (See under U.S. Department of Agriculture, Bureau of Animal Industry.)
- PUERTO RICO DEPARTMENT OF AGRICULTURE AND COMMERCE, Insular Experiment Station, Rio Piedras, Puerto Rico: 13 insects from Puerto Rico (122429, 122825, 122955).
- QUIGLEY, E. W., Philadelphia, Pa.: 1 pictorial print, "Bowl of Grapes" (123718).

- RAFALSKI, Prof. JULIAN. (See under University of Poznan.)
- RAFFLES MUSEUM AND LIBRARY, Singapore, Straits Settlements (through F. N. Chasen): 6 swiftlets from North Borneo and Straits Settlements (121481). Exchange.
- RANKIN, M., Greensburg, Ind.: 1 specimen and 2 photographs of plant from Indiana (120980).
- RANSON, ROBERT, St. Augustine, Fla.: 3 shrimps (121161).
- RAPP, F. A., Washington, D.C.: A specimen of gold ore from Great Falls Mine, Great Falls, Md. (120246).
- RAYMOND, Dr. PERCY. (See under Harvard University.)
- REED, Prof. C. T., Kingsville, Tex.: 1 female glowworm from Texas, and approximately 100 barnacles from gills of crab taken at Aransas Pass, Tex. (120891); 6 insects from Texas (121352).
- REED, Prof. E. L., Lubbock, Tex.: 146 plants from Texas (120823).
- REED, Dr. E. P., Valparaiso, Chile: 24 insects from Chile (120703, 122186).
- REED, F. C., Washington, D.C.: An old, hand-made, wrought-iron hand brace (124283). Loan.
- REES, C. W., Jeanerette, La. (See under Mrs. Robert Burleigh.)
- REESE, Prof. A. M., Morgantown, W.Va.: 33 insects, collected in caves, and 6 land mollusks from cave, Greenbrier County, W.Va., also 6 crayfishes, 1 amphipod, and 2 earthworms (122985).
- REESIDE, Dr. J. B., Jr. (See under British Government, British Museum.)
- REH, Miss EMMA, Oaxaca, Mexico: 1 elephant tooth from Santa Catarina Tayata, Oaxaca (122990).
- REHDER, H. A., Washington, D.C.: About 12,000 land, fresh-water, and marine shells (123202).
- REID, E. D., Washington, D.C.: 2 fishes (120872). (See also under Dr. G. S. Myers.)
- REINHARD, H. J., College Station, Tex.: 3 flies from Texas (121079). Exchange.
- REINHART, P. W., Palo Alto, Calif.: 16 Cretaceous fossils from California (121842).
- REMBRANDT PHOTOGRAVURE, LTD., London, England: 1 photograph of Karl Klic, and 4 photogravures, "From the Terrace on Richmond Hill", "Will Rogers", "Flowers" (3 colors), and "Karl Klic" (123952).
- REPETEK SAND DESERT STATION, Turkmenistan, St. Repetek, U.S.S.R.: 9 plants from Turkmenistan (120166). Exchange.
- REPUBLICA DE COLOMBIA, Seccion de Entomologia, Departamento de Agricultura y Ganaderia: 121 miscellaneous insects from Colombia (123501).
- RESNER, ERNEST, Washington, D.C.: 1 shark (123377).
- RHOADES, WILLIAM, Indianapolis, Ind.: 4 plants from Indiana (120134).
- RHODE ISLAND STATE COLLEGE, Kingston, R.I. (through A. E. Stene): 2 insects (123364).
- RICHAEL, C. L., Grove City, Pa.: Violin made by donor (122570).
- RICHARDS, Dr. H. G., Philadelphia, Pa.: 2 concretions and miscellaneous paleontological material (120972); 12 fossil crabs from Pleistocene, Two Mile Beach, N.J. (123989). (See also under Smithsonian Institution, National Museum.)
- RICHARDSON, A. M., Ore Bank, Va.: Unusually large leaf from a young hickory (120594).
- RICKER, P. L., Washington, D.C.: 1 plant from Virginia (121942). (See also under U.S. Department of Agriculture, Bureau of Plant Industry.)
- RICKETTS, E. F. (See under Pacific Biological Laboratories.)
- RILEY, J. H., Washington, D.C.: 1 red squirrel from Falls Church, Va. (124259).
- RINGDAHL, O., Halsingborg, Sweden: 273 flies, of 129 species, all named,

- most of them new to the collection (122851). Exchange.
- ROBERTS, C. E., Keokuk, Iowa: 1 specimen of millerite from Keokuk, Iowa (123424).
- ROBINSON, N. B., El Paso, Tex.: 1 lot of topaz crystals from Thomas Mountains, Utah (123506).
- RODDY, Dr. H. JUSTIN, Lancaster, Pa.: 55 Lower Cambrian fossils (121843). Exchange.
- ROEBLING FUND, Smithsonian Institution: One half-ton iron meteorite (119530); 1 specimen of crystalline quartz including euclase and topaz (121022); 1 polished section of tourmaline from Paris, Maine (121087); 4 specimens of the Toluca meteoric iron said to have been used as hammerstones (121256); portion of a meteoric iron from Pinon, N.Mex. (121391); 2 crystals of euclase and 1 crystal of tourmaline (121745); portion of Kunz collection of minerals, gems, meteorites, and building stones (121767); specimen of cassiterite in quartz, from Buckfield, Maine (121780); 1 rose precious topaz (121839); 3 specimens of crystallized gold (122032); 1 cut stone of pink amethyst (122033); 4 specimens of minerals from Franklin, N.J. (122199); 15 ounces of platinum-palladium concentrates from Transvaal, South Africa (122212); 3 specimens of bianchite from Trentino, Italy (122256); an iron meteorite weighing 14,206 grams from Henbury, Central Australia (122305); a twin crystal of phenacite and 2 specimens of fluorite (122388); 7 specimens of minerals from Franklin Furnace, N.J. (122687); 1 large mass of pitchblende and 1 of native silver from Great Bear Lake, Canada (123265); 1 meteoric stone from Archie, Mo., and 1 slice of meteoric stone from Melrose, N.Mex. (123410); 1 pink tourmaline from Brazil (123415); 1 specimen each of bastnasite, fayalite, fayalite and anthophyllite, and fayalite on the matrix from Cripple Creek and Bear Creek Canyon, Colo. (123723); 1 ruby tourmaline (123738); 5 meteoric specimens (124097); 4 black opals from Lightning Ridge, New South Wales (124554); 1 specimen of ardealite from Rumania and 1 of halite from Thuringia (124607).
- ROIG, Dr. MARIO S., Habana, Cuba: 3 shrimps from Cuba (120025, 123120).
- ROLLINS, E. J., West Somerville, Mass.; Fancy knitted cotton counterpane made in 1887 by donor's great-grandmother, Susanna Jacquith Abbott, of Bedford, Mass., when she was 90 years old (119568).
- ROSICKY, Prof. Dr. V., Brno, Czechoslovakia: 1 specimen each of rosickyite, cristobalite, and pisekite (123266); Exchange.
- ROSS, Dr. C. S. (See under Hugh J. Harley.)
- ROTH, Mr. and Mrs. L. V. (See under Mrs. A. P. Brigham.)
- ROUSSEAU, JACQUES, Montreal, Canada: 3 brachiopods from Pennsylvania formation, Jemez Mountains, N.Mex. (120959).
- ROYAL BOTANICAL GARDEN, Sibpore, India: 150 plants from India (124675). Exchange.
- ROYAL ONTARIO MUSEUM OF MINERALOGY, Toronto, Ontario: 40 specimens of syenitic rocks from Port Coldwell, Canada (124513). Exchange.
- ROYAL ONTARIO MUSEUM OF PALAENTOLOGY, Toronto, Ontario: 2 dinosaurian skulls (122314). Exchange.
- RUBBER MANUFACTURERS ASSOCIATION, INC., New York, N.Y.: 60 specimens of rubber latex, gutta percha, balata, and a series of rubber toys and inflated balls (121555); 3 charts showing causes of rapid wear and failure in automobile tires (122123).
- RUDGE, WILLIAM EDWIN, PRINTING HOUSE OF, New York, N.Y.: A book, "Picturesque United States of America 1811, 1812, 1813, Being

- A MEMOIR ON PAUL SVININ", by Avrahm Yarmolinsky (122662).
- RUGG, H. C., Hanover, N.H.: 1 fern from Glacier National Park (121970).
- RUNYON, ROBERT, Tamaulipas, Mexico: 61 plants from Texas (121965, 124100).
- RUSBY, Dr. H. H., New York, N.Y.: 1 plant from Mexico (122527).
- RUSSELL, P. G. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)
- RUSSIA CEMENT Co., Gloucester, Mass. 1 ear of yellow dent corn and 1 dried root of bitter cassava to illustrate sources of vegetable glues (124625). (See also under Wayne Colorplate Co.)
- SACRAMENTO JUNIOR COLLEGE, Museum of Anthropology, Sacramento, Calif. (Through Robert F. Heizer): 2 skulls from Bennett Mound, Sacramento Valley, Calif. (124540).
- SAKAGUCHI, SOICHIRO, Okianawa, Japan; 14 annelid worms, 2 hydroids, 1 crustacean, 2 sipunculid worms, and 3 nemertean worms from Japan (85657).
- SANTA BARBARA MUSEUM OF NATURAL HISTORY, Santa Barbara, Calif.: 1 plant (123186); 11 species of Pleistocene plants from Carpinteria asphalt pits, Calif. (124162, exchange).
- SARDESON, Dr. F. W., Minneapolis, Minn.: Small collection of Middle Ordovician bryozoans from Minnesota (121463).
- SAVAGE, L. A., Newberry, S.C.: 2 scorpions from South Carolina (119994).
- SAWYER, J. D., Park City, Utah (Through E. P. Henderson): specimen of jamesonite from Park City, Utah (122087).
- SAYLES, Dr. R. W., Chestnut Hill, Mass.: 2 large specimens of glacial conglomerate (Squantum tillite) from Boston, Mass. (123976).
- SCHELLENBERG, Dr. A., Berlin, Germany: 20 amphipods (116384). Exchange.
- SCHENCK, Dr. H. G., Stanford University, Calif.: 6 fossil crustaceans from California (119731, 121841, 124511).
- SCHERNIKOW, ERNEST, San Francisco, Calif.: 1 specimen of opal from near Erandique, Honduras (124061).
- SCHMID, E. S., Washington, D.C.: 2 parrots (120013, 120785); 2 grass paroquets (120208, 123687); 1 blue jay (120331); 2 South American monkeys (123187, 124250).
- SCHMITT, Dr. W. L., Washington, D.C.: (See under Smithsonian Institution, National Museum.)
- SCHNECKENBERGER, M., Buffalo, N.Y.: 2 cameras, 1 an Eastman kodak and the other an E. & H. T. Anthony box camera (120223). Loan.
- SCHNORRENBERG, HAROLD, Stillwater, Okla.: 2 flies (120072); 15 flies including type, paratypes, and 9 others of a new species described by Dr. Alan Stone, through whom the specimens were received (124581).
- SCHOFF, H. L., Sarasota, Fla.: Archeological and skeletal material from mounds along Sarasota Bay, Fla. (122716).
- SCHUH, R. E., Washington, D.C.: 284 algae (microscopic mounts) (120277, 121554); 17 plants from Maine (121669, 121853); 6 algae from Maine (124255).
- SCHULTZ, Dr. A. H. (See under Johns Hopkins University, Medical School.)
- SCHULTZ, Dr. L. P., Seattle, Wash. (See under University of Washington.)
- SCHULZE, ALBERTO, Horqueta, Paraguay: 1 Azara's woodpecker (120378).
- SCHWARTING, A. C., De Pere, Wis.: Newfoundland 12-cent postage stamp of 1928 (121024).
- SCOFIELD, JOHN, Washington, D.C.: Skin of Philadelphia vireo (121274).
- SCOTT, Prof. GAYLE, Fort Worth, Tex.: Specimen of Lower Cretaceous ammonite (123467).
- SEELY, T. D., Jacksonville, Fla.: Lower pharyngeal bones of black drum-

- fish, from West Jacksonville, Fla. (124518).
- SEIFRIZ, Prof. WILLIAM, Philadelphia, Pa.: 4 crabs and 4 insects from the Sierra Nevada of Colombia (119360); 388 plants from Santa Marta region, Colombia (119943); 61 plants collected in Colombia by Juan Giacommetto (122135).
- SENCKENBERGISCHE NATURFORSCHENDE GESELLSCHAFT, Frankfurt, Germany: 1 cast of a fossil reptile (124235). Exchange.
- SETTY, L. R., Parkville, Mo.: 4 flies (122541).
- SETZLER, F. M. (See under Smithsonian Institution, National Museum.)
- SEYRIG, M. ANDRE, Mulhouse, Haut-Rhin, France: 64 Hymenoptera (121162).
- SHANNON, Mrs. CAROLINE WOLFLEY. (See under Mrs. Eleanor Wolfley Bisell.)
- SHANNON, Dr. R. C., Washington, D.C.: 1 fish and 1 salamander from Iquitos, Peru (120159).
- SHANNON, T. J. (See under Mrs. Eleanor Wolfley Bisell.)
- SHAW-BOX CRANE & HOIST Co., Muskegon, Mich.: A Shaw, heavy-duty, 33-horsepower, direct-current electric motor of 1899 (121675).
- SHAW, Miss I., Norfolk, Va.: 1 large horseshoe crab (123395).
- SHAW, S. F., Guatemala City, Guatemala: Inscribed mica schist pebble from Las Quebradas, Guatemala (122550).
- SHAWBAKER, J. G., Monrovia, Md.: An old pick for dressing millstones (123725).
- SHEARER, JOHN, Inwood, Long Island, N.Y.: 1 deformed lobster claw (122189).
- SHELDON, W. G., and RICHARD BORDEN, Milton, Mass.: 63 mammals from British Columbia (119501).
- SHILLINGER, Dr. J. E., Washington, D.C. (See under U.S. Department of Agriculture, Bureau of Biological Survey.)
- SHOEMAKER, Mrs. ELLA O., Conway, Mich.: 1 barnacle from Tybee Island, Ga. (120306).
- SHUFELDT, P. W., La Cueva, N.Mex.: 2,316 birds (121837).
- SIBLEY, REUBEN, Freedom, Maine (through T. L. Jackson): Ship carpenter's broadax and adz said to have been used by Jacob Sibley, grandfather of donor, when employed in building U.S.S. *Constitution* (120611).
- SILOOK, PAUL, St. Lawrence Island, Alaska (through H. B. Collins, Jr.): 7 birds from St. Lawrence Island (122397).
- SIM, R. J., Riverton, N.J.: 58 Scarabaeidae of 7 species from Syria (123087).
- SIMPSON, CLARENCE, and HERMAN GUNTER, Tallahassee, Fla.: 3 fox squirrels from Tallahassee, Fla. (124249).
- SIMPSON, Dr. E. S., Perth, Western Australia: 10 specimens of minerals (121831). Exchange.
- SIMPSON, Dr. G. G., New York, N.Y.: 1 lot of fossils (12 plants, 20 invertebrates, and 7 vertebrates) collected for the Museum from Fort Union and Deep River formations in Montana, 1932 (124322).
- SINGER, J. W., Stamping Ground, Ky.: 3 plants from Kentucky (121756).
- SKEELS, H. C., Washington, D.C. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)
- SKINNER, K. L., Weybridge, Surrey, England: 12 birds' eggs (121479); 148 foreign birds' eggs (121480, exchange).
- SKOGBERG, Dr. TAGE, Pacific Grove, Calif. (See under Hopkins Marine Station.)
- SKUTCH, Dr. F., Tecpam, Guatemala: 2 birds (121257); 200 plants from Guatemala (122358).
- SLAVIK, Prof. F. (See under Mineralogicky ustav Karlovy University.)

SMALL, R. P., Pine Knot, Calif.: 2 large water jars made by Cahuilla Indians (121977).

SMITH, C. S., San Marcos, Tex.: 2 shrimps from Ezellir Cave, San Marcos, Tex. (123857).

SMITH, Prof. E. C. (See under Colorado Agricultural College.)

SMITH, Dr. H. M., Bangkok, Siam: 456 birdskins, 2 bird skeletons, 15 mammal skins, 1,635 insects, 575 mollusks, 2 turtles, 36 ferns, 12 leeches, and 16 ostracods from Siam (122398).

SMITH, L. H., Washington, D.C.: A fossil fish from White River beds, Sentinel Butte, S.Dak. (122378).

SMITH, THORN, JR., New York, N.Y.: 21 marine shells of 10 species from west coast of Florida (120821).

SMITHSONIAN INSTITUTION: A wood mortising machine of about 1884 (120867); hand-colored photograph of a page of an 11th-century Armenian Bible, water color by Mrs. C. D. Walcott, original in Freer Gallery (121107); 1 etching, "We Fix Flats" by Robert Lawson, associate member's print for 1932 of American Society of Etchers (121284). Deposit.

Bureau of American Ethnology: Archaeological material from between Rio Salada and Rio Dulce, an area known as Mesopotonia Santiaguena, of the Gran Chaco, Argentina (114181); 5 human skeletons excavated by Dr. F. H. H. Roberts, Jr., on Zuni Indian Reservation, N.Mex., and 1 lot of wild-turkey bones from Arizona, collected in 1930 (120252); teeth of American antelope from western Nebraska, collected by Dr. W. D. Strong (121548); 17 daguerreotypes, 13 ambrotypes, and 1 tintype of Indian subjects (121824); 1 lot of turkey bones, nymph of bug, and 2 fragments of swamp cane collected by W. M. Walker from Jonesville mound, La., 1932 (122561); fragment of an earthen-

ware vessel from Weeden Island, Tampa Bay, Fla., collected in 1925 by D. I. Bushnell, Jr. (122696); an earthenware vessel from the Keams Canyon district, Ariz., and 1 from near Gettysburg, Pa., transferred to Bureau from Bureau of Indian Affairs (122697); pottery elbow pipe and an earthenware shallow bowl made by Tule Indians of Mulatupa on San Blas coast of Panama (122701); archeological and ethnological specimens from Ecuador and Peru, and collection of land snail shells obtained by M. W. Stirling in 1932 (122704); fragment of a coarse shell-tempered pottery slab found in a stone grave near Nashville, Tenn. (122705); 1 lot of bones, consisting of wild turkey, raven, golden eagle, and little brown crane collected by Dr. F. H. H. Roberts, Jr., at Long H Ranch, eastern Arizona, 1929 (120772); quilt and beaded bag collected by George R. Cassedy at Pawnee Junction, Nebr., in 1869 from Buckskin Charlie (122979); 6 projectile points from Yuma County, Colo. (124507).

National Museum, collected by members of staff: Aschemeier, C. R.: 13 birds, 1,436 fishes, 200 shrimps, 25 crawfishes, 6 turtles, 9 frogs, 4 lots of tadpoles, 4 lizards, 12 insects and larvae, and 50 shells collected in Florida, 1932-33 (122689). Bartsch, Dr. Paul: 49 birds in alcohol, 4 turtles, 7 invertebrates, 21 echinoderms, and 250 land and marine shells from the Tortugas and Florida (120571). Bartsch, Dr. Paul, and Charles Gilbert: 3,400 fresh-water shells and 340 land shells from Georgia, North Carolina, Tennessee, and Virginia (121095). Bassler, Dr. R. S.: About 300 Silurian and Mississippian crinoids and cystids and 1,000 miscellaneous fossils from Indiana, Kentucky, and Tennessee (121127). Benn, James H.: minerals from Forest of Dean, Kingston and Ellenville, N. Y., and

Franklin, N.J. (120330); 2 specimens of calcitic stalagmites from Mount Etna, near Beaver Creek, Md. (123080). Division of Birds: 39 birds in alcohol (124583). Boss, N. H., and Dr. Remington Kellogg: A cetacean specimen consisting of 2 dorsal vertebrae and 7 ribs, from Miocene, Calvert formation, south of Plum Point, Md. (121779). Collins, Henry B., Jr.: 1 lot of bird bones from Alaska (121088). Cooper, Dr. G. A.: Invertebrate fossils from Cambrian, Ordovician, Silurian, and Devonian of Gaspe Peninsula, Quebec, and Chenango, Otsego, Schoharie, and Albany Counties, N.Y. (120092). Denmark, C. R.: Large master clock and accessories from electric-clock system installed in Arts and Industries Building about 1880 (123081). Ford, J. A.: 1 bowhead whale skull from Point Barrow, Alaska (121774); 190 specimens of skeletal material, 169 birdskins, 15 mammals, and some Pleistocene horse material from Point Barrow, Alaska (122649). Foshag, W. F., and James H. Benn: About 55 specimens of minerals from Amelia, Va. (121861). Gilmore, C. W.: Miocene and Oligocene fossils obtained by expedition of 1932 in Nebraska, Wyoming, and South Dakota (121290). Henderson, E. P.: Rocks, ores, and minerals collected in 1932 for the Museum with cooperation of Canfield fund (124181). Hrdlička, Dr. Aleš: Archeological and human skeletal material, bird and mammal bones, and mollusks, obtained in Alaska in 1932 (119325, 121089); 156 mollusks from Middle Goose Island, Kodiak, Alaska (121561). Division of Insects: Old microscope, Queens & Co., no. 1392 (124271). Maxon, Dr. W. R.: 5 ferns from Georgetown, D.C. (121057). Miller, G. S., Jr.: Mammals, reptiles, plants, archeological

material, insects, shells, and woods collected in Puerto Rico in 1932, also 25 fishes from Lake Guanica, Puerto Rico (118458). Morton, C. V.: 1,897 plants collected in Oaxaca by C. V. Morton and Dr. Emil Makrinius, also 180 insects (122747). Richards, Dr. H. G.: 786 mollusks, 1 echinoderm, small collection of Crustacea, from Bermuda (120209). Schmitt, Dr. W. L.: Specimens taken at Tortugas, Fla., in 1932 under auspices of Carnegie Institution of Washington, comprising about 1,900 crustaceans, 1 sponge, 35 coelenterates, 5 bryozoans, 1 pycnogonid, 6 lots of foraminifera, 300 mollusks, 3 plants, echinoderms, fishes, and 5 insects (119885); large collection of Crustacea and 9 birds for skeletonizing and 1 bird skull collected for the Museum while guest of Capt. G. Allan Hancock on cruise of yacht *Velero III* to Galapagos Islands, 1933 (122445). Setzler, F. M.: Archeological and skeletal material, including miscellaneous mammal bones, collected in 1932 from six caves in Brewster County, in Big Bend region of Texas, also bird bones (118169). Wetmore, Dr. A.: 95 bird skins and 38 skeletons (122034).

National Museum, obtained by purchase: Skeleton of a dugong from Bribie Island, Brisbane, Queensland (118656); 1 Edison projecting kinetoscope (119335); 58 beetles (119760); 311 plants from Texas (119807); a fossil fish from Niobrara cretaceous chalk, Logan County, Kans. (119810); 3 birdskins of forms new to the collection (119838); 451 plants collected in Brazil by Mrs. Ynes Mexia (119963); 2 Attu baskets from Aleutian Islands (119991); 100 plants from Switzerland (119992); collection of copepod crustaceans of the late Charles Dwight Marsh consisting of 3,307 slide mounts of copepods, including representative

material of 26 new species, together with card catalogs, library pamphlets, and other material (120079); 52 microscopic slide mounts of isopods and 49 alcoholic specimen of isopods (120082); 3 snakes from Colombia (120335); skins and skulls of 3 bamboo rats, and 2 jackal skins and skulls from Ceylon (120367); 35 small Siberian mammals (120371); 3 birdskins from St. Lawrence Island (120382); 13 birds from Korea (120408); photostatic prints of specifications and drawings of British patents of Robert Fulton, John Cox Stevens, and James Rumsey (120610); blueprints and photographs of early steam boilers and engines, purchased abroad by C. W. Mitman (120612); 1 Aru Island kingfisher (120819); a photograph of a watercolor by Bourne, showing C. F. Durant's balloon over Park Place, New York City, in 1830 (121128); collection of fossils from Cuba (121129); 185 plants from northern Paraguay (121246); 144 insects, mostly Diptera (121251); 3 meteorite hammerstones found at Zichipilco, Valley of Toluca, Mexico (121264); collection of reptiles and amphibians and 2 fresh-water crayfish from Tazewell, Tenn. (121268); motion-picture film of walrus in San Diego Zoo (121322); 500 photographs of type specimens of plants in European herbaria (121482); 2,279 miscellaneous natural-history specimens, comprising insects, birdskins, snakes, lizards, and mammal skins, and mollusk (121522); 9 birds new to the Museum (121844); 231 Brazilian plants collected by Mrs. Ynes Mexia (122116); 9 lots, 272 specimens, of land and fresh-water mollusks (122420); 766 insects (122421); skeleton of a mosasaur from near Wakeeney, Kans. (122438); 100 Hepaticae (122670); 30 Silurian fossils from Amerika,

Bohemia (122688); 2 model airplanes, $\frac{1}{16}$ size, illustrating Antoinette and Herring-Curtiss Pusher, early types that established world records in 1909 (122859); 4 photographs of type specimens of plants (123126); 5 Collotypes (Albertina facsimiles)—“Marie's Himmelfahrt”, after Tinteretto; “In a Tavern” and “Tavern”, after A. Van Ostade; “Christ Child with Ball” and “Grass”, after A. Dürer (123255); 1 Hemfield Railroad coverlet hand-woven about 1851 near Wheeling, W.Va. (123286); 1 6-arm clock reel for measuring yarn, and 1 pair of wool hand cards originally from Wardensville, W.Va. (123287); 232 plants collected in Boyaca, Colombia, by A. E. Lawrence (123288) 279 butterflies, many rare and new to the Museum collection (123350); 200 original etchings assembled by J. Kay, 1826 (123353); 26 mammals, 34 birds, 24 reptiles, and 1 lump of fossil resin (123397); 1 Choctaw flute and 1 Chitimacha basket (123461); 160 miscellaneous insects (123477); cotton and wool, hand woven coverlet, in overshot weave, made in Stewart, Va., about 1815, by Mary Martin (123565); 3 birds from Korea (123694); 36 prints, 12 from each of 3 plates made by Fox Talbot (123728); 6 pieces of Mexican jades from collection of the late George F. Kunz (124081); 3 birdskins (124188); 9 silhouettes, 5 of which are purchases and 4 are small advertisements (124189); 90 plants from Ecuador (124273); 11 pieces of glassware (124597); 143 pieces of American and Irish Belleek china (124598); 500 photographs of type specimens of plants in European herbaria (124606); 2 airplane propellers (124669).

National Museum, made in Museum laboratories: 4 casts of fossil ear of corn, made from specimen no. 35367 (120086); 3 casts of an un-

- finished slate tube from original belonging to Dr. Charles Back (120266); cast of lobster from specimen in Museum of Comparative Zoology (121360); casts of various archeological specimens from Kentucky (122543); an exhibit arranged to illustrate Arabian period of history of medicine (122854); a series of charts, photographs, and specimens arranged to illustrate history of pharmacy (122857); an exhibit illustrating evolution of United States medical standards, the pharmacopoeia and formulary, and commentaries on these books, the dispensaries (122969); 29 charts, maps, and drawings pertaining to archeology of the Old World, prepared in the Museum by S. E. Perkins under direction of J. Townsend Russell and Lorne Wedlock (123811); 14 photographs of Paleolithic sites and places yielding remains of fossil man, made from photographs furnished by Dr. A. Hrdlička and films belonging to J. Townsend Russell (124072).
- National Zoological Park*: 1 egg of California condor (120017); 149 birds (120018, 121100, 121667, 122369, 123259, 124062); 1 horseshoe crab taken at Chesapeake Beach by W. W. Gingell (120215); 71 mammals (120235, 120787, 121404, 122138, 122858, 123844, 124266); 3 pairs of antlers shed by animals and 2 pairs of deer antlers with a portion of skull attached from animals that died in the park (120705); 1 lot of 14 skeletons, 4 alcoholics, 2 birdskins, and 1 bird's egg (120874); 1 gorilla from Alumbongo Mountains, 100 miles inland, west of southern end of Lake Edward (121674); a collection of reptiles (78 specimens) collected by National Zoological Park British Guiana expedition, August–September 1931 (121867); skeleton of a Rocky Mountain goat, skin and skull of a Rocky Mountain sheep, and skeleton of a black bear (122396).
- SMOOKER, G. D., St. Joseph, Trinidad, British West Indies: 1 birdskin and 2 sets, 5 specimens, of eggs (120132).
- SODY, H. J. V., Buitenzorg, Java: 59 mammal skins with skulls from Java and Celebes, and 5 birdskins from Java and Sunda Islands (120188). Exchange.
- SOFIA UNIVERSITY, Sofia, Bulgaria: 100 plants, chiefly from Bulgaria (120241). Exchange.
- SORDAHL, Mrs. L. O., Washington, D.C.: 1 plant from Southwest Africa (120155). (See also under Dr. Zschokke.)
- SOUTH DAKOTA STATE COLLEGE, Brookings, S.Dak.: 16 flies from South Dakota (123500); (through Prof. George Gilbertson) an uncrushed humerus of a mosasaurian reptile (123821).
- SOUTH DAKOTA STATE SCHOOL OF MINES, Rapid City, S.Dak. (through Dr. C. C. O'Harra): 1 cast of Black Hills "Bear Lodge" meteorite (123104); 1 slab of Bear Lodge meteorite from Bear Lodge Mountains, Crook County, Wyo. (123579, exchange).
- SOUTHEASTERN TEACHERS' COLLEGE, Durant, Okla. (through Prof. W. L. Blain): 100 plants from Oklahoma (122133). Exchange.
- SOUTHERN BIOLOGICAL SUPPLY Co., INC., New Orleans, La.: 16 shrimps (116365).
- SOVIET UNION INFORMATION BUREAU. (See under Leningrad Institute of Mineralogy.)
- SPALDING & BROS., A. G., New York, N.Y.: 3 modern aviators' helmets, 1 for winter flying, 1 for summer, and 1 provided with ear pockets for radio receivers (123074).
- SPEICH, Mrs. L. F. (See under Mrs. Mae I. English and Mrs. L. F. Speich.)
- SPENCE, Dr. G. C., Brooklands, England: 1 mollusk from Umyamweoi, East Africa (122031).

- SPRINGER FUND, Smithsonian Institution: Collection of Paleozoic echinoderms and related fossils (123195).
- SPROAT, A. D., Zacatecas, Mexico (through Dr. E. W. Nelson): 2 mountain-lion skulls from Zacatecas (120158).
- SPROUL, CHARLES, Walpole, Maine (through T. L. Jackson): 1 all-wood hame and an old pod auger (120614).
- SQUIER, Maj. Gen. GEORGE O., Washington, D. C.: Portrait of Maj. Gen. George O. Squier, U.S.A., retired, by E. Hodgson Smart (122728).
- STAATLICHEN MUSEUM, Dresden, Germany (through Dr. Fritz von Emden): 6 rare, determined, beetle larvae (120761, exchange); 32 beetles (122185).
- STAATS-SAMMLUNG FÜR PALAONTOLOG. UND HISTOR. GEOL., München, Germany: A cast of type of a fossil mammal (124027). Exchange.
- STABLER, Mrs. LAURENCE, Alexandria, Va.: 2 hand-made quilts, one in "stuffed work" with applique of printed cotton "Tree of Life" design, made in 1802 by Mary Mitchel; the other, appliqued with printed cotton floral motifs, made by her daughter in 1830, and a small sampler worked in 1733 by Hannah Reeve (123978). Loan.
- STADER, Capt. J. A., Washington, D.C.: Hand-woven, double-weave coverlet in blue and white, made in 1855, and a Jacquard weave coverlet in red, green, and purple, woven full width, formerly owned by lender's grandmother in Columbus, Ind. (120168). Loan.
- STAFFORD, E. W., State College, Miss.: 6 crayfishes from Mississippi (116498).
- STANDARD TEXTILE PRODUCTS Co., New York, N.Y.: 70 specimens illustrating manufacture of oilcloth (121138).
- STANFORD UNIVERSITY, Stanford University, Calif. (through Prof. LeRoy Abrams): 3 plants from California (120242). Exchange.
- STANLEY, Mrs. IDA, Washington, D.C.: 2 plates, part of table service used on *Graf Zeppelin* during its maiden voyage to United States and return, 1928 (123073). Loan.
- STANLEY, Dr. W. F., Minot, N.Dak.: 3 toads and 9 frogs from Minot, N.Dak. (124529).
- STARKWEATHER, Mrs. J. A., East Orange, N.J.: Sword and cane owned during early part of 19th century by Dr. Thomas Williamson, U.S.N. (124539).
- STATE, U.S. DEPARTMENT OF: Bronze medal issued by Government of Republic of San Marino in commemoration of inauguration of first San Marino railway, June 12, 1932 (123269).
- STATION BIOLOGIQUE DU ST.-LAURENT, Trois Pistoles, Quebec: (Through Prof. G. H. Prefontaine) About 105 marine invertebrates, composed of isopods, marine worms, anemones, Bryozoa, hermit crabs, hydroids, parasitic copepods, shrimps, amphipods, sponges, nemertean, leech, ascidian, and 2 species, 10 specimens, of marine and fresh-water mollusks from the St. Lawrence Estuary (116249); 12 marine shells, 20 amphipods, 2 isopods, 5 crabs, 102 shrimp. 39 hermit crabs, 1 galatheid, 55 euphausiids, 9 mysids, 1 cumacean, from Trois Pistoles, Quebec (120948); 10 barnacles, 4 amphipods, 5 isopods, 5 mysids, 6 pycnogonids, from Trois Pistoles, Quebec (121656).
- STEELE, Capt. R. D., Port Arthur, Tex.: 1 porpoise skull from coast of Texas (113986).
- STEERE, Mrs. GRACE E. HOLCOMB, and Mrs. EVA C. HOLCOMB STOREY, Southwick, Mass.: A Herschelien telescope, a small astronomical transit and an instrument tripod made by Amasa Holcomb, and an astronomical notebook kept by him (123587).
- STEIN, Miss HILDA A., Carbondale, Ill.: 2 salamanders from near Olive Branch, Ill. (124509).

- STEMEN, T. R., and W. S. MYERS, Oklahoma City, Okla.: 25 plants from Oklahoma (120274).
- STONE, A. E., Kingston, R.I.: (See under the Rhode Island State College.)
- STEPHENSON, Dr. N. W., Silver Spring, Md.: Rose-breasted cockatoo (120608).
- STERNHEIMER BROS., Richmond, Va.: 3 aerostatic gas valves, a radiator shutter assembly, a crash helmet, and a parachute pump (124669).
- STERNKE, W. A., Opa Locka, Fla.: 20 fishes from Yucatan and Jamaica (124617).
- STEVENS, G. W., Alva, Okla.: 2 fishes (120605).
- STEVENSON, J. A. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)
- STEYERMARK, J. A., St. Louis, Mo.: 12 photographs of type specimens of plants (120020).
- STILLINGER, C. R., Spokane, Wash.: 64 plants from Idaho (116397).
- STIRLING, M. W., Washington, D.C.: 350 Lepidoptera from eastern Peru (120152); copper and stone axes found by Indians in fields near Azogues, Ecuador, and purchased from them by donor (122702); archeological, skeletal, and ethnological material (33 specimens) collected by donor near Cuenca, Ecuador, in 1931 (123369).
- STOLER, M. H., Washington, D.C.: 2 slabs of graptolites from Middle Ordovician rocks near Pembroke, Va. (120811).
- STONE, Dr. ALLEN. (See under Harold Schnorrenberg.)
- STOREY, Mrs. EVA C. HOLCOMB. (See under Mrs. Grace E. Holcomb Steere.)
- STRINGER, HERBERT. (See under British Government, British Museum.)
- STRONG, H. T., New York, N.Y.: 3 specimens of willemite (124185). Exchange.
- SUHRIE, J. E., Lansdowne, Pa.: 1 mounted raccoon skin (122295).
- SUPLEE, H. H., Washington, D.C.: Piece of wire said to be from experimental telegraph circuit used by Morse and Vail in 1837-38 (124084).
- SVEC, CHARLES, Relay, Md.: 19 freshwater shells of 2 species from Florida (123082).
- SWALLEN, J. R., Washington, D.C.: 23 plants from Tennessee (121373).
- SWANTON, Dr. J. R., Washington, D.C.: So-called Hopewell type pottery bowl, recovered from Marksville Works, Avoyelles Parish, La., by Mrs. Virginia D. Miller (122679).
- SWARTZ, Dr. F. M., State College, Pa.: 83 Devonian Ostracoda comprising types of 13 recently described species (120283).
- TAFT, Prof. ROBERT, Lawrence, Kans.: Portrait of H. L. Smith, inventor of tintype (124503).
- TAIHOKU IMPERIAL UNIVERSITY, Taihoku (Formosa), Japan: 200 plants from Formosa (122680). Exchange.
- TAYLOR, C. H., Clarendon, Va.: Scale model, $\frac{1}{50}$ size, of a Curtiss Condor airplane, a modern type used for commercial transport and military bombing (120024).
- TAYLOR, F. A., Washington, D.C.: An old tool for sharpening millstones (121865).
- TEHON, L. R., Urbana, Ill.: 4 plants (123362).
- TENNESSEE GEOLOGICAL SURVEY, Nashville, Tenn.: Fossil coral from Tennessee (121270).
- TENNESSEE, UNIVERSITY OF, Knoxville, Tenn. (through Prof. H. M. Jennison): 50 plants from Tennessee (122218). Exchange.
- TEXAS AGRICULTURAL AND MECHANICAL COLLEGE, College Station, Tex. (through Prof. H. G. Johnston): 7 beetles from Texas (120688).
- TEXAS PETROLEUM Co., New York, N.Y. (through Dr. Julia A. Gardner): 10 Upper Cretaceous fossils from Tachira, Venezuela (123123).
- TEXAS, UNIVERSITY OF, Austin, Tex.: 3 ferns from western Texas (122401).

- THOMAS, BOB, Bowie, Ariz.: Fossil jaw of a camel from Arizona (121125).
- THOMAS, C. C., Washington, D.C.: Model of a 5-inch naval gun on a pedestal mount (121833).
- THOMAS, W. M., Keokuk, Iowa: A large quartz geode from Keokuk, Iowa (120216).
- THOMPSON, MRS. ANNA S. (See under Dr. C. F. Langworthy.)
- THOMPSON, J. W., Seattle, Wash.: 576 plants from Washington (120813, 120978, 122108). Exchange.
- THOMSEN, RICARDO, Montevideo, Uruguay: 40 amphipods, 12 copepods, 8 shrimps, 4 ostracods, 3 cladocerans, 5 flatworms, 1 leech (122677).
- TIDD, W. M., Columbus, Ohio: 5 parasitic copepods, new species including type, 3 paratypes, and 1 specimen covered with stalked protozoan (124318).
- TIEDE, Miss ANNA, Washington, D.C.: 1 book of veneer cut from western white pine with a slicing knife (122390).
- TITHERINGTON, GEORGE, Stockton, Calif.: Miscellaneous skeletal fragments excavated near Stockton, Calif. (121144).
- TOLMAN, R. P., Washington, D.C.: Wood samples of black gum (121835).
- TOMKINS, I. R., Savannah, Ga.: 16 shrimps (119840).
- TOWNES, C. H., Greenville, S.C.: 1 marine shell from Horry County, S.C. (128243).
- TOWNS, M. C., New York, N.Y.: 2 gold finger rings, one Chinese and the other Abyssinian (124584).
- TRACY, ARTHUR, Hollywood, Calif.: 1 bee (121957).
- TRAIN, PERCY, Lower Rochester, Nev.: A fossil plant from Trout Creek, Oreg. (120901); 1 plant from Nevada and 2 fossil leaves (121356); 9 plants (121534); an unusually fine specimen of an iron stone concretion from Cretaceous rocks of Cannonball River, N.Dak. (124236).
- TRANSCONTINENTAL & WESTERN AIR, INC., Kansas City, Mo.: Airplane pilot's uniform cap (122203).
- TREASURY, U.S. DEPARTMENT OF THE: *Bureau of the Mint*: 14 United States bronze, silver, and gold coins struck in 1932 (123584).
Bureau of the Public Health Service: (Through Dr. Ida A. Bengtson) 6 flies from Georgia (121135); (through Dr. Carroll Fox) 4 botfly larvae (123079).
- TRENCHARD, Mrs. EDWARD, Babylon, Long Island, N.Y.: Gold and enamel badge of Company K, 7th Regiment, N.Y.N.G., and a bronze sharpshooter's badge, owned by Edward Trenchard (124248). Loan.
- TRENHOLM, LEONARD, Chattanooga, Tenn.: 1 scorpion from Tennessee (120952).
- TROLL, G. A., St. Clairsville, Ohio: Frock coat and vest worn by William McKinley prior to his election as President of United States in 1896 (123575).
- TRUITT, Dr. R. V., College Park, Md.: (See under Maryland Conservation Department.)
- TULANE UNIVERSITY OF LOUISIANA, New Orleans, La. (through Dr. W. T. Penfound): 4 plants from Louisiana (122107).
- TURTON, JOSEPH, Washington, D.C.: 1 starling (121572).
- ULKE, Prof. TITUS, Washington, D.C.: 4 rare beetles collected by donor near Great Falls, Va. (123344); 2 specimens of ankerite from Huddleston mine, Bethesda, Md. (124299).
- UNDERWOOD, HATTON, Madisonville, Tenn.: 1 beetle (121775).
- UNION OF SOUTH AFRICA, DEPARTMENT OF AGRICULTURE, Pretoria, South Africa: 13 grasses (123114). Exchange.
- UNITED SHOE MACHINERY CORPORATION, Boston, Mass.: 33 specimens illustrating new process in shoe manufacture (124674).

- UNITED STATES GEORGE WASHINGTON BICENTENNIAL COMMISSION, Washington, D.C.: 2 official Bicentennial commemorative medals (121216).
- UNIVERSAL WINDING Co., Boston, Mass. (through A. A. Armington): 13 specimens illustrating work of Universal winder (124604).
- UNIVERSITE DE LAUSANNE, Lausanne, Switzerland (through Prof. E. Wilczek): 107 plants (122526). Exchange.
- UNIVERSITEIT VAN STELLENBOSCH, Stellenbosch, South Africa (through Prof. C. G. S. de Villiers): 140 mollusks from South Africa (118526).
- UNIVERSITETETS BOTANISKE MUSEUM, Copenhagen, Denmark: 106 ferns from Dominican Republic (112984); 8 plants from tropical America (120244); 2 specimens of fern from Mexico (120988); 866 plants (122676, 124589); 2 ferns from Hispaniola (124319). Exchange.
- UNIVERSITY OF WARSAW, Warsaw, Poland: 38 Jurassic brachiopods from Poland (123374). Exchange.
- UPPERCU, I. M., Keyport, N.J.: An adjustable metal airplane propeller of 1914 (123991).
- UTAH STATE AGRICULTURAL COLLEGE, Logan, Utah: 14 insects (119724, 121955); 28 flies from Utah (121828, 121857, 123699); 29 beetles from Utah (121825, 122304, 123980); 136 bugs from Utah (121826, 122539, 123836); 36 bugs from Idaho and Utah (122983).
- VACUUM OIL Co., INC., New York, N.Y.: Album of photographs illustrating Col. Charles A. Lindbergh's flights in Europe from May 21 to June 4, 1927; a vial of oil drained from his engine at Le Bourget Airport, and a frame of certificates authenticating this oil (120349).
- VALENTINE, Dr. J. M., Chapel Hill, N.C.: 6 beetles, of 5 species, 5 of the specimens being types of the species and the other an allotype (120005). Exchange.
- VALERIO, Prof. MANUEL, San Jose, Costa Rica: 92 miscellaneous insects, 2 lizards, 6 amphipods, 1 crab, 1 fresh-water mussel, 2 species (4 specimens) of marine and land shells, and 6 plants from Costa Rica (116237); 1 plant from Cocos Island (121155).
- VANDERBILT UNIVERSITY, Nashville, Tenn.: 41 Ordovician and Silurian trilobites from Tennessee (122311). Exchange.
- VANDER SCHALIE, HENRY, Ann Arbor, Mich.: 7 mollusks from North Carolina (121407, 122395).
- VAN DUZEE, M. C., Buffalo, N.Y.: 11 flies, of 4 species (1 holotype, others paratypes) (123696).
- VAN DYKE, DOUGLAS. (See under J. D. Buckstaff.)
- VAN HORN, Mrs. J. R., Washington, D.C.: A tall case clock of early 19th century (123481). Loan.
- VAN HORN, Miss MARIAN, Washington, D.C.: Fern from Virginia (121943).
- VAN HYNING, Dr. O. C., Marianna, Fla.: 5 turtles from near Marianna, Fla. (122191, 122663).
- VENEZUELA OIL Co., Maracaibo, Venezuela: 25 fossil crabs from Venezuela (121840).
- VERGES, E. M., Brookline, Mass.: 75 pottery and stone artifacts from Maunabo and Yabucoa, Puerto Rico (120355); small clay head from Dominican Republic and a rude stone mask from Puerto Rico (124462).
- VERMONT, UNIVERSITY OF, Burlington, Vt. (through Prof. G. P. Burns): 306 plants collected in Mexico by Dr. C. G. Pringle (123715).
- VICTORIAS MILLING Co., Manila, P.I.: 187 miscellaneous insects from Philippines (118723).
- VIJAKICH, L. S., Ithaca, N.Y.: 1 bird from Siam (123829).
- VILLENEUVE, Dr. J., Rambouillet, France: 21 flies (121223). Exchange.
- VILLIERS, Prof. C. G. S. DE. (See under Universiteit van Stellenbosch.)
- VINALL, H. N. (See under U.S. Department of Agriculture, Bureau of Plant Industry.)

- VINSON, Mrs. KATE C. MORAN, Washington, D.C.: A silk applique quilt designed and made in Baltimore, Md., 1845, by Mrs. Mary Jane Green Moran, mother of donor, when 18 years of age (123393).
- VIRGIN ISLANDS (U.S.), DEPARTMENT OF HEALTH OF, St. Croix, Virgin Islands (through Dr. James Knott): 1 crab and 5 shrimps from Virgin Islands (122067).
- VITREFRAX CORPORATION, Los Angeles, Calif.: A sample of kyanite ore from near Ogilby, Calif. (118672).
- VON EMDEN, Dr. FRITZ, Blaseqitz, Germany: 7 coleopterous larvae of 5 species (121094). Exchange. (See also under Staatlichen Museum.)
- VON ESCHEN, F., Modesto, Calif.: 3 specimens of river-limpet and 17 starfish from Oregon (118235).
- VONSEN, M., Petaluma, Calif.: 9 specimens of minerals from California (121464); a specimen of glaucophane with apatite in chlorite (122380, exchange); specimen of actinolite from Sonoma County, Calif. (124476).
- WAGGAMAN, Maj. ENNALLS, Washington, D.C.: Crossbow, quiver, and 6 arrows collected by donor in Cambodia in March 1933 (124620).
- WAILES, G. H., Vancouver, British Columbia: 94 amphipods (117319, 119853, 120205, 123596); 1 lot, 4 specimens, of shrimp larvae, and 500 copepods (123939).
- WALCOTT, Mrs. C. D., Washington, D.C.: 4 plants from Tennessee (120157); 2 plants (124064); 1 plant from Great Smoky National Park (124533).
- WALKER, E. P., Washington, D.C.: 3 gray-fox and 3 coyote skulls from Phoenix, Ariz. (122441).
- WALKER, F. W., Monticello, Fla. (through F. H. Benjamin): 2 rare and beautiful moths, reared by donor (121263).
- WAR, U.S. DEPARTMENT OF: 2 copies of United States military decoration, the Purple Heart, with lapel buttons and ribbons (120213); 1 large reconnoitering telescope with heliotrope attachment and folding tripod, and 1 astronomical transit with cast-iron base (122836).
- Air Corps*, 19th Airship Company, Langley Field, Va.: 7 propellers used on various airships operated by U.S. Army at Langley Field, Va., 1919-25 (124144).
- WARDLAW, F. A., Jr., Inspiration, Ariz., and F. A. WARDLAW, New York, N.Y.: 4 original Edison incandescent lamps, an early Edison tin-foil phonograph, a bust of Thomas A. Edison, 3 models of locomotives, 3 models of marine engines, and a galvanometer said to have been used by Joseph Henry (123470).
- WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N.Y.: 33 crinoids selected by Dr. G. A. Cooper (120345); 1 *Orthoceras* from Bertie waterlime and 71 stromatoproids from Devonian of Iowa (121939). Exchange.
- WARE, E. R. (See under U.S. Department of Agriculture, Forest Service.)
- WARREN, E. R., Colorado Springs, Colo.: 8 bird skeletons (123346).
- WASHBURN, CADWALLADER, Mallorca, Spain (through Frederick Keppell & Co., Inc.): 54 etchings by donor for exhibition April 24 to May 21, 1933 (123845). Loan.
- WASHBURN, Rev. O. R., Orford, N.H.: 1 beetle (121358).
- WASHINGTON FIELD MUSEUM, Washington, N.C.: 20 fossil shells from Runyon Creek, Beaufort County, N.C. (124383).
- WASHINGTON, STATE COLLEGE OF, Pullman, Wash.: 300 plants from western United States (122122). Exchange.
- WASHINGTON, UNIVERSITY OF, Department of Fisheries, Seattle, Wash. (through Dr. L. P. Schultz): 2 fishes, paratypes of a new species (123170).
- WATKINS, W. N., Washington, D.C.: Wood samples of sweet cherry, collected by donor at Bethesda, Md. (124623).

- WAYNE COLORPLATE Co., Detroit, Mich. (through Russia Cement Co.): 1 small halftone print with 3 enlargements to 4, 16, and 100 times original size, resulting from use of halftone screens, to illustrate use of glue in photo-engraving (120696).
- WEBB, T. W., Lake Placid, Fla.: 1 moth from Florida (121220).
- WEBB, W. F., Rochester, N.Y.: 161 pearly fresh-water mussels from United States and Australia (119989, 120254, 120869).
- WEBER, Mrs. SYBILLA M., New York, N.Y.: 50 drypoints for exhibition February 27 to March 26, 1933 (123262, loan); 2 drypoints entitled "Listening" and "At Top Speed" (123727).
- WEIDHAAS, ERNEST, New York, N.Y.: 32 chalcedonic fossils (123722).
- WEIL, M. K., Montgomery, Ala.: Potsherds from 3 Indian village sites in Alabama (124254).
- WELLS, J. C., Custer, S.Dak. (through E. P. Henderson): Examples of a phosphate mineral from South Dakota (122090).
- WELLS, J. W., Homer, N.Y.: (See under Dr. H. Yabe.)
- WESTMAN, JORGE, Santiago, Chile: Rough and polished samples of mineral alkanasul from Chile (121494). Exchange.
- WETMORE, Dr. A., Washington, D.C.: 102 birds and 1 shrew (121265, 123111, 123345, 123351, 123391, 123478, 123564, 123686, 123740, 123828, 123941, 123997, 124069, 124070, 124237, 124264, 124313, 124324, 124387, 124447, 124472, 124556, 124596); relic of a large wood cart axle, with iron skeins, skein ring, lynch hoop, lynch, and axle-box, from Stafford County, Va. (122554); 2 ptarmigan skulls (122827); specimens of bird bones from Pleistocene of Rancho La Brea, Calif. (122962). (See also under Smithsonian Institution, National Museum.)
- WHERRY, Dr. E. T., Philadelphia, Pa.: 1 cultivated plant from Pennsylvania (121259); 1 plant from Delaware (123999).
- WHITTALL ASSOCIATES, LTD., M. J., Worcester, Mass.: 22 specimens illustrating manufacture of wool carpet yarns (123493).
- WIELAND, Prof. G. R., New Haven, Conn.: 2 specimens of fossil plant (120218).
- WIGHT, Mrs. CALVIN, Washington, D.C.: Small collection of Chinese costumes, 4 scrolls, and a print (124071). Loan.
- WILCZEK, Prof. E. (See under Université de Lausanne.)
- WILLIAMS, Mrs. MATILDA DAFT, Albany, N.Y.: Early electric fan, ammeter, and framed coin associated with activities of Leo Daft, electric traction pioneer (123398).
- WILLIAMS, S. E., Marco, Fla.: 1 sea-turtle egg (124077).
- WILLIAMSON, E. B., Ann Arbor, Mich.: 1 slide of a moth (122706).
- WILLING, J. H., Los Angeles, Calif.: 3 gold stickpins reported to have been made in 1855 and worn by early California gold miners (123257).
- WILLIS, W. N., Trappe, Md.: Working model of steam engine fitted with pear-shaped cam patented by donor in 1883 (124510).
- WILSON, CHARLES, Clarno, Oreg.: 50 specimens of fossil fruit and impressions of leaves from Oregon (120601).
- WILSON, W. H. (See under National Carbon Co., Inc.)
- WING, L. W., Ann Arbor, Mich.: 2 horned larks (skins) (123275).
- WINKELSTEIN, CHARLES, Stamford, Conn.: 1 "gem" clam from Connecticut (120864).
- WISCONSIN, UNIVERSITY OF, Madison, Wis.: Plant from Ontario (122047); 17 plants from Wisconsin (122103). Exchange.
- WITCOMBE, McGEACHIN & Co., INC., New York, N.Y.: 2 scenic printed cotton drapery fabrics, Lindbergh Epic Toile and Abraham Lincoln Print (124182).

- WOOD, Miss HELEN M. (See under British Government, British Museum.)
- WOOD, R. M., Philadelphia, Pa.: 54 insects (122642).
- WOODWARD, DOROTHY, Lawrence, Kans.: Plant from Missouri (122114).
- WRIGHT, B. H., Penn Yan, N.Y.: 2 specimens (type and paratype) of a pearly fresh-water mussel from Florida (123488).
- YABE, Dr. H., Sendai, Japan (through J. W. Wells): 2 fossil corals from near Kamikatetsu, Kikaijima, Riu-kiu Islands (124659).
- YOTHERS, W. W. (See under U.S. Department of Agriculture, Bureau of Entomology.)
- YOUNG, B. P., Ithaca, N.Y.: 5 mollusks from alimentary canal of a woodchuck (121466).
- YOUNG, Prof. R. T., Missoula, Mont.: 45 amphipods, 1 copepod, 2 Cladocera, and 22 miscellaneous insects, from near Flathead Lake, Mont. (118247); 2 beetles (122831).
- ZELIFF, Dr. C. C., Washingtonville, Pa.: 1 helminth (115497); 13 fungi (120609); 2 stoneflies (124195).
- ZOELLER, Miss LILIAN, Solomons Island, Md.: 1 crab and 2 lots of zoea from Patuxent River (120327).
- ZOOLOGISCHES MUSEUM DER UNIVERSITÄT, Berlin, Germany: 1 crab, paratype (119190). Exchange.
- ZSCHOKKE, Dr., Keetmanshoop, Southwest Africa (through Mrs. L. O. Sordahl): 10 phyllopoas, collected in 1931 at Omaruru, Southwest Africa (119554).

PUBLICATIONS ISSUED BY THE UNITED STATES
NATIONAL MUSEUM DURING THE FISCAL YEAR 1932-33

REPORT

Report on the progress and condition of the United States National Museum for the year ended June 30, 1932.

8vo., pp. i-vi, 1-181, pl. 1.

PROCEEDINGS

Proceedings of the United States National Museum. Volume 79.
8vo., arts. 1-34, xvi+626 pp., 76 figs., 115 pls.

Proceedings of the United States National Museum. Volume 80.
8vo., arts. 1-23, xii+603 pp., 54 figs., 65 pls.

Proceedings of the United States National Museum. Volume 81.
8vo., arts. 1-18, xii+571 pp., 136 figs., 64 pls.

BULLETINS

No. 39, part N. Directions for preparing specimens of mammals. Sixth edition, revised. By Gerrit S. Miller, Jr.

8vo., pp. i-ii, 1-20, 5 figs.

No. 100, volume 12. Contributions to the biology of the Philippine Archipelago and adjacent regions: The fishes of the families Banjosidae, Lethrinidae, Sparidae, Girellidae, Kyphosidae, Oplegnathidae, Gerridae, Mullidae, Emmelichthyidae, Sciaenidae, Sillaginidae, Arripidae, and Enoplosidae collected by the United States Bureau of Fisheries steamer *Albatross*, chiefly in Philippine seas and adjacent waters. By Henry W. Fowler.

8vo., pp. i-vi, 1-465, 32 figs.

No. 158. The copepods of the Woods Hole region, Massachusetts. By Charles Branch Wilson.

8vo., pp. i-xix, 1-635, 316 figs., pls. 1-41 (colored frontispiece).

No. 163. American and European swords in the historical collections of the United States National Museum. By Theodore T. Belote.

8vo., pp. i-vii, 1-163, pls. 1-46.

No. 164. The Canadian and Ordovician formations and fossils of South Manchuria. By Riuji Endo.

8vo., pp. i-iii, 1-152, pls. 1-38 (including 5 folding maps).

PAPERS PUBLISHED IN SEPARATE FORM

FROM THE BULLETINS

From no. 100, volume 6. Contributions to the biology of the Philippine Archipelago and adjacent regions: Part 7, The Philippine land mollusks *Cochlostyla rufogaster* and *Obba marmorata* and their races. By Paul Bartsch.

8vo., pp. 329-342, pls. 83-86.

From the same: Part 8, The land shells of the genus *Obba* from Mindoro Province, Philippine Islands. By Paul Bartsch.

8vo., pp. 343-371, pls. 87-93.

FROM VOLUME 80 OF THE PROCEEDINGS

- No. 2921. Insects of the order Orthoptera of the Pinchot expedition of 1929. By A. N. Caudell.
Art. 21, pp. 1-7.
- No. 2923. Revision of the nearctic ichneumon-flies belonging to the genus *Macrocentrus*. By C. F. Muesebeck.
Art. 23, pp. 1-55.

FROM VOLUME 81 OF THE PROCEEDINGS

- No. 2925. Birds collected in Cuba and Haiti by the Parish-Smithsonian expedition of 1930. By Alexander Wetmore.
Art. 2, pp. 1-40, pls. 1-7.
- No. 2927. The marine and fresh-water sponges of California. By M. W. de Laubenfels.
Art. 4, pp. 1-140, 79 figs.
- No. 2928. A new trematode of the genus *Urotrema* from bats. By Joseph E. Alicata.
Art. 5, pp. 1-4, 1 fig.
- No. 2929. A newly discovered West Indian mollusk faunula. By Paul Bartsch.
Art. 6, pp. 1-12, pls. 1-3.
- No. 2930. Decorative designs on Elden Pueblo pottery, Flagstaff, Ariz. By Walter Hough.
Art. 7, pp. 1-11, 1 fig., pls. 1-10.
- No. 2931. The fishes obtained by Lieut. H. C. Kellers, of the United States Naval Eclipse expedition of 1930, at Niuafou Island, Tonga group, in Oceania. By Henry W. Fowler.
Art. 8, pp. 1-9, 3 figs.
- No. 2934. The forms of the common Old World swallowtail butterfly (*Papilio machaon*) in North America, with descriptions of two new species. By Austin H. Clark.
Art. 11, pp. 1-15, pls. 1-8.
- No. 2935. Report on the hexactinellid sponges collected by the United States Fisheries steamer *Albatross* in the northwestern Pacific during the summer of 1906. By Yaichiro Okada.
Art. 12, pp. 1-118, 16 figs., pls. 1-6.
- No. 2936. The trematode parasites of marine mammals. By Emmett W. Price.
Art. 13, pp. 1-68, pls. 1-12.
- No. 2937. Two new land shells of the genus *Bulimulus* from Bolivia. By William B. Marshall.
Art. 14, pp. 1-3, pl. 1.
- No. 2938. A Miocene mollusk of the genus *Haliotis* from the Temblor Range, California. By W. P. Woodring.
Art. 15, pp. 1-4, pl. 1.
- No. 2939. Notes on the helminth parasites of the opossum (*Didelphis virginiana*) in southeast Texas, with descriptions of four new species. By Asa C. Chandler.
Art. 16, pp. 1-15, 5 figs.
- No. 2940. The helminths parasitic in the Amphibia and Reptilia of Houston, Tex., and vicinity. By Paul D. Harwood.
Art. 17, pp. 1-71, pls. 1-5.
- No. 2941. On a newly mounted skeleton of *Diplodocus* in the United States National Museum. By Charles W. Gilmore.
Art. 18, pp. 1-21, 3 figs., pls. 1-6.

FROM VOLUME 82 OF THE PROCEEDINGS

- No. 2942. A remarkable new genus and species of two-winged flies related to the Oestridae. By Charles H. T. Townsend.
Art. 1, pp. 1-4, 2 figs.
- No. 2943. A new Paleocene mammal from a deep well in Louisiana. By George Gaylord Simpson.
Art. 2, pp. 1-4, 1 fig.
- No. 2944. The Chinese lizards of the genus *Gekko*. By Leonhard Stejneger.
Art. 3, pp. 1-8.
- No. 2945. Description of a tick, *Dermacentor halli*, from the Texas peccary, with a key to the North American species of *Dermacentor*. By Allen McIntosh.
Art. 4, pp. 1-6, 1 fig., pl. 1.
- No. 2946. New fossil fresh-water mollusks from Ecuador. By William B. Marshall and Edgar O. Bowles.
Art. 5, pp. 1-7, pl. 1.
- No. 2947. Two new nematodes, and notes on new findings of nematodes parasitic in Amphibia. By A. C. Walton.
Art. 6, pp. 1-5, 1 fig.
- No. 2948. A fossil rhinoceros (*Diceratherium armatum* Marsh) from Gallatin County, Montana. By Horace Elmer Wood, 2d.
Art. 7, pp. 1-4, pls. 1-3.
- No. 2949. New fresh-water gastropod mollusks of the genus *Chilina* of South America. By William B. Marshall.
Art. 8, pp. 1-6, pl. 1.
- No. 2950. A new species of extinct turtle from the Upper Pliocene of Idaho. By Charles W. Gilmore.
Art. 9, pp. 1-7, 5 figs., pls. 1-3.
- No. 2951. A collection of birds from Great Namaqualand, Southwest Africa. By Herbert Friedmann.
Art. 10, pp. 1-12, pl. 1.
- No. 2952. Five new species of North American ichneumon-flies. By Frank D. DeGant.
Art. 11, pp. 1-6.
- No. 2953. Fossil plants from the Aspen shale of southwestern Wyoming. By Roland W. Brown.
Art. 12, pp. 1-10, 2 figs., pls. 1, 2.
- No. 2954. *Camplostroma*, a Lower Cambrian floating hydrozoan. By Rudolf Ruedemann.
Art. 13, pp. 1-8, 2 figs., pls. 1-4.
- No. 2955. Descriptions of new ichneumon-flies with taxonomic notes. By R. A. Cushman.
Art. 14, pp. 1-16.
- No. 2956. Description of two parasitic nematodes from the Texas peccary. By Benjamin Schwartz and Joseph E. Alicata.
Art. 16, pp. 1-6, 4 figs.
- No. 2957. New termites from India. By Thomas E. Snyder.
Art. 16, pp. 1-15, 8 figs., pl. 1.
- No. 2958. A new nematode from the rhea. By Everett E. Wehr.
Art. 17, pp. 1-5, 3 figs.

- No. 2959. Synopsis of the calanoid crustaceans, exclusive of the Diaptomidae, found in fresh and brackish waters, chiefly of North America. By C. Dwight Marsh.
Art. 18, pp. 1-58, pls. 1-24.
- No. 2960. West African snails of the family Achatinidae in the United States National Museum. By Henry A. Pilsbry.
Art. 19, pp. 1-6, pls. 1, 2.
- No. 2961. Descriptions of new and imperfectly known species and genera of gobioid and pleuronectid fishes in the United States National Museum. By Isaac Ginsburg.
Art. 20, pp. 1-23, 3 figs.
- No. 2962. *Crossochir koelzi*: A new California surf-fish of the family Embiotocidae. By Carl L. Hubbs.
Art. 21, pp. 1-9, pl. 1.
- No. 2963. Pottery of the Hopewell type from Louisiana. By Frank M. Setzler.
Art. 22, pp. 1-21, 6 figs., pls. 1-7.

REPORT OF THE EXECUTIVE COMMITTEE OF THE BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION

FOR THE YEAR ENDING JUNE 30, 1933

To the Board of Regents of the Smithsonian Institution:

Your executive committee respectfully submits the following report in relation to the funds of the Smithsonian Institution, together with a statement of the appropriations by Congress for the Government bureaus in the administrative charge of the Institution:

SMITHSONIAN ENDOWMENT FUND

The original bequest of James Smithson was £104,960, 8 shillings, 6 pence; \$508,318.46. Refunds of money expended in prosecution of the claim, freights, insurance, etc., together with payment into the fund of the sum of £5,015 which had been withheld during the lifetime of Madame de la Batut, brought the fund to the amount of..... \$550, 000. 00

Since the original bequest the Institution has received gifts from various sources, chiefly in the years prior to 1893, the income from which may be used for the general work of the Institution. To these gifts has been added capital from savings on income, gain from sale of securities, etc., bringing the total endowment for general purposes to the amount of..... 1, 121, 938. 03

The Institution holds also a number of endowment gifts the income of each being restricted to specific use. These are invested and stand on the books of the Institution as follows:

Arthur, James, fund, income for investigations and study of sun and lecture on the sun.....	\$46, 176. 01
Bacon, Virginia Purdy, fund, for a traveling scholarship to investigate fauna of countries other than the United States.....	57, 846. 04
Baird, Lucy H., fund, for creating a memorial to Secretary Baird....	9, 492. 74
Barstow, Frederic D., fund, for purchase of animals for the Zoological Park.....	878. 26
Canfield Collection fund, for increase and care of the Canfield collection of minerals.....	44, 162. 63
Casey, Thomas L., fund, for maintenance of the Casey collection and promotion of researches relating to Coleoptera.....	8, 923. 05
Chamberlain, Francis Lea, fund, for increase and promotion of Isaac Lea collection of gems and mollusks.....	32, 513. 80
Hodgkins fund, specific, for increase and diffusion of more exact knowledge in regard to nature and properties of atmospheric air..	100, 000. 00

Hughes, Bruce, fund, to found Hughes alcove -----	17,492.15
Myer, Catherine Walden, fund, for purchase of first-class works of art for the use of and benefit of the National Gallery of Art.-----	21,886.49
Pell, Cornelia Livingston, fund, for maintenance of Alfred Duane Pell collection-----	2,787.63
Poore, Lucy T. and George W., fund, for general use of the Institution when principal amounts to the sum of \$250,000-----	63,642.83
Reid, Addison T., fund, for founding chair in biology in memory of Asher Tunis-----	25,725.75
Roebbling fund, for care, improvement, and increase of Roebbling collection of minerals-----	139,339.01
Rollins, Miriam and William, fund, for investigations in physics and chemistry-----	58,779.04
Springer, Frank, fund, for care, etc., of Springer collection and library-----	14,883.04
Walcott, Charles D. and Mary Vaux, research fund, for development of geological and paleontological studies and publishing results thereof-----	11,615.48
Younger, Helen Walcott, fund, held in trust-----	49,812.50
Zerbee, Frances Brincklé, fund, for endowment of aquaria-----	878.73

Total endowment for specific purposes other than Freer endowment----- 706,835.18

The capital funds of the Institution, except the Freer funds, are invested as follows:

	U.S. Treasury	Consolidated fund	Separate funds	Total
Arthur, James, fund-----		\$46,176.01		\$46,176.01
Bacon, Virginia Purdy, fund-----		57,846.04		57,846.04
Baird, Lucy H., fund-----		9,492.74		9,492.74
Barstow, Frederic D., fund-----		878.26		878.26
Canfield Collection, fund-----		44,162.63		44,162.63
Casey, Thomas L., fund-----		8,923.05		8,923.05
Chamberlain fund-----		32,513.80		32,513.80
Hodgkins (specific) fund-----	\$100,000.00			100,000.00
Hughes, Bruce, fund-----		17,492.15		17,492.15
Myer, Catherine W., fund-----		21,886.49		21,886.49
Pell, Cornelia Livingston, fund-----		2,787.63		2,787.63
Poore, Lucy T. and George W., fund-----	26,670.00	36,972.83		63,642.83
Reid, Addison T., fund-----	11,000.00	14,725.75		25,725.75
Roebbling Collection fund-----		139,339.01		139,339.01
Rollins, Miriam and William, fund-----		58,779.04		58,779.04
Smithsonian unrestricted funds:				
Avery fund-----	14,000.00	42,995.35		56,995.35
Endowment fund-----		172,494.45		172,494.45
Habel fund-----	500.00			500.00
Hackenberg fund-----		4,645.45		4,645.45
Hamilton fund-----	2,500.00	466.06		2,966.06
Henry fund-----		1,396.39		1,396.39
Hodgkins general fund-----	116,000.00	34,626.90		150,626.90
Parent fund-----	727,640.00	1,409.48		729,049.48
Rhees fund-----	590.00	546.19		1,136.19
Sanford fund-----	1,100.00	1,027.76		2,127.76
Springer fund-----			\$14,883.04	14,883.04
Walcott, Charles D. and Mary Vaux, fund-----		11,615.48		11,615.48
Younger, Helen Walcott, fund-----			49,812.50	49,812.50
Zerbee, Frances Brincklé, fund-----		878.73		878.73
Total-----	1,000,000.00	764,077.67	64,695.54	1,828,773.21

FREER GALLERY OF ART FUND

Early in 1906, by deed of gift, Charles L. Freer, of Detroit, gave to the Institution his collection of Chinese and other oriental objects of art, as well as paintings, etchings, and other works of art by Whistler, Thayer, Dewing, and other artists. Later he also gave funds for the construction of a building to house the collection, and finally, in his will, probated November 6, 1919, he provided stock and securities to the estimated value of \$1,958,591.42 as an endowment fund for the operation of the gallery. From the above date to the present time these funds have been increased by stock dividends, savings of income, etc., to a total of \$4,736,907.59. In view of the importance and special nature of the gift and the requirements of the testator in respect to it, all Freer funds are kept separate from the other funds of the Institution, and the accounting in respect to them is stated separately.

The invested funds of the Freer bequest are classified as follows:

Court and grounds fund.....	\$530, 719. 72
Court and grounds maintenance fund.....	133, 392. 99
Curator fund.....	540, 030. 57
Residuary legacy.....	3, 532, 764. 31
Total.....	<u>4, 736, 907. 59</u>

SUMMARY

Invested endowment for general purposes.....	\$1, 121, 938. 03
Invested endowment for specific purposes other than Freer endowment.....	706, 835. 18
Total invested endowment other than Freer endowment..	<u>1, 828, 773. 21</u>
Freer invested endowment for specific purposes.....	4, 736, 907. 59
Total invested endowment for all purposes.....	<u>6, 565, 680. 80</u>

CLASSIFICATION OF INVESTMENTS

Deposited in the United States Treasury at 6 percent per annum as authorized in the U. S. Revised Statutes, sec. 5591.....	\$1, 000, 000. 00
Investments other than Freer endowment (cost or market value at date acquired):	
Bonds (20 different groups).....	\$368, 873. 41
Stocks (36 different groups).....	430, 252. 66
Real estate first-mortgage notes.....	16, 750. 00
Uninvested capital.....	12, 897. 14
	<u>828, 773. 21</u>
Total investments other than Freer endowment.....	1, 828, 773. 21
Investments of Freer endowment (cost or market value at date acquired):	
Bonds (48 different groups).....	\$2, 275, 487. 44
Stocks (37 different groups).....	2, 371, 085. 15
Real estate first-mortgage notes.....	58, 500. 00
Uninvested capital.....	31, 835. 00
	<u>4, 736, 907. 59</u>
Total investments.....	<u>6, 565, 680. 80</u>

CASH BALANCES, RECEIPTS, AND DISBURSEMENTS DURING THE FISCAL YEAR ¹

Cash balance on hand June 30, 1932-----		\$250, 270. 59
Receipts:		
Cash income from various sources for general work of the institution-----	\$67, 978. 99	
Cash gifts expendable for special scientific objects (not to be invested)-----	124, 500. 00	
Cash received as royalties from sales of Smithsonian Scientific Series-----	2, 500. 00	
Cash income from endowments for specific use other than Freer endowments and from miscellaneous sources (including refund of temporary advances)-----	58, 373. 59	
Cash capital from sale, call of securities, etc. (to be reinvested)-----	226, 107. 44	
Total receipts other than Freer endowment-----		479, 460. 02
Cash receipts from Freer endowment, income from investments, etc-----	217, 437. 92	
Cash capital from sale, call of securities, etc. (to be reinvested)-----	1, 190, 648. 13	
		<u>1, 408, 086. 05</u>
Total-----		<u><u>2, 137, 816. 66</u></u>
Disbursements:		
From funds for general work of the Institution:		
Buildings, care, repairs and alterations--	\$2, 013. 48	
Furniture and fixtures-----	58. 20	
General administration ² -----	24, 384. 37	
Library-----	1, 882. 75	
Publications (comprising preparation, printing, and distribution)-----	9, 771. 57	
Researches and explorations-----	10, 605. 94	
International exchanges-----	3, 903. 48	
		52, 619. 79
From funds for specific use, other than Freer endowment:		
Investments made from gifts, from gain from sales, etc., of securities and from savings on income-----	117, 601. 49	
Other expenditures, consisting largely of research work, travel, increase and care of special collections, etc., from income of endowment funds and from cash gifts for specific use (including temporary advances)-----	161, 978. 87	
Reinvestment of cash capital from sale, call of securities, etc-----	214, 539. 95	
		<u>494, 120. 31</u>

¹ This statement does not include Government appropriations under the administrative charge of the Institution.

² This includes salaries of the Secretary and certain others.

CASH BALANCES, RECEIPTS, AND DISBURSEMENTS DURING THE FISCAL YEAR—continued

Disbursements—Continued.

From Freer endowment:

Operating expenses of the gallery, salaries, field expenses, etc.....	\$57, 896. 01	
Purchases of art objects.....	166, 548. 77	
Investments made from gain from sale, etc., of securities and from income---	7, 525. 90	
Reinvestment of cash capital, from sale, call of securities, etc.....	1, 175, 697. 63	
Cash balance June 30, 1933.....		\$1, 407, 668. 31 183, 408. 25
Total.....		2, 137, 816. 66

EXPENDITURES FOR RESEARCHES IN PURE SCIENCE, EXPLORATIONS,
CARE, INCREASE, AND STUDY OF COLLECTIONS, ETC.

Expenditures from general endowment:

Publications.....	\$9, 771. 57	
Researches and explorations.....	20, 645. 32	
		\$30, 416. 89

Expenditures from funds devoted to specific purposes:

Researches and explorations.....	121, 629. 71	
Care, increase, and study of special collections---	15, 743. 11	
Publications.....	2, 117. 28	
		139, 490. 10
Total.....		169, 906. 99

The practice of depositing on time in local trust companies and banks such revenues as may be spared temporarily has been continued during the past year, and interest on these deposits has amounted to \$2,020.04.

The Institution gratefully acknowledges gifts or bequests from the following:

Dr. Adolph M. Hanson, income from certain royalties for conducting scientific work of the Institution.

Mr. Eldridge R. Johnson, for deep-sea and other oceanographic explorations.

Research Corporation, for further contributions for researches in radiation.

Mr. John A. Roebing, for further contributions for researches in radiation.

Mrs. Mary Vaux Walcott, for purchase of Indian sand paintings.

All payments are made by check, signed by the Secretary of the Institution, on the Treasurer of the United States, and all revenues are deposited to the credit of the same account. In many instances deposits are placed in bank for convenience of collection and later are withdrawn in round amounts and deposited in the Treasury.

The foregoing report relates only to the private funds of the Institution.

The following appropriations were made by Congress for the Government bureaus under the administrative charge of the Smithsonian Institution for the fiscal year 1933.

Salaries and expenses.....		\$38, 644
Gellatly Art collection.....		17, 500
International exchanges.....		47, 529
American ethnology.....		66, 640
International Catalog of Scientific Literature.....		5, 650
Astrophysical Observatory.....		32, 094
National Museum:		
Maintenance and operation.....	\$148, 370	
Preservation of collections.....	617, 760	
		<u>766, 130</u>
National Gallery of Art.....		38, 220
National Zoological Park.....		228, 880
Printing and binding.....		62, 422
		<u>1, 303, 709</u>

There was also an allotment of \$12,500 made by the United States Commission of the Chicago World's Fair Centennial Celebration for participation by the Smithsonian Institution in "A Century of Progress."

The report of the audit of the Smithsonian private funds is printed below:

OCTOBER 4, 1933.

EXECUTIVE COMMITTEE, BOARD OF REGENTS,
Smithsonian Institution, Washington, D.C.

SIRS: Pursuant to agreement we have audited the accounts of the Smithsonian Institution for the fiscal year ended June 30, 1933, and certify the balance of cash on hand June 30, 1933, to be \$185,308.25.

We have verified the record of receipts and disbursements maintained by the Institution and the agreement of the book balances with the bank balances.

We have examined all the securities in the custody of the Institution and in the custody of the banks and found them to agree with the book records.

We have compared the stated income of such securities with the receipts of record and found them in agreement therewith.

We have examined all vouchers covering disbursements for account of the Institution during the fiscal year ended June 30, 1933, together with the authority therefor, and have compared them with the Institution's record of expenditures and found them to agree.

We have examined and verified the accounts of the Institution with each trust fund.

We found the books of account and records well and accurately kept and the securities conveniently filed and securely cared for.

All information requested by your auditors was promptly and courteously furnished.

We certify the balance sheet, in our opinion, correctly presents the financial condition of the Institution as at June 30, 1933.

WILLIAM L. YAEGER & Co.

WILLIAM L. YAEGER,

Certified Public Accountant.

Respectfully submitted.

FREDERIC A. DELANO,

R. WALTON MOORE,

JOHN C. MERRIAM,

Executive Committee.

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SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01583 1217