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ANNUAL REPORT

OF THE

BOARD OF REGENTS

OF THE

SMITHSONIAN INSTITUTION,

SHOWING

THE OPERATIONS, EXPENDITURES, AND CONDITION
OF THE INSTITUTION

FOR THE

YEAR ENDING JUNE 30, 1906.

REPORT

OF THE

U. S. NATIONAL MUSEUM.

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REPORT

UPON

THE CONDITION AND PROGRESS OF THE U. S. NATIONAL MUSEUM DURING THE YEAR ENDING JUNE 30, 1906.

By Richard Rathbun,

Assistant Secretary of the Smithsonian Institution, in charge of the U. S. National Museum.

In the death of Samuel Pierpont Langley, Secretary of the Smithsonian Institution, on February 27, 1906, the National Museum, of which he was the keeper by virtue of his higher office, has suffered a severe loss.

Although Mr. Langley's scientific work lay in the direction of astronomy and physics, his wide range of learning and breadth of view led him to take a deep personal interest in all the varied activities of the Museum, with some of which, moreover, he was especially identified. It was largely through his efforts that the collections relating to the history of time-keeping devices and to standards of weights and measures were brought together, and the art subjects strongly appealed to his esthetic sense.

The extensive collections exhibited in the public halls were in his view not only valuable to the student but capable of imparting information to the man of ordinary education, and in behalf of the people at large he sought the elimination from the labels of such technical matter as was beyond their comprehension. He was also especially solicitous as to the needs of the child, as is strikingly illustrated in the so-called children's room, due to his initiative and direction.

As was to be expected, the manifold duties resting upon the Secretary precluded his taking up the details of management of the Museum, but he was ever active in guarding its interests before Congress and the public.

The work of this great man will be recorded in another place and at another time. In this connection I only wish to express my sense of personal loss and my deep appreciation of the confidence he bestowed in committing to me the administration of the National Museum.

GENERAL CONSIDERATIONS.

The inception and history of the Museum have often been discussed in the opening pages of the annual report. Congress, in the act of August 10, 1846, founding the Smithsonian Institution, recognized that an opportunity was afforded, in carrying out the large-minded design of Smithson, to provide for the custody of the museum of the nation. To this new establishment was therefore intrusted the care of the national collections, a course that time has fully justified.

In the beginning the cost of maintaining the museum side of the Institution's work was wholly paid from the Smithsonian income; then for a number of years the Government bore a share, and during the past three decades Congress has voted sufficient funds to cover the expenses of the museum, thus furthering one of the primary means "for the increase and diffusion of knowledge among men" without encroaching upon the resources of the Institution.

The museum idea was inherent in the establishment of the Smithsonian Institution, which in its turn was based upon a ten years' discussion in Congress and the advice of the most distinguished scientific men, educators, and intellectual leaders of the nation of seventy years ago. It is interesting to note how broad and comprehensive were the views which actuated our lawmakers in determining the scope of the Museum, a fact especially remarkable when it is recalled that at that date no museum of considerable size existed in the United States, and the museums of England and of the continent of Europe were still to a large extent without a developed plan, although containing many rich collections.

The Congress which passed the act of foundation enumerated as within the scope of the Museum "all objects of art and of foreign and curious research and all objects of natural history, plants, and geological and mineralogical specimens belonging to the United States," thus stamping the Museum at the very outset as one of the widest range and at the same time as the Museum of the United States. It was also fully appreciated that additions would be necessary to the collections then in existence, and provision was made for their increase by the exchange of duplicate specimens, by donations and by other means.

If the wisdom of Congress in so fully providing for a museum in the Smithsonian law challenges attention, the interpretation put upon this law by the Board of Regents within less than six months from the passage of the act can not but command admiration. In the early part of September, 1846, the Regents took steps toward formulating a plan of operations. The report of the committee appointed for this pur-

pose, submitted in December and January following, shows a thorough consideration of the subject in both the spirit and the letter of the law. It would seem not out of place to cite here the very first pronouncement of the Board with reference to the character of the Museum:

"In obedience to the requirements of the charter,[a] which leaves little discretion in regard to the extent of accommodations to be provided, your committee recommend that there be included in the building a museum of liberal size, fitted up to receive the collections destined for the Institution. * * *

"As important as the cabinets of natural history by the charter required to be included in the Museum your committee regard its ethnological portion, including all collections that may supply items in the physical history of our species, and illustrate the manners, customs, religions and progressive advance of the various nations of the world: as, for example, collections of skulls, skeletons, portraits, dresses, implements, weapons, idols, antiquities, of the various races of man. * * * In this connexion, your committee recommend the passage of resolutions asking the cooperation of certain public functionaries, and of the public generally, in furtherance of the above objects.

"Your committee are further of opinion that in the Museum, if the funds of the Institution permit, might judiciously be included various series of models illustrating the progress of some of the most useful inventions; such, for example, as the steam engine from its earliest and rudest form to its present most improved state; but this they propose only so far as it may not encroach on ground already covered by the numerous models in the Patent Office.

"Specimens of staple materials, of their gradual manufacture, and of the finished products of manufactures and the arts may also, your committee think, be usefully introduced. This would supply opportunity to examine samples of the best manufactured articles our country affords, and to judge her gradual progress in arts and manufactures. * * *

"The gallery of art, your committee think, should include both paintings and sculpture, as well as engravings and architectural designs; and it is desirable to have in connexion with it one or more studios in which young artists might copy without interruption, being admitted under such regulations as the board may prescribe. Your committee also think that, as the collection of paintings and sculpture will probably accumulate slowly, the room destined for a gallery of art might properly and usefully meanwhile be occupied during the sessions of Congress as an exhibition room for the works of artists generally; and the extent and general usefulness of such an exhibition

[a]Since the Institution was not chartered in a legal sense but established by Congress, the use of the word "charter" in this connection would seem to be unauthorized. It was not subsequently employed.

might probably be increased if an arrangement could be effected with the Academy of Design, the Arts-Union, the Artists' Fund Society, and other associations of similar character, so as to concentrate at the metropolis for a certain portion of each winter the best results of talent in the fine arts."

The important points in this report are, (1) that it was the opinion of the Regents that a museum was requisite under the law, Congress having left no discretion in the matter; (2) that ethnology and anthropology, though not specially named, were yet as important subjects as natural history; (3) that the history of the progress of useful inventions and the collection of the raw materials and products of the manufactures and arts should also be provided for; (4) for the gallery of art the committee had models in existence, and they proposed, pending the gathering of art collections, which would of necessity be slow, to provide for loan exhibitions by cooperating with art academies and societies.

In the resolutions which where adopted upon the presentation of this report, a museum was mentioned as "one of the principal modes of executing the act and trust."[a] The work was to go forward as the funds permitted, and, as is well known, the maintenance of the museum and the library was long ago assumed by Congress, the Institution taking upon itself only so much of the necessary responsibility for the administration of these and subsequent additions to its activities as would weld them into a compact, scientific whole, which together forms a unique and notable agency for the increase and diffusion of knowledge, for the direction of research, for cooperation with Departments of the Government and with universities and scientific societies in America, and likewise affords a definite correspondent to all scientific institutions and men abroad who seek interchange of views or knowledge with men of science in the United States.

Since that early day no material change has been suggested in the general scope of the Government museum; it has only remained to elaborate the details, and the opportunity is now close at hand to realize all that the first Board had in view, since ample space will be available in about another two years.

The development of the Museum has naturally been greatest in those subjects which the conditions of the past sixty years have made most

[a] *Resolved*, That it is the intention of the act of Congress establishing the Institution, and in accordance with the design of Mr. Smithson, as expressed in his will, that one of the principal modes of executing the act and the trust is the accumulation of collections of specimens and objects of natural history and of elegant art, and the gradual formation of a library of valuable works pertaining to all departments of human knowledge, to the end that a copious storehouse of materials of science, literature, and art may be provided which shall excite and diffuse the love of learning among men, and shall assist the original investigations and efforts of those who may devote themselves to the pursuit of any branch of knowledge.

fruitful—the natural history, geology, ethnology, and archeology of the United States, supplemented by many collections from other countries. The opportunities in these directions have been mainly brought about through the activities of the scientific and industrial surveys of the Government, many of which are the direct outgrowths of earlier explorations, stimulated or directed by the Institution. The Centennial Exhibition of 1876 afforded the first opportunity for establishing a department of the industrial arts on a creditable basis, and of this the fullest advantage was taken, though only a part of the collections then obtained could be accommodated in the space available.

The department or gallery of the fine arts has progressed less rapidly than the other branches, as anticipated at the outset, but not through any lack of desire or appreciation. In fact, it is interesting to note that the first collection acquired by action of the Regents was a large series of choice engravings, purchased in 1849 at a cost of about $4,000, but now valued at more than ten times that sum. The recent gift by Mr. Charles L. Freer of his important art collection is certain to inspire renewed activity in this direction, as is also the decree of the supreme court of the District of Columbia, announced in the closing days of the year, to the effect that the Smithsonian gallery is in law and in fact the National Gallery of Art, which insures the possession of the Harriet Lane Johnston collection of paintings and other art objects.

Another subject to which much attention has been paid with gratifying results is American history, illustrated by objects representing distinguished personages and important events as well as the domestic life of the country from the colonial period to the present day.

It has been deemed appropriate at this time to present the foregoing brief review of the scope of the national collections, since the time is approaching when they may be given an orderly arrangement and when the subjects least developed from lack of space may have the opportunity for growth. By transferring to the new building, as proposed to Congress, the subjects which are best represented, which have been as a whole most completely classified and can, therefore, be most advantageously exhibited for the benefit of the public, namely, ethnology, archeology, natural history, and geology, the present museum building may be given over to the industrial arts. In certain branches of this subject the collections are already important and extensive, and arrangements are already under way for large and valuable additions. Several halls in the Smithsonian building were originally planned for the gallery of art, and with a moderate expenditure they can be adjusted to suit the requirements of to-day.

With its collections thus distributed between the three buildings, all fireproof and of substantial construction, the National Museum may be expected to enter upon an era of renewed prosperity and usefulness.

While it is the primary duty of a museum to preserve the objects confided to its care, as it is that of a library to preserve its books and manuscripts, yet the importance of public collections rests not upon the mere basis of custodianship, nor upon the number of specimens assembled and their money value, but upon the use to which they are put. Judged by this standard, the National Museum may claim to have reached a high state of efficiency. From an educational point of view it is of great value to those persons who are so fortunate as to reside in Washington or who are able to visit the nation's capital. In its well-designed cases, in which every detail of structure, appointments, and color is considered, a selection of representative objects is placed upon view to the public, all being carefully labeled individually and in groups. The child as well as the adult has been provided for, and the kindergarten pupil and the high-school scholar can be seen here, supplementing their class-room games or studies. Under authority from Congress, the small colleges and higher grades of schools and academies throughout the land, especially in places where museums do not exist, are also being aided in their educational work by sets of duplicate specimens, selected and labeled to meet the needs of both teachers and pupils.

Nor has the elementary or even the higher education been by any means the sole gainer from the work of the Museum. To advance knowledge, to gradually extend the boundaries of learning, has been one of the great tasks to which the Museum, in consonance with the spirit of the Institution, has set itself from the first. Its staff, though chiefly engaged in the duties incident to the care, classification, and labeling of collections in order that they may be accessible to the public and to students, has yet in these operations made important discoveries in every department of the Museum's activities, which have in turn been communicated to other scholars through its numerous publications. But the collections have not been held for the study of the staff nor for the scientific advancement of those belonging to the establishment. Most freely have they been put at the disposal of investigators connected with other institutions, and, in fact, without the help of many such the record of scientific progress based upon the material in the Museum would be greatly curtailed. When it is possible to so arrange the investigator comes to Washington; otherwise such collections as he needs are sent to him, whether he resides in this country or abroad. In this manner practically every prominent specialist throughout the world interested in the subjects here well represented has had some use of the collections, and thereby the National Museum has come to be recognized as a conspicuous factor in the advancement of knowledge wherever civilization has a foothold.

THE NEW BUILDING FOR THE NATIONAL MUSEUM.

The beginning of the year found only the foundations of the new building in place, and it was not until the latter part of the summer that enough stone had been received to commence the erection of the walls. The first stone to be set, one of the large pieces of the base course next adjoining the northern projection on the east, was laid on August 21, 1905, from which time the construction of the basement walls was continued until their completion, except at the entrances on both the north and south sides. The several rows of massive brick piers required to support the exceptionally broad and heavy floors of the main story, as well as the laying of the steel framework and brick arches of these floors, were also finished, and work was begun in June on the court walls of the main story.

The plans of the building as approved in January, 1904, are being followed, except as to the south central feature, the central projection on the north side, and certain matters of detail, in regard to which it was understood in the beginning that further studies would be necessary to produce the best results. All of the alterations suggested by the architects, however, have been in the direction of securing greater simplicity and more perfect harmony in the several parts of the building. These changes, approved in April last, insure the acquisition by the Government of a structure of exceptional dignity and merit, which will rank among the finest museum buildings of the world. Not least among its qualities is the massive character of the walls, which already count many pieces of granite weighing from 10 to 19 tons apiece, a sufficient guaranty of its stability and permanence.

The failure of one of the quarries to furnish stone within the time agreed upon has been the cause of some delay and has retarded the completion of the building until about two years hence, making the total period required for its erection about four years. Before the close of the year, however, practically all of the important additional contracts had been let, and it is expected that greater activity will prevail hereafter.

SOME IMPORTANT MATTERS OF THE YEAR.

A satisfactory conclusion has fortunately been reached regarding the worn-out roofs on the present Museum building, which, it has been found, can be entirely replaced without removing the collections below. Steps have been taken in this direction, and since the walls were very substantially constructed, there is no reason why the building may not soon be placed in even a better condition than it was originally.

With the rapid increase in the national collections, which has lately averaged nearly a quarter of a million specimens annually, the Museum,

as well as the Smithsonian building, has been turned into a veritable storehouse of valuable material. Year by year the exhibition cases have been brought closer and closer together, and great spaces have been shut off from the public view to permit of the shelter of thousands of new accessions, whose importance can only be revealed upon the completion of the new building. In this manner the freedom of circulation through the building has been much curtailed, and its contents have become so crowded that it has been deemed a matter of prudence to close, as far as possible, the great openings of the inner walls, in order to isolate the different sections and prevent the spread of fire, should one occur. This work has already been started, but some time will be required for its completion.

As an additional fire precaution experiments are in progress looking to the fitting up of the storerooms and laboratories with metal cases, having especially in view the requirements of the new building, and the importance of providing absolute protection for the reserve collections.

The collections of the Museum were increased during the year to the extent of about 257,000 specimens. In ethnology large accessions were received from Arizona and New Mexico, the Philippine Islands and Malaysia, and smaller but important ones from the Egyptian Sudan, Austria, and Colombia. The additions in archeology, less extensive but of great interest, came mainly from Japan, France, Switzerland, Algeria, Colombia, Mexico, and Florida. The collections in physical anthropology were mainly enriched by material from Malaysia and from ancient Indian ruins and mounds in the western and southwestern part of the United States.

The exhibition of small arms, in the division of technology, has been made the finest in the country by the courtesy of the United States Cartridge Company, of Lowell, Massachusetts, in depositing its valuable collection of 569 pieces, many of great rarity. All of the important typical features in the development of devices for throwing projectiles, from the crossbow to the latest form of gun and pistol, are represented, requiring 38 large cases for their installation. To the collection in aerodromics have been added original examples of the Lilienthal and Hargrave aeroplanes. The manufacture of cut glass in all its stages and the recent advances in the potter's art in America are illustrated by two beautiful series of examples.

Through the British Indian government the division of historic religions acquired a valuable Tibetan manuscript on Buddhistic theology, and several important Jewish ceremonial objects were added to the Benguiat loan collection.

The historical exhibits were enriched by many objects of interest and intrinsic value, including rich costumes and personal ornaments dating from the beginning of the last century and relics of Capt.

James Lawrence, U. S. Navy, Gen. Santa Anna, of Mexico, and Gen. José Antonio Paez, the Venezuelan patriot.

Among the objects of art received were a full-length portrait of General Paez, painted by John J. Peoli and donated by the children of the latter, and the beautiful marble bust of Maj. Walter Reed, U. S. Army, executed by Mr. Hans Schuler and deposited by the Walter Reed Memorial Association.

The accessions in the several branches of biology amounted to about 227,000 specimens. The most important was the donation by Mr. William Schaus of his valuable collection of American Lepidoptera, numbering 75,000 specimens. The Bureau of Fisheries transferred an exceptionally large quantity of fishes and marine invertebrates, including the types of several hundred new species obtained during explorations at the Hawaiian and Philippine islands, on the coast of Japan, in the tropical Pacific, along the west coast of America from Alaska to Panama, and at Porto Rico.

Of mammals, the principal additions came from Malaysia through Doctor Abbott; of birds, from the Philippines and Guam through Doctor Mearns; of reptiles, from Japan, Formosa, and the Philippines, and of mollusks, from Burma through Doctor Chamberlain. Besides the Schaus collection, the division of insects received 33,000 specimens through the Department of Agriculture, mainly from Texas, Central America, the West Indies, and Japan.

Over 37,000 plants were added to the Herbarium, the greater number having been obtained through explorations in Mexico and from the Department of Agriculture.

The U. S. Geological Survey was the principal contributor in geological subjects, the transfers including large series of rocks and ores from recent surveys in the West, and of many thousands of fossil invertebrates and plants described in recent bulletins. There were, however, many additions of valuable material from other sources.

As far as can be determined, it may be said that the entire series of collections is being maintained in good condition, and every possible resource is directed toward preserving this rich accumulation of over sixty years until its safety can be further insured in more appropriate and secure surroundings. All additions have been carefully recorded, and to the extent that the conveniences permit, all classes of specimens are accessible for reference or study.

The large upper hall in the Smithsonian building, devoted to the archeological collections, so long under repair, has been again opened to the public with an entire revision of its contents, which makes it more attractive and instructive than ever.

Notwithstanding the increased demands upon the staff in routine matters, the amount of research work accomplished in connection with the classification of the collections has been noteworthy. The number

of publications issued during the year was exceptional, comprising 8 volumes, though some of these were begun the year before. They consist of 1 annual report, 3 volumes of proceedings, and 4 bulletins. Of the papers they contain, 81 were actually issued during the year, all descriptive of the collections in the Museum except the administrative reports. The number of copies of volumes and separates distributed was over 100,000.

Of duplicate specimens separated from the reserve collections, over 20,000 were distributed to educational establishments throughout the country and above 17,000 were used in making exchanges.

THE AMERICAN ASSOCIATION OF MUSEUMS.

On December 21, 1905, the directors of several of the large museums in the United States met at the National Museum to discuss the expediency of organizing for America a society corresponding in its aims with the Museums Association of Great Britain. As a result of the deliberations at this time a call was issued for a general meeting, which was held at the American Museum of Natural History, New York, on May 15 and 16, 1906, the attendance being large and representative of museums of art, as well as of natural history and ethnology. An organization was effected by the adoption of a temporary constitution and the election of a board of officers. The publication of some form of periodical in the interest of museums was proposed.

The importance of this movement, so auspiciously inaugurated, can not be overestimated, since the opportunity for interchange of views will surely stimulate the activities of museums everywhere and tend to increase their benefits in behalf of the public, for which they are instituted.

SUMMARY OF THE OPERATIONS OF THE YEAR.

APPROPRIATIONS AND EXPENDITURES.

The appropriations made by Congress for the maintenance and activities of the National Museum during the year 1905–6 are given in the following table, which also shows the expenditures under each item for the year and the balances remaining on June 30, 1906, to meet outstanding liabilities.

Object.	Appropriations.	Expenditures.	Balances June 30, 1906.
Preservation of collections	$180,000.00	$175,841.40	$4,158.60
Furniture and fixtures	22,500.00	19,843.02	2,656.98
Heating, lighting, and electrical service	18,000.00	16,603.25	1,396.75
Building repairs	15,000.00	10,206.52	4,793.48
Books, pamphlets, and periodicals	2,000.00	1,262.18	737.82
Rent of workshops, etc	4,580.00	4,579.92	.08
Postage	500.00	500.00	.....
Printing and binding	25,000.00	24,775.93	224.07
Total	267,580.00	253,612.22	13,967.78

The sum of $1,500,000 was also appropriated for continuing the construction of the new Museum building.

The disbursements made during the past year from unexpended balances of appropriations for the two previous years are indicated in the following tables:

From balances of appropriations for 1904–5.

Object.	Balances June 30, 1905.	Expenditures 1905–6.	Balances June 30, 1906.
Preservation of collections	$6,645.34	$6,074.04	$571.30
Furniture and fixtures	2,769.99	2,681.31	88.68
Heating and lighting	1,469.40	1,388.38	81.02
Building repairs	1,800.90	1,493.31	307.59
Books, etc	965.96	905.69	60.27
Rent of workshops, etc	.08	.....	.08
Transportation of exhibits acquired at the Louisiana Purchase Exposition	5,235.12	4,063.79	1,171.33
Printing and binding	175.31	.....	175.31
Total	19,062.10	16,606.52	2,455.58

From balances of appropriations for 1903–4.

Object.	Balances July 1, 1905.	Expenditures 1905–6.	Balances July 1, 1906.
Preservation of collections	$198.99	$188.13	$10.86
Furniture and fixtures	6.94		6.94
Heating and lighting	54.48		54.48
Building repairs	53.34		53.34
Books, etc	18.32	10.71	7.61
Purchase of specimens	614.72		614.72
Rent of workshops, etc	.08		.08
Total	946.87	198.84	748.03

For the operations of the fiscal year ending June 30, 1907, Congress voted the following appropriations in the sundry civil act approved June 30, 1906:

Preservation of collections	$180,000	Rent of workshops, etc	$4,580
Furniture and fixtures	20,000	Postage	500
Heating and lighting	18,000	Printing and binding	34,000
Building repairs	15,000	Total	274,080
Books, pamphlets, and periodicals	2,000		

Besides the regular appropriations, $500,000 was granted for continuing work upon the new building for the Museum.

Comparing the appropriations for 1907 with those for 1906, it will be noticed that the amount for furniture and fixtures has been reduced by $2,500 and that for printing and binding has been increased by $9,000. The latter change was occasioned by the fact that all printing was specifically appropriated for, while heretofore the cost of printing the annual reports was charged against the general fund of the Government Printing Office.

BUILDINGS.

An account of the progress made in the erection of the new Museum building has been given on a previous page.

The subjects requiring most attention under building repairs were the roofs and certain measures for increasing the fire protection. Each section of the Museum building has virtually a separate roof. The rotunda, main halls, courts, corner pavilions and central towers are covered with slate, while the low ranges which adjoin the outer walls are roofed with tin. There is besides a complicated system of gutters and down spouts. The tin roofs have at no time demanded more than the ordinary amount of repair, but most of the slate roofs, which are too flat to justify the use of that material, and the gutters and down spouts have caused endless annoyance and much damage. It had been thought necessary to await the completion of the new building before steps could be taken to replace them. Through the cour-

tesy of the Supervising Architect of the Treasury Department, however, plans were drawn up during the year under which new tin roofs may be substituted for the slate over the exhibition halls without materially interfering with the collections below. While much of the framework is scarcely strong enough to support slate, it is entirely adequate for the lighter metal covering. It was not until late in the year that the arrangements to this end were perfected, but contracts were let for roofs over the east hall and the adjoining courts, the work to continue during the summer. It is expected that as much, if not more, can be accomplished under the appropriation for 1907.

Some attention has also been given to the gutters and down spouts on the Smithsonian building, which have for a long time been in such bad condition that during the spring thaws a great deal of water backs into the archeological hall, causing injury to the walls and the disfigurement of the painting. Much of the old tin roof on the Museum building was painted, and the old slate on the northwest pavilion was replaced by other of a better quality.

The partitions which separate the halls, courts, and ranges in the Museum building are broken by so many large, arched openings, reaching nearly to the roofs, as to make of the exhibition space practically one large room, about two acres in extent. While the building itself, including these interior partitions, was constructed of fireproof materials, yet the immense collection, now greatly crowded, contains much that is combustible. Every possible means of detecting the occurrence of a fire and of preventing its spread have been introduced, but as an additional and very necessary precaution it has been decided to isolate the different sections as far as possible. The only way to accomplish this effectively is to close all openings, except the few necessary passageways, with some fireproof material, and macite has been selected for the purpose after subjecting it to a thorough test. Much was done in this direction during the year, the following places having been already isolated wholly or in part: The story over the southeast range, occupied by a part of the herbarium and of the collections of the Biological Survey; the gallery in the west-north range used by the library and the division of history; the pueblo court, and the west side of the south hall.

Among other items of repair may be mentioned the entire renovation, including the plumbing, of the toilet rooms in the Museum building; the laying of a broad water table along the north front of the same building to check the seepage of water into the conduits containing the steam pipes and electric wires; the repainting of all the woodwork on the outside of this building; the renewal of the 42 windows in the clearstory of the west corridor of the Smithsonian building, and the repainting of many walls, disfigured by water or by time.

The heating plant was kept in good condition, with a few changes and additions. Steam was maintained from October 13, 1905, to May 11, 1906, with a consumption of 725 tons of furnace coal, 43 tons of egg coal, and 32½ cords of wood.

A thorough inspection of the electric lighting system was made by an electrical engineer detailed by the Supervising Architect of the Treasury Department, with the result of introducing many changes in the plant, to make it conform more nearly to modern methods and to eliminate all elements of danger.

There were on hand at the close of the year 2,336 exhibition cases, 2,279 storage cases, and 1,580 pieces of miscellaneous furniture. Of the additions in this line during the year, 59 cases were made in the Museum workshops, 151 were purchased, 14 were acquired from the Bureau of American Republics, and 2 from the U. S. Geological Survey. Besides this above 1,641 standard unit storage cases, insect drawers, and trays were purchased, and a great deal of attention was given in the Museum shops to repairing, remodeling, and refinishing old exhibition cases.

The danger from fire, which is greater in the storage rooms than in the exhibition halls, has led to some experiments in the direction of securing noncombustible furniture for the former, having especially in view the needs of the new building. In providing for the storage of the Schaus collection of Lepidoptera, which fills about 500 mahogany drawers of regulation size, a very satisfactory metal case was obtained on special order, each of a size to hold 50 of the drawers in two vertical tiers. The racks are made of channel and angle iron and covered on the back and top with sheet iron, and with the runners on which the drawers slide of cold-rolled steel riveted to the channel irons on the side. Experiments are in progress looking to the construction in metal of satisfactory standard storage cases and drawers, and herbarium cases. A number of the drawers have been received, but it is still too early to pass judgment upon them. Shelves of iron and glass have also been introduced in one of the laboratories, with excellent results.

ADDITIONS TO THE COLLECTIONS.

The total number of accessions received during the year was 1,516, comprising 257,605 specimens, of which 8,232 were assigned to the department of anthropology, 227,633 to the department of biology, and 21,740 to the department of geology. A detailed list of these accessions is given in the latter part of this report, only the more important ones being referred to on the following pages.

Anthropology. Of the 62 accessions received by the division of ethnology, the larger ones, with a single exception, resulted from explorations by Dr. W. L. Abbott, Dr. Walter Hough, Prof. E. L.

Hewett, and Mr. George W. Ellis. The contributions from Doctor Abbott comprised three collections, the first from the islands of Engano and Nias, off the west coast of Sumatra, with a few specimens from other neighboring localities; the second from West Borneo, and the third from western Sumatra. The Engano collection is especially interesting for the reason that the natives, who are fast disappearing, present marked differences in their arts from the inhabitants of other near-by islands. It consists, besides photographs of the people, of articles illustrating their costumes and ornaments, weapons and trophies of war, canoes and paddles, nets and traps, domestic utensils, baskets, tools, and the products of various industries. The Nias collection, which is also large and valuable, was secured principally in the extreme north and south of the island. It resembles that from Engano, but is especially rich in objects of worship. The material from West Borneo was secured in the Pontianak residency, which includes the waters of the Kapuas River system. This region was thoroughly explored by Doctor Abbott, who visited all the subdistricts. The collection is especially rich in basketry and weapons, but other classes of objects are well represented, such as traps, tools, and other utensils connected with the domestic arts, costumes, musical instruments, and agricultural implements. The collection from western Sumatra, though much smaller than the others, is of much value.

The collection of the Museum-Gates expedition contains about 3,000 specimens. The exploration was conducted by Doctor Hough, in conjunction with Mr. P. G. Gates, of Pasadena, California, who generously assumed the entire expense of the fieldwork. The season extended from June to October, 1905, the region covered lying in the mountains and drainage system of the San Francisco River on the border between Arizona and New Mexico. The material secured consists of pottery, stone implements, basketry, bows and arrows, textile fabrics, ceremonial offerings, etc., from ancient pueblos and caves, the bones of several animals, including the bison, being obtained in the latter. From the pueblo cemeteries the skeletons of former inhabitants were secured, and from one of the caves three desiccated human bodies. A collection of plants was also made.

An exploration of the ruins in Pajarito Park, New Mexico, by Prof. E. L. Hewett, for the Bureau of American Ethnology, resulted in the acquisition of 429 specimens, principally ancient Tewa pottery and bone and stone implements and crania. The collection is especially interesting on account of the class of pottery, which is of a new type, exhibiting a remarkable symbolism, and from the fact that the crania secured were almost all purely dolichocephalic.

The collection from Mr. George W. Ellis, of Monrovia, Liberia, was received as a loan. It consists of 393 ethnological objects from

the Vai-speaking peoples of western Africa (Soudan), gathered by Mr. Ellis while at his post as secretary of the American legation in Liberia. It is rich in specimens of the fine leather work manufactured by these natives and also contains examples of their costumes, pottery, models of canoes, household belongings, and samples of the mineral, animal, and vegetable products of the country.

The Philippine Insular Commission at the Louisiana Purchase Exposition presented 458 specimens, a selection from the immense exhibits of the Commission, consisting of pottery, musical instruments, basketry, agricultural tools, models of houses, transportation devices, costumes, textile fabrics, etc., illustrating the culture of the islands. This gift was in addition to the large collection received from the same source the year before.

Mrs. Jane Friedenwald, of Baltimore, donated to the Museum a collection of ethnologica, numbering 46 objects from the Egyptian Soudan, comprising musical instruments, spears, swords, ironwork, and leather work, of superior interest and value. The geographical cabinet of the Benedictine School, Seitenstetten, Lower Austria, sent in exchange, through Prof. P. Josef Schock, an excellent series of 19 ethnological and industrial objects from southeastern Europe. Dr. H. Pittier, of the U. S. Department of Agriculture, contributed a collection of 18 ethnological specimens from the Popayan Indians of Cauca, Colombia, consisting of baskets, dishes, personal ornaments, and figurines carved from seeds and painted in colors.

The more noteworthy additions to the division of prehistoric archeology have been as follows: Through Mr. Jean Miguel, of Herault, France, there were obtained in exchange 106 objects, including flint hatchets, knives and scrapers, bone awls, fragments of animal and human bones, etc., mainly from caverns in France and Algeria, besides a number of polished stone implements, fragments of pottery, bronze pins, and a bronze hatchet, from various localities in France and from a pile dwelling at Lake Morat, Switzerland. Mr. Miguel also donated a small collection of the same character. Dr. H. Pittier presented 3 especially fine specimens of earthenware spindle whorls, with incised and inlaid decorations, taken from graves in the Cauca Valley, Colombia, and also a gold spider and fishhook from southern Cauca. A small collection from Bogota, Colombia, consisting mainly of stone spindle whorls, all more or less decorated with incised line patterns, and a number of stone implements from New Jersey, were received as a gift of Mr. and Mrs. Charles A. Pope, of Valparaiso, Chile. Thirty-one earthenware bowls, bottles, effigy vases, tripod vases and figurines, and two stone hatchets, from Ahoma, Sinaloa, Mexico, apparently washed out of an ancient burial ground, were contributed by Mr. E. W. Nelson, of the Biological Survey, who obtained them during his summer field-work of 1905.

An interesting collection of 58 polished stone hatchets, arrow points, perforators, rice spoons, roughly shaped points of flint, curved "jewels" or amulets, and a bead of nephrite, from various localities in Japan, were received in exchange from Mr. Y. Hirase, of Karasumaru, Kyoto. Five sculptured stone heads, parts of small statues, from Nagasaki, Japan, said to have been placed over graves, and belonging to the collection of the late Pierre Louis Jouy, were presented by Mrs. Jouy.

The Bureau of American Ethnology transferred a quantity of shell implements and objects, fragments of pottery, many showing incised and stamped decorations, and fossil bones obtained by Dr. Aleš Hrdlička from a shell mound near Osprey, Florida; and the U. S. Geological Survey a large number of mollusks, representing 24 species, illustrating a part of the food of the mound builders, collected at the same place by Dr. T. Wayland Vaughan.

A loan collection belonging to Mr. A. H. Blackiston, of Cumberland, Maryland, comprises earthenware ollas, bowls, effigy vases, etc., with painted and incised decorations, and a number of the highly polished specimens of black ware, stone axes, mortars, pestles, rubbing and polishing stones, carved stone amulets, copper objects, shell beads and pendants, shell necklaces, sandals of yucca fiber, fragments of cane matting, and pieces of human and animal bones from the Casas Grandes Valley and from Cave Valley, Chihuahua, Mexico, many having been obtained from ancient cliff dwellings. The painted pottery is of special interest as representing some new forms and symbolisms. An ax of limonite, found by Mr. J. M. Wulfing while digging a well in Gasconade County, Missouri, is especially noteworthy from the fact that the material is quite light, like chalk, and not of the usual firm, heavy material of which stone axes are made.

The principal accessions in the division of physical anthropology were as follows: Over 100 specimens from Malay, including a number of brains of the orang, gibbon, and monkeys, besides 4 complete bodies of gibbons, presented by Doctor Abbott; an important collection of skeleton parts of white races, from Prof. George S. Huntington, of Columbia University, in exchange; many crania and other bones, through the Bureau of Ethnology, collected at the ancient Indian ruins in Pajarito Park, New Mexico, by Mr. E. L. Hewett, and in the vicinity of Osprey, Florida, by Doctor Hrdlička; Indian bones and crania from mounds in North Dakota, donated by Prof. H. Montgomery, of the University of Toronto; many specimens of the same character from the ancient sites of Pueblo Indians in New Mexico and Arizona, through the Museum-Gates expedition of 1905; the brains of a number of animals which had died at the National Zoological Park; nearly 1,000 photographs of Indians belonging to over 30 tribes

in the southwestern United States and northern Mexico from negatives taken by Doctor Hrdlička on the Hyde expeditions, contributed by the American Museum of Natural History. Important material was also received from Dr. H. Pittier, Dr. D. S. Lamb, of the Army Medical Museum, Prof. J. E. Tylor, of Oxford, Maryland, and Mr. C. Hagenbeck.

The additions to the collections of technology were exceptionally valuable and noteworthy, especially in the section of firearms. This was mainly due to the generosity of the United States Cartridge Company, of Lowell, Massachusetts, in depositing its unique historical collection of small arms, which the company has been assembling for some years. It is the finest and most complete collection of its kind in the country, and its acquisition places the Museum in the front rank in respect to this subject. The collection comprizes 569 pieces, many of great rarity, carefully selected to illustrate the art of gun making from the beginning to the present time. It is systematically installed in 38 mahogany cases furnished by the company and very appropriately constructed to display their contents to the best advantage. All important typical features in the mechanical development of devices for throwing projectiles are shown, from the crossbow through the advancing stages of matchlocks, wheel locks, flintlocks, guns with percussion pill locks, percussion cap locks, and magazine primer locks, to the modern types adapted to the use of metallic cartridges. The development of breech-loading and magazine guns is well illustrated. Many of the pieces are examples of fine artistic work in gold, silver, ivory, and other ornamental materials.

Of the 38 cases in the exhibition 1 is devoted to arbalests, or crossbows; 1 to ancient matchlocks; 1 to Japanese matchlocks and blunderbusses; 2 to flintlock muskets used in the war of the revolution; 1 to guns made by the United States Government between 1799 and 1860; 8 to guns used by the United States Army during the civil war; 1 to guns used by the Confederate army during the civil war; 1 to breech-loading rifles; 1 to repeating arms; 1 to magazine and revolving arms; 1 to telescope and sporting rifles; 2 to rifles captured from American Indians; 2 to musketoons, whaling guns, etc.; 3 to fowling pieces; 1 to guns used by historical personages; 1 to foreign flintlocks; 1 to modern military guns, and 5 to revolvers and pistols. In two special cases are a Springfield magazine rifle of the model of 1903, and what is considered the most valuable piece in the collection, commonly called the Cookson gun, dated 1586. The latter appears to have been made by John Cookson, in England, but shows, in features of construction and embellishment, certain Spanish, Moorish, or Turkish characteristics. It is of superior workmanship and is elaborately and richly decorated. The features of most interest are the magazine and auto-

matic loading devices. Separate chambers in the stock carry a supply of loose powder and bullets, and these are fed into the barrel by a single movement of a simple lever, which at the same time closes the pan and cocks the hammer of the flintlock. This relic was discovered in Baltimore, Maryland, in 1863, by a provost-marshal and held in the custody of the Government until after the close of the war, when it was sold to a local dealer, finally passing into the possession of the Cartridge Company.

Three interesting pieces have also been added to the collection of arms through the courtesy of the War Department. One is a Springfield musket made in 1800, being the immediate successor of the Charleville model, of which a number of examples were sent to this country by the Government of France just before the war of the Revolution. The Charleville model was employed by the French army and was regarded as the most effective military gun of its time; it was used during a considerable period by the ordnance officers of the United States Army as a pattern for making guns at the Springfield Arsenal, slight improvements being introduced from time to time. The other two are United States magazine rifles of the model of 1903, with improvements of 1905, including the knife bayonet.

The collection of aeroplanes has received several important pieces. One of these was an example of the so-called air sailer, having no propelling power, but used to support a man in flight from some elevated point to the ground, constructed and used by Otto Lilienthal, a noted German experimenter in this subject, which was presented to the Museum by Mr. John Brisben Walker. Another was one of the flying machines invented by Mr. Lawrence Hargrave, of New South Wales, and donated by the Field Museum of Natural History of Chicago. This example is provided with propellers driven by a compressed-air engine placed near the forward end of a central tubular shaft, the latter serving as the compressed-air reservoir, and was tested by Mr. Hargrave in 1891, when it made a flight of 312 feet. Mr. Octave Chanute, of Chicago, so well known for his experiments in aerodromics, has very generously given to the Museum a number of small models and parts of apparatus of his own devising, which are of much historical interest.

The collection of American watch movements has been enriched by several interesting additions, illustrating advancing steps in the industry. As a loan from Mr. Frederick Leach, of New York, there were received a movement made by Dennison, Howard & Davis, at Waltham, Mass., before the organization of the American Waltham Company, and forming a basis for the work done immediately afterwards; one of the first stem-winding lady's watches; a collection of typical watch movements made in the United States at an early date, and one

watch movement made by the Palmer Watch Company, of Waltham. Mr. Thomas Featherstonhaugh, of Washington, presented a movement made by the United States Watch Company, Marion, New Jersey, which marks a step in the history of watch making in the United States, and Mr. J. C. Lindsey, of Ravenna, Ohio, contributed an antique silver watch made by Christian Lehmann, at Vattenuyl, Germany, supposed to be about one hundred and fifty years old.

Mr. George F. Cummings, of New York, donated two historical documents relating to the invention of the telegraph, one being an invitation from Professor Morse to the father of Mr. Cummings to witness the operation of his electric magnetic telegraph at a private exhibition in the geological cabinet of the New York City University on January 22, 1838, the other an original message recorded in the characters of the Morse alphabet, said to have been made on the same date.

The gallery of ceramics received 94 pieces, the most interesting addition being a gift from the Libby Glass Company, illustrating the processes involved in the manufacture of cut glass. The materials and the proportion of each employed in the making of the glass are represented. There is a miniature model of the furnace with the clay crucibles in which the glass is melted, and also a set of the tools and a series of objects in glass showing the successive stages of cutting from the plain condition to the finished product, comprising beautiful examples of this art. The Rev. Curt Morhart, of Bavaria, generously donated a clay tablet with green glaze, bearing an allegorical representation of what is said to be the discovery of America by Columbus; it is supposed to have been made between 1520 and 1545. Through the meeting in Washington, during the winter, of the American Potters' Association, the Museum came into possession of 50 fine examples of the potter's art, presented by 21 different manufacturers. The association has generously offered to add material to this collection when more space becomes available, and to keep the Museum supplied with the latest noteworthy productions.

Of the additions in graphic arts, two may be mentioned. The first consists of twelve lithographic prints in color, constituting a part of the illustrations in the notable work of the late Heber R. Bishop, entitled "Investigations and Studies in Jade." They were presented by the Forbes Lithograph Manufacturing Company, of Boston, and represent the highest type of the lithographic art of to-day. The other is an original copperplate, one of a series engraved for illustrating "Philoponus," etc., published by the Benedictine Monastery at Seitenstetten, Lower Austria, in 1621, and obtained in exchange from the Geographical School Museum at the monastery.

The section of photography received, among many other objects, one of the first model "Genie" magazine cameras, presented by

Mr. William E. Schneider, of Washington, and an Ipper's relief-photograph, showing an entirely new application of photography, the gift of Mr. Albert H. Walker, of New York City.

To the collection of musical instruments were added an upright piano, with twelve boxes of musical instruments made by Debain, of Paris, about 1850, a bequest from the late Mrs. Ann A. Jeffcott, of New Haven, Connecticut; a collection of old musical instruments presented by Mr. Weston D. Bayley, of Philadelphia, and a harp or musical bow of the type made and used by the natives of the Barbados, from Mrs. Sarah S. Frishmuth, of Philadelphia.

One of the most important acquisitions by the division of historic religions was a Tibetan manuscript presented by the British Indian government, entitled "Prajna Paramita, or Transcendental Wisdom." It consists of a treatise on Tibetan Buddhistic theology or metaphysics, written in gold characters on the black ground of 363 cardboards, between covers of lacquered wood. To Mr. Ephraim Benguiat the Museum is indebted for the loan of the following objects: An elaborate embroidery of fine French workmanship of the period of Louis XV, representing Joseph in an Egyptian chariot, with scenes of Egyptian life; an old English lamp, with a chain of quatrefoil; eight finely wrought and engraved silver cups used at the Jewish passover meal, and an old Samaritan bronze case of the Torah scroll, inlaid in silver, with Samaritan inscriptions and arabesques. Of special interest for the study of religions is a "Pujah" set, consisting of the paraphernalia used in Hindu family worship, showing the private and domestic side of Hindu religious life, obtained from Miss Emily Brainard Ryder.

The historical collection received many accessions during the year, of which the following are the more important: Mrs. Julian James, of Washington, added to her already large loan collection many costumes, ornaments of personal wear, and toilet articles, worn or used by the Bailey-Myers-Mason families from 1812 to 1900. The interest shown by Mrs. James in the welfare of this division may be illustrated by the mention of some of her recent deposits, which comprise gold and silver watches ornamented with jewels; bracelets of diamonds and other precious stones and of carved jet beads; tortoise-shell combs, some jeweled; opera glasses, one with a diamond monogram; brooches, pins, card cases of silver, gold, and amber, a solid silver wash bowl and pitcher handed down in the family from Spanish ancestors; silver cups, jade intaglio scarf pins, a pearl and diamond necklace on gold wire, gold and silver chatelaine bags, fans of pearl and ivory, earrings of gold and precious stones, five rare and valuable East India shawls, parasols of lace and carved ebony, a dress of pina cloth, satin and silk dresses, signet rings; a cross of the Order of Isabella the Catholic and one of the Legion of Honor of France conferred upon members of

the family, commissions and warrants in the Navy, and other documents. Mrs. James also presented the telescope used by Rear-Admiral (then Captain) Theodorius Bailey, U. S. Navy, second in command of the Mississippi expedition sent by Admiral Farragut on May 1, 1862, to demand the surrender of the city of New Orleans.

Five pieces of silver plate presented by the common councils of the cities of Philadelphia and New York, in 1813, to Capt. James Lawrence, U. S. Navy, of the U. S. S. *Hornet*, for his capture of the British sloop-of-war *Peacock* during the war of 1812, were lent by Mr. William Preston Redmond, of New York City. A telescope and gold-headed cane which belonged to Gen. Santa Anna, President of Mexico and commander of the army of invasion of Texas in 1836, were deposited in behalf of the heirs of Gen. Sam Houston, and several uniforms and objects of military accouterment worn by Gen. José Antonio Paez, the Venezuelan patriot who died at New York City in 1861, when minister from Venezuela to the United States, were received as a loan from José Antonio Paez, of Staten Island, New York. It is interesting to note in this connection the acquisition by the Museum of a full-length oil portrait of General Paez, painted by John J. Peoli, and generously donated by the children of the artist through his daughter, Mrs. Mary Peoli Maginn, of New York. Mr. Peoli was born in New York, October 1, 1825, but when only 3 years old his parents removed to Havana, where the youth began the study of art at the Royal Academy of San Alejandro. At the age of 14 years he gained the first prize, which entitled him to a scholarship at Rome, at which place he studied 8 years under the celebrated painter Minardi. From Rome he went to Paris and Madrid, where he continued his studies, and at the latter city painted the portraits of several members of the royal family. He afterwards resided many years in the United States, but died in Sagua la Grande, Cuba, on July 8, 1893. He was an intimate friend and ardent admirer of General Paez.

The chair used by Gen. U. S. Grant when he signed the terms of capitulation with Gen. R. E. Lee, at Appomattox Court House, has become the property of the Museum through the bequest of the late Gen. Wilmon W. Blackmar, U. S. Army.

The notable table service of 32 pieces, comprising a silver and gilt punch bowl, cups, spoons, a coffeepot, teapot, sugar bowl, milk pitcher, and two massive silver engraved waiters, made by Tomaso and Fernando Zamora, native jewelers and silversmiths of Manila, Philippine Islands, and exhibited at the Louisiana Purchase and Lewis and Clark expositions, was purchased by the War Department and deposited in the Museum.

An interesting collection, comprising 22 pieces of fractional currency, 8 medals, 27 gold coins, 356 silver coins, 312 copper coins, and 6 nickel coins, and including many rare examples from America and

other countries, assembled by Mr. Claas Denekas, has been loaned to the Museum by Miss Gesine Denekas, of Brightwood, D. C.

Mention may here be made of the marble bust of the late Walter Reed, major and surgeon, U. S. Army, an exquisite example of the sculptor's art, executed by Mr. Hans Schuler, of Baltimore, for the Walter Reed Memorial Association, which, through the courtesy of the association, now occupies a prominent place in the main hall. Although only 51 years of age at the time of his death in 1902, Major Reed had attained rank among the most distinguished benefactors of humanity by his intelligent and conclusive experiments on the transmission of yellow fever, resulting in the establishment of effective means for checking and even eradicating this most dread disease of the American tropics. Scarcely less noteworthy in character and thoroughness were his previous investigations upon the subject of typhoid fever

Biology.—The largest biological accession of the year, and one of the largest donations the department has ever received, was the collection of 75,000 American Lepidoptera, presented by Mr. William Schaus, as elsewhere described.

The Museum has also continued to be indebted to Dr. W. L. Abbott, one of its associates, who sent three large zoological collections from the East Indies, comprising about 2,600 specimens, of which about 1,700 were vertebrates. They represent investigations by Doctor Abbott on the west coast of Sumatra and the adjacent islands of Engano and Nias; on the coast and islands of eastern Sumatra, and in West Borneo. The Engano and Nias collection consists of 442 mammals, 363 birds, 77 reptiles, and 850 butterflies; the eastern Sumatra collection, of 352 mammals and 95 birds; and the West Borneo collection of 296 mammals and 70 birds. There was also received from Doctor Abbott and Mr. C. B. Kloss jointly a series of 98 mammal skins from the Rhio Archipelago. None of these collections have yet been fully worked up, but many new species have already been discovered, and the contribution as a whole is of exceeding interest and value.

The U. S. Bureau of Fisheries transmitted an exceptionally large number of important collections of fishes and marine invertebrates. Among the former were many type specimens of new species from the Hawaiian and Philippine islands, Japan, and the northwest coast of America. Of the latter, which were comprised in about 3,000 packages, there were, besides much unidentified material, twelve important collections which had been studied by specialists, consisting of about 1,000 lots of specimens and 143 types of new species, belonging to the following groups: Barnacles, schizopod crustaceans, and annelids from Hawaii; isopod crustaceans, echinoderms, and corals from Porto Rico; annelids from Alaska, Japan, and the Great

Lakes; corals, with commensal annelids, and sponges from the region about Panama; and corals from the South Pacific. There were also many mollusks, chiefly from the Pacific Ocean.

Maj. Edgar A. Mearns, surgeon, U. S. Army, contributed about 150 specimens of birds from the Philippine Islands and Guam, including several species new to the Museum, and a large number of rats and shrews from Manila and vicinity.

Among the additions specifically to the division of mammals was a mounted specimen of the handsome broad-horned antelope, *Eurycros eurycros*, from West Africa, collected by Mr. W. N. McMillan and presented by Mrs. McMillan. This genus had not previously been represented in the Museum. The British Museum transmitted in exchange a collection of small mammals from Borneo, China, Africa, and Australia, consisting mainly of species new to the National Museum; the Copenhagen University Zoological Museum, specimens of the Norwegian wild reindeer and red deer, both of which are becoming rare; and the Civic Museum, of Genoa, 51 specimens of bats, chiefly from South America, but including two Malayan genera. A collection of small mammals from Java, obtained through the offices of the United States consular agent at Padang, Sumatra, are of special interest as coming from a region from which many species were described at an early date. Among the mammals received from the National Zoological Park was a specimen of Grevy's zebra, a species new to the Museum. A small but important collection of birds from islands in the Bay of Panama, including specimens of newly described species from the type localities, was obtained from the Hon. J. E. Thayer in exchange.

To the division of reptiles and batrachians there was added, as a gift from the Science College of the Imperial University of Tokyo, a valuable collection from Japan, the Riukiu Archipelago, and Formosa, containing the types of several new forms and species not previously in the National Museum. This division also received a small but interesting collection from the Philippine Islands, presented by Mr. R. C. McGregor; a series of 24 specimens illustrating the development of the spotted-tailed salamander, *Spelerpes maculicaudus*, the gift of Mr. W. L. McAtee and Mr. A. M. Banta; 16 specimens of rare North American salamanders, including one new species, *Plethodon shermani*, from Mr. C. S. Brimley, and 2 specimens of a new species of horned toad from Mexico, from Mr. R. L. Ditmars.

Beside the material from the Bureau of Fisheries, already mentioned, the division of fishes obtained two important accessions. The first consisted of specimens from Ecuador and Peru, collected by Mr. P. O. Simon; the second of a large number of Mexican species collected by Dr. S. E. Meek and contributed by the Field Museum of Natural History.

Dr. L. T. Chamberlain, an associate of the Museum, presented to the division of mollusks a collection of Naiades from upper Burma, which included a fine series of the largest existing species of fresh-water mussel. A large series of Japanese shells, contributed by Dr. W. H. Dall, and another similar series obtained by purchase, embrace about 400 species, many recently described. Other noteworthy donations were about 540 species of South African shells, from Lieut. Col. W. H. Turton, of Bristol, England; about 250 Uruguayan shells, from Dr. F. Filippone, of Montevideo; over 1,000 Costa Rican and other Central and South American shells, from Dr. H. Pittier; a number of Mexican land shells from the collection of the agronomic bureau of the Mexican Government, through Prof. A. L. Herrera, and the type specimen of *Scala mitchelli*, from Texas, from Mr. J. D. Mitchell. The Museum collection of Mexican land shells has become one of the finest in existence.

Among many additions to the division of marine invertebrates, aside from the large transfers made by the Bureau of Fisheries, four exchanges are worthy of special mention, as follows: A collection of 141 specimens of corals, including the types of 13 species, from the Bishop Museum, Honolulu; a series of 22 specimens of corals from the Cape Verde Islands, from Mr. J. Stanley Gardiner; 23 species of Pacific coast bryozoans, from Dr. Alice Robertson, and 14 species of Cumacea, from the west coast of Ireland, from the British Museum.

The number of accessions received by the division of insects was 312, comprising nearly 122,000 specimens. The gift by Mr. William Schaus of his collection of American butterflies and moths, numbering 75,000 specimens, stands preeminent among all the accessions of the year, and adds immensely to the richness and importance of the national collection of Lepidoptera. Two thousand of the specimens came from Mexico, the remainder from North and South America. The Museum was also indebted to the Rev. Robert Brown, S. J., for important gifts of insects from the Philippine Islands, and to Prof. H. Maxwell-Lefroy for valuable contributions of East Indian parasitic Hymenoptera. The collections transferred by the U. S. Department of Agriculture were, as usual, of great extent and value. The following six lots, comprising about 33,000 specimens, are especially noteworthy: 10,000 specimens from Texas, collected by Mr. H. S. Barber; 3,000 specimens from Central America, collected by Mr. F. Knab; 10,000 specimens from Guatemala, collected by Mr. E. A. Schwarz and Mr. H. S. Barber; 5,000 specimens from the West Indies, collected by Mr. A. Busck; 3,000 Japanese insects from the exhibit at the St. Louis Exposition, presented to the Department by Mr. K. N. Ohashi, and 2,000 specimens from Plummers Island, Maryland, collected by Messrs. Schwarz, Clemons, and Barber. Among exchanges may be mentioned 500 moths from the American Museum

of Natural History; Coleoptera and Hemiptera from New Guinea, through Mr. O. Kronov; and a collection of Hymenoptera containing many cotypes of recently described species, from the Sarawak Museum, Borneo.

The division of plants received 575 accessions, containing in the aggregate 37,751 specimens. The most important accession was the collection made by Dr. J. N. Rose and Mr. J. H. Painter, while detailed for field work in Mexico. It comprises 4,477 specimens, is especially rich in cacti, and includes many rare species from type localities, as well as numerous undescribed species. The number of specimens transferred from the Department of Agriculture was 15,145, of which 13,786 specimens came from the Bureau of Plant Industry, 931 from the Biological Survey, 320 from the Forest Service, and 108 from the Bureau of Entomology. Through exchange with the New York Botanical Garden 1,743 plants, including much West Indian material, were obtained; and by gift from Dr. H. Pittier, 406 specimens, chiefly from Central America.

Geology.—The total number of specimens received by the Department of Geology, exclusive of duplicates, was approximately 21,000, comprized in 164 accessions, of which 91 consisted of rocks, ores, and minerals, 16 of fossil vertebrates, 44 of fossil invertebrates, and 13 of fossil plants. Four hundred and seventy-two lots of specimens were also received from different parts of the country for identification and report.

The division of systematic and applied geology obtained by transfer from the Geological Survey 1,335 specimens of rocks and ores illustrating field work in the Mount Stuart and Tacoma quadrangles of Washington; the gold belt of the Blue Mountains; the Cripple Creek district, and the Needle Mountain Quadrangle of Colorado; the Marysville district of Montana; the Clifton Morenci district of Arizona, and the lead and zinc district of western Kentucky. The same bureau also transmitted about 475 hand specimens of native and foreign rocks and a large collection of phosphates, associated rocks, and fossils collected in Florida by the late George H. Eldridge.

Among other noteworthy additions to this division were specimens of Alaskan ores, presented by the Alaskan Commission at the Lewis and Clark Exposition; a collection of rocks and ores from the Philippine Islands, obtained at the same exposition; a fine specimen of phonolite with a telluride of gold from Cripple Creek, Colorado, donated by Mr. A. B. Frenzel; a large number of specimens of basalt, phonolite, and dolorite collected in Colorado and Wyoming by Prof. R. D. George; a large mass of tin ore from Lincolnton, North Carolina, a gift of the Piedmont Mining Company; 13 samples of volcanic dust from several eruptions of Mount Vesuvius from 1822 to 1867, donated by Prof. J. W. Mallet, of the University of Virginia; a small collection

of rocks from Rio Grande do Sul, Brazil, presented by Mr. I. C. White, of Morgantown, West Virginia; and a specimen of metallic zinc smelted in Washington, District of Columbia, in 1835, said to be the first zinc smelted in America from American ores.

The most important accessions in the division of mineralogy consisted of the type materials of the new minerals coronadite and morencite, and of specimens of the rare minerals emmonsite, spangolite, dioptase, and libenthenite from the Geological Survey, and a unique and remarkable cube of iron pyrites, about 2 inches in diameter, containing numerous small crystals of gold, showing cubic, octahedral, and dodecahedral faces, and some good crystals of argentite, obtained by purchase. Other valuable additions were a specimen of stibiotantalite; a complete individual, weighing 1,170 grams, of the meteorite which fell at Modoc, Kansas, September 2, 1905; a 576-gram mass of the Kernouve meteorite which fell in May, 1867; and a 200-gram slice of a meteorite found at Coon Butte, Arizona, in 1905, the last named being the gift of Mr. D. M. Barringer.

From the Geological Survey there was transferred to the section of invertebrate paleontology a collection of Upper Cretaceous fossils from the Judith River beds of Montana, containing the types and other figured specimens described by Dr. T. W. Stanton in Bulletin No. 257 of the Survey; a collection of type specimens of Miocene foraminifera from the Monterey shale of California, described by Mr. R. M. Bagg in Bulletin No. 268 of the Survey; and about 3,000 specimens of Ordovician, Silurian, and Devonian fossils collected in Virginia by Doctor Bassler, under the auspices of the Survey. Dr. A. von Mickwitz, of Eastland, Russia, presented over 2,000 specimens of Russian Ordovician bryozoans; Prof. Charles Schuchert, a large slab containing Helderbergian crinoids from New York State, and Dr. H. Pittier some 500 specimens of Pliocene and Pleistocene fossils from Costa Rica. Through exchange much valuable material was also obtained, including collections of Paleozoic fossils from Mr. George W. Stose, of European Mesozoic, and Cenozoic fossils from Mr. W. E. Crane, and of European Tertiary fossils from Mr. J. Vaquez, of Pantin, France.

The section of vertebrate paleontology has received but few specimens, since at present it is practically impossible to obtain material of this character without sending collectors into the field, which the Museum is not able to do. The following additions, however, are deserving of mention: A nearly complete skeleton of a new species of Sinopa from the Bridger (Eocene) of Wyoming, collected in 1902 by Mr. Walter Granger under the auspices of the Geological Survey, and described by Dr. W. D. Matthew under the name *Sinopa grangeri*; a nearly complete skull of a new genus of musk ox from the Pleistocene of Alaska, obtained by Mr. W. H. Osgood, of the Department of

Agriculture, and described by him under the name *Simbos terrelli;* part of the skull of a fossil ruminant from the Pleistocene of Zuni, New Mexico, presented by the Department of the Interior, and described and figured by Mr. Gidley, of the Museum, as *Lissops zunicusis*, and a small collection of fossil reptiles from the Permian of Brazil.

Of the accessions in the division of paleobotany the most important were as follows: Several thousand specimens of Mesozoic plants, being the material described by Ward, Fontaine, Bibbins, and Wieland in Monograph No. XLVIII of the Geological Survey; several hundred examples of fossil wood and plants from the Permo-Carboniferous of São Paulo and Santa Catherina, Brazil, collected by Mr. I. C. White, and 250 specimens of fossil plants from the Judith River beds of the Upper Cretaceous of Montana, collected in 1903 by Mr. T. W. Stanton and Mr. J. B. Hatcher, and described in Bulletin No. 257 of the Geological Survey.

GENERAL WORK ON THE COLLECTIONS.

The primary duty with which the Museum staff is charged is the care, recording, and arrangement of the immense collections, which have lately been increasing at the rate of nearly a quarter of a million specimens annually. This work, laborious under the best conditions, is made especially difficult by the crowded condition of the buildings, the inconvenient location of most of the workrooms, and the fact that the bulk of all the material received must now be packed away for a time in inaccessible storage quarters. The safety of specimens is never secured by simply finding a place for them. They must be under constant surveillance, for otherwise they are certain to deteriorate and eventually to become valueless. It is, therefore, not only the recent accessions which require attention, but every collection received from the very first that came into the possession of the Museum. Only a general review of the work of the past year is given here.

In the division of physical anthropology much time was spent in placing the older material, mainly skulls and skeletons, in proper museum order, and in attending to the preparation and preservation of current accessions. This involved the cleaning, identification, cataloging, and arrangement of a large number of specimens, and at the close of the year the entire collection was in as perfect condition as the limited facilities permitted. Some improvements were also made in the accommodations of the laboratory.

The numbering and card cataloging of the extensive ethnological collections, mainly from the Philippines, obtained at the Louisiana Purchase Exposition in 1905, were completed and the objects arranged in storage drawers in the Museum building. In order to make more

accessible the entire reserve collections in ethnology, which have to some extent been scattered in different places, partial means have been provided for bringing them together in unit drawers, properly classified and labeled. The segregation and rearrangement of the material representing the Eskimo, the Northwest coast and Pueblo Indians, and that from Africa and the East Indies has been finished, and a finding-catalog of the Eskimo and Northwest coast objects has been prepared. The large Abbott collection has been assembled in one place, and work upon it is still in progress. A part of one side of the Pueblo court has been screened off as a laboratory, and the storage facilities back of the exhibition cases have been increased by the addition of 400 unit drawers.

In the division of prehistoric archeology the routine work was largely directed toward the rearrangement of the exhibition hall, although the care of current accessions occupied the usual amount of time.

Notwithstanding the diversity of subjects falling under the head of technology, and the great extent of the collections, a considerable part of which it is still necessary to retain in storage, the material belonging to this division has been kept in good condition, and much attention has been given to the history and labeling of the different objects. In the division of graphic arts the Cranch collection of many hundred prints was classified and arranged, and full descriptions of each print are being prepared for use as labels. The study series has been assembled in storage drawers back of the exhibition cases.

The collection illustrating Christian ceremonial or ecclesiastical art, comprizing about 930 objects, was withdrawn from storage, numbered, cataloged, and arranged for study purposes.

In the gallery room assigned to the reserve series in history suitable racks have been constructed for the portrait collection and drawer racks for the duplicate specimens. The indexing and cataloging of the portraits were continued during the year.

In the preparatory laboratories of the Department of Anthropology there was no cessation of activity at any time during the year. It is there that all the casting, modeling, and coloring of specimens are done, that the lay figures are prepared for the exhibition cases, and that the poisoning and cleaning of objects are conducted. Nowhere else has the preparator's art in anthropology been carried to a higher stage of perfection, a fact that will be prominently demonstrated in the halls of the new building.

In the division of mammals the extensive collections of rabbits and marmots and of small to medium sized skulls were rearranged in systematic order, new cases for the former having been constructed at the entrance to the mammal laboratory. In the division of birds some 5,000 duplicates were overhauled and invoiced. The hornbills, now

represented by a splendid collection, the fruit pigeons, and specimens of some other groups, which had been scattered in different places, were brought together in glass-covered drawers placed on top of the tier of storage cases in the crowded laboratory. The recent very large accessions from the Bureau of Fisheries made necessary the construction of a large amount of additional shelving in the basement storage rooms of the division of fishes. Some 12,000 specimens of fishes were cataloged, and many of these were put in final shape and given their appropriate places in the systematically arranged series, special attention being paid to types and other unusually important specimens.

In the division of mollusks, 7,500 lots of specimens were cataloged. Good progress was made toward placing the large Jeffrey's collection, mainly of British shells, in final museum shape. The identification of all the species is being verified, and the duplicates are being separated from the reserve specimens. The rearrangement of the American land shells, especially from Mexico and Central America, was continued, and that of the families Doliidæ and Cassididæ was completed. The cataloging of the named specimens of crustaceans, echinoderms, hydroids, bryozoans, alcyonarian and stony corals, and annelids in the division of marine invertebrates was brought up to date, and the extensive collection of echinoderms was rearranged, permitting the recent additions in that group to be assigned their appropriate places.

A very large amount of work was accomplished in identifying and rearranging specimens in the division of insects. To accommodate the Schaus collection of Lepidoptera it was necessary to screen off a corner of the exhibition hall devoted to fishes and reptiles. This temporary laboratory has been fitted up with iron stacks to hold the insect drawers, an initial step toward securing better fire protection for the invaluable collections of this division. As in previous years, the larger number of workers in this division were assistants of the Bureau of Entomology of the U. S. Department of Agriculture.

In the division of comparative anatomy the entire collection of cetacean skeletons and skulls (except those of the whalebone whales) was assembled and systematically arranged in the storage compartments under the exhibition cases in the southeast range, after being cleaned and cataloged. The fish skeletons and skulls, numbering about 1,500, were treated in a similar manner.

The capacity of the storage cases in the division of plants was increased by about 200 compartments, making the total number now in use above 10,000. The herbarium is reported to be nearly free of pests, and continuous efforts are made to prevent their gaining a foothold. During the year 17,189 sheets of plants were stamped and placed in the regular series, which now contains 385,260 sheets. The number of plants mounted was 10,577. The work of rearranging the

herbarium in accordance with the system of Engler and Prantl was continued, the families covered extending from Acanthaceæ (No. 266) to Compositæ (No. 280).

The preparators of the Department of Biology were kept fully occupied. The mounting of mammals for exhibition was practically restricted to small specimens, and the taxidermic work in connection with both mammals and birds consisted mainly in preserving the skins of fresh specimens as they were received, in preparing and making over old skins for the reserve series, and in the constant renovation of specimens in both the reserve and exhibition series to prevent their deterioration. In osteology some 30 skeletons of mammals and birds, including a number of large forms, such as the bison, camel, and tiger, were roughed out and a few skeletons were cleaned. A still larger work was the cleaning of mammal skulls, required for study in connection with the skins. The total number so treated was about 7,000, of which a large portion was from the collections of the Biological Survey. The chief modeler overhauled the collection of fish casts which has accumulated during the past twenty-five years, renovating those required for exhibition, the remainder being made up into sets for distribution to schools and colleges. He also prepared a number of casts of large and interesting reptiles, and cleaned about 1,000 specimens of corals for study and exhibition purposes.

In the division of systematic and applied geology much was accomplished in bringing the reserve collections into better arrangement and classification. Good progress is reported as to the segregation of the record collections transferred from time to time by the U. S. Geological Survey. This required the overhauling of the entire series, including the cleaning of specimens and trays, the verification of labels, the elimination of duplicates, the rearrangement of the specimens in drawers, the preparation of lists and of catalog and bibliographical cards. By the close of the year all of the material from the surveys of the Pacific coast, the Great Basin and the Rocky Mountain States (except some material from Montana, Arizona, and New Mexico), and from Arkansas, Kentucky, Missouri, and Texas, had been gone over, although the lists were not completed. The specimens thus rearranged numbered about 15,800 and filled about 360 large standard drawers.

The purely petrographical material was stored in cases in the west-south range, the balcony of the same range, and the mezzanine story of the southwest pavilion. Nearly the entire duplicate series of this division was also overhauled, and approximately 12,500 specimens, accurately labeled, were made up into 225 sets for distribution to schools and colleges. Many thin sections of rocks were cut for determinative purposes, and numerous blocks and slabs of stone were prepared for exhibition.

In the section of invertebrate paleontology nearly 40,000 specimens, representing 3,000 species and filling 172 standard drawers, were labeled, cataloged, and systematically arranged. This material belonged mainly to the Rominger collection of Paleozoic fossils from the Mississippi Valley, the work upon which was completed, and to the Ulrich collection, which will require at least another year's attention. Types of several hundred species have been added to the section since the publication of the type catalog in 1905.

Seven hundred specimens were identified and cataloged in the section of vertebrate paleontology. About 200 specimens of the teeth of Mesozoic mammals were mounted on corks inserted in glass vials for their better preservation, and enlarged pencil drawings and wax models of many minute forms were prepared. Much time was spent in locating and identifying the type material of the earlier specialists in this subject, such as Leidy, Cope, and Marsh. Excellent progress was made by Mr. Gidley in classifying the reserve collection of fossil mammals, the trays containing them being grouped by geological horizons. The same may be said of the work of Mr. Gilmore upon the reptilian forms. Some 636 trays of the Marsh collection, stored at the Emery building, have been roughly classified and labeled, and several hundred specimens of small reptiles have been unwrapped in order to make them accessible for study. In the matter of preparing large specimens for exhibition, which requires much time and skill, the following were worked out and mounted: A complete skeleton of *Merycoidodon gracilis*, a skull of *Triceratops calicornis*, a composite skeleton of a large *Dinornis*, and a cave bear. The skull of a Miocene rhinoceros from the Marsh collection was prepared for mounting, and the skeleton of a mastodon, exhibited at the Louisiana Purchase Exposition, was renovated. All of the type and figured specimens in this section have been assembled, properly marked, and labeled.

In paleobotany the general routine work in connection with the collections occupied the entire time of Doctor Peale.

THE EXHIBITION COLLECTIONS.

Owing to lack of space it has not yet been possible to organize an exhibition series illustrative of the subject of physical anthropology, although there is much material on hand suitable for that purpose. A number of plaster busts of American Indians comprizes the entire display at present.

Many changes and improvements were made in the exhibition collections of ethnology. All of the wall cases on the floor of the west hall were rearranged, and the Siamese collection obtained at the Louisiana Purchase Exposition was newly installed. The latter consists of art objects and selections from the textile and agricultural exhibits. The Roumanian peasant group, for which the costumes

were obtained from Baron Lajòs Ambrozy de Sedan, of Temesvar, Hungary, was completed and installed in a large case in the same hall. In the gallery of the northwest court the Patagonian, British Guiana, and Costa Rican objects were rearranged, and the figure cases prepared in the same manner as in other halls. Through the completion of the fire wall in this court the hanging of the collection of South American oil paintings of Indian subjects and the final disposition of baskets and decorative objects became possible.

The extensive repairs in the hall of prehistoric archeology, the large upper room in the Smithsonian building, were completed in 1905, and advantage was taken of the opportunity to entirely reorganize the important collections of this division. It was found necessary to temporarily screen off one end of the room for storage and laboratory purposes, but the exhibition series was opened to the public on January 22, 1906. The work of revision was slow and laborious, the cases and their contents having first to be thoroughly cleaned. The floor cases were rearranged and some new ones added, and many of the less important specimens were transferred to storage, to make room for recent accessions of greater interest to the public. The hall is now in a much more attractive and satisfactory condition than ever before. Among the noteworthy features which supplement the older collections are engraved stone plates, discoidal stones, bird-shaped and boat-shaped amulets, banner stones, and a series of both chipped and polished stone objects of the rarer types; a number of ancient Peruvian textiles belonging to the Pope collection; casts of rare Mexican antiquities, such as drums, knives, jade carvings, and images in clay and stone; the Seton-Karr collection of chipped flint implements from the Fayum district of Egypt, and the Harris collection of archeological objects from Ohio and Missouri. Casts of the Abadiano collection of important Mexican sculptures and casts of carved stone yokes, "Palmas" stones, bas-reliefs, etc., from Mexico; the Brigham collection of ancient burial pottery, including two very large vases from the island of Marajo, Brazil; and parts of the West Indian collections of Latimer, Gabb, and Fewkes, comprizing stone collars, zemes, masks, hatchets, pestles, beads, and objects of clay, bone, and shell, have been installed in six especially large cases which occupy the center of the hall. A number of originals and casts of large Mexican and Peruvian bas-reliefs have been hung on the western wall.

The series of casts illustrating the history of classical sculpture has, from lack of better accommodations, been assembled temporarily in the court devoted to the graphic arts, which has thereby become unduly crowded to the disadvantage of both subjects. The pieces, 145 in number, are displayed in large center cases and on pedestals, walls, and screens.

In technology the collection of arms deposited by the United States Cartridge Company, elsewhere described, has added a most interesting and popular feature. Being accompanied by handsome mahogany cases built expressly for the purpose, its installation was readily accomplished. Small additions have also been made to other exhibition series in this division, which is being developed along certain lines as rapidly as possible under the present unfavorable conditions.

The gallery of ceramics received a few additions, notably the exhibition of the Libby Glass Company, illustrating the manufacture of cut glass. There is nothing special to note in regard to the exhibits in graphic arts and medicine, except in the matter of labeling, since the space assigned to these divisions is now fully occupied.

A selection from collections in storage illustrating the principal phases of the doctrines and rites of the western (Roman Catholic) and eastern (Greek Catholic and Armenian) churches was installed. The historical collection received some important objects, and a series of American coins and medals and of Japanese coins, made up from the Capron purchase and a gift from the Government of Japan, were placed on exhibition.

In the Department of Biology the several large mammals mounted for the Louisiana Purchase Exposition, and subsequently shown at the Lewis and Clark Exposition, were, after their return to Washington, arranged in the gallery of the south hall, the only place that could be found for them. Although these and the other large mammals from the St. Louis Exposition are among the most valuable additions which have been made to this exhibition series for some time, it has not been practicable to inclose them under glass. A number of other mammals of small to medium size, chiefly from the oriental region, were mounted and installed during the year, and the heads of large game on the wall space above the gallery were renovated and rearranged.

The large series of cases in the Smithsonian main hall containing North American birds were thoroughly cleansed inside. The specimens themselves were also cleaned and put in order. Some progress was made in substituting the new pattern of label holder, adopted the year before, and new labels were printed for the birds of Australia and neighboring regions. The fine exhibition collection of birds can, however, never be shown effectively in the antiquated cases which it now occupies.

Skeletons of a large sulphurbottom whale (of the same species as the cast in the south hall), of an adult little piked whale, of a dodo, and of an African elephant, were added to the osteological series, which was almost entirely relabeled. The cutting off, for storage of the Schaus collection of Lepidoptera, of a part of the exhibition hall devoted to reptiles and fishes, necessitated an entire rearrangement of

these collections, to which were also added the fine casts from the St. Louis Exposition.

Some progress was made toward completing the exhibit of insects, and a case of bryozoans was installed in the hall of marine invertebrates. A notable addition to the Children's Room was a copy of the old Dutch painting of the dodo, the original of which is in the British Museum.

As a new departure, a special case was brought into use for the display of miscellaneous newly acquired objects having a general popular interest, preparatory to their being installed in their proper places in the various permanent exhibition series. In this case were also placed some small groups of specimens of current interest, such as the cotton-boll weevil and the "culep," or Guatemalan ant, and mosquitoes which transmit malarial fever, yellow fever, etc. The smaller specimens were mounted in a new form of glass cell devised by the chief of exhibits.

Comparatively few changes were made in the exhibition collections of the Department of Geology. A large mass of diatomaceous earth was added to the economic series; two cases of minerals and one of hot spring tubes, returned from the Louisiana Purchase Exposition, were installed in the west-south range, and the paper casts of the large Bacubirito and Cape York meteorites were placed on one of the galleries facing the rotunda. The exhibit of fossil vertebrates, which occupies the southeast court, was extensively overhauled and rearranged, and there were added to it a skull of *Triceratops calicornis*, a complete skeleton of the small oreodont, *Merycoidodon gracilis*, skeletons of a small mastodon from Michigan, and a large *Dinornis* from New Zealand, and the remains of a cave bear from France. In the gallery of the southeast court a screen was built against the east side for the exhibition of ammonites and other large fossil invertebrates, and a beginning was made toward rearranging the fossil plants.

RESEARCHES.

The most important researches carried on in the Department of Anthropology were those made in connection with the preparation of articles for the "Handbook of the Indians," now in course of publication by the Bureau of American Ethnology. This work, far from being restricted to information in hand, has been extensively based on special studies, involving the critical examination of practically all of the Museum collections which relate to the subject. The results, moreover, have been of service not solely in the compilation of the "Handbook," but have brought about a more thorough knowledge of the collections and a more complete and accurate labeling of many specimens. The task has been one of great magnitude, extending through

several years, and the outcome has fully justified the time spent upon it. The investigations on the part of the Museum have been conducted by Mr. W. H. Holmes in prehistoric archeology, by Professor Mason and Doctor Hough in ethnology, and by Doctor Hrdlička in physical anthropology.

Doctor Hrdlička continued his inquiries relative to the effects of preservatives on specimens of the brain, the weight of the brain in correlation with the weight of the body, the proportions of the cranial fossæ, and the growth, physiology, and pathology of certain tribes of Indians. He also completed a study of 26 orang crania from Borneo. A number of visiting Indians were measured and facial casts of a few of them were made.

The large Malaysian collection of ethnology from Dr. W. L. Abbott was the subject of investigation by Professor Mason and Doctor Hough, who have in preparation an illustrated descriptive catalog of its interesting specimens. The extensive ethnological material from the Museum-Gates expedition of 1905 is being worked up by Doctor Hough, whose report is well advanced. The latter has also commenced the writing of a bulletin on the distribution of the ancient Indian ruins of the Gila-Salt River region in the Territories of Arizona and New Mexico. The principal investigations in prehistoric archeology were conducted by Mr. Holmes and had reference mainly to the "Handbook" above mentioned. The condition and knowledge of the collections in this division were greatly advanced by his thorough and comprehensive researches.

Mr. Maynard, assistant curator of technology, has completed a careful study of the Museum records bearing upon the subject of marine architecture, especially as illustrated by the many models received from the Bureau of Fisheries and other sources. Under authority from the officials of the Departments of War and of the Treasury, an examination of the records relating to the manufacture of arms for the United States Army and United States Navy is also in progress.

Besides the investigations by members of the Museum staff, the collections in anthropology have been extensively consulted by experts from different parts of the country and from abroad, and in greater or less degree have been utilized in many important researches.

A considerable part of the East Indian collections of mammals recently received from Dr. W. L. Abbott was worked up during the year, those from Engano and Karimata islands and the Rhio Archipelago by Mr. Gerritt S. Miller, jr., and those from Banka and Billiton islands by Dr. W. M. Lyon, jr. A number of special contributions, based wholly or mainly upon this material, were published, the more noteworthy being as follows: By Mr. Miller, on Malayan pigs and new forms of bats, on the monkeys allied to *Macaca nemestrina*, and on two new civets; by Doctor Lyon, on the pygmy squirrels,

and a revision of the slow lemurs; by Mr. Knud Andersen, of the British Museum, on the bats of the genus *Rhinolophus*.

The Museum collection of bats, which is very extensive and diversified, has received a great amount of attention. Mr. Miller, who has been making a careful study of the entire order Chiroptera, extending over several years, recently brought to conclusion a revision of the families and genera in a manuscript of 583 pages. He also published several papers on nomenclature and new genera. Mr. W. L. Hahn, aid, is working up the genus *Hemiderma*, as represented in the Museum, and contributed two short papers on bats. Mr. Andersen completed and published several papers on the genera *Rhinolophus* and *Hipposideros*, based partly on the collections here.

Dr. F. W. True prepared a full description of the new fossil sea lion from Oregon, *Pontolcon magnus*, for publication by the U. S. Geological Survey, and also published a description of a new fossil seal from the Miocene of Maryland. In addition, he prepared an account of the fossil cetacean known as *Agorophius* for publication by the Smithsonian Institution, and continued work on the ziphioid whales and on a new scheme of biological exhibits.

Doctor Lyon spent some time in bringing up to date a catalog of the type specimens of mammals in the Museum collection; he also published a note on *Prolagus*, a genus of rabbits, and discovered that the great ant-eater of Central America represents a new species, which he described from a Museum specimen. Among those who made use of the mammal collection in connection with their investigations were Dr. J. A. Allen, of the American Museum of Natural History; Dr. D. G. Elliot, of the Field Museum of Natural History, and the members of the staff of the Biological Survey.

Mr. Robert Ridgway, curator of birds, completed the revision of six families of North American birds for his comprehensive work now in course of publication; described 18 new genera and 3 new species of birds, and made other contributions on the subject of ornithology. Dr. C. W. Richmond, assistant curator, added 3,000 cards to the catalog of genera and species of birds, spending some time at the Philadelphia Academy of Sciences for the purpose of consulting publications not to be found in Washington. He also continued his work on the catalog of type localities of North American birds. The birds collected in Sumatra and Borneo by Doctor Abbott were placed in the hands of Mr. H. C. Oberholser, of the Biological Survey, for study. Mr. J. H. Riley, aid in the division of birds, besides assisting Mr. Ridgway with his manual, described 3 new Venezuelan species and a new ground dove from Porto Rico. The collection of birds was consulted by members of the Biological Survey, the committee on nomenclature of the American Ornithologists' Union, and Mr. Outram Bangs, of Boston. Several papers based partly on this collection by

ornithologists not connected with the Museum were published, as follows: On the Ruff in Indiana, by Mr. R. Deane; on gulls of the genus *Larus*, by Dr. J. Dwight, jr.; on variation in the hairy woodpeckers, by Mr. H. O. Jenkins; on petrels, by Mr. W. O. Emerson; on certain California birds, by Dr. L. B. Bishop, and on the Pacific night hawk, by Mr. J. Grinnell.

Dr. Leonhard Stejneger, curator of reptiles and batrachians, completed a large work on the herpetology of Japan, which has occupied his attention for several years, and a report on the reptiles collected in Patagonia by the late Prof. J. B. Hatcher; he has begun upon a revision of the North American salamanders, and researches relative to the reptile fauna of the Philippines, for which material is being assembled. He also described several new species. The lizards and snakes of Texas were studied by Mr. Vernon Bailey of the Biological Survey; the chameleons by Mr. Th. Barbour; the garter snakes by Mr. A. G. Ruthven; the sea turtles by Mr. R. E. Coker, and the tailless batrachians by Miss M. C. Dickerson.

Twenty-four papers on fishes, by members of the staff and others, based wholly or in part on Museum collections, were issued or in course of preparation during the year. Seven of these were on Japanese fishes, including the sand lances, thread fishes, giant bass, and sturgeons, by Dr. David Starr Jordan, in collaboration with Mr. R. C. McGregor, Mr. J. O. Snyder, and Mr. A. Seale. In conjunction with the two latter Doctor Jordan also contributed a paper on fishes from the Negros Islands, Philippines, a list of the fishes collected at Shanghai and Hongkong in 1882–83 by Mr. Pierre L. Jouy, and a list of fishes collected at Tahiti by Mr. H. P. Bowie.

Dr. B. W. Evermann, curator of fishes, conjointly with Mr. Seale, Mr. W. H. Kendall, and Mr. H. W. Clark, described the fishes collected at the Philippines by Doctor Mearns and those from the same islands exhibited at the Louisiana Purchase Exposition. He also reported on collections of fishes obtained in Argentina by Mr. J. W. Titcomb, and in Santo Domingo by Mr. A. Busck. Prof. C. H. Eigenmann, of Indiana University, and Mr. Barton A. Bean, assistant curator of fishes, completed a paper on the specimens brought from the Amazon River a few years ago by Prof. J. B. Steere, and have begun upon a list and bibliography of all the species known to occur in the same region. Mr. Bean and Mr. McKnew spent some time in a study of the Florida fishes contained in the collection.

Prof. C. H. Gilbert, of Stanford University, spent about two months at the Museum investigating the general collection and reexamining the type specimens of deep-sea fishes obtained in the Pacific Ocean by the Fisheries steamer *Albatross*. Notes by him and Mr. J. C. Thompson on the fishes of Puget Sound were published. Dr. T. N. Gill, associate in biology, contributed papers on the carp and cyprinoid

fishes and on the life history of sea horses; Mr. E. C. Starkes, a list of fishes obtained in Ecuador and Peru by Mr. P. O. Simons, and Mr. E. W. Gudger, an account of the breeding habits and embryology of the pipe fishes. The ichthyologists of the Bureau of Fisheries made frequent use of the collections as heretofore.

Dr. W. H. Dall, curator of mollusks, completed a report on the land and fresh-water shells collected by the Harriman expedition to Alaska, and several shorter papers on land shells, on *Chiton*, *Callistoma*, *Crepidula*, *and Vitrina*, and on questions of nomenclature. Work on his revision of the Volutidæ was continued. In cooperation with Dr. Paul Bartsch, assistant curator, he prepared an extensive series of notes on Japanese, Indo-Pacific, and American species of the family Pyramidellidæ. Doctor Bartsch has nearly completed his monograph of the same family, and published two short papers on fresh-water shells. Some progress was also made in working up the mollusks collected at the Hawaiian Islands by the Bureau of Fisheries.

Thirty-three systematic and faunal papers and many articles on types of economic interest were prepared by the staff of the division of insects and others who worked in the laboratory. A new genus of Encyrtidæ from China was described by the curator, Dr. L. O. Howard, who was also the author of a number of economic papers. Among the contributions by Dr. W. H. Ashmead were an outline of a new arrangement of the families and genera of ants, a new classification of the ants of the family Ponerinæ and of the Driver ants, descriptions of a large number of new genera and species of Hymenoptera from the Philippines and Japan, and of two new Mymaridæ from Russian Turkestan. He also completed papers on Hymenoptera from the Galapagos Islands, and on Proctotrypidæ, Cynipoidea, and Bethytidæ from continental South America, and continued his studies on the Braconidæ.

Mr. D. W. Coquillet, custodian, submitted a new classification of the mosquitoes (Culicidæ) of North and Central America, and descriptions of 3 new genera and 15 new species of this family from the West Indies and Central America. A revision of the Hemerobiidæ of the United States and descriptions of many new genera and species of neuropterous insects and of American spiders and mites were prepared by Mr. Nathan Banks, custodian. Mr. J. A. G. Rehn, of Philadelphia, contributed to the Proceedings descriptions of new species of earwigs, of South American grasshoppers, and of several other groups of orthopterous insects from Costa Rica. Mr. F. H. Chittenden, of the Bureau of Entomology, described 13 new species of *Sphenophorus*, and Mr. Otto Heidemann, of the same Bureau, a new genus and two new species of Rhyngota. Mr. R. H. Johnson, of the Carnegie Institution, studied the specimens of *Hippodamia* and other Coccinellidæ, in preparation for a treatise on variation of color

in beetles. The Eumenidæ were examined by the Rev. F. W. X. O'Brien, S. J., who contemplates writing a synopsis of the North American species.

The investigations conducted in connection with the division of marine invertebrates were extensive and important. The soundings made by the U. S. S. *Nero* during the survey for a trans-Pacific cable, rich in specimens of foraminifera, were examined and reported on by Dr. James M. Flint, U. S. Navy, curator of medicine, in "A Contribution to the Oceanography of the Pacific," constituting Bulletin No. 55 of the Museum. Dr. James E. Benedict, assistant curator of marine invertebrates, studied the anomuran crabs from Hawaii and Japan, and, in cooperation with Dr. Harriet Richardson, made considerable progress toward completing his work on the family Lithodidæ, including a revision of the genera. Miss M. J. Rathbun, also assistant curator of the division, finished the second part of her monograph on the fresh-water crabs of the world, which was published by the Museum of Natural History, Paris, France. She reported on the brachyuran and macruran crustaceans obtained during the Hawaiian investigations of the U. S. Bureau of Fisheries, began the working up of the decapod crustaceans from several cruises of the steamer *Albatross* in the tropical Pacific and of the general collection of grapsoid crabs, and prepared a paper on certain New England crustaceans. A monograph of the isopod crustaceans of North America by Dr. Harriet Richardson, collaborator, based chiefly on the Museum collection, was published as Bulletin No. 54 of the Museum. It treats of 369 species, 12 of which, together with 9 genera, were new to science. The same author also contributed a paper on the family Sphæromidæ and one descriptive of a new genus of Isopoda from the *Albatross*-Agassiz Pacific expedition of 1904–5. Dr. T. W. Vaughan, custodian, reported on the stony corals from the same cruise of the *Albatross* and from the explorations at the Hawaiian Islands by the Bureau of Fisheries, and, in two papers, described several new species belonging to the genera *Fungia*, *Cœnocyathus*, and *Astrangia*.

Reports upon material collected in Hawaiian waters by the Bureau of Fisheries were published during the year as follows: On the starfishes by Mr. W. K. Fisher, on the nemerteans by Prof. W. R. Coe, on the annelids by Mr. A. L. Treadwell, on the hydroids by Prof. C. C. Nutting, and on the medusæ by Dr. A. G. Mayer. Descriptions of the parasitic *Myzostoma* taken from the crinoids collected on the Japan coast by the same Bureau were published by Mr. J. F. McClendon, who also examined the general collection of crinoids in the Museum for additional specimens. The following papers based upon material from *Albatross* explorations in the tropical Pacific under the direction of Dr. Alexander Agassiz, in addition to those mentioned above, were

published by the Museum of Comparative Zoology, namely: On the starfishes collected during the cruise of 1899–1900, by Dr. H. Ludwig; on the pelagic tunicates from the same cruise, by Prof. W. E. Ritter and Miss Edith S. Byxbee; and on a remarkable new genus of Cystoflagellata from the cruise of 1904–5, by Dr. Charles A. Kofoid.

In accordance with an arrangement between the Bureau of Fisheries and Doctor Agassiz, the entire Museum collection of deep-water sponges from the Pacific Ocean, mainly obtained in the course of investigations by the steamer *Albatross*, were sent to Dr. R. von Lendenfeld and Dr. F. Urban, of Prague, Austria, for working up in connection with other material from the Bureau of Fisheries and the Museum of Comparative Zoology. Doctor Agassiz has generously agreed to assume the expenses attendant upon the preparation and publication of this extensive work, which will occupy several years. The equally large and important collection of starfishes from the North Pacific Ocean and Bering Sea, but including the shore and shallow-water species as well as those from greater depths, was turned over to Mr. W. K. Fisher, of Stanford University, for study and report. To Dr. C. B. Wilson, of Westfield, Massachusetts, whose reports on the Argulidæ and Caliginæ have already been published, were sent the specimens belonging to the other groups of parasitic copepod crustaceans. The Museum collection of barnacles is being studied by Dr. H. A. Pilsbry, of the Philadelphia Academy of Sciences; the bryozoans from Bering Sea and other northern waters, by Dr. H. Kluge, of the Museum für Naturkunde, Berlin; and the extensive collection of foraminifera from the Pacific deep sea, by Mr. Joseph A. Cushman, of the Boston Society of Natural History. The collection last mentioned, resulting chiefly from soundings and dredgings by the steamer *Albatross* and cable surveys by the United States Navy, is exceedingly rich and diversified.

Eleven contributions by the staff of the division of plants were published during the year. Dr. J. N. Rose, associate curator, was chiefly occupied in working up the Mexican plants, collected mainly by himself in recent years. He prepared two papers on this material in conjunction with Mr. J. H. Painter, and described certain umbelliferous plants from Georgia. In cooperation with Dr. N. L. Britton, director of the New York Botanical Garden, he has begun upon a monograph of the cactus group. Capt. John Donnell Smith, associate in botany, described 23 new Central American species, and identified several hundred Guatemalan plants in the Herbarium, with the assistance of Baron von Pürckheim. He also completed for the press the eighth part of his enumeration of the plants of Guatemala. Mr. W. R. Maxon, assistant curator, prepared six papers on ferns, in which were described new species from Mexico, Guatemala, Porto Rico, and

Alabama: and a collection of yellow water lilies, assembled by Mr. G. S. Miller, jr., was made the subject of investigations by Mr. Painter, aid in the division. Prof. E. L. Morris, of the Washington Central High School, continued his studies on the genus *Plantago*, and the botanists of the Department of Agriculture made constant use of the Herbarium.

Four meteorites from Modoc, Kansas; Coon Butte, Arizona; Hendersonville, North Carolina, and Selma, Alabama, were the subject of study by Prof. George P. Merrill, head curator of geology, who completed descriptions of the two first mentioned. A contribution to the History of American Geology, on which he had been engaged for several years, was published in April as an appendix to the Annual Report of the Museum for 1904. Mr. Wirt Tassin, assistant curator of mineralogy, conducted investigations on meteorites in the collection with special reference to establishing the relations between structure and composition, which resulted in the discovery of a graphitic iron not heretofore recognized as occurring in meteorites, and in confirming the conclusion that much of the so-called chromite of meteorites is not true chromite but rather a spinel. Forty-two analyses led to the recognition of four minerals new to the collection.

Dr. R. S. Bassler, assistant curator of stratigraphic paleontology, completed under the auspices of the U. S. Geological Survey, a paper on the stratigraphy of the Valley of Virginia, with especial reference to the cement resources of the region, and a monograph on the bryozoan fauna of the Rochester shales. He has begun upon a study of the Ordovician bryozoans of Russia.

Mr. Gidley, of the section of vertebrate paleontology, made a study of tooth-cusp development in Mesozoic mammals, described a new species of fossil raccoon and a new genus and species of musk-ox, and finished his work on Miocene horses, begun at the American Museum of Natural History. He has now in preparation a revision of the Mesozoic mammals, based primarily upon the Museum collection. Mr. Gilmore, of the same section, described a recently mounted skeleton of the oreodont, *Merycoidodon gracilis*, and commenced the writing of a new description of the type specimens of *Morosaurus agilis* Marsh. He was also the author of several other papers relating to the collection of fossil reptiles. Both Mr. Gilmore and Mr. Gidley spent much time in revising the manuscript of a type catalog of the fossil vertebrates in the collection of the Museum, which will soon be ready for printing.

Extensive researches in paleobotany were carried on by Mr. David White and Dr. F. H. Knowlton, of the U. S. Geological Survey, who are also in charge of the Museum collection of fossil plants.

EXPLORATIONS.

The principal exploration of the year under the Department of Anthropology was conducted by Doctor Hough, assistant curator of ethnology, in conjunction with Mr. P. G. Gates, of Pasadena, California, through whose generosity the field expenses were paid, and was a continuation of the work begun in 1901 under the same conditions. The expedition started from Clifton, Arizona, on June 7, 1905, and terminated at Gallup, New Mexico, about four months later, having covered a large extent of country, touching upon the boundaries of earlier surveys by Doctor Hough. The area examined lies south of the great divide which sharply separates Arizona into two provinces, and is especially interesting on account of the presence of numerous cliff dwellings resembling those in the northern part of the Pueblo sphere. It contains, like other sections, numerous pueblo sites, but especially attractive are the ancient caves used for habitations and ceremonial purposes. The object of the expedition was to ascertain the nature of the peoples, their diffusion under varying conditions of environment due to food supply, elevation, intrusion from other areas, migrations, etc. With this view a study of the animal, vegetal, and climatic environment was made and collections were secured from the various sites for the purpose of comparative studies. Since the natural diffusion of population is along water courses, the work was mainly confined to streams. Of these, the San Francisco with its branches, the Blue, the Tulerosa, and the Apache were thoroughly investigated. As the region had previously been untouched by scientific exploration, the results of the expedition are very important. About 3,000 specimens were obtained and shipped to Washington.

In February, 1906, under the auspices of the Bureau of American Ethnology, Doctor Hrdlička, assistant curator of physical anthropology, in company with Dr. T. W. Vaughan, of the U. S. Geological Survey, spent about two weeks at Osprey, Florida, for the purpose of examining the localities where human fossil bones had been discovered, and of ascertaining the local conditions favoring fossilization. Osteological remains of Indians of more recent date were also obtained for comparison with the fossil specimens. Dr. J. Walter Fewkes, of the Bureau of Ethnology, made explorations in the Vera Cruz district of Mexico, of which a report is in press. The valuable collection he obtained is referred to in another place.

Of private expeditions from which collections have been received, reference may be made to the work of Doctor Abbott in the islands of Engano and Nias and along the northern branch of the Great Kapuas River, in western Borneo; of Dr. E. A. Mearns, U. S. Army, in connection with military operations in the Philippines; and of Mr. A. H.

Blackiston among cliff dwellings in the Casas Grandes Valley and in Cave Valley, Chihuahua, Mexico.

The most important exploration in the interest of the Department of Biology was conducted by Dr. J. N. Rose, associate curator of plants, who, with one assistant, was detailed for about three months to continue his botanical investigations in Mexico, in cooperation with the National Medical Institute of Mexico and the New York Botanical Garden. The States of Mexico, Morelos, Guerrero, Hidalgo, Queretaro, Puebla, and Oaxaca were visited and large collections obtained, including many living specimens of cacti.

Doctor True, head curator of biology, who is studying the fossil cetaceans of the Atlantic coast region, collected at the Calvert Cliffs in Maryland, where several hundred specimens, mainly vertebræ, were found, and also in the vicinity of Richmond and at Gay Head, Massachusetts. While in charge of the Museum exhibit at the Lewis and Clark Exposition, Doctor Lyon made several trips, chiefly for procuring small mammals, to places in the vicinity of Portland, Oregon, to Seaside and Mount Hood, and to Mount Rainier, Washington. Mr. William Palmer also collected mammals about Portland, and Mr. W. L. Hahn was detailed for field work in Indiana. Doctor Stejneger engaged in field-work for the Museum while in Europe during the summer of 1905, and Doctor Ralph visited the Dismal Swamp, Virginia, and the Adirondack region in New York, securing both mammals and reptiles. Mr. Barton A. Bean accompanied Dr. B. W. Evermann to Florida, where he obtained a large number of fishes mainly between Daytona and Miami. Miss M. J. Rathbun was detailed to the Woods Hole Station of the Bureau of Fisheries for a part of the summer of 1905.

Dr. A. M. Reese, of Syracuse University, while collecting material in Florida for a study of the embryology of the alligator, under a grant from the Smithsonian Institution, obtained a number of reptiles for the Museum. The important field-work of Doctor Abbott in the East Indies, and of Doctor Mearns in Guam and the Philippine Islands has already been referred to.

The branches of the Government through the explorations of which the collections in biology were especially enriched are the Bureau of Fisheries, and the Bureau of Entomology, the Biological Survey, and the Bureau of Plant Industry of the Department of Agriculture.

The only explorations carried on in connection with the Department of Geology were conducted under the joint auspices of the Museum and the U. S. Geological Survey by Doctor Bassler, who engaged in stratigraphic field-work in the southern Appalachians during the early part of July, 1905; in western Virginia during August and September, and in the Mississippi Valley during June, 1906. These investigations resulted in the acquisition of a large amount of desirable material for the Museum collection.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

Over 30,000 duplicate specimens, recently separated from the reserve collections, and consisting mainly of marine invertebrates, fishes, rocks, ores, and minerals, accurately named and labeled, were made up into several hundred sets for distribution to educational establishments. The number of sets actually sent out during the year was 261, including fossils, as well as the groups above mentioned; these comprised about 20,000 specimens.

There were lent to specialists elsewhere for study, including those who are conducting investigations for the Museum, as noted under the heading of researches, about 20,000 specimens; and upward of 17,500 duplicate specimens were utilized in making exchanges with other institutions and with individuals. The most noteworthy object disposed of in exchange was the full-sized restoration of the skeleton of the Dinosaurian reptile, *Triceratops*, exhibited at both the Pan-American and Louisiana Purchase expositions, which was sent to the British Museum of Natural History. Reproductions of some of the rarer objects in archeology have also proved to be a valuable medium of exchange. The institutions abroad from which, through exchange relations, important material was received were as follows:

The British Museum of Natural History, London; the Royal Botanic Gardens, Kew, England; the Museum of Natural History, Paris; the University Zoological Museum, Copenhagen; the Geographisches Schul-Museum, Seitenstetten, Lower Austria; the University of Göttingen, Germany; the Zoological Museum of the Imperial Academy of Sciences, St. Petersburg; the Zoological Museum, Christiania, Norway; the University of Upsala, Sweden; the Musée Cantonal, Fribourg, Switzerland; the Museo Civico di Storia Naturale, Genoa, Italy; the Royal Botanic Garden, Sibpur, near Calcutta, India; the University of Sydney, New South Wales; the Sarawak Museum, Borneo; the Instituto Medico Nacional, City of Mexico; the Instituto Fisico-Geografico, San José, Costa Rica; the Hope Gardens, Kingston, Jamaica; the Geological Survey of Canada; the Estacion Central Agronomica, Santiago de las Vegas, Cuba.

The following individuals abroad have also sent valuable specimens in exchange: Mr. J. Stanley Gardiner, Mr. Edward Lovett, the Rev. Canon A. M. Norman, and Mr. H. W. Parrtt, of England; Mr. F. Canu, Mr. Jean Miguel, and Mr. J. Vaquez, of France; Mr. Ph. Oberland, of Austria; Mr. J. Kaulfuss, of Germany; Mr. G. van Roon, of Holland; Mr. A. Roman, of Sweden; Mr. A. Berger, of Italy; Dr. H. Christ, Mr. Charles Mottaz, Grebel, Wendler & Co., and Mr. Henry Volkart, of Switzerland; the Rev. R. P. Longinos Navas, of Spain; Mr. Y. Hirase, of Japan; Mr. Octavius Watkins, of West

Australia; the Rev. William Webster, of New Zealand; Mr. C. Boden Kloss, of Singapore; Mr. C. Conzatti, of Mexico; and Mr. Federico Videla Ibarra, of Chile.

VISITORS.

The number of visitors to the National Museum building during the year was 210,886, a daily average of 673, and to the Smithsonian building 149,661, a daily average of 478.

The following tables show, respectively, the attendance during each month of the past year, and for each year beginning with 1881, when the Museum building was first opened to the public:

Number of visitors during the fiscal year 1905–6.

Year and month.	Museum building.	Smithsonian building.
1905.		
July	17,077	12,471
August	22,641	16,176
September	22,197	16,257
October	17,684	12,841
November	13,831	9,008
December	16,572	11,171
1906.		
January	13,762	9,507
February	14,958	10,720
March	16,152	11,240
April	24,429	17,556
May	16,462	11,997
June	15,121	10,717
Total	210,886	149,661

Number of visitors to the Museum and Smithsonian buildings since the opening of the former in 1881.

Year.	Museum building.	Smithsonian building.	Year.	Museum building.	Smithsonian building.
1881	150,000	100,000	1894–95	201,744	105,658
1882	167,455	152,744	1895–96	180,505	103,650
1883	202,188	104,823	1896–97	229,606	115,709
1884 (half year)	97,661	45,565	1897–98	177,254	99,273
1884–85	205,026	105,993	1898–99	192,471	116,912
1885–86	174,225	88,960	1899–1900	225,440	133,147
1886–87	216,562	98,552	1900–1901	216,556	151,563
1887–88	249,665	102,863	1901–2	173,888	144,107
1888–89	374,843	149,618	1902–3	315,307	181,174
1889–90	274,321	120,894	1903–4	220,778	143,988
1890–91	286,426	111,669	1904–5	235,921	149,380
1891–92	269,825	114,817	1905–6	210,886	149,661
1892–93	319,930	174,188	Total	5,764,234	3,168,818
1893–94	195,748	103,910			

CORRESPONDENCE.

The work of the office of correspondence has been kept well in hand, notwithstanding the increased demands made upon the office, which not only has to do with the receipt and answering of letters in general but is also charged with the distribution of the Museum publications. Of the 8 volumes and 80 separate papers issued during the year, about 24,000 copies of the former and 34,000 of the latter were supplied to the scientific establishments, libraries, and individuals entered on the permanent mailing list. About 14,000 publications were sent out in response to special request, and some 34,000 copies were distributed in sets to many scientific and educational institutions in different parts of the country.

PUBLICATIONS AND PRINTING.

Eight volumes of publications were issued during the year, though the composition and printing of a part of them was begun in 1905. These volumes were as follows: The Annual Report for the fiscal year ending June 30, 1904, containing, besides the administrative part, three scientific papers entitled "Contributions to the History of American Geology," by George P. Merrill, "The S. S. Howland Collection of Buddhist religious art in the National Museum," by Immanuel M. Casanowicz, and "Flint Implements of the Fayum, Egypt," by Heywood Walter Seton-Karr; volumes 28, 29, and 30 of the Proceedings of the Museum, comprising 97 descriptive papers, 25 of which were issued in separate form before the beginning of the year; Part I of Bulletin 53, entitled "Catalogue of the type specimens of fossil invertebrates in the department of geology, United States National Museum," by Charles Schuchert, assisted by W. H. Dall, T. W. Stanton, and R. S. Bassler; Bulletin 54, "A Monograph on the Isopods of North America," by Harriet Richardson; Bulletin 55, "A Contribution to the Oceanography of the Pacific," by James M. Flint; Part S of Bulletin 39, entitled "Directions for collecting information and objects illustrating the history of medicine," by James M. Flint; and Part 1 of Volume X of the Contributions from the National Herbarium, entitled "North American Species of Festuca," by Charles V. Piper.

Of the papers contained in the Proceedings and the Annual Report, separates in editions of 600 to 1,000 were printed for supplying specialists, whereby the distribution of the publications was greatly extended. These separates together with the bulletins related to 81 subjects as follows: Administration, 1; physical anthropology, 1; archeology, 1; historic religions, 1; medicine, 1; mammals, 5; birds, 3; reptiles and

batrachians, 4; fishes, 16; insects, 21; crustaceans, 2; mollusks, 3; helminthology, 1; corals, 2; plants, 4; geology, 1; fossils, 13; oceanography, 1.

The regular distribution of the publications of the year consisted of 23,670 volumes and 33,600 separates, while the special distribution, resulting from requests received from time to time and from the effort to place the publications among scientific establishments where they will do the most good, amounted to about 48,000 volumes and separates from the issues of this and former years.

Besides the printing of the publications the editor has charge of all the other printing for the Museum, including the several forms of labels employed in connection with the exhibition collections, those for the specimens, for the shelves and for the cases.

LIBRARY.

The library was exceptionally fortunate the past year in the matter of valuable donations. Perhaps the one of greatest general interest was a copy of the magnificent publication in two volumes, entitled "Investigations and Studies in Jade," profusely illustrated by American, European, and Chinese artists, and presented by the estate of the late Heber R. Bishop, whose large collection of jade and other hard stones was denoted to the Metropolitan Museum of Art in New York. The material for this imposing work was prepared under the direction of Mr. Bishop at great cost, but its publication was left to his executors. The number of copies was limited to one hundred, to be distributed to members of his family, heads of governments, and the principal libraries and museums in this and other countries.

Prof. Lester F. Ward, of the U. S. Geological Survey, and for many years connected with the Museum, presented his collection of botanical and paleobotanical books, memoirs, and pamphlets. Mr. Robert Ridgway, curator of birds, contributed a large number of natural history papers, and Dr. C. W. Richmond, assistant curator of birds, over a hundred valuable works relating to the same subject and to travel. Prof. O. T. Mason and Dr. C. A. White have continued to add to their donations of some years ago, and many valuable publications have reached the library in this way.

The library now contains 27,726 volumes, 44,075 unbound papers, and 108 manuscripts, the additions during the year having comprised 3,556 books, 5,327 pamphlets, and 105 parts of volumes. There were catalogued 1,848 books, 4,864 pamphlets, and 12,228 parts of periodicals, and 290 books were bound.

The number of books, periodicals, and pamphlets borrowed from the general library amounted to 28,924, including 19,354 which were assigned to the sectional libraries.

The sectional libraries established in the Museum are as follows:

Administration.
Administrative Assistant.
Anthropology.
Biology.
Birds.
Botany.
Children's Room.
Comparative Anatomy.
Editor.
Ethnology.
Fishes.
Geology.
History.
Insects.
Mammals.
Marine Invertebrates.
Materia Medica.
Mesozoic Fossils.
Mineralogy.
Mollusks.
Oriental Archeology.
Paleobotany.
Parasites.
Photography.
Physical Anthropology.
Prehistoric archeology.
Reptiles.
Stratigraphic Paleontology.
Superintendent.
Taxidermy.
Technology.

PHOTOGRAPHY.

In the photographic laboratory, which is well equipped for the purpose, there were made 1,681 negatives, 3,820 silver prints, 465 platinum prints, 514 velox prints, 1,903 cyanotypes, and 56 bromide prints. These photographs were almost exclusively of objects in the collections for use in illustrating scientific reports or in perfecting the records and catalogs. Some, however, related to structural details of the buildings, to articles of furniture, and to other general museum subjects. The chief photographer, Mr. T. W. Smillie, also continued, as in previous years, to conduct the examinations in photography for the U. S. Civil Service Commission.

EXPOSITIONS.

LEWIS AND CLARK CENTENNIAL EXPOSITION, PORTLAND, OREGON.

From the appropriation of $200,000 made by Congress for a Government exhibit at this exposition, which was held from June 1 to October 15, 1905, the sum of $12,658 was allotted to the Smithsonian Institution and National Museum, which were represented on the Government Board by Dr. F. W. True, Dr. M. W. Lyon, jr., being detailed as chief special agent. The collections taken to Portland were mainly selections from the exhibit made at the Louisiana Purchase Exposition, but with only about one-third the space the display was naturally very much smaller. Among the new objects shown were photographic enlargements of geological subjects and of animals at the National Zoological Park; framed plates from Audubon's great work on birds; a nearly complete skeleton of the extinct Dodo; a facsimile of a painting of the living Dodo from a copy in the British Museum, and the skeleton of a little piked whale.

JAMESTOWN TERCENTENNIAL EXPOSITION.

In the sundry civil act approved June 30, 1906, the sum of $200,000 was appropriated to enable the United States Government, including

the Smithsonian Institution and the National Museum, to be represented at the Jamestown Tercentennial Exposition, which will be held during the summer of 1907. The buildings were provided for in a separate grant of $350,000.

ORGANIZATION AND STAFF.

There were few changes in the scientific staff during the year. Mr. E. P. Upham, who has served for many years in the division of prehistoric archeology under the title of clerk, was advanced to the rank of aid. Dr. M. W. Lyon, jr., was promoted from the grade of aid to that of assistant curator in the division of mammals, while Mr. Gerrit S. Miller, jr., also assistant curator in the same division, was granted a year's leave of absence to enable him to carry on certain investigations abroad for the British Museum of Natural History.

Dr. Paul Bartsch was promoted from aid to assistant curator in the division of mollusks. Mr. Le Roy Abrams was appointed assistant curator in the division of plants; Mr. A. N. Caudell, of the Department of Agriculture, custodian of orthoptera in the division of insects, and Mr. Lawrence La Forge, of the Geological Survey, aid in the division of physical and chemical geology.

The following table gives the organization and staff at the close of the fiscal year:

The Museum Staff.

[June 30, 1906.]

The Secretary of the Smithsonian Institution, Keeper *ex officio*.
Richard Rathbun, Assistant Secretary, in charge of the U. S. National Museum.
W. de C. Ravenel, Administrative Assistant.

SCIENTIFIC STAFF.

Department of Anthropology:

Otis T. Mason, Head Curator.

Division of Ethnology: Otis T. Mason, Curator; Walter Hough, Assistant Curator; J. W. Fewkes, Collaborator.

Division of Physical Anthropology: Aleš Hrdlička, Assistant Curator.

Division of Historic Archeology: Cyrus Adler, Curator; I. M. Casanowicz, Assistant Curator.

Division of Prehistoric Archeology: William H. Holmes, Curator; J. D. McGuire, Collaborator; E. P. Upham, Aid.

Division of Technology: George C. Maynard, Assistant Curator.

Division of Graphic Arts: Paul Brockett, Custodian.

Section of Photography: T. W. Smillie, Custodian.

Division of Medicine: J. M. Flint, U. S. Navy (Retired), Curator.

Division of Historic Religions: Cyrus Adler, Curator.

Division of History: A. Howard Clark, Curator; Paul Beckwith, Assistant Curator.

Associate in Historic Archeology: Paul Haupt.

Department of Biology:

Frederick W. True, Head Curator.

Division of Mammals: Frederick W. True, Curator; Marcus W. Lyon, jr., Assistant Curator; Walter L. Hahn, Aid.

Division of Birds: Robert Ridgway, Curator; Charles W. Richmond, Assistant Curator; J. H. Riley, Aid.

Section of Birds' Eggs: William L. Ralph, Curator; E. J. Horgan, Aid.

Division of Reptiles and Batrachians: Leonhard Stejneger, Curator; R. G. Paine, Aid.

Division of Fishes: B. W. Evermann, Curator; Barton A. Bean, Assistant Curator; C. A. McKnew, Aid.

Division of Mollusks: William H. Dall, Curator; Paul Bartsch, Assistant Curator; William B. Marshall, Aid.

Division of Insects: L. O. Howard, Curator; W. H. Ashmead, Assistant Curator; H. S. Barber, Aid.

Section of Hymenoptera: W. H. Ashmead, in charge.

Section of Myriapoda: O. F. Cook, Custodian.

Section of Diptera: D. W. Coquillett, Custodian.

Section of Coleoptera: E. A. Schwarz, Custodian.

Section of Lepidoptera: Harrison G. Dyar, Custodian.

Section of Orthoptera: A. N. Caudell, Custodian.

Section of Arachnida: Nathan Banks, Custodian.

DEPARTMENT OF BIOLOGY—Continued.

Division of Marine Invertebrates: Richard Rathbun, Curator; J. E. Benedict, Assistant Curator; Mary J. Rathbun, Assistant Curator; Harriet Richardson, Collaborator.

Section of Helminthological Collections: C. W. Stiles, Custodian; B. H. Ransom, Assistant Custodian.

Division of Plants (National Herbarium): Frederick V. Coville, Curator: J. N. Rose, Associate Curator; W. R. Maxon, Assistant Curator; LeRoy Abrams, Assistant Curator; J. H. Painter, Aid.

Section of Cryptogamic Collections: O. F. Cook, Assistant Curator.

Section of Higher Algæ: W. T. Swingle, Custodian.

Section of Lower Fungi: D. G. Fairchild, Custodian.

Associates in Zoology: Theodore N. Gill, C. Hart Merriam, R. E. C. Stearns, W. L. Abbott.

Associates in Botany: Edward L. Greene, John Donnell Smith.

DEPARTMENT OF GEOLOGY:

George P. Merrill, Head Curator.

Division of Physical and Chemical Geology (Systematic and Applied): George P. Merrill, Curator; Laurence La Forge, Aid.

Division of Mineralogy: F. W. Clarke, Curator; Wirt Tassin, Assistant Curator.

Division of Stratigraphic Paleontology: Charles D. Walcott, Curator; R. S. Bassler, Assistant Curator.

Section of Invertebrate Fossils: Paleozoic, R. S. Bassler, in charge; Carboniferous, George H. Girty, Custodian; Mesozoic, T. W. Stanton, Custodian; Cenozoic, W. H. Dall, Associate Curator; Madreporarian Corals, T. Wayland Vaughan, Custodian.

Section of Paleobotany: David White, Associate Curator; A. C. Peale, Aid; F. H. Knowlton, Custodian of Mesozoic Plants.

Associate in Mineralogy, L. T. Chamberlain.

Associate in Paleontology, Charles A. White.

Associate in Paleobotany, Lester F. Ward.

DEPARTMENT OF MINERAL TECHNOLOGY:

Charles D. Walcott, Curator.

ADMINISTRATIVE STAFF.

Chief of Correspondence and Documents, R. I. Geare.

Disbursing Agent, W. I. Adams.

Superintendent of Construction and Labor, J. S. Goldsmith.

Editor, Marcus Benjamin.

Editorial Clerk, E. S. Steele.

Assistant Librarian, N. P. Scudder.

Photographer, T. W. Smillie.

Registrar, S. C. Brown.

Property Clerk, W. A. Knowles.

LIST OF ACCESSIONS TO THE COLLECTIONS DURING THE FISCAL YEAR 1905–1906.

[Except when otherwise indicated, the specimens were either presented or transferred in accordance with law.]

Abbott, William L., Singapore, Straits Settlements: An extensive and valuable collection of ethnological and biological material, the latter consisting of mammals, birds, reptiles, insects, fishes, and mollusks, principally from the islands of Engano and Nias, western Sumatra; also 363 negatives (44682); a large and very interesting collection of ethnological objects and natural-history specimens from the region of Kapuas River, Borneo (45397); ethnological specimens and natural-history material from eastern Sumatra (46089); mammals from Rhio Archipelago, collected by C. Boden Kloss (46090). (See under C. Boden Kloss.)

Abrams, Le Roy, U. S. National Museum: 638 plants from California (46066: purchase). (See under J. W. Adams.)

Adam, Joseph S., Canaan, Conn.: Larva of a sphinx-moth, or hawk-moth, parasitized by ichneumon-flies (44969).

Adams, J. W., Soldiers' Home, Cal.: 8 plants from California (45147); 4 plants from the southern part of California (received through Le Roy Abrams) (45031).

Adams, Martin A., Jersey City, N. J.: Cane or walking-stick with the inscription "Presented to Dr. B. Clement, U. S. Frigate *Constitution*" (45632).

Adler, Cyrus, Smithsonian Institution: Ten-cent bill (fractional currency) (45284).

Agriculture, Department of, Hon. James Wilson, Secretary.

Bureau of Biological Survey: 4 plants from Texas, collected by Arthur Howell (44771); specimen of black pine, *Pinus Jeffreyi*, collected by J. H. Gaut in Shasta County, Cal. (44859); 268 plants from Mexico (44939); 50 shells from Lower California (44996); 3 freshwater shells obtained by J. H. Gaut in California (45015); 4 birds' eggs collected in Lower California by E. A. Goldman and E. W. Nelson (45027); 4 specimens of mollusk, *Epiphragmophora fidelis*, from California, collected by J. H. Gaut (45049); plant from Elk River, Minnesota, collected by Vernon Bailey (45080); 207 plants collected in Lower California by E. W. Nelson and E. A. Goldman (45136); 5 specimens of willow, *Salix*, obtained in California by E. W. Nelson (45385); 120 plants from Lower California obtained by E. W. Nelson and E. A. Goldman (45479); 29 landshells collected by E. W. Nelson and E. A. Goldman in Lower California (45496); 26 plants collected in Texas by A. H. Howell (45579); 130 plants collected in Lower California by E. A. Goldman and E. W. Nelson (45582); 9 specimens of cacti from Mexico collected by E. W. Nelson (45736); 24 living plants and 120 dried specimens obtained by E. W. Nelson and E. A. Goldman in Mexico (45735); crustaceans collected by E. W. Nelson and E. A. Gold-

AGRICULTURE, DEPARTMENT OF—Cont'd.

man in San Felipe Bay, Lower California (45797); 6 eggs of Viosca's pigeon, *Columba fasciata vioscæ* from Lower California (45811); 18 land-shells from Lower California (45840); 21 plants from California collected by E. A. Goldman (45845); 38 plants from Arizona collected by E. A. Goldman (45846); specimen of living prickly pear, *Opuntia*, from Wyoming collected by Vernon Bailey (45897); 5 plants from Wyoming collected by Vernon Bailey (45958); 3 living specimens of cacti collected by Vernon Bailey in New Mexico (46048); skeletons and sterna of birds (46062); nest of California bush-tit, *Psaltriparus minimus californicus* (46128).

Bureau of Entomology: Specimen of short-fruited rush, *Juncus brachycarpus*, from Long Island, collected by Harry Latham (44740); large collection of insects made by Mr. A. Busck, under the auspices of the Carnegie Institution (45044); about 10,000 insects collected in Brownsville, Tex., by H. S. Barber (45250); about 800 Japanese insects (45252); 6 specimens of cicada, *Cicada nigriventris* (45477); specimen of insect, *Mantispa viridis*, collected by J. D. Mitchell, Victoria, Tex. (45587); 6 specimens of insect, *Telenomus liodermæ*, collected by A. W. Morrill (45740); large collection of insects, shells, reptiles, plants, marine invertebrates, bird and bird-egg collected in Alta Verapaz, Guatemala, by E. A. Schwarz and H. S. Barber (46026).

Bureau of Plant Industry: 30 plants from Texas (44649); 196 plants collected in Massachusetts by G. C. Worthen (45677); 820 type specimens of grasses and many drawings of types (44696); about 400 plants collected in Guatemala by H. Pittier in 1905 (44763); about 300 snakes, insects, and plants collected in Guatemala by G. P. Goll in 1904 and 1905 (44783); 13 plants from various localities (44885); about 800 plants collected in Costa Rica in 1903 by O. F. Cook and C. B. Doyle (44889); 15 plants from Washington and Oregon collected by Byron Hunter (44976); plants obtained in Texas by J. H. Gaut (44991); 2 specimens of

AGRICULTURE, DEPARTMENT OF—Cont'd.

willow, *Salix* (45016); 9 specimens of grasses collected at Fort Gibbons, Alaska, by C. W. H. Heideman (45033); 13 specimens of grasses from Mt. Rose, Nev., collected by P. B. Kennedy (45034); 23 plants collected in Argentina by various collectors and received from E. Autran, Buenos Aires, Argentina (45035); 6 plants collected in the Transvaal by William McDonald, editor of the "Agricultural Journal," Pretoria, Transvaal (45036); 150 plants collected in various localities and received from E. Hackel, Graz, Austria (45037); 821 grasses, largely types obtained by different collectors in various localities (45038); 69 specimens of grasses collected in the southern part of the United States by S. M. Tracy (45039); 15 specimens of grasses from Terra del Fuego collected in 1903, from E. Autran, Buenos Aires, Argentina (45040); 2,750 plants from various localities (45059); 3 plants from Virginia (45060); 123 plants collected in Mexico by H. Pittier (45126); 18 specimens of cryptogams from various localities (45233); 300 plants from the western part of the United States collected by F. V. Coville (45237); plants from Oregon (45238); 10 plants from Oregon (45238); plant from Washington (45266); 3 plants from various localities (45280); 31 plants from various localities (45349); 35 plants collected in Pennsylvania, Maine, and other localities by P. L. Ricker (45401); 9 specimens of *Pteridophyta* collected in Washington by C. V. Piper (45416); 8 shrubby plants from New Hampshire collected by F. V. Coville (45425); 21 specimens of grasses collected by W. E. Brockway in Grenada, West Indies (45605); 8 grasses from Argentina collected by G. Williams and sent by L. H. Pammel (45606); 31 grasses from W. C. Cusick, Union, Oreg. (45607); 65 botanical specimens from N. N. Suksdorf, Bingen, Wash. (45608); 116 specimens of grasses from different localities (45609); 5 plants from Mexico and vicinity (45610); 500 plants, chiefly from the western section of the United States, collected by David Griffiths

AGRICULTURE, DEPARTMENT OF—Cont'd.
(45667); 82 sedges (45674); 1 plant, *Dracontium asperum*, from Porto Rico (45706); about 1,175 specimens of grasses (45737); 400 plants obtained from A. Kneucker, Germany (45864); about 500 specimens of fungi from Maine collected by P. L. Ricker (45893); specimen of ivory palm, *Phytelephas*, from Panama (45894); plants from the Colombian Republic collected by H. Pittier (44895); fungus, *Alternaria solani*, collected by W. S. Lyon in the Philippine Islands (45896); plants from Alaska collected by the Harriman expedition (45908); plants collected by W. F. Wight in Canada and New Hampshire (45917); 2 plants from the southern part of California (45928); 52 plants from various sections of the United States (46017); 2 living specimens of prickly pear, *Opuntia*, from Dallas, Tex., collected by C. V. Piper (46018); 4 living plants from Texas collected by C. V. Piper (46028); specimen of plantain from Texas collected by C. V. Piper (46070); 14 plants from the Philippine Islands collected by F. Lamson-Scribner (46101).

Forest Service: 310 plants collected in the United States.

(See also under J. A. Flemer; B. V. Lilly; C. G. Lloyd; C. S. Scofield.)

ALABAMA STATE COMMISSION AT THE LOUISIANA PURCHASE EXPOSITION: Ores and nonmetallic minerals from Alabama (44661).

ALBATROSS - AGASSIZ EXPEDITION. (See under Department of Commerce and Labor, Bureau of Fisheries.)

ALFARO, ANASTASIO, San José, Costa Rica: 5 birds' skins from Costa Rica (44654); 11 birds' skins from Costa Rica, including type of a new species of owl, *Cryptoglaux ridgwayi* (44903). (See under San José, Costa Rica, Museo Nacional).

ALLEN, G. W., Fort Bayard, N. Mex.: 2 larvæ of a large yellow swallow-tailed butterfly, *Papilio* (44970).

ALLEN, R. A., Jr., U. S. National Museum: Wild rabbit, gray squirrel, owl, hooded woodpecker, field-lark, crow, blue jay, cardinal, turkey buzzard, 2 field-larks, woodcock, collected for the Museum at

ALLEN, R. A., Jr.—Continued.
Ammon, Amelia County, Va. (45112; 45125; 45140; 45160).

ALLEN, WILLIAM T., Pacific Grove, Cal.: 5 living plants of the genus *Dudleya*, from Point Lobus (45725).

ALONZA, CARLO, Bologna, Italy: Subterranean crustaceans from Italy (44951); collection of cave insects (46092). Exchange.

ALTAMIRANO, F., Instituto Medico Nacional, City of Mexico, Mexico: 4 plants from Mexico (45017). (See also under City of Mexico.)

ALVERSON, A. H., San Bernardino, Cal.: 7 plants from California (45835: exchange).

AMERICAN MUSEUM OF NATURAL HISTORY, New York City: About 500 moths (45726: exchange); 2 species of ants (45854: exchange); brain of an Eskimo (11234: loan).

AMERICAN PHILOSOPHICAL SOCIETY, Philadelphia, Pa.: Bronze medal to commemorate the 200th anniversary of the birth of Benjamin Franklin (received through the President of the United States, from the State Department) (45927). See also under Smithsonian Institution.

AMERICAN REPUBLICS, INTERNATIONAL BUREAU OF THE, Washington, D. C.: Panama relief map and Intercontinental railway map (45568).

AMES, FRANK H., Brooklyn, N. Y.: Beetle and 2 larvæ of *Sitodrepa panicea* (46134).

AMOS, Mrs. HELEN, Washington, D. C.: Cecropia moth (46046).

ANDERSON, E. M., Provincial Museum, Victoria, British Columbia: Moth (44687).

ANDERSON, ROBERT V. (See under Leland Stanford Junior University.)

ANDERSON, R. W., Eagle Pass, Tex.: Cactaceæ from Texas (45553; 45627; 45640).

ANDREWS, L., Stonington, Conn.: 5 plants of the genus *Sanguinaria* from Connecticut (45920).

ANTHONY, A. W., Anthony, Oreg.: Invertebrate fossils (46052).

ARKANSAS STATE COMMISSION AT THE LOUISIANA PURCHASE EXPOSITION: Ores and nonmetallic minerals from Arkansas (44662).

ARLEDGE, ALEX., Weiser, Idaho: Larva of a water-beetle, *Hydrophilus triangularis* (44690).

ARMES, Col. G. A., U. S. Army (retired), Washington, D. C.: Service sword worn during the civil war, while on the staff of Gen. W. S. Hancock (44960); unexploded shell from Appomattox battlefield, April 8–9, 1865 (45363).

ARTHUR, J. C., Lafayette, Ind.: 32 fungi (45898: exchange).

ASH, CHARLES, U. S. National Museum: Bat, *Vespertilio* (45319: collected for the Museum).

ATWOOD, M. C., Provincetown, Mass.: Brain of double-crested cormorant, *Phalacrocorax dilophus* (45022).

AUTRAN, E. (See under Department of Agriculture.)

AVERY, W. C., Corinth, Vt.: Larvæ of a fly, probably *Homalomyia canicularis* (45868).

BACK, E. A., Amherst, Mass.: 5 dipterous insects, *Scatopse clavipes* (45788).

BADU, N. J., Llano, Tex.: Samples of powdered rock (44874).

BAGG, RUFUS M., Jr. (See under Interior Department, U. S. Geological Survey.)

BAILEY, VERNON, Department of Agriculture, Washington, D. C.: Living specimen of prickly pear, *Opuntia clavata* from Texas (45130). (See also under Department of Agriculture.)

BAKER, C. F., Santiago de las Vegas, Cuba: 44 specimens of Lepidoptera (44863); 176 specimens of Lepidoptera (45166); 200 specimens of cacti from Cuba (46085). (See also under Santiago de las Vegas.)

BAKER, FRANK C. (See under Chicago Academy of Sciences.)

BAKER, LEROY, Mell City, Nev.: Silver ores from Buena Vista district, Humboldt County, Nev. (45527).

BAKER, Miss OLIVIA, Selma, Ala.: Alabama badge of the Young People's Society of Christian Endeavor (44676).

BALCH, F. N., Boston, Mass.: 4 specimens of mollusk, *Rissoa latior*, from Maine (46001).

BALL, W. P., Beckley, W. Va.: 2 fossil plants from Beckley (received through David White) (45528).

BANGS, OUTRAM. (See under John E. Thayer.)

BANKS, CHARLES S. (See under Manila, Philippine Islands, Bureau of Science.)

BANTA, A. M. and W. L. MCATEE, Department of Agriculture: 24 specimens of salamanders, *Spelerpes maculicaudus*, from Mansfield's Cave, Bloomington, Ind. (45247).

BARBER, A. W., Washington, D. C.: Birch-bark bucket from Washington (44956: exchange); plant from near Lake Okeechobee, Florida (44965); copperhead snake from Virginia (44826).

BARBER, Maj. HENRY A., U. S. Army (retired), Cambridge, Md.: Scorpion, *Heterometrus longimanus* (45110).

BARBER, H. S., U. S. National Museum: 5 specimens of knotweed, *Polygonum*, from Fairfax County, Va. (44785); 3 land-shells from California (45054). (See also under Department of Agriculture and Carnegie Institution.)

BARBER, V. S., Susanville, Cal.: 34 eggs of North American birds (44694).

BARCHET, STEPHEN P. (See under Smithsonian Institution.)

BARNARD, W. C., Seneca, Mo.: Small collection of relics from ancient quarries in Seneca County (45113); flint implements from Seneca (46057). Exchange.

BARNES, WILLIAM, Decatur, Ill.: 616 moths (44720: exchange); 259 specimens of Lepidoptera (44680; 45233).

BARRETT, L. E., Syracuse, N. Y.: Hickory-horned devil, larva of *Citheronia regalis*, from Indian Territory (?) (44910).

BARRINGER, M., Philadelphia, Pa.: Piece of stony meteorite weighing 200 grams, from Cañon Diablo, Arizona (46024).

BARROTT, A. F., Washington, D. C.: Coin: ½ kopeck of 1892 (45111); silver necklace of Navaho workmanship (45924: exchange).

BARTLETT, J. D., Hico, Tex.: Fragment of a Lower Cretaceous ammonite of the genus *Engonoceras* (45383).

BARTLETT, S. P. (See under Department of Commerce and Labor, Bureau of Fisheries.)

BARTSCH, PAUL, U. S. National Museum: Fungus from the District of Columbia (44718); 3 plants from Fairfax County, Va. (44798: collected for the Museum).

BASSETT, Miss HULDA J., Warsaw, N. Y.: Beetle, *Calligrapha scalaris* (45457).

BASSLER, R. S., U. S. National Museum: 20 land-shells from Clinch Mountain, near Mendota, Va. (44824); about 5,000 fossils from the Ordovician rocks of Virginia (44935: collected for the Museum); about 500 fossils from the Silurian and Devonian rocks of Virginia (44977: collected for the Museum).

BAUMANN, A. F., Greenville, S. C.: Cube of granite (44957).

BAYLEY, WESTERN D., Philadelphia, Pa.: Collection of old musical instruments and manuscript music arranged for bands (45356).

BEALS, Mrs. IDA M., Lake Valley, N. Mex.: 11 specimens of cactus and a plant from New Mexico (44648; 44807; 44818; 45026; 45184).

BEAN, BARTON A., U. S. National Museum: Fishes collected for the Museum along the eastern coast of Florida (45409).

BEAN, T. H., New York City: Invertebrates from Alaska and Washington (45169); 3 birds' skins from near Washington, D. C. (45964).

BECKWITH, PAUL, U. S. National Museum: 26 one-cent pieces, U. S. currency, and 2 U. S. dimes (45454); silver half-dollar, U. S. currency, issued in 1817 (45710); silver coin of the Dukes of Belgium, IIII Marean gross of 1668 (46010).

BEEBE, G. F., Jordan, Mont.: Cricket, *Stenopalmatus fuscus* (45094).

BEERS, HENRY W., Bridgeport, Conn.: 7 nests and 35 eggs of the blue-winged warbler, *Helminthophila pinus* (45603: exchange).

BENEDICT, J. E., U. S. National Museum: Mollusks and other invertebrates from Pacific Grove, Cal. (45339: collected for the Museum).

BENEDICT, J. E. and MARCUS W. LYON, jr., U. S. National Museum: Mammals, plants, reptiles, mollusks, crustaceans, birds, and fishes from Oregon (45099: collected for the Museum).

BENEDICT, J. E., jr., Woodside, Md.: Snake, *Carphophiops*, from Woodside (44881).

BENGUIAT, HADJI EPHRAIM, New York City: Religious objects used in Jewish ceremonial (11437: loan).

BERG, L. (See under St. Petersburg, Musée Zoologique de l'Académie Impériale des Sciences).

BERGER, A., La Mortola, Ventimiglia, Italy: Specimen of cactus from Italy (45292: exchange).

BERGH, H. O., Quatsino, British Columbia (northwest coast of Vancouver Island): 2 Indian skulls collected in the neighborhood of Quatsino (45058).

BERNDT, E. L. (See under Department of Commerce and Labor, Bureau of Fisheries).

BESSELIEVRE, S. I., Navy Department, Washington, D. C.: Blue prints of the plans of the frigate *Constitution*. (44724).

BEUTENMULLER, ALFRED, New York City: 968 photographs of Indians of the southwestern part of the United States and northern Mexico, printed from negatives taken by Dr. Aleš Hrdlička (45102).

BEUTENMULLER, WILLIAM, American Museum of Natural History, New York City: 6 beetles, *Cychrus niagarensis* and *Corymbites longicornis* (44633).

BILLINGSLEY, T. E., Victoria, Tex.: 3 living specimens of cacti from Victoria (44799).

BISHOP, estate of H. R.: Copy of the magnificent publication entitled "The Bishop Collection, Investigations and Studies in Jade": also rocks and associated minerals collected by George F. Kunz and his son in Silesia for Mr. Bishop's use in illustrating the occurrence of jade in Europe (received through A. J. Paterson, executor) (45485).

BISHOP MUSEUM (See under Honolulu, Hawaiian Islands).

Black, G. F., New York City: Electrotypes of Scotch and other antiquities (44941).

Black, Gen. John C., Civil Service Commission, Washington, D. C.: Luna moth, *Trophæa luna* (46132).

Blackford, Charles M., Staunton, Va.: Long-sting, *Megarhyssa lunator* (46039).

Blackiston, A. H., Flagstaff, Ariz.: Collection of pottery, stone implements, and human bones from Casas Grandes Valley and Cave Valley, Chihuahua, Mexico (11152); shell and stone objects, bones, etc., from the same localities (11311). Loan.

Blackmar, estate of Gen. W. W.: Chair in which General Grant sat when signing the articles of capitulation at the surrender of the army of General Lee at Appomattox Court House, April 9, 1865 (received through Geo. B. Knapp, executor) (45493).

Blakeslee, A. F., Halle, Germany: 2 specimens of fungus, *Phycomyces nitens* (45727).

Blaney, Dwight, Bar Harbor, Me.: 230 specimens of mollusks from Frenchmans Bay, Me. (44712).

Blanke, Cyrus F., St. Louis, Mo.: Piece of a log which formed a part of the cabin built by General Grant in 1854 (45490).

Blankinship, J. W., Bozeman, Mont.: 500 plants from Montana (45232: purchase).

Blumer, J. C., Washington, D. C.: 3 living specimens of cacti from New Mexico (45626); 146 plants from New Mexico (46014).

Boarman, W. A., Cherrydale road, Fairfax County, Va.: Pair of iron tongs found in 1862 on General Washington's birthplace, Wakefield, Va. (46097).

Bolles, Miss Lucy Dix, Brookline, Mass.: Brick from porcelain tower at Mankin; brick of solid tea (sometime used as money), and a sword made of perforated copper coins (45436).

Booth, P. L., Danville, Va.: Larva of moth, *Megalopyge opercularis* (44855).

Bosworth, A. S., Fishing Hawk, W. Va.: Fossil plants (44778).

Boutwell, G. B., Monte Vista, Colo.: Specimen of tench, *Tinca vulgaris* (45771).

Bowden, J., Stillwater, Okla.: Larva of a butterfly, *Papilio* sp. (46078).

Bowers, Samuel, Bisbee, Ariz.: 51 cases of a bag-worm, *Oiketicus townsendi* (44731; 45392).

Bowers, Stephen, Los Angeles, Cal.: Specimen of coelenterate, *Cœnocyathus* n. sp., from California (45143).

Bradley, Mrs. N. D., Richmond, Va.: 2 garden spiders, *Argiope riparia* (?) (44934).

Brainerd, Dwight, Montreal, Canada: 2 types of new species and variety of a moth, *Gortyna* (44728: exchange).

Brainerd, Ezra, Middlebury, Vt.: 33 specimens of violets from Vermont. (45809: exchange).

Brandegee, T. S., San Diego, Cal.: 3 plants from California (45103: exchange); 6 specimens of umbelliferous plants from Mexico (45400); 6 plants from California and Mexico, 4 of them collected in Mexico by C. A. Purpus (45717; 45878; 45951: exchange).

Braun, Miss A. F., Cincinnati, Ohio: 9 tineid moths representing rare species (45422).

Braverman, M., Visalia, Cal.: 2 German passports (46020).

Brazilian Commission at the Louisiana Purchase Exposition: Ores and nonmetallic minerals from Brazil (44636).

Brewster, A. B., Koyukuk District, Alaska: Gold nugget (crystal) weighing 2 grams (45440); plaster casts of 2 gold nuggets from Myrtle Creek, Koyukuk District (45515).

Brimley Brothers, Raleigh, N. C.: 5 batrachians (46060: purchase).

Brimley, C. S., Raleigh, N. C.: 4 specimens of *Chologaster cornutus* and *Copelandellus quiescens* from Ellis Lake, North Carolina (44673); eggs of *Scaphiopus holbrooki* and larvæ of *Engystoma* (45200); salamander from North Carolina (45259); 30 specimens of Orthoptera (45546); tree-frogs and salamanders (45633); 2 salamanders from North Carolina (46059).

British Guiana Museum. (See under Georgetown, British Guiana.)

Britton, N. L., New York Botanical Garden, New York City: 8 plants, 6 photographs of plants, and a living plant (45121: exchange). (See under Kingston, Jamaica, and New York Botanical Garden.)

Brockhaus, Otto, Port Angeles, Wash.: Larvæ of a cerambycid beetle, probably *Ergates spiculatus* (46012).

Brockway, William, Necaxa, Puebla, Mexico: 8 living plants from Mexico (45322).

Brockway, W. E. (See under Department of Agriculture.)

Brodie, William, Provincial Museum, Toronto, Ontario, Canada: 23 specimens of Hymenoptera (44894); 14 specimens of Diptera (received through L. O. Howard) (46068).

Brooklyn Institute of Arts and Sciences, Museum of, Brooklyn, N. Y.: Reptiles and batrachians from North and South America (45448); skeleton of oilbird, *Steatornis caripensis*, from Trinidad, collected by George K. Cherrie (45611). Exchange.

Brooks, F. E., Morgantown, W. Va.: 4 specimens of *Stiboscopus brooksi* (45548).

Brooks, T. W., Detroit, Mich.: Cockroaches, probably *Ectobia germanica* (45997).

Brown, E. J., Lemon City, Fla.: Reptiles, batrachians, fishes, insects, shrimp, shrew, and a bird, from Florida (45875).

Brown, Nathan Clifford, Lakewood, N. J.: Skin of cardinal, *Cardinalis cardinalis*, inclining to *floridanus* (45641); 8 birds' nests from North Carolina (45642).

Brown, Rev. Robert, Philippine Weather Bureau, Manila, Philippine Islands: Parasitic Hymenoptera (44681; 44765; 44781; 44797; 44879; 45096; 45245; 45281; 45459; 45615); 2 glass sponges (44823).

Browne, estate of Mrs. L. W. K.: Swords and guns of the late Gen. William Henry Browne (received through H. H. Dodge, executor) (45676: bequest.)

Brues, C. T., Public Museum, Milwaukee, Wis.: 2 specimens of ichneumon-flies, *Mesostenus arvalis* (44810).

Bruner, Prof. Lawrence, Lincoln, Nebr.: 66 Orthoptera (Decticinæ) (45391).

Bryant, Owen, Cohasset, Mass.: 2 specimens of Diptera (44813); 14 specimens of mollusks, *Rissoa multilineata* and *Paludestrina salsa*, from Cohasset (45187).

Bucks Harbor Granite Company, South Brooksville, Me. (See under M. D. Chatto.)

Bunker, Mrs. Ella, Washington, D. C.: 4 eggs of African gray parrot (45246).

Busck, August, Department of Agriculture, Washington, D. C.: Mammals from the West Indies (45003); snakes and lizards from Santo Domingo (45005); 10 birds' skins from Santo Domingo (45062); sand-bug from Trinidad (45228); young specimens of mollusks, *Ampullaria*, from Trinidad, and of *Neritina* from Santo Domingo (45250). (See also under Department of Agriculture, and B. W. Evermann.)

Bush, B. F., Courtney, Mo.: 52 plants, including portions of 2 types from Missouri, Arkansas, and Texas (44777); 52 plants from Missouri (45291).

Bush, Miss K. J. (See under Peabody Museum, New Haven, Conn.)

Bussell, C. W., McCoysburg, Ind.: 2 wolves (45991).

Butler, C. T., Brookhaven, Miss.: Plant (44788).

Button, F. L., Oakland, Cal.: Specimen of mollusk, *Rostellaria delicatula*, from Persian Gulf, and 5 specimens of mollusk, *Epiphragmophora arrosa expansilabris*, from Ferndale, Cal. (45522).

Cairns, Ralph, Walton, N. Y.: Two fossil plants from the Devonian of New York (received through David White) (45507).

Caldwell, F. M., Venice, Ill.: Photograph of a celt weighing 40 pounds (45946).

California Academy of Sciences, San Francisco, Cal.: Plant from Lower California (45857: exchange).

California Citrus Products Company, National City, Cal.: Citric acid, melade, lemon extract, lemon oil, from the Lewis and Clark Exposition at Portland, Oreg. (45794).

Calleja, Francisco Lopez, San José, Costa Rica: Reptiles, batrachians, and 2 mole-crickets (44638).

Calvert, Mrs. E. F. R. (See under Miss Cornelia P. Randolph.)

Canada, Geological Survey of. (See under Ottawa, Canada.)

Cannon, W. A., Tucson, Ariz.: Cactus fruits (44717).

Canu, F., Versailles, France: Fossil shells from the Cretaceous of France (44809: exchange).

Card, George W. (See under Sydney, New South Wales, University of Sydney.)

Carlisle, J. A., Gainesville, Fla.: Pair of ram's horns (45239).

Carnegie Institution, Washington, D. C.: A large collection of insects from Central America, obtained by Mr. Frederick Knab (received through Dr. L. O. Howard) (45043); 827 mosquitoes and other insects collected in July and August, 1904 by H. S. Barber (45258); fishes, insects, mollusks, and other invertebrates collected by J. Hobart Egbert in the region of the Hawaiian Islands while attached to the Magnetic Expedition under the auspices of the Carnegie Institution (45865). (See also under Department of Agriculture.)

Carnegie Museum, Pittsburg, Pa.: Specimen of *Sanguinaria* from Pennsylvania (45833; exchange).

Carruth, G. H., Catawba, Va.: Larva and pupa of a moth, *Sisyrosea textula* (44997).

Cary, L. R., Cameron, La.: Shells (45643).

Cary, Merritt, Department of Agriculture, Washington, D. C.: 13 dragonflies and a moth from Athabasca, Mackenzie Districts, Canada (46035).

Cary, Merritt, and L. Bruner, Department of Agriculture: 128 dragon flies from Juan Viñas, Costa Rica (46034).

Castner, Mrs. Hamilton Y., New York City: 10 specimens illustrating the manufacture of aluminum by the Castner process, and a portrait of H. Y. Castner (45366).

Catlettsburg, Kenova and Ceredo Water Company, Catlettsburg, Ky.: Specimen of "crystallized soot" (45164).

Caudell, A. N., U. S. National Museum: Lizard from Wyandotte Cave., Ind. (44825; collected for the Museum); 3 bats, *Myotis*, from Indiana (45025); salamanders from Falls Church, Va. (45154; collected for the Museum); 150 specimens of Orthoptera from Paraguay (45423).

Cerriglio, A., Washington, D. C.: Crab, *Gecarcinus*, found in a bunch of bananas from Cuba (45930).

Ceylon Commission at the Louisiana Purchase Exposition: Ores and nonmetallic minerals from Ceylon (44639; 6 swifts, *Collocalia*, from Ceylon (44904; purchase).

Chalwin, H. J., superintendent Municipal Gardens, Cape Town, South Africa: Seeds (44716).

Chamberlain, E. B., Cumberland Center, Me.: Living plant, *Sedum stoloniferus*, from Maine (46100; exchange).

Chamberlain, F. M. (See under Department of Commerce and Labor, Bureau of Fisheries.)

Chamberlain, L. T., New York City: Collection of unios from Burmah (45317).

Channon, Miss M. K., Philadelphia, Pa.: Mole-cricket, *Gryllotalpa borealis* (45045).

Chanute, Octave, Chicago, Ill.: Models of flying-machines and kites (45671; 45672). (See also under Field Museum of Natural History.)

Chapman, N. A., East Cleveland, Ohio: Photograph of Dr. G. S. B. Hempstead and his "Archeological Map" of Portsmouth, Ohio, and vicinity (44726).

Chapman, S. B., Shope, N. C.: Grasshopper, *Chortophaga viridifasciata* (45619).

CHAPMAN, T. A., Betula, Reigate, England: 8 butterflies, 5 moths, and 6 cocoons from Spain (44650).

CHASE, Mrs. AGNES, Washington, D. C.: 2 plants from the District of Columbia (45877; exchange). (See also under E. J. Hill.)

CHASTAIN BROTHERS, Thomasville, Ga.: Nest and young larvæ of a moth (46007).

CHATTO, M. D., South Brooksville, Me.: Polished cube of granite from the Bucks Harbor Granite Company (45310).

CHERRIE, GEORGE K. (See under Brooklyn Institute of Arts and Sciences, Museum of.)

CHICAGO ACADEMY OF SCIENCES, Chicago, Ill.: Crustaceans (received through Frank C. Baker, curator) (45287).

CHRIST, H. BASEL, Switzerland: Fragment of the type of *Diplozium Werckleanum* (fern) from Costa Rica (45311); 328 ferns from Costa Rica (45712; exchange).

CHRISTIANIA, NORWAY, ZOOLOGICAL MUSEUM: 4 specimens of rats (45680); skin and skull of reindeer, and skin and skull of red deer (46025). Exchange.

CHURCHILL, C. H., Johannesburg, Cal.: Three fossorial wasps from Mojave Desert (44883).

CLAPP, GEORGE H., Pittsburg, Pa.: Cotypes of 3 species of land-snails, *Polygyra* (45241).

CLARK, F. F., New York City: 2 one-cent pieces of United States currency of the issues of 1885 and 1893 (45473).

CLARK, H. F., Washington, D. C.: Gold ore from Montana Tonopah mines, Tonopah, Nev. (44955).

CLARK, H. W., Bureau of Fisheries: 75 land mollusks from the District of Columbia (44833); landshells and a snail, *Limax maximus*, from the District of Columbia (45841; 45052; 45509).

CLARK, J. J., Washington, D. C.: Parts of a telegraph relay (45161).

CLEMONS, DOUGLAS, U. S. National Museum: Landshells, freshwater shell, and amphipods from the District of Columbia and Chesapeake Beach (45051; 46135).

CLEMONS, DOUGLAS, and E. A. SCHWARZ, U. S. National Museum: 2,000 insects collected in 1905 on Plummers Island (45668).

CLINTON, G. P., New Haven, Conn.: 50 specimens of economic fungi from North America (45064: exchange).

CLUNN, H. G., San Pedro Springs, via Temosachic, Mexico: Neuropterous insect, *Chauliodes disjunctus* (46108).

COCKERELL, T. D. A., Boulder, Colo.: Cotypes of 2 species of landshells from Kingston, N. Mex. (44693); 10 specimens of parasitic Hymenoptera (44733); 4 moths, *Phalonia felix*, *Thiodia tenuiana*, *Paltodora magnella*, and *Incurvaria* n. sp. (45163).

COKER, ROBERT E., Baltimore, Md.: Hawksbill turtle (45132).

COLBY, J. A., Philadelphia, Pa.: Small wooden dish or tray made by the natives of the Gilbert or King's Mill group of islands in the South Pacific Ocean; also a photograph of trays and bowls (45747).

COLEMAN, JOHN W., Selma, Ala.: 25 fossil echinoids (45948).

COLLEGE OF PHYSICIANS AND SURGEONS, Columbia University, New York City: Collection of human bones (45362: exchange).

COLLINS, FRANK S., Malden, Mass.: 50 specimens of algæ (44880; 45483: purchase).

COLLINS, J. F., Providence, R. I.: 154 plants from the eastern section of Quebec (45776: purchase).

COLONIAL COMPANY POTTERS, East Liverpool, Ohio: 3 pieces of pottery (45698).

COLORADO STATE COMMISSION AT THE LOUISIANA PURCHASE EXPOSITION: Ores and nonmetallic minerals from Colorado (44663).

COMMERCE AND LABOR, DEPARTMENT OF: Hon. Victor Metcalfe, secretary.

Bureau of Fisheries: Type specimens of fishes collected by the steamer *Albatross* in Alaska waters (44660); 16 plants from Norway, collected by Hugh M. Smith (44746); fishes from the Illinois

COMMERCE AND LABOR, DEPARTMENT OF—Continued.

River, collected by S. P. Bartlett (45811); 87 plants from the vicinity of Yes Bay, Alaska (44815); 63 plants collected near Yes Bay, Alaska (44886); fishes (44928); marine invertebrates, mollusks, insects, and reptiles (44954); 3 plants from Yes Bay, Alaska, collected by F. M. Chamberlain (45086); sponges collected in the Pacific Ocean by the Albatross-Agassiz Expedition of 1891 (45174); series of fresh-water fishes from Maine (45175); snake and frogs from Maine, collected by W. C. Kendall in Aroostook County (45180); mammals, birds, mollusks, and other invertebrates, fossils, fish, and fiber-producing plants collected by the *Albatross* and *Fish Hawk* in Japan, Alaska, the South Sea Islands, and Porto Rico (45248); fishing apparatus and gear, fossil material, and 2 valves of a giant clam (45276; fishes, mollusks, and other invertebrates from the German educational exhibit at the Louisiana Purchase Exposition (45340); fishes, mollusks, and other invertebrates, also ethnological objects forming part of the Japanese fisheries exhibit at the Louisiana Purchase Exposition (45348); sponges from the Pacific Ocean (45351); 22 types of fishes collected by the *Albatross* among the Hawaiian Islands in 1902 (45353); insects, crustaceans, and shells collected by J. W. Titcomb in Argentina (45361); Hawaiian fishes collected by the *Albatross* in 1902 (45365); isopods, including types of new species, collected at Porto Rico in 1899 by the *Fish Hawk* (45399); reptiles, fishes, insects, mollusks, and other invertebrates, plants, and skull of a mammal (45403), fishes, chiefly from Alaska (45404); fishes from various localities (45407); compound ascidian from Ellice Island, obtained by the Albatross-Agassiz Expedition to the South Pacific in 1899 (45410); about 2,981 fishes collected by the *Fish Hawk*, *Albatross*, and *Grampus*, and also by Cloudesley Rutter and W. C. Kendall (45430, 45431, 45432); hammerless darting-gun No. 583, and implements

COMMERCE AND LABOR, DEPARTMENT OF—Continued.

for taking blubber from a whale (45474); stony corals obtained during the Albatross-Agassiz Expedition to the South Pacific in 1904–5 (45482); fishes from the Hawaiian Islands, collected by D. S. Jordan and B. W. Evermann, the *Albatross*, the Fur Seal Commission, and O. P. Jenkins (45495); fishes chiefly from the coast of California obtained by the *Albatross* in 1894 (45498); sponges collected by the *Albatross* off the coast of California in 1904 (45516); dried crustaceans (45517); 103 fishes from the Pacific Ocean principally obtained by the *Albatross* (45558); 309 fishes collected in Hawaiian waters by the *Albatross* in 1902 (45564); 101 fishes from Samoa, collected by D. S. Jordan in 1902 (45565); 60 fishes from the western section of Cuba, collected in March of 1902 by C. H. Eigenmann and O. Riddle (45583); 95 fishes collected in Hawaiian waters in 1902 by E. L. Berndt and others (45584); 5,772 fishes from the fresh waters of the northern part of California and the southern section of Oregon (45604); isopod, *Meinertia*, sp. from Kochi, Japan, collected by H. M. Smith (45620); 529 fishes collected in Massachusetts waters chiefly about Woods Hole (45639); 511 fishes, chiefly from the New England coast (45664); Hawaiian fishes (45679); type specimens of worms, *Limnodrilus gracilis* and *Actinobdella annectans* (45751); barnacles, chiefly from the Hawaiian Islands and the Alaska-California coast (45770); mammals, birds, reptiles, fish eggs, insects, mollusks, and other invertebrates (45772); reptiles, plants, mollusks, and other invertebrates obtained by the *Albatross* during the Albatross-Agassiz Expedition to the South Pacific in 1899–1900 (45786); fishes from Argentina, South America (45791); 78 Unionidæ from Connecticut lakes, New Hampshire, collected by W. C. Kendall and E. L. Goldsborough in 1904 (45800); fishes, including several types from Japan, Hawaiian Islands, and the Galapagos Islands (received from Leland Stanford Junior

COMMERCE AND LABOR, DEPARTMENT OF—Continued.

University (45856); mollusks from Samoa (received from Leland Stanford Junior University, (45873); types of new species of fishes from Japan and the Philippine Islands (45935); fishes collected by the *Albatross* in the North Pacific Ocean, principally in 1894 (45988); worms and other invertebrates, insects, and mollusks, including types, collected by the Alaskan Salmon Commission in 1903, by the *Albatross* off the coast of Japan in 1900, and in the Hawaiian Islands and off the southern part of California in 1902 (46055); 2 crabs, *Potamocarinus*, collected by S. E. Meek at Lake Amatitlan, Guatemala (46080).

CONWAY, BENJAMIN, Anacostia, D. C.: Fifty-cent United States coin, issued in 1821 (45206: exchange).

CONZATTI, C., Oaxaca, Mexico: 5 living specimens of cacti (45863; 45829: exchange); 10 living plants from Mexico (46054; 46072; 46086).

COOK, O. F., Department of Agriculture, Washington, D. C.: 2 plants from Guatemala (44632). (See also under Department of Agriculture.)

COOPER, JUAN, Cartago, Costa Rica: 5 birds' skins from Costa Rica (44655).

COQUILLETT, D. W. (See under James G. Needham.)

CORBETT, Miss MARY H., U. S. Geological Survey, Washington, D. C.: Sword, commission, and handkerchief of Lieut. Samuel Howard, pilot of the *Monitor* during its engagement with the *Merrimac* (45729: exchange).

COREY, J. M., and H. W. MITCHELL, Saratoga, N. Y.: Piece of tufa from a mineral spring (45368).

COSPER, Mrs. J. H. T., Blue, Ariz.: Pottery vase from Bear Creek (45824).

COTTON, J. S., Washington, D. C.: 4 living specimens of cacti (45146).

COVILLE, F. V., Department of Agriculture: 2 plants, *Franklinia alatamaha*, from Maryland (44908). (See also under Department of Agriculture.)

COX, L. N.: Specimen of coral, *Porites*, from the island of Guam (received through C. W. Hayes, U. S. Geological Survey, Washington, D. C.) (45142).

CRANE, W. E., Brooklyn, N. Y.: 300 fossils from the Pleistocene rocks at Santa Barbara, Cal. (44812); 50 fossil coral sponges from the Jurassic of France (44832); 100 fossil sponges and bryozoans from the Cretaceous greensand, Faringdon, England (44861); European Paleozoic and Mesozoic fossils (44936). Exchange.

CRAWFORD, J. G., Albany, Oreg.: Skull of a beaked whale, *Mesoplodon stejnegeri*, from a specimen stranded 1½ miles south of the U. S. Life-Saving Station on South Beach, near Newport, Oreg. (45866: exchange); photograph of egg mass of sculpin (45876).

CROSBY, C. R., University of Missouri, Columbia, Mo.: Braconid (45825).

CROSBY, F. W., San Diego, Cal.: Specimen of dumortierite from Alpine, Cal. (45767); samples of gold-bearing carbonate of lime from the mines of the Golden Harvest Milling and Mining Company, San Bernardino County, Cal. (46121).

CROSBY, M. LEWIS, Boston, Mass.: 2 bullets telescoped in flight (45871).

CROSS, WHITMAN. (See under Interior Department, U. S. Geological Survey.)

CUMMINGS, GEORGE F., New York City: Card of invitation extended by S. F. B. Morse to a private exhibition of his electro-magnetic telegraph, Jan. 24, 1838, and a message recorded by the apparatus on the same day (45891).

CURTIS, CHARLES E. (See under Mrs. Ann A. Jeffcott.)

CURTISS, A. H., Jacksonville, Fla.: 226 plants from Cuba (45084: purchase).

CUSICK, WILLIAM C., Union, Oreg.: Specimen of sumac, *Schmaltzia*, from Oregon (45359). (See also under Department of Agriculture.)

DALL, MARCUS, Washington, D. C.: 25 specimens of fresh-water shells from the Uintah Mountains, Wyoming (44773); 14 specimens of fossil mollusk,

DALL, MARCUS—Continued.
Planorbis utahensis, from the Eocene of the Uintah Mountains (44774); land and fresh-water shells from Utah (45346).

DALL, W. H., U. S. Geological Survey, Washington, D. C.: Japanese land-shells (45150). (See also under A. L. Herrera.)

DAMON, ROBERT F., Weymouth, England: Colored cast of Australian mud-fish, *Ceratodus forsteri* (45364: purchase).

DARLING, WILLARD S., Harbor Springs, Mich.: Chippewa bark-and-quill work (45591).

DARTON, N. H. (See under Interior Department, U. S. Geological Survey.)

DAUGHTREY, T. R. L., Jacksonville, Fla.: 2 skulls from a mound near Lake Okechobee, Fla. (45030).

DAVENPORT, HOMER, Morris Plains, N. J.: Peacock pheasant, *Polyplectron* (45029); pheasant (45445).

DAVIDSON, H. A. (See under H. E. Hasse.)

DAVIS, C. ABBOTT. (See under Roger Williams Park Museum).

DAVIS, E. D., Harrisonburg, Va.: Specimen of black marble (46069).

DAVIS, T. A., Lakeland, Fla.: Bagworm, *Thyriopteryx ephemeræformis* (46123).

DAVIS, T. E. R., Baileyton, Tenn.: Pseudoscorpion, *Chelifer cauceroides* (45588).

DAVIS, WILLIAM T., New Brighton, Staten Island, N. Y.: Cicada, *Prunesis venosa* (45408).

DAVISON, L. C., Jacksonville, Fla.: Larvæ of a tineid moth (44882).

DAY, W. T., Barboursville, Va.: Specimen of graphite (44835).

DEAM, C. C., Bluffton, Ind.: 212 plants from Indiana (45135: exchange); seeds from Guatemala (45761).

DELGAR, H. S., Joseph, N. Mex.: 4 stone implements (45884).

DEMAREST, Miss E. E., Passaic, N. J.: 59 lantern slides, 147 negatives, diatoms, 22 photographs, and a lot of unmounted photographs, forming the collection of diatoms formerly owned by Dr. Van Allen, of Albany, N. Y. (45990).

DEMMING, H. C. (See under Charles A. Porter.)

DENEKAS, Miss GESINE, Brightwood, D. C.: Collection of medals, gold, silver, copper, and base metal coins, also United States fractional currency (received through Henry Hensel, of Jeffersonville, Ind.) (11060: loan).

DEPUY, A. B., Department of Agriculture Washington, D. C.: Carbonized wood with marcasite from a railroad excavation at First and M streets, Washington, D. C. (44775); 14 specimens of vivianite from Mullica Hill, N. J. (44972: exchange).

DE RIEMER, W. E., Washington, D. C.: Pair of jaws of a sand shark, *Odontaspis littoralis* (45106: collected for the Museum).

DEYROLLE, LES FILS D'EMILE, Paris, France: Skeleton of a dodo, *Didus ineptus*, from the Marais aux Songes, Mauritius (45525: purchase).

DICKERSON, Miss M. C., Providence, R. I.: Toads from Cuttyhunk, Mass., and frogs from Seattle, Wash. (44946; 46079).

DIETZ, W. G., Hazelton, Pa.: 27 cotypes of Microlepidoptera (45780).

DILLARD, BUCHANAN, Helena, Mont.: Moth, *Smerinthus cerysii* (46106).

DILLER, J. S., U. S. Geological Survey, Washington, D. C.: Rocks and minerals from Europe and America (45230).

DITMARS, R. L., New York Zoological Park, New York City: Horned toads from the northern part of Sonora, Mexico (45024; 45070).

DOD, F. H. W., Millarville, Alberta, Canada: 99 moths (45637: exchange).

DODGE, BYRON E., Davison, Mich.: Stone pestle and arrow point (11517: loan).

DODGE, C. K., Port Huron, Mich.: 3 specimens of a mollusk, *Laciniaria*, from near Port Frank, Lambton County, Ontario (44887); 17 plants from Michigan (45134).

DODGE, Mrs. H. H., Mount Vernon, Va.: Relics of the Revolutionary war; war of 1812; and Mexican and Civil wars, which belonged to the late Gen. William Henry Browne (11275: loan).

DOLAN, J. J., U. S. National Museum: Ribbon badge, ribbon and metal badge of the Knights of Columbus (44675); Christian Endeavor badge of the Ohio Union at the International Convention, 1905 (44689); souvenir badge of Elks (colored) Reunion at Washington, D. C., in 1905 (44830). (See also under J. E. Lowe.)

DOLAN, P. V., Washington, D. C.: 5-cent silver Panama currency (45892).

DOLL, J. J., Brooklyn, N. Y.: 30 moths from Arizona (45393); 13 moths (45497).

DONALDSON, Mrs. LUCY ORD, Bloomfield, N. J.: U. S. Army marksman's badge, Department of Texas, and a life-saving medal (45842); sword of Lieut. Jules Garesche Ord (45843).

DORIA, Marquis G. (See under Genoa, Italy, Museo Civico di Storia Naturale).

DORIAN, FRANK, London, England: Specimen of "touch-money" of the time of Charles II (45285).

DOUGHERTY, C. V., Baltimore, Md.: Specimens of opercula from Cavite, Luzon, Philippine Islands (45256).

DOUGLASS, WILLIAM B., Washington, D. C.: Iron axe-blade found in a shell mound on the coast of Oregon (11403: loan).

DOWELL, PHILIP, Port Richmond, N. Y.: Plants from New Jersey and Pennsylvania (44931); (45812: exchange).

DOYLE, C. B. (See under Department of Agriculture.)

DRAINARD, M., Golden, British Columbia: Specimen of sodalite from Golden, received through Charles M. Lea, of Philadelphia, Pa. (45297).

DRAKE, Mrs. IDA M., Alva, Okla.: Spider, *Argiope transversa* (*fasciata*), "Silver-ladder spider" (44846).

DUCKWORTH, A. S., Cape Girardeau, Mo.: 3 specimens of fossil echinoids (44952).

DUDGEON, G. C.: About 2,000 specimens of butterflies from India (received through Sir George Hampson, British Museum of Natural History, London, England) (45262).

DUGÈS, A., Guanajuato, Mexico: Mollusk, sea urchin, *Echinometra subangularis*, and 2 alcyonarians (45151); plants from Mexico (45341).

DUKES, W. C., Mobile, Ala.: 13 ferns from Alabama (44942: exchange); 10 specimens of *Pteridophyta* from the Southern States (45269: exchange); 7 specimens of ferns, *Botrychium*, from near Mobile (45350); 10 specimens of ferns, *Botrychium* and *Ophioglossum*, from Alabama (45621: exchange).

DUNLOP, GEORGE, Chevy Chase, Md.: Grooved stone axe found near Chevy Chase Lake (45283).

DURY, CHARLES, Cincinnati, Ohio: 14 beetles (45218: exchange); 6 beetles, *Lachnosterna vehemens*, and *Symbiotes* sp. (45492).

DUVAL, H. C., Washington, D. C.: Piece of worked soapstone from Anandale soapstone quarry, Fairfax County, Va., and 2 roughly worked leaf-shaped blades from Shea, Baltimore County, Md. (44862).

DYAR, H. G. (See under Lord Walsingham).

EAST, J. M., Manchester, N. H.: Badge of the Manchester Union (45784).

EASTWOOD, Miss ALICE, California Academy of Sciences, San Francisco, Cal.: 2 living specimens of cacti from Grand Junction, Colo. (45002); 5 living cacti from Arizona (45067: exchange); 2 umbelliferers from California and 5 ferns (45342; 45343); 24 plants from Grand Canyon, Ariz. (45354: exchange).

EATON, A. A., North Easton, Mass.: 4 ferns from the United States and the West Indies (44697); 15 specimens of horse-tail, *Equisetum*, from North America (45481).

EDWIN BENNETT POTTERY COMPANY, Baltimore, Md.: Vase (45690).

EGAN, MARK J., Clifton, Ariz.: Stone dish from Solomonville, Graham County, Ariz. (45823).

EGBERT, J. HOBART, U. S. Coast and Geodetic Survey, Washington, D. C.: 10 specimens of mollusk, *Janthina striatula*,

Egbert, J. Hobart—Continued.
specimen of *Cypræa araneosa*, 2 of *Cypræa caput-serpentis*, and 6 of *Cypræa maculata* (45412); 9 photographs of a beaked whale, *Ziphius*, captured by the crew of the steamer *Patterson* in Kiska Harbor, Alaska (45599); beak of a gray porpoise, *Prodelphinus*, a photograph of the same, and the jaw of a shark, *Carcharhinus* sp. (45600); 3 birds' skins, batrachians, and insects from Florida (45763); mammals, reptiles, batrachians, crustaceans, insects, and fishes from Florida (45799); 6 living plants from Florida (45858); upper and lower jaws and a photograph of a porpoise, *Lagenorhynchus obliquidens*, from Montague Strait, Prince William Sound, Alaska (45938); human skull from southeastern Alaska (46056). (See under Carnegie Institution.)

Ehlers, E. H., Göttingen, Germany: Two photographs of skull of type of bat, *Megaderma gigas* (45073). (See under Göttingen, Germany, University of Göttingen.)

Eigenmann, C. H., Bloomington, Ind.: Skull of a porpoise from San Diego, Cal. (46110). (See under Department of Commerce and Labor, Bureau of Fisheries, and W. P. Hay.)

Eldridge, G. H. (See under Interior Department, U. S. Geological Survey.)

Ellis, George W., jr., secretary, American Legation, Monrovia, Liberia: Ethnological objects from the Vai-speaking peoples of West Africa (11122: loan).

Ellis, Sylvester L., Provincetown, Mass.: Skeleton of an adult little-piked whale, *Balænoptera acuto-rostrata*, from Provincetown (45524: purchase).

Elskes, Lawrence, Goliad, Tex.: Luna-moth, *Actias luna* (45754).

Emmons, Lieut. G. T., U. S. Navy, Princeton, N. J.: 2 African pipes and an arrow rasp from Washington State (45092: exchange).

Emmons, N. H., Bisbee, Ariz.: Copper ore from New Mexico (44695).

Engel, H., Pittsburg, Pa.: 121 moths (45510).

Eschnaur, Mrs. W. H., Terminal, Cal.: Specimens of mollusk, *Cerostoma nuttalli*, showing color variation (45571).

Estación Central Agronómica. (See under Santiago de las Vegas, Cuba.)

Evans, A. W., New Haven, Conn.: 34 specimens of *Pteridophyta* (44913: loan); specimen of liverwort, *Cronotolejeunea Bermudiana*, from Bermuda (45480); 23 specimens of liverworts from Jamaica (44860).

Evans, Henry, Wauzeka, Wis.: Sample of onyx (45075).

Evermann, B. W., U. S. Bureau of Fisheries: 3 shrimps from San Francisco Mountains, Santo Domingo, West Indies, collected by August Busck (45139); fern from St. George's Island, Bering Sea (45411). (See under Department of Commerce and Labor, Bureau of Fisheries.)

Failyer, G. H., Department of Agriculture, Washington, D. C.: Specimen of moss agate (44979).

Fairchild, D. G., Department of Agriculture, Washington, D. C.: 86 beetles from the Malay Archipelago (44856).

Fall, H. C., Pasadena, Cal.: 2 beetles, *Glycerius obtusus* and *Tachycellus turbatus* (typical specimen) (45617: exchange).

Faris, A. P., Clinton, Mo.: Larva of moth, *Sphecodina abbottii* (44721); longicorn beetle, *Orthosoma brunneum*, from Providence, R. I. (44803).

Farwell, O. A., Detroit, Mich.: 2 plants from Texas (45074).

Favile, Mrs. J. M., Fredericksburg, Va.: 5 moths of cutworms, *Noctua clandestina* (45098).

Fawcett, William. (See under Kingston, Jamaica.)

Featherstonhaugh, Thomas, Washington, D. C.: American watch movement (45020); half-dollar of the issue of 1831 (45494); sample of monazite sand from Rutherford, N. C. (45820).

Felippone, Florentino, Montevideo, Uruguay, South America: 250 land, freshwater, and marine shells, and an echinoderm (44709).

FELLOWS, F. F., McMinnville, Oreg.: 14 photographs taken in Alaska, received through M. W. Lyon, jr. (45120).

FENNO, L. CARTERET, Boston, Mass.: White-fronted goose, *Anser albifrons gambeli*, in immature plumage (45249).

FERNEKES, VAL., Milwaukee, Wis.: 13 moths (45119).

FIELD MUSEUM OF NATURAL HISTORY, Chicago, Ill.: Fishes from the fresh waters of Mexico and Ontario (44821: exchange); piece of Sherbourne meteorite weighing 578 grammes (44959: exchange); example of the Hargrave flying machine (45631); monkeys and bats from tropical America (45795: exchange).

FIELD, R., Washington, D. C.: Cocoon of a moth of the family Cochlidiidæ, (45967).

FINLEY, W. L., Portland, Oreg.: 39 birds' eggs from Oregon (45129).

FISHER, A. K., Department of Agriculture, Washington, D. C.: 5 beetles from Cypress Point (45458).

FISHER, W. H., Baltimore, Md.: Snake, *Natrix fasciata* (45057).

FLAGG, Capt. CHARLES E. B., U. S. Army, Malahe Island, Laguna, Philippine Islands: Larva, pupa, and adult of a house fly, *Musca domesticus* (44985).

FLEMER, J. A. (no address given): 58 plants collected at the headwaters of the Chilkat River, Alaska (received through Department of Agriculture, Washington, D. C.), (45581).

FLEMING, RALSTON, N. Y. City: "The first ballot-box used by the Dakota Indians" (46083).

FLICK, G. W. H., West Salem, Ill.: 15 land and marine mollusks from Nicaragua (44744).

FLOWER, F. G., Seattle, Wash.: Seed of a leguminous plant and a few insects (44839).

FORBES LITHOGRAPH MANUFACTURING COMPANY, Boston, Mass.: 12 lithographic prints of illustrations from the work entitled "Investigations and Studies in Jade," by the late Heber R. Bishop (received through E. W. Roberts) (46009).

FORBES, W. T. M., Amherst, Mass.: 44 Lepidoptera (45636: exchange).

FORNEY, E. O., Washington, D. C.: Specimen of piedmontite (manganese epidote) from Jacko Mountain, Franklin County, Pa. (46162).

FOX, W. H., Washington, D. C., and J. W. HAWKINS, Nimrod Hall, Va.: Eggs of raven, *Corvus corax principalis* (45781).

FRANCK, HENRY, Frankfurt-am-Main, Germany: Living specimen of stonecrop, *Echeveria clavifolia* (44890).

FRANKLIN, JOSHUA, Moseley, Ala.: Clay concretion (45529).

FREED, J. K., Scott, Kans.: Meteorite (45418: deposit); meteorite, weighing 1,170 grams, from Modoc, Kans. (46112: purchase).

FRENZEL, A. B., Denver, Colo.: Specimen of phonolite carrying telluride gold (44980).

FRIBOURG, SWITZERLAND, MUSÉE CANTONAL: 508 plants from Switzerland (45226: exchange).

FRIEDENWALD, Mrs. JANE, Baltimore, Md.: Ethnological objects from the Egyptian Soudan, comprising musical instruments, spears, swords, iron-work, and leather-work (45514).

FRIEND, GILBERT H., Paw Paw, W. Va.: Long-sting, *Thalessa lunator* (44671).

FRIERSON, L. S., Frierson, La.: 20 specimens of mussels, Unionidæ, principally from Japan and China (45444).

FRISHMUTH, Mrs. S. S., Philadelphia, Pa.: A musical bow of the kind used in the Barbados; made in Philadelphia by a native of Barbados (45464: exchange).

FRY, WALTER, Department of Agriculture, Washington, D. C.: Plants from California (44981; 45006).

FURLONG, CHARLES W., White Plains, N. Y.: Piece of the wreck of the frigate *Philadelphia*, a framed chart of the harbor of Tripoli, and a pamphlet describing the finding of the wreck (44645).

FUR-SEAL COMMISSION. (See under Department of Commerce and Labor, Bureau of Fisheries.)

GAGE, A. (See under Sibpur, India, Royal Botanic Garden.)

GARCZYNSKI, E., Washington, D. C.: Concretion of ferruginous sand from Washington, D. C. (45903).

GARDINER, J. STANLEY, Cambridge, England: 22 recent corals from Cape Verde Islands (45144: exchange).

GARMAN, H., Lexington, Ky.: Plant from Kentucky (44926).

GARRETT, GEORGE, Ada, Ohio: Crab-spider, *Acrosoma rugosum* (44772).

GATES, PETER G., Pasadena, Cal.: Archeological collection from New Mexico and Arizona (11323: loan).

GATES POTTERIES, Chicago, Ill.: 3 pieces of Teco pottery (45700).

GAUT, J. H. (See under Department of Agriculture.)

GEE, N. GIST, Department of Science, Soochow University, Soochow, China: 11 weevils, *Desmidophorus confucii* (46133).

GENOA, ITALY, MUSEO CIVICO DI STORIA NATURALE: 51 bats from South America, Africa, Asia, and other localities (45585; 46000). Exchange.

GEOGRAPHISCHES-SCHUL MUSEUM. (See under Seitenstetten, Lower Austria).

GEORGE, R. D., University of Colorado, Boulder, Colo.: Specimens of phonolite from Bull Cliff and The Dillon, near Victor, Colo. (44842); basalt from Yellowstone National Park (44944); 100 specimens of Valmont dolerite (45733). Exchange.

GEORGETOWN, BRITISH GUIANA, BRITISH GUIANA MUSEUM: 100 specimens of Coleoptera, 30 Lepidoptera, 31 Hymenoptera, and 6 Orthoptera (45853: exchange).

GEORGIA STATE COMMISSION AT THE LOUISIANA PURCHASE EXPOSITION: Ores and nonmetallic minerals from Georgia (44664).

GERMAN EDUCATIONAL EXHIBIT AT THE LOUISIANA PURCHASE EXPOSITION. (See under Department of Commerce and Labor, Bureau of Fisheries.)

GIBSON, FRANK M., Westminister, Md.: Braconid insect, *Doryctes* (*Bracon*) *exhalans* (46102).

GIFFARD, W. A., Honolulu, Hawaiian Islands: 6 insects from Mt. Tantalus (45100).

GILBERT, B. D., Clayville, N. Y.: 2 mosses and a fern (44739).

GILBERT, C. S., Los Angeles, Cal.: 5 plants from California (45101).

GILCHRIST, D. M., U. S. National Museum: Frog, *Rana pipiens* (45155: collected for the Museum).

GILLETTE, C. P., Fort Collins, Colo.: 100 Lepidoptera (45559).

GIRAULT, A. A., Myrtle, Ga.: 3 type specimens of insect, *Eulophus guttiventris* and 2 of *Aphycus annulepes* (45999).

GIRTY, G. H., U. S. Geological Survey, Washington, D. C.: 10 ferns from Texas (44629: collected for the Museum).

GLOVER, G. H., Middle Park, Colo.: Plant from Colorado (44768).

GOFF, D. S., Metlaltoyuca, Mexico: Seed of the Spanish cedar (44705).

GOLDBACH, A., Pensacola, Fla.: Luna moth, *Tropæa luna* (44700).

GOLDMAN, E. A. (See under Department of Agriculture.)

GOLDSBOROUGH, RALSTON. (See under Smithsonian Institution, Bureau of American Ethnology.)

GOLDSMITH, J. S., U. S. National Museum: Great white egret, *Herodias egretta* (44902).

GOLL, GEORGE P., Washington, D. C.: Insects from Central America (45966). (See also under Department of Agriculture.)

GOMEZ, A. DA COSTA, New York City: About 100 fresh-water shells from Central America (44829); mollusk, *Bifidaria prototypus*, from Guatemala (45888).

GOODWIN POTTERY COMPANY, East Liverpool, Ohio: Apple-blossom vase (45691).

GORDON, W. W., Washington, D. C.: Lignite with pyrite found near the Capitol (45916).

GORMAN, M. W. (See under C. V. Piper.)

GÖTTINGEN, GERMANY, UNIVERSITY OF GÖTTINGEN: Crustaceans (received through E. Ehlers) (45502: exchange).

GOULD, C. N. (See under Interior Department, U. S. Geological Survey.)

GRATON, L. C. (See under Interior Department, U. S. Geological Survey.)

GRAVES, G. H., South China, Me.: Smelt, *Osmerus mordax* (45848).

GREBEL, WENDLER AND COMPANY, Geneva, Switzerland: Piece of the Kernouve meteorite weighing 567 grams (45987: exchange).

GREELY, Gen. A. W., U. S. Army, War Department, Washington, D. C.: 2 photographs of a humpback whale caught on the Sitka-Valdez (Alaska) cable, November 6, 1904 (45018). (See also under War Department.)

GREENE, E. L., U. S. National Museum, Washington, D. C.: 45 plants collected in New Mexico by O. B. Metcalfe (45290: purchase); 2 plants from the District of Columbia and vicinity (46022).

GREENE, G. S., Los Angeles, Cal.: Nest and 4 eggs collected in Arizona, and believed to be Say's phoebe, *Sayornis saya* (46079).

GREENFIELD, A. M., Gaines, Pa.: Luna moth, *Tropxa luna* (46065).

GREGORY, L. M., Manvel, Cal.: Specimen of *Guteregia* from California (44906).

GRIFFITHS, DAVID. (See under Department of Agriculture.)

GRINNELL, FORDYCE, Pasadena, Cal.: About 625 plants from California (44875: purchase).

GRINSTED, C. W., Washington, D. C.: Hair worm, *Gordius*, from the filtration plant in Washington (45802).

GRÖNVOLD, H., British Museum (Natural History), London, England: Full-sized copy in oil of a painting of a dodo by a Dutch artist, the original in the British Museum (45523: purchase).

GROSVENOR, D. A., Washington, D. C.: Hog-nosed snake from Maryland (46027).

GROUT, A. J., Brooklyn, N. Y.: Specimens of North American pleurocarpous mosses (45612: purchase).

GRUEBY FAIENCE COMPANY, Boston, Mass.: Vase (45693).

GUDGER, E. W.: Waynesville, N. C.: Microscopic slides showing the development of the pipe-fish (44784).

HACKEL, E. (See also under Department of Agriculture.)

HAGENBECK, CARL, Hagenbeck's Circus: Skin of a young male hippopotamus (45921).

HAHN, W. L., U. S. National Museum: 2 specimens of stonecrop, *Sedum*, from Virginia (44674; mammals, plants, mollusks, insects, and reptiles (44940); snake, *Eutænia*, from Bascom, Ind. (45145); lizard from Great Falls, Md. (45915). Collected for the Museum.

HAINES, A. S., Westtown, Pa.: 236 plants from Pennsylvania and Maryland (45377).

HALBERSTADT, BAIRD, Pottsville, Pa.: Fossil plants, *Mariopteris inflata*, from Vaughan, W. Va. (45520).

HALL, H. M., Berkeley, Cal.: 119 plants from California (45274); 7 specimens of plants, *Cotyledon saxosum*, from California (46006). Exchange.

HAMPSON, Sir GEORGE F. (See under G. C. Dudgeon, and London, England, British Museum of Natural History.)

HANCOCK, JOSEPH L., Chicago, Ill.: 4 cotypes of Orthoptera (45217: exchange).

HARDLER, WILLIAM, Savannah, Ga.: Carrion-flower, *Stapelia variabilis* (45224).

HARPER, JOHN B. (See under Department of the Interior, Office of Indian Affairs.)

HARPER, R. H., Afton, Ind. T.: Horned toad (44827).

HARPER, R. M., University, Ala.: 2 plants, *Harperia nodosa*, from Georgia (45317); plant from Georgia collected by S. W. McCallie (46087).

HARRIS, W., Hope Gardens, Kingston, Jamaica, West Indies: Bat, *Noctilio* (44711); tree-frogs, grasshopper, fern, and crab (44891); 5 specimens of crustacean, *Sesarma bidentatum*, and specimens of cypronodont fish (45334).

HARSHBERGER, JOHN W., University of Pennsylvania, Philadelphia, Pa.: 215 plants from Pennsylvania (45085).

HART, J. EDWARD, Miami, Fla: 2 annelid worms, *Nereis* (46113).

HASBROUCK, Lieut. R. DE LANCEY, U. S. Navy, San Francisco, Cal.: Cassidid beetle (44698).

HASSE, Dr. H. E., U. S. Army, Soldiers' Home, Cal.: 4 living plants from California collected by Doctors Hasse and H. A. Davidson (46073).

HASSE, PAUL, Senahú, Alta Vera Paz, Guatemala, Central America: Reptiles, batrachians, and beetles from Guatemala (44790; 44796).

HATCH, MARK B., Ponce, Porto Rico: Sword presented to Brig. Gen. J. P. Hatch by the officers of the Fifth New York and First Vermont Cavalry, October 31, 1862 (11511: loan).

HAWKINS, J. P., jr. (See under W. H. Fox.)

HAY, W. P., Howard University, Washington, D. C.: 2 hermaphroditic crayfishes, *Cambarus affinis* and *C. propinquus* (45675); frogs from Cuba obtained by C. H. Eigenmann (45914).

HAYNES, D. F., & SON, Baltimore, Md.: Vase (45688).

HAYNES, FRANK R. (The accessions of pottery received from the following firms were transmitted through Mr. Haynes: Colonial Company Potters; Edwin Bennett Pottery Company; Gates Potteries; Goodwin Pottery Company; Grueby Faience Company; D. F. Haynes & Son; Homer Laughlin China Company; International Pottery Company; Norse Pottery Company; G. E. Ohr; Pope Gosser China Company; A. W. Robertson; Roseville Pottery Company; Sevres China Company; J. S. Taft & Co.; C. C. Thompson Pottery Company; Van Briggle Pottery Company; Wheatly Pottery Company; Warwick China Company; Willets Manufacturing Company).

HEACOCK, EDWARD R., Wyncote, Pa.; Fern from Pennsylvania (45273).

HEAD, W. G., Shelby, N. C.: Monazite ore and monazite sand (46125).

HEIDEMAN, C. W. H. (See under Department of Agriculture, and War Department, Signal Corps.)

HEIDEMANN, O., Department of Agriculture: 2 land shells from the District of Columbia (45050); 2 types of bug, *Corythuca pergandei* (45300); 3 types of bugs, Aradidæ (5 specimens) (46117). (See also under Department of Agriculture.)

HEIGHWAY, A. E., Guaracabulla, Cuba: Gold ore and small agates from Cuba (45446).

HELBERSTADT, BAIRD. (See under Henry Hudson Smith.)

HELLER, A. A., Los Gatos, Cal.: 400 plants principally from California (45601; 45670). Purchase.

HENDERSON, J. G., Chicago, Ill.: Specimens from a mound near Naples, Ill., and from the surface near the Illinois River (45550: exchange).

HENDLEY, H. W., U. S. National Museum: Copper two-cent piece issued in 1867, United States currency (44837).

HENSHAW, SAMUEL. (See under Museum of Comparative Zoology, Cambridge, Mass.)

HERRERA, A. L., City of Mexico, Mexico: Mexican land and fresh-water mollusks (received through W. H. Dall and L. O. Howard) (45115).

HERRICK, GLENN W., Agricultural College, Miss.: 2 insects from Mississippi (44737).

HERRICK, Mrs. H. B. (See under S. P. Langley, estate of.)

HESS, FRANK L. (See under Piedmont Mining Company.)

HEWES, JOHN W., Chester, Pa.: Archeological specimens (44967).

HEWETT, E. L., Bureau of American Ethnology, Washington, D. C.: Indian war-clubs (11232: loan); 20 crania (45899: exchange). (See also under Smithsonian Institution, Bureau of American Ethnology).

HEWITT, JOHN. (See under Sarawak, Borneo, Sarawak Museum.)

HILL, E. J., Chicago, Ill.: 2 specimens of thorns, *Cratægus*, from type trees in Illinois (received through Mrs. Agnes Chase) (45185).

HILLMAN, F. H., Washington, D. C.: 9 specimens of *Trifolium* from Maryland (45061).

HIRASE, Y., Karasumaru, Kyoto, Japan: 58 archeological objects (45019: exchange); 409 mollusks from Japan (45153: purchase); crabs from Japan (45171: exchange).

HITZ, JOHN, Washington, D. C.: Piece of zinc, a portion of the first piece produced in the United States from American ore (1835) (45314).

HOCHDERFFER, GEORGE, Flagstaff, Ariz.: Living specimens of stone-crop *Echeveria*, from Arizona (45447); 15 plants from near Agua Caliente, Cal. (45624); living plant from Arizona (45814); 2 living plants from Bradshaw Mountains, Arizona (45910: exchange).

HODELL, CHARLES W., Baltimore, Md.: Spray of crimson rambler infested with aphids (45998).

HODSON, E. R., Woodland Park, Colo.: Living plant from Colorado (46088).

HOLDEN, R. J., Blacksburg, Va.: 5 specimens of Clinton rock with fossils from Estell, Ga. (45388).

HOLLYDAY, JOHN W. (See under Charles A. Killie.)

HOLM, THEODOR, Brookland, D. C.: Specimen of rush, *Juncus*, from Bodega Bay, Sonoma County, Cal. (44907).

HOLWAY, E. W. D., University of Minnesota, Minneapolis, Minn.: 40 specimens of fungi from North America (46075: exchange).

HOLZINGER, J. M., Winona, Minn.: 60 mosses (44975; 45722). Purchase.

HOMER LAUGHLIN CHINA COMPANY, East Liverpool, Ohio: 3 vases (45696).

HONOLULU, HAWAIIAN ISLANDS, BISHOP MUSEUM: 141 recent corals from the Hawaiian Islands (44637: exchange).

HOPE GARDENS. (See under Kingston, Jamaica.)

HOPKINS, S. C., Isabella, Cal.: 7 plants collected on the Brackenridge range, Kern County, Cal. (44735).

HORN, F. C. (See under Interior Department, U. S. Geological Survey.)

HORNUNG, J., Menlo Park, Cal.: 5 bats and a spider (45004); skeleton of barn-owl, *Strix pratincola* (45118); 3 moles and 10 bats (45158); 3 earwigs (45159); 3 bats from California (45595).

HOUGH, WALTER, U. S. National Museum: Flea from a prairie-dog found 5½ feet under ground, N. H. Ranch, Apache County, N. Mex. (44819); volcanic bomb and fossils from Salt Lake, Socorro County, N. Mex. (45023: collected for the Museum); archeological specimens, human and animal bones, and plants (45821: collected through the cooperation of the Museum and Peter Goddard Gates (second expedition).

HOUGHTON, C. O., Newark, Del.: Masked duck, *Nomonyx dominicus*, from Maryland (45960).

HOUSE, H. D., Department of Agriculture, Washington, D. C.: Plants collected in the vicinity of Washington, D. C. (44937); dried barnacles from Chesapeake Beach (45798); 43 specimens of clover, *Trifolium*, from Europe (45939: exchange).

HOUSE OF REFORMATION, Cheltenham, Md.: Bald eagle, *Haliaëtus leucocephalus* (received through John B. Pyle, superintendent) (45762).

HOUSTON, ANDREW J., Beaumont, Tex.: Telescope and gold-headed cane of Gen. Antonio de Lopez de Santa Anna (11379: loan, in behalf of the descendants of Gen. Samuel Houston).

HOWARD, L. O. (See under William Brodie, Carnegie Institution, and A. L. Herrera.)

HOWE, ERNEST. (See under Interior Department, U. S. Geological Survey.)

HOWELL, ARTHUR. (See under Department of Agriculture.)

HOWELL, A. H., Runge, Tex.: 3 specimens of *Croton* (44912). (See also under Department of Agriculture).

HOWELL, E. E., Washington, D. C.: 2 specimens of serpentine from Montville, N. J. (45419: exchange).

HRDLIČKA, ALEŠ, U. S. National Museum: White fetus; colored fetus; negro newborn child and a fetus of a negro (44841; 44897; 45315: collected for the Museum); sponges, sea-urchins, and gorgonian from Casey's Key, Fla.; marine shells from Florida (45752; 45779). (See under Alfred Beutenmuller, and Smithsonian Institution, Bureau of American Ethnology.)

HUBBARD, H. G. (See under E. A. Schwarz.)

HUBER, SIMON G., Mays Landing, N. J.: 2 mollusks, *Sphærimus*, from New Jersey (45165).

HUNTER, BYRON. (See under Department of Agriculture.)

HUNTER, THOMAS L., King George Court House, Va.: Larva of moth, *Megalopyge opercularis* (44909).

HURTER, JULIUS, Sr., St. Louis, Mo.: Reptiles and batrachians (45724).

IACKE, MRS. AMALIE, Panzós-Senahú, Alta Vera Paz, Guatemala, Central America: 54 Lepidoptera from Guatemala (44795).

IBARRA, Señor FEDERICO VIDELA, Estacion de Maipu, Chile, South America: Birds, insects, and mammals (45309); miscellaneous collection of insects (45867). Exchange.

IJIMA, I. (See under Science College, Imperial University, Tokyo, Japan.)

INGERSOLL, C. M., Bayou Labatre, Ala.: Electric-light bug, *Benacus griseus* (44703).

INSTITUTO FISICO-GEOGRAFICO NACIONAL. (See under San José, Costa Rica.)

INTERIOR, DEPARTMENT OF, Hon. E. A. Hitchcock, Secretary.

Ores from the Alaskan exhibit at the Lewis and Clark Exposition (45466).

Office of Indian Affairs: F. E. Leupp, Commissioner; remains of fossil vertebrates from the dam on the Zuñi Reservation, forwarded by J. B. Harper, superintendent of irrigation, Zuñi Reservation, Zuñi, N. Mex. (45173).

U. S. Geological Survey: Charles D. Walcott, Director; fossil bones collected by Willis T. Lee in the Red Lands of the Staked Plains, eastern part of New Mexico (44836); vertebrate fossils from the Triassic Dockum beds, obtained by C. N. Gould, 18 miles southeast of Canyon City, Tex. (44901); 2 vertebrate fossils from Fairbanks and Upper Cleary creeks, Alaska (45088); rocks from Tacoma, Washington quadrangle, obtained by Bailey Willis and G. O. Smith (45149); rocks from Needle Mountain quadrangle, Colorado (45179); hubnerite from the hubnerite

INTERIOR, DEPARTMENT OF—Continued.

mine near Osceola, Nev. (45201); basalt and hornblende-andesite from California (45214); fossil teeth from Tertiary deposits 3 miles south of Iron Mountain Station, Wyo., collected by N. H. Darton (45243); fossil turtle from the Bad Lands of South Dakota, collected by N. H. Darton (45251); Cretaceous and Tertiary fossils collected by L. W. Stephenson from and near Cape Fear River, North Carolina (45267); Tertiary fossils from near Minidoka, Idaho, collected by F. C. Horn (45279); shell limestone collected in Florida by the late G. H. Eldridge (45295); rocks from Marysville district, Montana, collected by W. H. Weed (45296); fish remains from the Tertiary of Sanpete, Utah, collected by G. B. Richardson (45379); Mesozoic fossil plants described by Lester F. Ward in Monograph XLVIII of the Survey (45415); fuller's earth from Attapulgus, Ga. (45455); Miocene foraminifera from the Monterey shale of California, described and figured by Rufus M. Bagg, jr., for Bulletin 268 of the Survey (45501); rocks from the Kenova quadrangle, Kentucky, collected by W. C. Phalen (45560); 4 minerals from Colorado, namely, native tellurium, zunyite, and chalcedony (45569); nevadite from Chalk Mountain, Colorado, collected by Whitman Cross (45576); 2 specimens of brecciated chlorite schist from Animas Canyon, collected by Ernest Howe (45592); Upper Cretaceous fossils (vertebrates, invertebrates, and plants) from Judith River beds (45730); Pleistocene fishes from Truckee Canal, near Hazen, Nev. (45787); rock containing the rare mineral "emmonsite" from Cripple Creek district, Colorado (45807); 24 species of mollusks collected by T. Wayland Vaughan from a shell mound at Osprey, Fla. (45859); 315 rocks and ores from Cripple Creek district, Colorado, collected by Waldemar Lindgren and F. L. Ransome; also duplicate material (45885); sample of lead ore in limestone from Missouri (45911); 2 corals from Florida, obtained by T. Wayland Vaughan (45965); 76

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rocks, minerals, and ores from the western section of Kentucky, representing lead, zinc, and fluorspar deposits (45968); 237 rocks and ores from the Clifton quadrangle, Arizona, collected by Waldemar Lindgren (46042); 18 minerals from the Clifton-Morenci district, Arizona, collected by Waldemar Lindgren (46043); 133 specimens from the gold belt of the Blue Mountains, Oregon, collected by Waldemar Lindgren (46049); 84 rocks from Bitterroot range of Idaho and Montana, collected by Waldemar Lindgren (46077); 51 rocks and ores from the central portion of the Carolinas, collected by L. C. Graton (46109).

INTERNATIONAL POTTERY COMPANY, Trenton, N. J.: Yellow pitcher or jug (45686).

JACKSON, Hon. JOHN B., American minister, Athens, Greece, Newark, N. J.: 2 pieces of Bulgarian carpet (44873: purchase).

JAMES, Mrs. C. M. M. J., Washington, D. C.: Telescope of Rear-Admiral Theodorus Bailey, used at the surrender of the city of New Orleans (45945).

JAMES, Mrs. JULIAN, Washington, D. C.: 15 photographs of the Myers-Mason family (45493); snuff-box (in case) made from an oak rafter that supported the roof of the Hall of Independence (10949: loan); collection of Myers-Mason family heirlooms (11244: loan).

JAPANESE FISHERIES EXHIBIT AT THE LOUISIANA PURCHASE EXPOSITION. (See under Department of Commerce and Labor, Bureau of Fisheries).

JEFFCOTT, Mrs. ANN A.: Upright piano, made by Debain, of Paris, France, with 12 boxes of musical attachments (transmitted through Charles E. Curtis, New Haven, Conn., executor of estate (44953: bequest).

JEFFRIES, THOMAS N., Saltillo, Mexico: 2 living specimens of Crassulaceæ, *Echeveria*, from Mexico (45255).

JENINGS, JEFFERSON H., Washington, D. C.: Pipe of black slate, mended with lead (45021).

JENKINS, O. P. (See under Department of Commerce and Labor, Bureau of Fisheries).

JENNEY, C. E., Fresno, Cal.: About 30 fresh-water mollusks, marine mollusks, 4 species of insects, 25 isopods, *Porcellio laevis;* 16 shells (45768; 45777; 45887; 45890; 45901).

JENTINK, F. A., Leiden, Holland: 6 photographs of skulls of bats, *Callinycteris rosenbergii* and *Cynopterus melanocephalus* (44896).

JERMY, JULIUS, San Antonio, Tex.: 19 moths (44704); 60 beetles (44715).

JESSUP, A. C., Grayson, Utah: Ear of corn found beneath the clay floor of a small house at Wickiup Cañon, San Juan County, Utah (45870).

JEWETT, STANLEY G., Portland, Oreg.: Chipmunk from Troutlake, Washington (45471).

JOHN, ANDREW, Washington, D. C.: 3 small vases and 2 pipes, samples of the work in pottery-making of the Catawba Indians of South Carolina (44911); photograph of Andrew John, sr. (44947).

JOHNS HOPKINS UNIVERSITY, Baltimore, Md.: Brains of negroes and fetuses (received through Frank P. Mall) (45563).

JOHNSON, C. W., Boston, Mass.: 2 specimens of *Strombus* from Nicaragua (44995).

JOHNSON, Lieut. F. C., U. S. Army, Albay, Philippine Islands: Leaf insect (44692).

JOHNSON, R. H., Cold Spring Harbor, N. Y.: 6 birds' skins from Washington (45545).

JOHNSON, W. W., Memphis, Tenn.: Ball covered with cactus spines, taken from a cow's stomach (45252).

JONES, HENRY, Blue, Ariz.: Skull of grizzly bear (45822).

JONES, J. T., Tacoma, Wash.: Gold on pyrite from the southeastern part of Alaska (46111: purchase).

JORDAN, A. S., Whitehall, Md.: Tourmaline from Baltimore County, Md. (44978).

JORDAN, DAVID S. (See under Department of Commerce and Labor, Bureau of Fisheries.)

JOUY, Mrs. M. S. F., U. S. National Museum: Ethnological objects from Japan and Mexico, collected by the late Pierre L. Jouy (44725).

KAIN, JOHN, Matagorda, Tex.: Pteroped mollusks, *Cresis aciculata*, from Texas (45278).

KAULFUSS, J., Nürnberg-Schweinau, Germany: 92 plants (46016: exchange).

KEARFOTT, W. D., Montclair, N. J.: 11 moths (44732); 164 moths from North and South America (45394); 98 moths (45420).

KEARNEY, T. H., Department of Agriculture: 6 plants from Plummers Island, Md. (44736); 38 plants from Plummers Island (45000); 2 plants from South Dakota, collected by T. H. Means (45032).

KEELE, JOSEPH, Ottawa, Canada: 12 specimens of mollusks, *Physa ancillaria*, from Meach Lake, near Ottawa (45933).

KEENAN, MICHAEL, Springer, N. Mex.: Beetles, *Tenebrio molitor* (46064).

KELLERMAN, W. A., Columbus, Ohio: Plant from Guatemala (45254: exchange); 41 plants from Guatemala (45293: exchange); 8 fresh fruits of *Pereskia* from El Rancho, Guatemala (45530); 39 plants from Guatemala (46760: exchange).

KELLY, LUTHER S., San Carlos, Ariz.: 12 bulbs from Arizona (45828).

KENDALL, W. C. (See under Department of Commerce and Labor, Bureau of Fisheries.)

KENNEDY, HARRIS, Roxbury, Mass.: 2 bats from Japan and 2 from Bonin Island (45205).

KENNEDY, P. B. (See under Department of Agriculture.)

KENTUCKY STATE COMMISSION AT THE LOUISIANA PURCHASE EXPOSITION: Ores and nonmetallic minerals from Kentucky (44665).

KERN, D. N., Allentown, Pa.: Small, leaf-shaped blade of jasper, and a triangular arrowpoint found near Vera Cruz Jasper mines, Lehigh County, Pa. (45207).

KESTER, VAUGHAN and PAUL, Accotink, Va.: Mounted heads of large game animals, skins, guns, and ethnological objects (44635).

KEW, LONDON, ENGLAND: ROYAL BOTANICAL GARDENS: Piece of the type specimen of a plant from Mexico, and 2 drawings (45847: exchange).

KILLIE, CHARLES A., Peking Presbyterian Mission, Paoting-fu, China: Mauser rifle (with 2 shells and 50 Mauser bullets) captured at the siege of Peking (received through John W. Hollyday) (45586).

KILPATRICK, Mrs. LUISA V. DE, Santiago de Chile, South America: Collection of relics of the late Judson Kilpatrick U. S. Army (46071).

KING, Miss MARY R., Great Neck, Long Island, N. Y.: Pupa of large yellow and black butterfly, *Papilio turnus* (44845).

KING, WILLIAM A., Cleveland, Ohio: Badge worn by the donor in 1860, during the political campaign of Abraham Lincoln (45785).

KINGSTON, JAMAICA, HOPE GARDENS: 26 living specimens of cacti from Jamaica (received through N. L. Britton, New York Botanical Garden) (46094: exchange).

KIRK, EDWIN J., Columbia University, New York City: Bryozoans from the Trenton rocks of Canada (46011).

KIRKLAND, A. H., Boston, Mass.: 3 parasites of Gypsy-moth, *Chalcis flavipes* (44727).

KLOSS, C. BODEN, Singapore, Straits Settlements: 32 mammals from Batam Island and Singapore (received through W. L. Abbott) (45405); skull of 2 pigs from Johore (45499: exchange); shrew, centipede, and skeleton of a bird (received through W. L. Abbott) (46063); mammals from the Malay Peninsula (46091). (See under W. L. Abbott.)

KNAB, FREDERICK, U. S. National Museum: Schizopods from Costa Rica. (45229); 24 beetles and a lace-winged fly (45669). (See under Carnegie Institution).

KNAPP, GEORGE B. (See under W. W. Blackmar).

KNEUCKER, A. (See under Department of Agriculture.)

KNIGHT, O. W., Bangor, Me.: 4 plants from California and New Mexico (45757).

KNOPF, FRED., Lebanon, Pa.: 75 plants from Pennsylvania (45001).

KNOWLES, J. D., Port Huron, Mich.: Plant from Michigan (received through Department of Agriculture) (45072).

KOHLER, MAX J. (See under Smithsonian Institution.)

KOSTROMETINOFF, GEORGE, Sitka, Alaska: Suit of armor worn by Alexander Baranoff, first Russian governor of Alaska, and a lithographic portrait of Governor Baranoff (45931).

KOTINSKY, JACOB, Honolulu, Hawaiian Islands: 25 insects (45203); 11 Diptera from India and the Hawaiian Islands (46081). (See under W. A. Giffard.)

KUNZE, R. E., Phoenix, Ariz.: Larva of *Copidryas cosyra* (44864).

LA FLESCHE, FRANCIS, Washington, D. C.: Skull of Omaha medicine man (44748).

LAING, ALVA E., Detroit, Mich.: Half-dollar, Columbian issue, 1893 (45441).

LAMB, D. S., Army Medical Museum, Washington, D. C.: Human skeleton (45575); skeleton and brain of a negro (45805).

LAMB, R. P., Davenport, Iowa: Moth, *Spilosoma virginica* (46067).

LAMSON-SCRIBNER, F. (See under Department of Agriculture.)

LANDERS, Miss CORA, Nevada City, Cal.: *Lepidoptera* (44892).

LANGLEY, estate of S. P.: Fetish from Santa Ana, N. Mex. (received through Mrs. H. B. Herrick) (45746).

LATHAM, HARRY. (See under Department of Agriculture.)

LAURENT, PHILIP, Philadelphia, Pa.: 4 specimens of orthopterous insect, *Tenodera sinensis* (45902).

LEA, CHARLES M. (See under M. Drainard.)

LEACH, FREDERICK, New York City: 12 old watch movements; (10911; 11047; 11521). Loan.

LEE, IRA T., Thrace, Ark.: 2 specimens of rat-tail maggots, probably *Mallota posticata* (45264).

LEE, WILLIS T. (See under Interior Department, U. S. Geological Survey.)

LEFROY, H. MAXWELL, Pesu, India: Parasitic Hymenoptera (44895; 45434).

LEIER, HENRY, Alva, Okla.: 2 madstones (11133: loan).

LELAND STANFORD JUNIOR UNIVERSITY, Stanford University, Cal.: Fishes collected by P. O. Simons in Ecuador and Peru (45554); fishes collected by G. A. Lung in Manila, Cavite, and adjacent localities (45855); Japanese fishes obtained by Robert V. Anderson (45618).

LEMBKEY, WALTER I., Washington, D. C.: Short-eared owl, *Asio accipitrinus*, and Richardson's owl, *Cryptoglaux richardsoni*, from St. Paul Island, Alaska (45462).

LENOX, J., Holder, Fla.: Beetle, *Strategus antæus* (44998).

LERCHEN, F. H., Deming, N. Mex.: Specimens of lerchenite (45335).

LEUPP, F. E. (See under Interior Department, Office of Indian Affairs.)

LEWIS, G. H., Washington, D. C.: Crystal of rutile from Chester County, Pa. (45830).

LIBBEY GLASS COMPANY, Toledo, Ohio: Exhibit of glassware, showing process of manufacture (44943).

LIE-PETTERSEN, O. J., Bergen, Norway: 6 specimens of bumblebee, *Bombus smithianus*, from Radoen, near Bergen, western Norway (45328).

LILLY, B. V.: Stone celt and bones from mounds southwest from Tallulah, La. (received through Department of Agriculture, Washington, D. C.) (45123).

Lindgren, Waldemar, U. S. Geological Survey, Washington, D. C.: Skull of skunk, *Mephitis* (45202). (See also under Interior Department, U. S. Geological Survey.)

Lindsey, J. C., Ravenna, Ohio: Silver case watch (45451).

Lipe, Clarence, Los Angeles, Cal.: Pleistocene fossils from San Pedro, Cal. (44767: exchange).

Lloyd, C. G., Cincinnati, Ohio: 2 specimens of oak, *Quercus Leana* (received through Department of Agriculture) (45531).

London, England, British Museum (Natural History): 74 mammals (44770); 14 species of Irish Cumacea (45963). Exchange.

Long, John P., Springfield, Mass.: 8 flies, parasitic on deer (45204).

Lookabill, Alfred, Crawfordsville, Ind.: 7 photographs of gourds (45450).

Lovett, Edward, Croydon, England: 3 originals and 3 models of ethnological objects from the southern part of Wales and England (45562); set of Maundy money of 1906 (46127). Exchange.

Lowe, H. N., Long Beach, Cal.: Crustaceans from the southern part of California (45439; 46104). Exchange.

Lowe, J. E., Duluth, Ga.: Ribbon badge of the Seventh Regiment of Georgia Volunteers, C. S. A. (44806).

Lucas, F. A., Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.: 2 turtles from Plymouth, Mass. (44958).

Luchs, Leopold, Washington, D. C.: Fossil wood from near the Reform School Washington, D. C. (45838).

Ludlow, Miss C. L., Office of the Surgeon-General, Marine-Hospital Service, Washington, D. C.: Insects from the Philippine Islands (45764; 46058.)

Lung, G. A. (See under Leland Stanford Junior University.)

Luschan, Felix von, Berlin, Germany: Skin-color tablet for determining the color of the skin in the different races (45570).

Lyon, M. W., Jr., U. S. National Museum: Mammals, birds, plants, and a frog from Oregon and California (45472; 45713). Collected for the Museum. (See under F. F. Fellows.)

Lyon, M. W., Jr., and J. E. Benedict, U. S. National Museum: Mammals, plants, reptiles, mollusks, crustaceans, birds, and fishes from Oregon (45099: collected for the Museum).

Lyon, Victor W., Jeffersonville, Ind.: Devonian fossils from the Falls of the Ohio (45177: exchange).

Lyon, W. S. (See under Department of Agriculture.)

McAtee, W. L., and A. M. Banta, Department of Agriculture, Washington, D. C.: 24 specimens of salamander, *Spelerpes maculicaudus* from Mayfield's Cave, Bloomington, Ind. (45247).

McCallie, S. W. (See under R. M. Harper.)

McCann, Jasper K., Zanesville, Ohio: Neuropterous insect, *Corydalis cornuta* (46103).

McConnell, W. R. (See under Pennsylvania State College).

McCown, R. M., Saginaw, Ark.: Spider, *Acrosoma rugosa* (44710).

McDonald, William. (See under Department of Agriculture).

McDowell, J. A., City of Mexico, Mexico: 21 plants from Mexico (46010).

McElhose, Henry A., St. Louis, Mo.: 36 moths (45395: exchange).

McGee, Anita Newcomb, Washington, D. C.: Skull of an Ainо (45880: purchase).

McGee, W J (See under Smithsonian Institution, Bureau of American Ethnology.)

McGregor, R. C., Palo Alto, Cal.: Reptiles, batrachians and crustaceans from the Philippine Islands (45167); marine shells from the Hawaiian Islands (45211); 3 birds' skins, *Falco peregrinus pealei; Puffinus tenuirostris* and *Actodromas minutilla* (45478: deposit). (See under Manila, Philippine Islands, Bureau of Agriculture.)

McKaig, Joseph F., Washington, D. C.: White fetus (brain and skeleton) (44840).

McLachlan, Argyle, Victoria, Tex.: 4 ants (44691); 90 insects from cotton fields in Guatemala (45426).

McLachlan, R. W. (See under Numismatic and Antiquarian Society of Montreal.)

McLaughlin, C., Robbins, Mich.: 2 western great horned owls, *Bubo virginianus occidentalis* (45437; 45645).

McLean, Mrs. Donald. (See under National Society, Daughters of the American Revolution.)

McMillan, W. N., London, England: Mounted Bongo antelope, *Boocercus euryceros* (45364).

McPherson, J. D., Andalusia, Ala.: Centipede, *Scutigera forceps* (44974).

MacDonald, M. E., Guanajuato, Mexico: Specimen of quartz replacing dolomite (45716).

Macfarlane, J. M., University of Pennsylvania, Philadelphia, Pa.: 4 specimens of pitcher plant, *Sarracenia*, from Mississippi (46029: exchange).

Mackerille, Lucy V., Chevy Chase, Md.: Spider, *Lycosa fatifera* (44994).

Macoun, J. M. (See under Ottawa, Canada, Geological Survey of.)

Mall, Frank P. (See under Johns Hopkins University.)

Mallett, J. W., University of Virginia, Charlottesville, Va.: Allenite from Amherst, Va., and volcanic ashes from Vesuvius, Italy, representing various eruptions (45905).

Malone, R. A., Jr., Culebra, Panama: Clearwing moth, *Sania agrus* (44838).

Manila, Philippine Islands:

Bureau of Agriculture: 217 plants collected by R. C. McGregor (44900).

Bureau of Science: 2 beetles (received through Charles S. Banks) (45547).

Marloff, Fred., Oak Station, Pa.: Moth, *Glæa signata* (45556); 6 moths (45635: exchange).

Marshall, George, U. S. National Museum: 1-cent piece, United States currency, issue of 1902 (45453); skull and hoof of horse from Laurel, Md. (45526).

Marshall, Miss Josephine, Anacostia, D. C.: Pearl from a common oyster (45839).

Marsteller, Miss Pauline, Thoroughfare, Va.: Set of English china, consisting of 38 pieces (11113: loan).

Marsteller, Miss Pauline, and A. A. Marsteller, Thoroughfare, Va.: Silverware which belonged to Col. Philip Marsteller, of General Washington's staff (11303: loan).

Marvel, W. D., Taunton, Mass.: "Mummified mouse" (45357).

Mason, O. T., U. S. National Museum: 4 silver coins, United States currency, namely, 2 half dollars of the issues of 1903 and 1904, and 2 quarter dollars of the issues of 1898 and 1904 (45513); silver half dollar, United States currency, in 1828 (45709).

Maxon, W. R., U. S. National Museum: 10 plants from the eastern section of the United States (44792); plants from the District of Columbia (44999); specimen of fern, *Botrychium*, from Connecticut (45272). Collected for the Museum.

Maxwell, J. W., Austin, Tex.: Scarabæid beetle (45995).

Maynard, G. C., U. S. National Museum: Photograph of an oil portrait of William Hale Maynard in the city hall of Buffalo, N. Y. (45475).

Means, T. H. (See under T. H. Kearney.)

Mearns, Dr. E. A., U. S. Army, Manila, Philippine Islands: Pair of wooden sandals (45028); rats and shrews from the vicinity of Manila (45567); mammals, birds, fishes, marine invertebrates, mollusks, and ethnological objects from Guam and Manila (45789); natural history specimens and ethnological objects from the Philippine Islands (45912); mammals, birds, reptile, shell, insects, corals, and ethnological objects from the Philippine Islands; 84 plants from

MEARNS, Dr. E. A.—Continued.
the Philippine Islands (46074). (See under Dr. Raymond F. Metcalfe, U. S. Army, and Maj. G. W. Newgarden, U. S. Army.

MEEK, S. E. (See under Department of Commerce and Labor, Bureau of Fishes.)

MELVILLE, A. G., Chicago, Ill.: Specimen of walking-stick, *Diapheromera femorata* (44884).

MENELIK, King, Adis Abbaba, Abyssinia: 2 elephant tusks (received through Hon. Theodore Roosevelt) (45215).

MERRIAM, C. Hart. (See under Wm. Lord Smith.)

MERRIHEW, Mrs. E. L., Long Beach, Cal.: 250 land and marine mollusks from California (44684).

MERRILL, G. P., U. S. National Museum: Photographs of J. H. Alexander, Jules Ducatel, Philip Tyson, and H. H. Hayden (44683); shrew and a fish from the Isle of Springs, Sheepscot Bay, Maine (46040).

MERRITT, Miss C. A., Medina, N. Y.: 2 polished stones (45682).

METCALFE, O. B. (See under E. L. Greene.)

METCALFE, Dr. RAYMOND F., U. S. Army, Manila, Philippine Islands: Reptiles from Samar, Philippine Islands (received through Dr. E. A. Mearns, U. S. Army (45790).

METTAUER, H. A., Macon, Ga.: 2 plants from Georgia (45131).

MEXICO, CITY OF MEXICO, INSTITUTO MEDICO NACIONAL: 2 living plants from Mexico (received through F. Altamirano, director) (45602: exchange).

MEYER, J., Brooklyn, N. Y.: Photographic color prints, unfinished prints, and paper sensitized for printing, illustrating new process of making photographic color prints (45704).

MICKWITZ, AUGUST VON, Reval, Estland, Russia: 2,063 specimens of Russian Ordovician bryozoans (45521).

MIGUEL, JEAN, Barroubio, par Aigues-Vives, Hérault, France: Prehistoric objects (44831); prehistoric objects (46030: exchange).

MILLER, Lieut. EDWARD Y., U. S. Army, governor of the Province of Palawan, Puerta Princesa, Philippine Islands: Copies of a letter in Tagbanua characters, and 2 photographs of the alphabet and of a bamboo tube which were formerly used in correspondence by the natives (45937).

MILLER, GERRIT S., Jr., U. S. National Museum: 72 plants principally from the vicinity of Washington (44858: collected for the Museum); specimen of *Ipomœa* from Mexico (45929).

MILLER, Mrs. GERRIT S., Jr., Washington, D. C.: 14 specimens of mollusks, *Laciniaria* from Virginia (45386).

MILLER, GERRIT S., Sr., Peterboro, N. Y.: 2 specimens of *Sambucus* from Peterboro (44670); 8 photographs of a common finback whale, *Balænoptera physalus* taken at Provincetown, Mass. (45589).

MILLS, THEO., Methow, Wash.; Cecropia moth, *Samia gloveri* (46131).

MILWAUKEE PUBLIC MUSEUM, Milwaukee, Wis.: 12 specimens of Hymenoptera (received through H. L. Ward, custodian) (44626).

MINGUS, EVERITT, Marshfield, Oreg.: Wood coated bronze (46051).

MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: 2 plants (45013); 6 living plants from Mexico (45183); specimen of stone-crop, *Echeveria lucida* (45225); living specimen of stone-crop, *Sedastrum hemsleyanum* from Mexico (45268); 2 living plants (45504). Exchange.

MITCHELL, Miss E. G., U. S. National Museum: Crustaceans from Piney Branch, District of Columbia. (45170).

MITCHELL, E. S., Havre de Grace, Md.: Oriskany fossils (45330).

MITCHELL, H. W. (See under J. M. Corey.)

MITCHELL, J. D., Victoria, Tex.: Type of mollusk, *Scala mitchelli* (45577). (See also under Department of Agriculture.)

MONTGOMERY, HENRY, curator of Museum, Toronto University, Toronto, Canada: Mound relics from Dakota (45749).

MOONEY, JAMES. (See under Smithsonian Institution, Bureau of American Ethnology.)

Morhart, Curt, Pfarrer von Staadorf, Bayern, Germany: Clay tablet with figure of Columbus (received through Department of State) (44779).

Morrill, A. W. (See under Department of Agriculture.)

Morse, A. P., Wellesley, Mass.: 13 Orthoptera (45666: exchange).

Mosby, John S., Jr., Mosby, Va.: Black horse-fly, *Tabanus atratus*, and a sphinx-moth, *Callosamia angulifera* (46129).

Mottaz, Charles, Geneva, Switzerland: 11 bats and a shrew from Switzerland (45663: exchange).

Murray, J. D., Washington, D. C.: Skull of a negro (46044); negro fetus (46115).

Musée Cantonal. (See under Fribourg, Switzerland.)

Musée Zoologique de L'Académie Impériale des Sciences. (See under St. Petersburg, Russia.)

Museo Civico di Storia Naturale. (See under Genoa, Italy.)

Museo Nacional. (See under San José, Costa Rica.)

Muséum D'Histoire Naturelle. (See under Paris, France.)

Museum of Comparative Zoology, Cambridge, Mass: Reptiles and batrachians from the Bahama Islands (45925).

Museum of Natural History, Valpariso, Chile, South America: 17 specimens of Arachnids (45265).

Nash, G. V. (See under New York Botanical Garden.)

National Society of the Dames of 1846: Flag of the Baltimore, Md., and Washington Battalion, volunteers in the Mexican war, 1846–1848 (10664), badge, with inscription, of the reunion of the National Association of Veterans of the Mexican War, at Dallas, Tex., 1905 (10786); sword carried by Sergeant Michael McEnnis in the march through Mexico under Col. A. W. Doniphan, and a gold-plated medal made from cannon captured in Mexico (10787); 5 badges of Mexican War Veterans (10813); Mexican flag (10841); letter and 3 military documents of Richard C. Daly (1847–1860) (11158); photograph, newspapers, badge, and circular letter

National Society of the Dames of 1846—Continued.
to the Fifty-ninth Congress relating to the National Association of Mexican War Veterans (11315). Loan.

National Society of the Daughters of the American Revolution, Mrs. Donald McLean, President-General:

"A masque made in the matrix which was moulded at Mount Vernon on the living features of George Washington by that eminent sculptor, Jean Antoine Houdon, who in 1785 was brought from Paris for that purpuse by the State of Virginia" (10641); framed letter of Abigail Adams; framed photographs, with pieces of wood attached, of Washington elm, Cambridge, Mass.; Clark House, Lexington, Mass.; Faneuil Hall, Boston, Mass., and Old North Church, Boston, Mass. (11347); Revolutionary relics (11370); porcelain clock, 3 miniatures on ivory, and a chemisette, the property of Mrs. Sophie L. Walker (11371); letter written in 1777 by Samuel Chase to Governor Johnson, of Maryland, and a bronze medal awarded to the society by the Louisiana Purchase Exposition (11479). Loan.

Navas, R. P. Longinos, Zaragoza, Spain: Hymenoptera from Spain (45956: exchange).

Needham, James G., Lake Forest, Ill. 50 Diptera (received through D. W. Coquillett) (45289).

Nelson, Aven, Laramie, Wyo.: 746 plants from Wyoming and Colorado (45065: purchase).

Nelson, E. W., Department of Agriculture, Washington, D. C.: Ancient pottery and stone objects from Mexico (45923: purchase). (See under Department of Agriculture.)

Newgarden, Maj. George W., U. S. Army, Manila, Philippine Islands: Horned beetle, *Chalcosoma atlas* (received through Dr. E. A. Mearns, U. S. Army) (45913).

New Jersey Historical Society, Newark, N. J.: Copy (bronze) of the Centennial Memorial medal issued by the Society (received through Nathaniel Niles) (45773).

New Jersey State Commission at the Louisiana Purchase Exposition: Ores and nonmetallic minerals from New Jersey (44666).

Newlon, W. S., Oswego, Kans.: Vertebra of a fossil or extinct bison (44963); skull of a bison, and Indian relics (45181).

New Mexico State Commission at the Louisiana Purchase Exposition: Ores and non metallic minerals from New Mexico (44667).

New York Aquarium, Battery Park, New York City: Specimen of Axolotl (45629).

New York Botanical Garden, Bronx Park, New York City: Living plant collected by G. V. Nash in Hayti (45066); living plant from Mexico (45083); large collection of *Pteridophyta* (45263); 2 living plants (45299); living plant from Costa Rica (45344); 296 specimens of marine algæ and 232 specimens of Characeæ (45580); 597 plants from the West Indies (45623); plants principally from Jamaica (45628); living specimens of cacti, principally from Mexico (46050). Exchange.

New York Zoological Park, New York City: 2 specimens of rattlesnakes from Arizona (45421); iguana, *Cyclura carinata* from Turks Island, West Indies (45728).

Nichols, Mrs. Ann, Laredo, Tex.: 2 specimens of cactus (45011).

Nichols, George E., New Haven, Conn.: Mollusk, *Schizæa pusilla*, from Cape Breton, Nova Scotia (45271).

Nickels, John, U. S. Geological Survey, Washington, D. C.: About 60 freshwater shells from Riverside on the Ohio River (45889).

Niles, Nathaniel. (See under New Jersey Historical Society.)

Norman, Rev. Canon A. M., The Red House, Berkhamsted, Herts, England: Parasitic copepods (received through Charles B. Wilson) (45398: exchange).

Norse Pottery Company, Rockford, Ill.: 3 pieces of pottery (45701).

North Carolina Agricultural Station, Raleigh, N. C.: 4 Hymenoptera (45739).

North Carolina Department of Agriculture, Raleigh, N. C.: Adult and larva of a salamander, *Stereochilus marginatus* (received through H. H. Brimley) (45298).

North Carolina Granite Corporation, Mount Airy, N. C.: Cube of Mount Airy granite (44850).

North, John T., New York City: Projectile found on Flat Creek Swamp, Fayette County, Ga. (45590).

Numismatic and Antiquarian Society of Montreal, Montreal, Canada: Medal issued in connection with the bicentennial of the erection of the building of the museum of the society (received through R. W. McLachlan, honorary curator) (45681).

Oberlander, Ph., Hronov, Bohemia: Hemiptera and Coleoptera from New Guinea (45906); insects from India, Ceylon, Australia, and Chile (44938). Exchange.

O'Brien, F. W. X., Woodstock, Md.: 2 mud nests with bees (45137).

Ohr, George E., Biloxi, Miss.: Small handled vase (45687).

Oldroyd, Mrs. T. S., Long Beach, Cal.: Marine shells and marine mollusks from California and other localities (45138; 45778).

Orcutt, C. R., San Diego, Cal.: 7 species of fungi from Lower California (45719).

Ord, estate of the late Capt. James T., U. S. Army: Badge of the Seventy-fifth Army Corps, presented to Captain Ord by Major-General Shafter after the war with Spain (received through Mrs. Lucy Ord Donaldson) (11343: loan).

Oregon Commission at the Lewis and Clark Exposition, Portland, Oreg.: Cobalt ore from Quartzburg, and gypsum from Huntington, Oreg. (45469).

Oriole Museum, Knowlesville, N. Y.: 6 birds' skins from China (45613).

Osgood, W. H. (See under J. B. Tyrrell.)

Oslar, Ernest J., Denver, Colo.: 14 moths (45708: purchase).

Ottawa, Canada, Geological Survey of: (received through J. M. Macoun) 150 plants from Canada (45555); 103 plants from Canada (45735). Exchange.

Owen, Virgil W., Los Angeles, Cal.: Rattlesnake from Arizona (45796).

Paéz, José A., Sailors' Snug Harbor, Staten Island, N. Y.: Collection of personal relics of the late Gen. José Antonio Paéz (10689: loan).

Paine, P. R., Jr., Charleston, S. C.: Treefrogs from South Carolina (45069).

Palmer, Edward, Department of Agriculture: 303 plants from Mexico (44844: purchase); 232 plants from Mexico (44927: purchase); collection of ethnological objects from Mexico (45308); plants from Mexico (45511; 45721: purchase).

Palmer, William, U. S. National Museum: 5 ferns from the Bright Angel trail, Grand Canyon, Arizona (45337); dried specimen of crayfish from Mount Tamalpais, California (45220); lizard and a frog from California (45551); skins and skeletons of 2 squirrels, *Sciurus griseus*, from Allspaugh, Oreg. (45573); 15 plants from Oregon and other localities (45918). Collected for the Museum.

Pammel, L. H. (See under Department of Agriculture.)

Paris, France. Muséum D'Histoire Naturelle: 3 fresh water crabs (44644: exchange); 2 bats, *Euripterus*, from South America (44945: exchange); isopods obtained by the Charcot expedition to the Antarctic regions (45625).

Parish, S. B., San Bernardino, Cal.: 5 specimens of *Sedum* (44708); about 10 cacti from California (44730); specimen of fern, *Cheilanthes Cooperæ* (44929); plant from California (44964: exchange); specimen of fern (45071).

Parker, A. C., Bridgeton, N. J.: Saddleback caterpillar, *Sabine stimulea* (45046).

Parks, H. L., Lake Valley, N. Mex.: Beetle, *Hippodamia convergens* (44933).

Parritt, H. W., London, England: Specimen of crab, *Lithodes kamschatica*, and 2 specimens of crab, *Grapsus varius* (45593: exchange).

Paumgartten, Baron. (See under Seitenstetten, Lower Austria, Geographisches-Schul Museum).

Payne, Elias J., Olympia, Wash.: Ores from the Washington State Exhibit at the Lewis and Clark Exposition (45468).

Peabody, Mrs. Harriet, Washington, D. C.: 2 pottery bowls of Navaho Indian workmanship (45210).

Peabody Museum of Archeology and Ethnology, Harvard University, Cambridge, Mass. An old Micmac box made in Annapolis County, Nova Scotia, about the year 1800 (received through C. C. Willoughby) (45861: exchange).

Peabody Museum, Yale University, New Haven, Conn.: 4 isopod crustaceans, *Janira spinosa* and *Dynamene perforata* (received through Miss K. J. Bush) (45886).

Peck, Bradford, Jr., Searles, Cal., 2 plants from the Mojave Desert, *Pholisma arenarium* (44769); fragments of a solopugid, *Eremobates formicaria* (44854).

Pennell, Francis W., Wawa, Pa.: 2 plants from Pennsylvania (44899).

Pennsylvania State College, State College, Pa.: Fishes from various localities in Pennsylvania (received through W. R. McConnell, president) (46019).

Peters, Dr. R. H., Livingston, Guatemala: Moth (44794); 22 mollusks, *Veronicella stolli* (received through H. Pittier) (44923).

Peterson, John, Delamar, Nev.: Gold ore from Delamar (45384).

Pfordte, O. F., Rutherford, N. J.: Minerals and graphite (44878; 45989).

Phalen, W. C. (See under Interior Department, U. S. Geological Survey.)

Philippine Commission at the Louisiana Purchase Exposition: Ethnographic and mineralogical collections from the Philippine Islands (45257).

Phillips and Bosworth, Fishinghawk, W. Va.: Fossil plants (45227).

Phillips, J. W., Hailey, Mo.: 20 plants from Missouri (44761; 44888; 45460).

Piedmont Mining Company, Lincolnton, N. C.: Tin ore (received through Frank L. Hess) (46032).

Pierre, Abbé (Alliers), Moulin, France: Specimens of mymarid, *Anagrus atomos* (45738).

Pilsbry, H. A., Academy of Natural Sciences, Philadelphia, Pa.: Specimens of mollusk, *Subulina striatella*, from Liberia (45053).

Pinchot, Mrs. J. W., Washington, D. C.: Early colonial pewter pipe (46008).

Piper, C. V., Department of Agriculture, Washington, D. C.: 32 specimens of *Pteridophyta* from Alaska (44631); 300 shells from Mecca, Cal. (45014); 49 plants, principally from Washington, most of which are types (45360); 11 plants from Oregon, collected by M. W. Gorman (45429); 25 specimens of algæ from Alaska and 6 from other localities in the United States (45505); 2 specimens of beard-tongue, *Pentstemon*, from Oregon (45596). (See also under Department of Agriculture.)

Pittier, H., Department of Agriculture, Washington, D. C.: 3 carved and painted bowls made by the Kekci Indians (44678); 3 skulls of Kekci Indians from a cave of Sakalkunté, between Senahú and Aktelá, Alta Verapaz, Guatemala (44747); 14 living plants from Mexico (44848); 80 plants collected in El Salvador, by Carlos Renson (44852); 10 shells from Sakalkunté (44905); 35 specimens of land and freshwater mollusks, from Mexico and Gautemala (44924); mollusks, insects, crustacean, and a tooth (45048) specimen of plant, *Pereskia*, from Panama (45294); 162 plants from Costa Rica, consisting principally of Piperaceæ determined by de Candolle (45449); fish-hook and spider of gold, found near Cali, southern Cauca, Colombia, and ethnological objects made by the Popayan Indians of Cauca (45831); 38 mosses from Costa Rica (45837); 3 batrachians and a spider from Las Cruces de Lopez, Colombia, South America (46862); 134 plants from El Salvador, Central America, collected by Carlos Renson (45909); 3 spindle-whorls found in graves in the Cauca Valley, Colombia, and 2 photographs (45947); about 500 species of

Pittier, H.—Continued.
Pliocene and Pleistocene fossils from Port Limon, Costa Rica (45953); 120 lichens from Costa Rica (45959); 78 land and freshwater shells from Colombia, South America (46003); 133 land shells from Costa Rica and the Cocos Islands (46004); 33 plants collected by Carlos Renson in El Salvador (46013). (See also under Department of Agriculture and Dr. R. H. Peters.)

Piwonka, Thomas, Cleveland, Ohio: About 200 Onondaga fossils (45383).

Poole, B. G., Washington, D. C.: White fetus (44635).

Pope, Mr. and Mrs. Charles A., Valparaiso, Chile: 18 archeological specimens from Bogota and 23 stone implements from New Jersey (44982).

Pope Gosser China Company, Coshocton, Ohio: 2 vases (45694).

Porter, Charles A., Philadelphia, Pa.: Specimen of quartz (received through H. C. Demming) (45068).

Post, E. J., Tampa, Fla.: Rock containing fossil mollusks (45566).

Preble, E. A., Washington, D. C.: Skull of Dogrib woman from Fort Rae, Mackenzie, skull of an Eskimo child, and skull of a Tula Lake (Oregon) woman (45387); Eskimo furcoat and moccasins, net of willow bark, and sled line from the Mackenzie River district and western Hudson Bay shore (45922: purchase).

Prentiss, D. W., Washington, D. C.: Mole, *Scalops*, from Chevy Chase, Md. (45182).

Pringle, C. G., City of Mexico, Mexico: Plant from Mexico, of the crassulaceous class (45012); 2 living plants from Coahuila (45212); type specimen of plant, *Hoffmanseggia fruticosa* (45442); 645 plants from Mexico (45723: purchase).

Purpus, C. A., Amecameca, Mexico: 3 living specimens of Crassulaceæ (45378); 2 living specimens of *Cereus* (45720: purchase); 15 living plants (44973). (See under T. S. Brandegee.)

Pyle, J. B., superintendent House of Reformation, Cheltenham, Md.: Beetle, *Dynastes tityus* (45869)

RADER, F. E., Rampart, Alaska: 75 plants from Alaska (45235).

RALPH, W. L., U. S. National Museum: 8 deer and 17 rabbits (45097); 2 deer (45114); a rat (45122);[a] batrachians from Hamilton County, N. Y. (45156);[a] 2 specimens of deer (45221); 2 specimens of deer (45231); 2 musk-rats (45277); muskrat (45282); specimen of rice-field mouse, *Oryzomys*, from Virginia (45313); flying-squirrel and 3 mice (45333); 4 musk-rats and 3 specimens of field mouse, *Peromyscus* (45336); specimen of rice-field mouse, *Oryzomys*, from Virginia (45345); blue-crowned kinglet, *Regulus calendula* (45396); specimen of rice-field mouse, *Oryzomys*, from Virginia (45433); nest, 3 eggs, and skin of female Alaskan jay, *Perisoreus canadensis fumifrons* (45465); muskrat from Nansemond River, Suffolk, Va. (45503); turtle (45561); gray squirrel (45850); 25 birds' eggs from Newfoundland and Utah (45954); gray squirrel (46119); 2 squirrels (46136).

RAMES, JAMES L., Florence, Ariz.: Kangaroo-rat, *Dipodomys deserti*, from Casa Grande, Ariz. (46124).

RANDOLPH, Miss CORNELIA P., Washington, D. C., and Mrs. ELIZABETH G. R. CALVERT: Family relics, including a French clock which belonged to General Lingan; miniature on ivory of Gen. J. C. Lingan; wedding vest of General Lingan, and his parole from the prison-ship *Jersey*, dated February 25, 1776; teaspoon found near General Lingan's home, "Middlebrook Mills," in Montgomery County, Md.; buckskin hunting-shirt belonging to John Randolph of Roanoke; pair of doeskin garters worn by him, and a small gold shoe-buckle (46098).

RANSOME, F. L. (See under Interior Department, U. S. Geological Survey.)

RATHBUN, Miss M. J., U. S. National Museum: Invertebrates from Woods Hole, Mass. (45141: collected for the Museum).

RAWLINGS, E. A., Forest, Ontario, Canada: Rainbow-darter, *Etheostoma cæruleum* (45950).

RAYMOND, PERCY E., Carnegie Museum, Pittsburg, Pa.: Fossil bryozoans (45326).

REDMOND, WILLIAM PRESTON, New York City: 5 pieces of plate voted in 1813 by the Common Councils of New York and Philadelphia to Capt. James Lawrence, U. S. Navy, to commemorate the victory of the *Hornet* over the English sloop-of-war *Peacock* (11351: loan).

REED, J. C., Wickenburg, Ariz.: Ore (45574).

REESE, A. M., Syracuse, N. Y.: Toads, fishes, insects, mollusks, crustaceans and leeches from Lake Kissimmee, Florida (45168).

REICHARD, C. ADOLF, Frankfurt am Main, Germany: Photographs representing pieces of pottery found in caves along the coast of Jamaica (45331).

REINECKE, JUAN, Guanajuato, Mexico: 3 plants from Mexico (45826).

REINHOLT, O. H., Los Angeles, Cal.: 38 recent shells from the Philippine Islands (45486).

RENSON, CARLOS. (See under H. Pittier.)

REYNOLDS, E. V., Sacred Heart, Okla.: Imperial Roman coin (44764).

RICHARDS, T. W., U. S. Navy, Washington, D. C.: 31 birds' skins from Cuba (45089).

RICHARDSON, G. B. (See under Interior Department, U. S. Geological Survey.)

RICKENBAKER, G. W., North, S. C.: Cabbage-worm, *Gordius varius* (46105).

RICKER, P. L., Department of Agriculture, Washington, D. C.: 59 specimens of fungi from New England (45127: exchange); fossil leaf from the bog ore at Katahdin Iron Works, Piscataquis County, Me. (45792: transferred from the Department of Agriculture).

RIDDLE, O. (See under Department of Commerce and Labor, Bureau of Fisheries.)

RIDGWAY, ROBERT, U. S. National Museum: 1,305 birds' nests and eggs, a mammal, and 2 lizards from Costa Rica (44659: collected for the Museum); 22 skins of humming birds from Costa Rica

[a] Collected.

Ridgway, Robert—Continued.
(44786: purchased for the Museum); skin of screech-owl, *Megascops asio*, from Illinois (45148).

Riley, J. H., U. S. National Museum: 3 land-shells from Falls Church, Va. (44932); 10 birds' skins from Maryland and Virginia (45488: collected for the Museum); 3 squirrels and 2 bats from Virginia (45533); skin and skull of a squirrel (45932); egg of whip-poor-will, *Antrostomus vociferus* (45955).

Ripley, Edwin, Seattle, Wash.: Wolf-fish, *Anarrichthys ocellatus* (received through Department of Commerce and Labor, Bureau of Fisheries) (46067).

Ritchie, John, Jr., Boston, Mass.: 2 specimens of land-snail, *Helix maynardi* (cotypes) from Andras Island, Bahamas (45270); 5 specimens of land-snail, *Cepolis maynardi*, and 2 of *Cepolis xanthophæa* (cotypes) (45443); cotype of *Cepolis xanthophæus*, and 3 cotypes of *Cepolis caymanensis* (45487).

Roberts, E. W., House of Representatives, Washington, D. C.: Set of coins recently issued by the United States for use in the Philippine Islands (45926: exchange). (See also under Forbes Lithograph Manufacturing Company.)

Robertson, Alice, University of California, Berkeley, Cal.: 23 species of bryozoans from the Pacific coast (45552).

Robertson, A. W., San Francisco, Cal.: 3 pieces of pottery (45699).

Robinson, J. D. (See under Libbey Union Glass Company.)

Robinson, Mrs. Martha, care O. T. Mason, U. S. National Museum: Shuttle of a hand-loom (46036).

Robinson, Capt. Wirt, U. S. Army, Fort Totten, N. Y.: 60 Lepidoptera and 15 Coleoptera (44961); pupa of moth, *Phiprosopus callitrichoides* (44986); 3 mammals from the West Indies (45042).

Robotham, R., Marysville, Ohio: Glow-worm, *Photinus* sp. (44699).

Roby, William C., City of Mexico, Mexico: 7 plants from Mexico (45009).

Rockey, W., Haskell, Ind. T.: Stag-beetle, *Lucanus elaphus* (44713).

Rogan, H. G., Norfolk, Va.: 2 lobes of a human brain (45783).

Roger Williams Park Museum, Providence, R. I.: Fossil, *Sphenopteris elegans*, from Rhode Island (received through C. Abbott Davis, curator) (45616).

Rogers, Miss A. M., Hyattsville, Md.: Photograph of the "Bonhomme Richard" flag, and one of Mrs. Stafford (11324: loan).

Rogers, Walter, Farmington, Iowa: Sword captured from a Confederate officer at Fort Sumter, S. C. (44857).

Rolle, Hermann, Berlin, Germany: 1,500 land and fresh-water shells (types from the collections of the late Herr Möllendorff from the Philippine Islands (44623: purchase).

Roman, A., Upsala, Sweden: Swedish Hymenoptera (45683; 46023). Exchange.

Roon, G. Van, Rotterdam, Holland: Indo-Malayan beetles, Cetoniidæ and Lucanidæ (45222: exchange).

Roosevelt, Hon. Theodore, President of the United States: Piece of a log said to have formed part of the cabin built by General Grant on his farm near St. Louis in 1854 (45518). (See also under American Philosophical Society; Hadji Abdullah Ali Sudik and King Menelik.)

Rose, J. N., U. S. National Museum: 14 plants, principally cacti, from Mexico (44679); 27 plants from Mexico (44729); 89 living plants from Mexico (44802; 44817); 113 specimens of Cactaceæ, Crassulaceæ, etc., from Mexico (44853). Collected for the Museum.

Rose, J. N., and J. H. Painter, U. S. National Museum: 4,347 dried plants, 60 jars of alcoholic plants, 106 dried cactus, 70 shells, and a reptile (45406; collected for the Museum, in Mexico).

Rosenberg, W. F. H., London, England: 1,544 Hymenoptera and Hemiptera from various localities in Central and South America (45109); mammals (46126). Purchase.

Rosenstock, E., Gotha, Germany: 88 Brazilian ferns (45461: purchase).

Roseville Pottery Company, Zanesville, Ohio: Vase (Sang de boeuf) (45689).

Ross, F. H., Rutland, Vt.: Young mourning dove, *Zenaidura macroura* (44849).

Rostel, C. B., Central Point, Oreg.: Water-strider, *Gerris* sp. (45456).

Rounds, L. C., Westwater, Utah: Specimen of praying-mantis, *Stagmomantis carolina* (45007).

Rousseau, Talmage, Clear Water (Belleair), Fla.: Fungus from Florida (45312).

Royal Botanic Garden. (See under Sibpur, near Calcutta, India.)

Royal Botanical Gardens. (See under Kew, London, England.)

Royster, Alphonso, Suffolk, Va.: Carolina wren, *Thryothorus ludovicianus* (45381).

Rusby, H. H., New York Botanic Garden, New York City: Fragments of a plant from Bolivia (44930).

Rutter, Cloudesley. (See under Commerce and Labor, Department of, Bureau of Fisheries.)

Rybor, L. W., McCabe, Ariz.: Moth (46041).

Ryder, Emily B., Chicago, Ill.: Hindu Pujah set (45934: purchase); Parsi school girl's suit and skull cap (11094: loan).

St. Petersburg, Russia, Musée Zoologique de L'Académie Impériale des Sciences: Fishes (45879: exchange).

Sampson, F. A., Columbus, Mo.: About 150 Mississippian fossils from Fern Glen, Missouri (45750: exchange).

Sands, W. A., Auburndale, Fla.: Dragon fly (44804).

San José, Costa Rica, Instituto Fisico-Geografico Nacional: 939 plants from Costa Rica (45288: exchange); plants (45427: exchange); plants from Costa Rica (45622: exchange); 233 plants from Costa Rica (45662: exchange); plants from Costa Rica (45952: exchange); 6 lizards, *Cnemidophorus deppii*, from Costa Rica (46033).

San José, Costa Rico, Museo Nacional: 502 birds' skins from Costa Rica (44653); 3 species of crustaceans (45731); amphipods (45882).

Santiago de Las Vegas, Estacion Central Agronómica: Large collections of plants from Cuba (received through C. F. Baker) (45286; 45673; 45705; 45718; 46099). Exchange.

Sapp, W. J., Lordsburg, N. Mex.: Pseudomorphous mineral from near Gage, Luna County (45534).

Sarawak, Borneo, Sarawak Museum. John Hewitt, curator: 38 Hymenoptera (46076: exchange).

Savage, H. B., Belton, Tex.: Luna moth, *Actias luna* (45804).

Schaeffer, C., Brooklyn, N. Y.: 2 specimens of Decticinæ (45390).

Schaus, William, Twickenham, England: Collection of American moths, including several thousand specimens (44719; 44805; 44876; 45389); large collection of Lepidoptera and Coleoptera (46082).

Schmid, E. S., Washington, D. C.: "Homay" or "Chinese nightingale," *Trochalepteron canorum* (45438); Japanese titmouse, *Parus varius* (45572).

Schneider, William E., Washington, D. C.: Genie magazine camera, and a model of the same (45041).

Schock, P. J. (See under Seitenstetten, Lower Austria).

Schrottky, C., Paraguay, South America: Hymenoptera from South America (45782: exchange).

Schwarz, E. A., Department of Agriculture, Washington, D. C.: Nest of oriole, *Icterus hypomelas*, from Cayamas, Cuba (45117). (See also under Department of Agriculture).

Schwarz, E. A., and H. S. Barber, U. S. National Museum: Land shells and land mollusks from Guatemala (46002; 46084).

Schwarz, E. A., and D. Clemons, U. S. National Museum: 2,000 insects collected on Plummers Island, Maryland, in 1905 (45668).

Schwarz, E. A., and H. G. Hubbard: Salamander from Retreat, N. C. (45176).

Schweyer and Liess, King of Prussia, Pa.: 2 samples of American green marble from Pennsylvania (45367).

Science College, Imperial University, Tokyo, Japan: Japanese reptiles and batrachians (received through I. Ijima) (46093).

Scofield, C. S., Washington, D. C.: Living specimen of cactus from Dickinson, N. Dak. (received through Department of Agriculture) (44814).

Seabrook, Phoebe H., Washington, D. C.: African gray parrot (45104).

Seaman, W. H., Washington, D. C.: Marine shells and crustaceans from Frenchmans Bay, Massachusetts (45186).

Sedgwick, W. H., Christiana, Tenn.: 16 unios from Tennessee (45904).

Seegear, G. A., U. S. National Museum: 2 turtle eggs from Branchville, Md. (44984).

Seitenstetten, Lower Austria, Geographisches-Schul Museum: Collection of ethnological and industrial objects illustrating the primitive arts, chiefly of Austro-Hungary, obtained through the assistance of Baron P. Paumgartten, of the Austro-Hungarian Embassy, Washington, D. C. (45209; exchange).

Serjeantson, C. R., Miami, Fla.: 2 scorpions, *Centrurus gracilis* (44847).

Sevres China Company, East Liverpool, O.: Bird-jug or vase (45684).

Shaw, C. H., Collegeville, Pa.: 556 plants from the Selkirk Mountains, British Columbia (45836; exchange).

Sibpur, India, Royal Botanic Garden: 57 plants from Asia (45484; exchange).

Silvestri, Filippi, Portici, Italy: Parasitic Hymenoptera (44820; 45081; 45260; 45329).

Simmons, J. S., Taybelaran Bohol, Philippine Islands: Case-worm (45957).

Simons, P. O. (See under Leland Stanford Junior University).

Simpson, H. A., Wheeling, W. Va.: Luna moth, *Tropheea luna* (46130).

Sloan, Earle. (See under South Carolina Geological Survey).

Slocum, Joshua, Menemsha Creek, Mass.: Coral (45152).

Slosson, Mrs. A. T., New York City: 31 parasitic Hymenoptera (45424).

Smillie, T. W., U. S. National Museum: Nose-ring for a bull, from Maryland (45244).

Smith, F. W., Washington, D. C.: Model of the Parthenon, and model of lotus-pillar of ancient Egypt (11185; loan).

Smith, G. O. (See under Interior Department, U. S. Geological Survey.)

Smith, Henry Hudson, Philadelphia, Pa.: Fossil plant from near Gilbertson, Schuylkill County, Pa. (45275).

Smith, H. M., U. S. Bureau of Fisheries, Washington, D. C.: Bone needlecase, horn spoon, and a bone spoon from the Lapps of Finmarken, Norway (44780; exchange); flag fan from Khartum (44800; exchange); skull from a mound in Miami, Fla. (45124); satchel of native hemp, made by a Maori, near Wellington, New Zealand (45594); valve of shell, *Pteria macroptera lotorium* from Japan (45755); mollusks from Japan (45775); certification of a visit to the shrine of Ise, Japan, in May of 1903 (45860). (See also under Department of Commerce and Labor, Bureau of Fisheries.)

Smith, Jared S., Honolulu, Sandwich Islands: Plants from the Hawaiian Islands (44822; 44686).

Smith, John B., Rutger's College, New Brunswick, N. J.: Parasitic Hymenoptera (44782); 4 cotypes of mosquitoes (*Culex pallidohirta; C. siphonalis; C. saxatilis*, and *C. sylvicola*) (46045); parasitic Hymenoptera (45082).

Smith, John Donnell, Baltimore, Md.: Plants from Central America (45428; 45532); 3 sheets of foreign plants (45813).

Smith, Miss Nellie H., U. S. National Museum: Lefaucheux revolver (44641).

Smith, William Lord, Boston, Mass.: Natural history specimens from Korea (received through C. Hart Merriam) (45944).

Smith, W. S., Dalhousie, New Brunswick: Devonian fossils and a stone implement (45093).

SMITHSONIAN INSTITUTION: Bronze figure representing Buddha, presented by Mr. August Wall, of Benicia Barracks, Cal. (44642). Medal commemorating the laying of the corner stone of the new building for the National Library of Rio de Janeiro, Brazil (45213). Collection of plants from China, presented by Mr. Stephen P. Barchet, Shanghai, China (45512). Plants, chiefly from Salvador, presented by Capt. John Donnell Smith, Baltimore, Md. (45646). 14 bronze commemorative medals, awarded to the Smithsonian Institution by the Louisiana Purchase Exposition in recognition of the various special exhibits of the Institution and its bureaus (45678). Unique Tibetan manuscript, obtained by Lieutenant-Colonel Waddell at the instance of the government of India, and presented by Colonel Waddell (45806). Silver medal commemorating the two hundred and fiftieth anniversary of the settlement of the Jews in the United States, received through Mr. Max J. Kohler, honorary secretary of the executive committee of the celebration (45886). Bronze commemorative medal, awarded to the Institution and National Museum by the Lewis and Clark Centennial Exposition at Portland, Oreg. (45940). Copy of the Argonaut (45969). Copy of a medal struck by order of Congress to commemorate the two hundredth anniversary of the birth of Benjamin Franklin, received from the American Philosophical Society (46095).

Transferred from the Bureau of American Ethnology: Stone axe from Gasconade County, Mo., obtained by J. M. Wulfing, of St. Louis, Mo. (44789); stone implements from Frederick County, Md., and Lehigh Hills, Pennsylvania, collected by Ralston Goldsborough (44948); specimens of earthenware, stone implements, and shell objects collected in Mexico in 1895–1896 by W J McGee (44992); bone dice used in dice game in the ghost dance by the Arapaho Indians, obtained by James Mooney (44993); fragments of pottery from the Mandan country, obtained by E. R. Steinbrueck, Mandan, N. Dak.

SMITHSONIAN INSTITUTION—Continued. (45077); crania from a cave in Tarahumare, State of Chihuahua, Mexico, collected by James Mooney (45316); collection of skeletal remains, pottery vessels and fragments, implements of stone, bone, shell, etc., obtained during the season of 1905 by the excavation of burial places on the Pajarito plateau, New Mexico, by Edgar L. Hewett (45665); Indian skulls, fragmentary skull, and other bones, shell implements and objects, broken pottery and fossils collected in Florida by A. Hrdlička, of the National Museum (45819); medal issued by the Numismatic and Antiquarian Society of Montreal (45852); 2 ancient pueblo crania received from Edgar L. Hewett (45872); human skeleton obtained by Mr. Hewett from an ancient grave at Rito de los Frijoles, New Mexico (45936).

Transferred from the National Zoological Park: Black-tailed deer, *Odocoileus columbianus* (44624); Java sparrow, *Munia oryzivora*, wedge-tailed eagle, *Aquila audax* (44625); 3 blue foxes, *Vulpes lagopus* (44627); yellow baboon, *Papio babuin;* opossum, *Didelphys virginiana* (44628); 2 specimens of *Plegadis guarauna* (44749); Tovi parrakeet, *Brotogerys jugularis*, yellow-naped amazon, *Amazona auropalliata* and specimen of ibis, *Plegadis guarauna* (44750); cassowary, *Casuarius australis*, and 3 specimens of roseate spoonbill, *Ajaja ajaja* (44751); blue fox, *Vulpes lagopus*, white stork, *Ciconia alba* and specimen of roseate spoonbill, *Ajaja ajaja* (44752); blue quail, *Callipepla squamata*, green monkey, *Cercopithecus*, rock kangaroo, *Petrogale penicillata* (44753); rock kangaroo, *Petrogale penicillata*, golden eagle, *Aquila chrysatos* (44754); hedgehog, *Erinaceus europæus*, badger, *Taxidea americana* (44755); jaguar, *Felis onca*, rufous rat kangaroo, *Æpyrymnus rufescens* (44756); lynx, *Lynx rufus maculatus*, ocelot, *Felis pardalis*, and a cacomitli cat, *Felis cacomitli* (44757); black ape, *Cynopithecus niger* (44758); olive agouti, *Dasyprocta acouchy* (44759); coypu, *Myocastor coypus* (44760); coypu, *Myocaster coypus*, and blue fox, *Vulpes*

SMITHSONIAN INSTITUTION—Continued.

lagopus (44866); snowy owl, *Nyctea nyctea* (44867); 3 specimens of roseate spoonbill, *Ajaja ajaja* (44868); caracal, *Lynx caracal* (44869); deer, *Odocoileus* (44870); specimens of tiger, *Felis tigris*; rough fox, *Canis cancrivorus* (44871); king vulture, *Gypagus papa* (44914); mandrill, *Papio maimon* (44915); alligator, *Alligator mississippiensis* (44916); upland goose, *Chlæphaga magellanica* (44917); beaver, *Castor canadensis* (44918); Florida wildcat, *Lynx rufus floridanus*, American bison, *Bison americanus* (44919); rat kangaroo, *Aeprymnus rufescens*, manicou, *Didelphys* (44920); skin of emu, *Dromæus novæ-hollandiæ* (44921); spectacled owl, *Pulsatrix perspicillata* (44949); bonnet monkey, *Macacus sinicus* (44950); rhea, *Rhea americana* (44983); Canada porcupine, *Erethizon dorsatus* (45190); moufflon, *Ovis musimon*, hutia rat, *Capromys pilorides* (45191); rat kangaroo, *Aeprymnus rufescens* (45192); great horned owl, *Bubo virginianus*, glossy ibis, *Plegadis autumnalis*, and gang-gang cockatoo, *Callocephalon galeatum* (45193); trumpeter swan, *Olor buccinator*, Canada goose, *Branta canadensis*, and pintail, *Dafila acuta* (45194); aoudad, *Ovis tragelaphus*, and 2 hybrids from Cuban deer and Mexican deer (45195); pigtailed monkey, *Macacus nemistrinus*, and agouti, *Dasyprocta azaræ* (45196); Sambar deer, *Cervus aristotelis* (45197); 3 comb lizards, *Ctenosaura* sp. (45198); grass parrakeet, *Melopsittacus undulatus* (45199); American coot, *Fulica americana* (45242); harbor seal, *Phoca vitulina*, capybara, *Hydrochœrus capybara*, and rat kangaroo, *Aeprymnus rufescens* (45301); comb-lizard, *Ctenosaura* (45302); diamond rattlesnake, *Crotalus adamanteus* (45303); tree-duck, *Dendrocygna* (45304); agouti, *Dasyprocta azaræ*, and black ape, *Cynopithecus niger* (45305); agouti, *Dasyprocta acouchy* (45306); Java sparrow, *Munia oryzivora* (45307); European porcupine, *Hystrix cristata* (45323); rat kangaroo, *Aeprymnus rufescens* (45324); Louisiana heron, *Ardea tricolor ruficollis* (45325); green jay, *Xanthoura luxuosa* (45370);

SMITHSONIAN INSTITUTION—Continued.

hornbill, *Buceros*, and night heron, *Nycticorax nycticorax nævius* (45371); coypu, *Myocastor coypus* (45372); harbor seal, *Phoca vitulina*, and black-striped wallaby, *Macropus dorsalis* (45373); Rocky Mountain sheep, *Ovis canadensis* (45374); sloth bear, *Melursus ursinus* (45375); buffalo, *Bison americanus* (45376); fox, *Canis cancrivorus*, and mule deer, *Odocoileus hemionus* (45535); gelada baboon, *Theropithecus obscurus*, and a yellow baboon, *Papio babuin* (45536); tiger, *Felis tigris*, and Arabian camel, *Camelus dromedarius* (45537); langur monkey, *Presbytis entellus* (45538); black ape, *Cynopithecus niger*, and Cuban deer, *Odocoileus* (45539); Canada goose, *Branta canadensis*, and egret, *Ardea egretta* (45540); road runner, *Geococcyx californicus* (2 specimens) (45541); kiwi, *Apteryx mantelli* (?) (2 specimens); kea, *Nestor notabilis* (45542); snowy owl, *Nyctea nyctea* (45543); massasauga, *Sistrurus catenatus* (45544); cross fox, *Vulpes pennsylvanicus* (45647); dasyure, *Dasyurus*, and Tasmanian devil, *Sarcophilus ursinus* (45648); bay lynx, *Lynx rufus* (45649); harbor seal, *Phoca vitulina* (45650); dingo, *Canis dingo* (2 specimens) (45651); white ibis, *Guara alba*, peafowl, *Pava cristatus* (45652); roseate spoonbill, *Ajaja ajaja* (45653); langur monkey, *Presbytis entellus* (45654); tuatera lizard, *Sphenodon punctatus* (45655); pine snake, *Pituophis melanoleucus*, horned rattlesnake, *Crotalus cerastes* (45656); bull snake, *Pityophis sayi* (45657); roe deer, *Capreolus caprea*, langur monkey, *Presbytis entellus* (45658); little blue heron, *Ardea cærulea*, lesser snow goose, *Chen hyperborea* (45659); 2 specimens of road runner, *Geococcyx californianus* (45660); specimens of comb lizard, *Ctenosaura* (45741); roseate spoonbill, *Ajaja ajaja* (45742); coot, *Fulica americana*, gannet, *Sula bassana* (45743); common macaque, *Macacus cynomolgus*, langur monkey, *Presbytis entellus* (45744); grass parrakeet, *Melopsittacus undulatus* (45815); snake bird, *Anhinga anhinga* (45816); California sea-lion, *Zalophus californianus* (45817); American beaver,

SMITHSONIAN INSTITUTION—Continued.
Castor canadensis, grizzly bear, *Ursus horribilis* (45818); banded rattlesnake, *Crotalus horridus* (2 specimens) (45972); cockateel, *Calopsittacus novæ-hollandiæ* (45973); 6 arctic foxes, *Vulpes lagopus* (45974); 2 gray wolves, *Canis occidentalis* (45975); red squirrel, *Sciurus hudsonicus* (?), Barbary sheep, *Ovis tragelaphus* (45976); sparrow hawk, *Falco sparverius* (45977); glossy ibis, *Plegadis autumnalis*, loon, *Urinatorimber* (45978); macaque monkey, *Macaca cynomolga*, yellow baboon, *Papio babuin* (45979); red howler, *Alouata seniculus* (45980); crested screamer, *Chauna chavaria* (45981); hutia rat, *Capromys pilorides*, fisher, *Mustela pennanti* (45982); burrhel sheep, *Ovis nahoor* (45983); spider monkey, *Ateles*, red howler monkey, *Alouata seniculus* (45984); Grevy's zebra, *Equus grevyi* (45986); Arabian camel, *Camelus dromedarius* (45992); doguera baboon, *Papio doguera* (45993); comb-lizard, *Ctenosaura* sp. (45994).

SOUTH CAROLINA GEOLOGICAL SURVEY, Charleston, S. C.: Marl containing Tertiary fossils (44722); cretaceous marl from South Carolina (received through Earle Sloan) (45519).

SOUTH DAKOTA STATE COMMISSION AT THE LOUISIANA PURCHASE EXPOSITION: Ores and nonmetallic minerals from South Dakota (44668).

SPALDING, V. M., Tucson, Ariz.: 4 specimens of *Krameria* from Arizona (46053).

SPOFFORD, G. L., Hospital Corps, U. S. Army, Manila, Philippine Islands: Assassin-bug, *Centrocnemes* sp. (44987).

SPRINGER, FRANK, Burlington, Iowa: Crinoids, *Talorocrinus patei* (45810).

SPURLING, EVERETT S., Biddeford Pool, Me.: "Siil smelt," *Argentina silus* (46015).

STALFORD, FLORENCE, Sayre, Pa.: Badge of the Baltimore Convention (1905) of the Young Peoples' Society of Christian Endeavor (44677).

STANDARD UNDERGROUND CABLE COMPANY, Pittsburg, Pa.: 4 insulated electrical conductors (44816).

STANTON, T. W., U. S. Geological Survey, Washington, D. C.: 12 specimens of cacti from New Mexico and Colorado (44630; 44643; 44685). Collected for the Museum.

STARR, Mrs. C. H., Globe, Ariz.: Beetle, *Dendrobias mandibularis* (45095).

STEARNS, ELMER, Modesto, Cal.: 2 living specimens of cacti from Price, Utah (44898); 4 living specimens of cacti from Mexico (45774).

STEBBINS, Mrs. F. A., Chicago, Ill.: 2 copper coins (46096).

STEINBRUECK, E. R. (See under Smithsonian Institution, Bureau of American Ethnology.)

STEJNEGER, LEONHARD, U. S. National Museum: Mammals, mollusks, crustaceans, worms, and plants from Europe (44843: collected for the Museum); horned toad (45711: purchase). (See under O. J. Lie-Petterson and P. Stainer Stejneger.)

STEJNEGER, P. STAINER, Bergen, Norway: 3 pieces of Norwegian money (received through Leonhard Stejneger) (44851).

STEPHENSON, L. W. (See under Interior Department, U. S. Geological Survey.)

STONE, C. H., Cleveland, Ohio: Larvæ and puparia of a small fly, *Phora* sp. (45219).

STONE, J. F., Columbus, Ohio: An unique and valuable specimen of *Rhabdocarpus* in the fossil seed of a carboniferous plant from a piece of coal mined in Pike County, Ind. (44877.)

STOSE, G. W., Washington, D. C.: Paleozoic fossils (45327: exchange).

STRICKER, W. O., U. S. National Museum: Old-style weaving apparatus (46114), consisting of shuttle and quill from an old-fashioned hand loom.

STUHR, F. A., Portland, Oreg.: Ringed pheasant, *Phasianus torquatus* (45413); 2 chipmunks from Los Angeles, Cal.; skull of lynx from St. Helen, Oreg.; skull of squirrel from Sandy River, Oregon, and skull of porcupine from Cascade Mountains, Oregon (45470); skin and skull of flying squirrel and skull of a mink (45769).

SUDIK, HADJI ABDULLAH ALI, Adis Ababa, Abyssinia: Mounted specimen of leopard (received through Hon. Theodore Roosevelt) (45216).

SUKSDORF, N. N. (See under Department of Agriculture.)

SUMNER, Mrs. S. S., San Francisco, Cal.: 9 plants from Hawaiian Islands (received through Brig. Gen. T. E. Wilcox, U. S. Army, retired) (45358).

SUTER, HENRY, Auckland, New Zealand: 4 mollusks, *Voluta pacifica* and *Diplodon waikanense*, from New Zealand (45746).

SWEENY, T. W., U. S. National Museum: Jenks carbine (11121: loan).

SWETMAN, J. W., Biloxi, Miss.: Shell of *Onadonta trapezoides* (45707).

SWETT, L. W., Malden, Mass.: 7 geometrid moths from southern Arizona (44706); 3 Lepidoptera (44971).

SYDNEY, NEW SOUTH WALES, UNIVERSITY OF SYDNEY: Rocks from New South Wales, sent by request of Whitman Cross, of the U. S. Geological Survey (45253).

TAFT, J. S., & COMPANY, Keene, N. H.: 4 pieces of Hampshire pottery (45702).

TASSIN, WIRT, U. S. National Museum: Dulling snoods from Virginia, handles, horsehair swords, and ticklers, made by Mr. Tassin (45091).

TERRY, W. A., Bristol, Conn.: 2 microscopic slides of diatoms (44766).

THAYER, J. E., Lancaster, Mass.: 86 birds' skins from Panama, Gorgora Islands, and Pearl Islands (45489); nest and 4 eggs of McLeod's sparrow, *Aimophila mcleodii* (46118) (received through Outram Bangs). Exchange.

THAYER, P. E., Thomas, W. Va.: 3 cecropia moths, *Platysamia cecropia*, and an arctiid moth, *Estigmene acræa* (44702).

THOMAS, OLDFIELD, British Museum (Natural History), London, England: 4 specimens of red-backed mouse, *Evotomys*, from Japan (45133; 15 mice, *Microtus* and *Evotomys*, from the Tian Shan Mountains and the Orkney Islands (45463); bat, *Nyctinomus taeniotis*, from Africa (45900: exchange).

THOMPSON, A. C., Quincy, Mass.: Photograph of a bird stone (45834).

THOMPSON POTTERY COMPANY, C. C., East Liverpool, Ohio: Yellow pitcher (45685).

THUROW, F. W., Hockley, Tex.: 7 plants from Texas (45236).

TITCOMB, JOHN W. (See under Department of Commerce and Labor, Bureau of Fisheries.)

TODD, AURELIUS, Caibarien, Cuba: Shells from the stomach of a flamingo (45318).

TRACY, S. M., Biloxi, Miss.: 11 plants from the Southern States (44793); 2 plants from Texas (45949). (See also under Department of Agriculture.)

TRAPHAGEN, Mrs. F. W., Butte, Mont.: Portrait of George Washington on Wedgwood ware (10734: loan).

TRASK, Mrs. BLANCHE, Avalon, Cal.: 15 specimens of mollusk, *Polinices recluziana alta*, from California (45766).

TRISTÁN, J. FID, San José, Costa Rica: Crabs from Costa Rica (44652).

TRUE, F. W., U. S. National Museum: Skull of a striped porpoise, *Lagenorynchus acutus*, from Truro, Mass. (45105: collected for the Museum).

TUCKER, E. S., Lawrence, Kans.: 100 lepidoptera (45402); 45 insects (46116). Exchange.

TULANE UNIVERSITY OF LOUISIANA, Newcomb College Art Department, New Orleans, La.: Piece of Newcomb pottery (received through E. W. Woodward, Director of Art Department (45745).

TURNER, ARTHUR, Norfolk, Va.: Kongo eel, *Siren lacertina*, from Lake Smith (45414).

TURTON, Lieut. Col. W. H., Harley House, Clifton Down, Bristol, England: About 500 species of marine shells from Port Alfred, South Africa (45369).

TYLOR, J. E., Oxford, Md.: Human bones collected from an Indian burial place in Florida (45907).

TYRRELL, J. B., Lovett Gulch, Klondike, Alaska: Skull of type of *Simbos tyrrelli*, collected by Mr. W. H. Osgood, of the Biological Survey, Department of Agriculture (46138).

Ulrich, E. O., U. S. Geological Survey, Washington, D. C.: Large collection of land and fresh-water mollusks (45508).

Underwood, Cecil F., San José, Costa Rica: Humming bird, *Amazilia cinnamomea*, from Costa Rica (44656).

Underwood, L. M., Bedford Park, N. Mex.: Plant from Florida (44762).

United States Cartridge Company, Lowell, Mass.: Collection of small arms, consisting of 569 specimens (11423); U. S. Magazine rifle, model of 1903, with improvements of 1905 (11524). Loan.

United States National Museum: The following models were made in the Anthropological Laboratory: Plaster cast of bone awl, found by D. W. Bushnell, of St. Louis, Mo., in a mound at Montgomery, Pike County, Ill. (44872); mold and plaster cast of bone awl, the original of which was owned by Mr. Bushnell (44925); casts of duck-head amulet found by William L. Bryant, Buffalo, N. Y., in a mound at Cedar Keys, Fla. (45941); mold and 6 casts of Mississippi tablet (44968); mold and 6 casts of "Rattlesnake" disk in the University of Alabama (45090); model of wooden whistle (45491); plaster casts of Naples mound relics (45598); model of the U. S. S. *Constitution* (45661); casts of 2 stone "palmas" (45714); 6 casts of small engraved tablet of catlinite, the original of which was found by Henry Montgomery in a mound in North Dakota (45748); casts of a birdstone found near Edmore, Montcalm County, Mich. (45942); wooden compass (46021); plaster busts of North American Indians (46061); plaster casts of prehistoric objects of stone, bone, and pottery (46122); lay figures for a group of Wallachian peasants (46137).

Upsala, Sweden, University of Upsala: 57 fossils (45578: exchange).

Valparaiso, Chile, Museum of Natural History: Specimens of 4 species of crustaceans (45557); 2 leeches (46107).

Valway, W. H., Cleveland, Ohio: A pair of plumed quails, *Oreortyx pictus plumiferus* (44787).

Van Briggle Pottery Company, Colorado Springs, Colo.: 12 pieces of pottery (45703).

Vaquez, Mons. J., Pantin, Seine, France: Tertiary invertebrate and vertebrate fossils (45759: exchange).

Vaughan, Francis E., West Haven, Conn.: 79 stone and quartz arrow points (44801); shell arrowheads from Connecticut (44966).

Vaughan T. Wayland, U. S. Geological Survey, Washington, D. C.: 2 corals from Osprey, Fla. (45965). (See also under Interior Department, U. S. Geological Survey.)

Velie, J. W., St. Joseph, Mich.: 16 species of marine shells from Florida (44791).

Venable Brothers, Stone Mountain, Ga.: A six-inch dressed cube of granite (44988).

Verrill, A. Hyatt, Roseau, Dominica, West Indies: About 45 insects (44714); insects (44828); crustaceans, with sketches (45437); crustaceans from Dominica (45961).

Veth, C. G., Padang, Sumatra: 134 mammals from Japan (44865: purchase).

Volkart, Henry, St. Gallen, Switzerland: Danish weaving apparatus ("Brikning"), containing a piece of unfinished handiwork showing the process (45962: exchange); quadrangle boards, with string in process of weaving, photograph and 2 drawings (46120).

Waddell, Lieutenant-Colonel. (See under Smithsonian Institution.)

Wailes, L. A., Port Limon, Costa Rica: Marl containing Tertiary fossils (44776); fossil and mound shells, and skull of an agouti (45382).

Waldeyer, W., Anatomical Institute, Berlin, Germany: 2 typical specimens of German brains (44745).

Walker, A. H., New York City: Collection of Ippers' photomechanical prints and relief photograph (45970).

Walker, Bryant, Detroit, Mich.: Specimen of a variety of water snail, *Planorbis campanulatus* (45321).

WALKER, GEORGE H., Chicago, Ill.: 17 plants from Illinois (45063).

WALKER, JOHN B., New York City: Lilienthal flying machine (45630).

WALKER, Mrs. SOPHIE L., Alexandria, Va.: Experimental currency of Andrew Johnson (ten-dollar bill) (45883).

WALL, AUGUST. (See under Smithsonian Institution).

WALLINGSFORD, W. W., U. S. National Museum: 1 cent, United States currency, issued in 1835 (45452).

WALSINGHAM, Lord, Werton Hall, Thetford, England: 14 Tortricid-moths, 2 tineid-moths, and a limacodid moth (received through H. G. Dyar) (44738).

WALTER REED MEMORIAL ASSOCIATION, Baltimore, Md.: Marble bust of Maj. Walter Reed (received through Daniel C. Gilman, chairman of the committee) (11391: loan).

WAR DEPARTMENT, Hon. William H. Taft, Secretary: Punch bowl made from a tridacna shell and silver mounted, the work of Tomas Zamara, and a silver coffee set, also made by Señor Zamara, containing 31 pieces (45435).

Bureau of Ordnance, Brig. Gen. William Crozier, Chief: Springfield smooth-bore (flint-lock) musket of the "Charleville pattern," together with a collection of small arms, and swords, entrenchment tools from the Springfield Armory (44989, 44990); 2 United States magazine rifles, model of 1903, with improvements of 1905 (45803).

Signal, Corps U. S. Army, Gen. A. W. Greely, Chief Signal Officer. Pearl drag constructed and used by the Sulu Moros (45172); 81 plants from Alaska sent to the Department of Agriculture by Corporal Charles W. H. Heideman, Fort Gibbon, Alaska, and transferred to the Museum (45234).

WARD, LESTER F., U. S. Geological Survey, Washington, D. C.: 10 specimens of *Orobranche* sp., and *Bidens trichosperma* from the District of Columbia (44922) (See also under Interior Department, U. S. Geological Survey).

WARWICK CHINA COMPANY, Wheeling, W. Va.: Vase (45692).

WASSER, HENRY, U. S. National Museum: Ground mole from Landover, Md. (45489).

WATERS, C. E., Washington, D. C.: 7 plants from the United States (44672: exchange); specimen of *Lycopodium selago* from New York (45506).

WATKINS, A. OCTAVIUS, Royal Mint, Perth, West Australia: Stibio-tantalite from Greenbushes, West Australia, weighing 31 grams (45851: exchange).

WATKINS, Mrs. M. S., Washington, D. C.: One of the first envelopes received from San Francisco, Cal., after the earthquake of April, 1906 (46037).

WAYNE, ARTHUR T., Mount Pleasant, S. C.: Arizona crested flycatcher, *Myiarchus mexicanus magister* (45208).

WEBB, J. G., Osprey, Fla.: 4 living specimens of cacti from Florida (46005); butterflies, *Pontia monuste* and *Pontia m. phileta* (46038).

WEBER, S. E., Lancaster, Pa.: 10 pupæ and adults of mosquitoes, *Culex pipiens* (45332).

WEBSTER, WILLIAM H., Waiuku, Auckland, New Zealand: 2 specimens of mollusk, *Australium heliotropium* (45107: exchange).

WEED, W. H., U. S. Geological Survey, Washington, D. C.: 3 specimens of copper ore from Beaverhead County, Mont. (45808). (See also under Interior Department, U. S. Geological Survey.)

WEEDEN, W. C., U. S. National Museum: Wesson and Leavett revolver (45971).

WEEKS, STEPHEN B., San Carlos, Ariz.: Fragments of burial urns and of incinerated human bones, from an Indian burial place at San Carlos (44688).

WEIL, NORTON, Calhoun, Ky.: Oak gall from a post-oak (44893).

WEINBERG, FRANK, Woodside, N. Y.: 4 living plants from Africa (45128); living plants (45380; 45919).

WELSH-LOFFTUS URANIUM AND RARE METALS COMPANY, Richardson, Utah: Specimen of vanadium ore, not yet definitely named (44646).

WELZLER, FRED., San Francisco, Cal.: Tubular pipe of catlinite (?) from near Concho, Apache County, Ariz. (45078).

WERCKLE, C., Cartago, Costa Rica: 14 plants from Costa Rica (44651).

WESTINGHOUSE COMPANY, GEORGE, Pittsburg, Pa.: Tantalum lamp, Nernst lamp, 3 minerals on glass, 7 minerals, also other articles from the Lewis and Clark Exposition, Portland, Oreg. (45793).

WHEATLEY POTTERY COMPANY, Cincinnati, Ohio: 2 mottled vases (45695).

WHITE, C. R., Naples, Me.: Caddis-fly, larva, and case (44742).

WHITE, DAVID. (See under Ralph Cairns, W. P. Ball, and Baird Halbertstadt.)

WHITE, I. C., Morgantown, W. Va.: Brazilian rocks (45732); fossils from Brazil (45756).

WHITE, THOMAS, Winchendon Springs, Mass.: Impression of fossil shell (45715).

WHITING, E. N., Coulinga, Cal.: Moth from California (44743).

WIDGEON, J., Maryland Academy of Sciences, Baltimore, Md.: Salina fossils from Maryland (45178).

WIGHT, F. W. (See under Department of Agriculture.)

WILCOX, GLENN A., Tucson, Ariz.: Plants from Arizona (44707; 44741; 44808).

WILCOX, Brig. Gen. T. E., U. S. Army (retired), Washington, D. C.: Lumbar vertebra of a mastodon from Hangmans Creek, Idaho (45108); fragments of teeth of a fossil horse from Loup Fork Miocene concretions, Fort Niobrara, Nebr. (45597); specimen of pine from the Philippine Islands, collected by R. G. Egbert (45827). See also under Mrs. S. S. Sumner.

WILEY, GEORGE, Winter, Wis.: Moth of *Telea polyphemus* (44701).

WILLARD, T. E., U. S. Geological Survey: 15 specimens of Ordovician limestone with fossils from the western section of Maryland (45355).

WILLCOX, JOSEPH, Philadelphia, Pa.: Mollusk, *Cardium virginianum*, from near Newport News, Va. (45320).

WILLETS MANUFACTURING COMPANY, Trenton, N. J.: Cup, saucer, and plates (45697).

WILLIAMS, G. (See under Department of Agriculture.)

WILLIAMSON, E. B., Bluffton, Ind.: Crayfishes (45189); 3 specimens of living crayfishes, *Cambarus argillicola* (45881).

WILLIS, BAILEY, Carnegie Institution, Washington, D. C.: 6 photographs of Cambrian glacial boulders collected in China during the expedition of the Carnegie Institution (45076). (See also under Interior Department, U. S. Geological Survey.

WILLOUGHBY, C. C. (See under Peabody Museum of Archeology and Ethnology.)

WILMER, Lieut. Col. L. WORTHINGTON, Lothian House, Ryde, Isle of Wight, England: Cretaceous fossils from the Isle of Wight and about 20 fossil and recent mollusks, insects, and a piece of moss (45261; 45734).

WILSON, CHARLES B., State Normal School, Westfield, Mass.: Parasitic copepods, (Caliginæ) (45188); parasitic copepods (45500). (See a so under Rev. Canon A. M. Norman.)

WIRT ELECTRIC COMPANY, INCORPORATED, Philadelphia, Pa.: Wirt voltmeter No. 101, and Wirt voltmeter No. 239 (44824).

WOOD, N. R., U. S. National Museum: Young peacock, *Paro cristatus* (44647); 2 baffle-heads, *Charitonetta albeola* (45087).

WOODROFFE, THOMAS. (See under North Carolina Granite Corporation.)

WOODWARD, E. W. (See under Tulane University of Louisiana, Newcomb College Art Department.)

WOODWORTH, C. C., Stamper, Miss.: Clearwing-moth, *Hemaris axillaris* (45047).

WOOTON, E. O., Mesilla Park, N. Mex.: 5 specimens of plant, *Sedum wootoni*, from New Mexico (44640).

WORK, J. L., Lancaster, Ohio: Photograph of the skull of an elk with "triplet antlers" (45832).

Worthen, G. C. (See under Department of Agriculture.)

Wulfing, J. M., St. Louis, Mo.: Bone implement (46031). (See also under Smithsonian Institution, Bureau of American Ethnology.)

Wyoming Commission at the Lewis and Clark Exposition, Portland, Oreg.: Copper ore from Encampment, Wyo., mined by the Penn-Wyoming Company (45467).

Wyoming State Commission at the Louisiana Purchase Exposition: Ores and nonmetallic minerals from Wyoming (44669).

Yale University Museum, New Haven, Conn.: Crinoid slab found in the Helderbergian of Herkimer County, N. Y.; and plaster casts of Leidy's types of mammals; Cretaceous fossils; 6 fossil invertebrates and 3 fossil plants (44962; 45056: exchange; 45758); shells from Bermuda (45874).

Young, R. T., Boulder, Colo.: Lizard, *Sceloporus consobrinus* (45116); 17 mammals from Colorado (45638).

Zalesky, Dr. William, U. S. Navy, Washington, D. C.: Larva of *Mantis* from Santo Domingo (45055).

Zeigler, C. W., & Company, Gettysburg, Pa.: 1,000 pounds of diabase from Gettysburg (45614: purchase).

Zeledon, Señora Ampora de: 2 hummingbirds, 5 shells and crustaceans from Costa Rica (44658).

Zeledon, José C., San José, Costa Rica: 14 birds' skins and mammals (44657).

Zeus, Carl C., Fredalba Park, Cal.: 4 specimens of insect, *Notonecta insulata* (45008).

Ziegler, Mrs. E. M., New York City: 3 mounted Polar bears (45157).

Zoological Museum. (See under Christiania, Norway.)

LIST OF THE PUBLICATIONS OF THE U. S. NATIONAL MUSEUM ISSUED DURING THE FISCAL YEAR 1905-6, INCLUDING PAPERS PUBLISHED ELSEWHERE WHICH RELATE TO THE COLLECTIONS.

PUBLICATIONS OF THE MUSEUM.

ANNUAL REPORT.

Annual Report | of the | Board of Regents | of the | Smithsonian Institution, | showing | the operations, expenditures, and condition of the Institution | for the | year ending June 30, 1904. | — | Report | of the | U. S. National Museum. | [Seal] | Washington | Government Printing Office | 1906 |

8vo., pp. i-xvi, 1-780, pls. 66, figs. 141, maps 1.

PROCEEDINGS.

Smithsonian Institution. | United States National Museum | — | Proceedings | of the | United States National Museum | — | Volume XXVIII | — | Published under the direction of the Smithsonian Institution | [Seal] | Washington | Government Printing Office | 1905 |

8vo., pp. i-xix, 1-1027, pls. 1-35, figs. 380.

Smithsonian Institution | United States National Museum | — | Proceedings | of the | United States National Museum | — | Volume XXIX | — | [Seal] | Washington | Government Printing Office | 1906. |

8vo., pp. i-xvi, 1-840, pls. 1-41, figs. 143.

Smithsonian Institution | United States National Museum | — | Proceedings | of the | United States National Museum | — | Volume XXX | — | [Seal] | Washington | Government Printing Office | 1906 |

8vo., pp. i-xvi, 1-883, pls. 1-78, figs. 120.

BULLETINS.

Catalogue | of the | type and figured specimens | of | fossils, minerals, rocks | and ores | in the | Department of Geology, United States | National Museum | Prepared under the direction of | George P. Merrill | head curator of geology | Part I—Fossil invertebrates.[a] | [Seal] | Washington | Government Printing Office | 1905. |

Bulletin 53 (Part I), pp. 1-704.

A monograph | on the | Isopods of North America | By | Harriet Richardson | Collaborator, Division of Marine Invertebrates | [Seal] | Washington | Government Printing Office | 1905. |

Bulletin 54, pp. i-liii, 1-727, figs. 740.

A contribution to the oceanography | of the Pacific. | Compiled from data collected by the United | States steamer Nero while engaged in | the survey of a route for a | trans-Pacific cable | — | By | James M. Flint | Medical Director, U. S. Navy; Curator, Division of Medicine, U. S. National Museum | [Seal] | Washington | Government Printing Office | 1905. |

Bulletin 55, pp. i-v, 1-62, pls. i-xiv.

[a] Part I was prepared by Charles Schuchert, assisted by W. H. Dall, T. W. Stanton, and R. S. Bassler.

PAPERS PUBLISHED IN SEPARATE FORM.

FROM THE REPORT FOR 1904.

Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1904. By Richard Rathbun. pp. 1–186.

Report on the department of anthropology for the year 1903–4. By Otis Tufton Mason. pp. 61–75.

Report on the department of biology for the year 1903–4. By Frederick W. True. pp. 77–95.

Report on the department of geology for the year 1903–4. By George P. Merrill. pp. 97–104.

Contributions to the history of American geology. By George P. Merrill. pp. 189–733, pls. 1–37, figs. 1–141.

The S. S. Howland collection of Buddhist religious art in the National Museum. By Immanuel M. Casanowicz. pp. 735–744, pls. 1–17.

Flint implements of the Fayum, Egypt. By Heywood Walter Seton-Karr. pp. 745–751, pls. 1–12.

FROM VOLUME 28 OF THE PROCEEDINGS.

No. 1407. List of fishes collected by Dr. Bashford Dean on the Island of Negros, Philippines. By David Starr Jordan and Alvin Seale. pp. 769–803, figs. 1–20.

No. 1408. The life history of the seahorses (Hippocampids). By Theodore Gill. pp. 805–814, figs. 1–12.

No. 1409. Notes on an adult goblin shark (Mitsukurina owstoni) of Japan. By Barton A. Bean. pp. 815–818, figs. 1–2.

No. 1410. Notes on cestode cysts, Tænia chamissonii, new species, from a porpoise. By Edwin Linton. pp. 819–822, pl. xxxv.

No. 1411. Birds collected by Dr. W. L. Abbott in the Kilimanjaro region, East Africa. By Harry C. Oberholser. pp. 823–936.

No. 1412. A descriptive list of a collection of early stages of Japanese Lepidoptera. By Harrison G. Dyar. pp. 937–956, figs. 1–23.

No. 1413. Additions to the recorded hymenopterous fauna of the Philippine Islands, with descriptions of new species. By William H. Ashmead. pp. 957–971.

No. 1414. Notes on the fishes of Puget Sound. By Charles H. Gilbert and Joseph C. Thompson. pp. 973–987, figs. 1–3.

FROM VOLUME 29 OF THE PROCEEDINGS.

No. 1415. Cambrian faunas of China. By Charles D. Walcott. pp. 1–106.

No. 1416. New Hymenoptera from the Philippines. By William H. Ashmead. pp. 107–119.

No. 1417. The classification of the American Siphonaptera. By Carl F. Baker. pp. 121–170.

No. 1418. A new subspecies of ground dove from Mona Island, Porto Rico. By J. H. Riley. pp. 171, 172.

No. 1419. New genera of South American moths. By Harrison G. Dyar. pp. 173–178.

No. 1420. Descriptions of new South American moths. By William Schaus. pp. 179–345.

No. 1421. Some new South American moths. By William Warren. pp. 347–352.

No. 1422. A list of fishes collected in Tahiti by Mr. Henry P. Bowie. By David Starr Jordan and John Otterbein Snyder. pp. 353–357, figs. 1–3.

No. 1423. A list of American cochlidian moths, with descriptions of new genera and species. By Harrison G. Dyar. pp. 359–396.

No. 1424. New genera and species of Hymenoptera from the Philippines. By William H. Ashmead. pp. 397–413.

No. 1425. Thomas Martyn and the Universal Conchologist. By William Healey Dall. pp. 415–432.

No. 1426. The mounted skeleton of Triceratops prorsus. By Charles W. Gilmore. pp. 433–435, pls. 1–2.

No. 1427. Five new species of Mexican plants. By J. N. Rose. pp. 437–439.

No. 1428. Two new umbelliferous plants from the coastal plain of Georgia. By J. N. Rose. pp. 441, 442, pl. III.

No. 1429. Descriptions of three Mexican violets. By J. N. Rose and H. D. House. pp. 443, 444, pl. IV.

No. 1430. Description of a new species of Livoneca from the coast of Panama. By Harriet Richardson. pp. 445, 446, figs. 1–2.

No. 1431. The breeding habits and the segmentation of the egg of the pipefish, Siphostoma floridæ. By Eugene Willis Gudger. pp. 447–500, pls. V–XI, figs. 1, 2.

No. 1432. Notes on exotic forficulids or earwigs, with descriptions of new species. By James A. G. Rehn. pp. 501–515, figs. 1–9.

No. 1433. List of fishes collected in 1882–83 by Pierre Louis Jouy at Shanghai and Hongkong, China. By David Starr Jordan and Alvin Seale. pp. 517–529, figs. 1–6.

No. 1434. On the syntomid moths of southern Venezuela collected in 1898–1900. By Edward A. Klages. pp. 531–552.

No. 1435. A fossil raccoon from a California Pleistocene cave deposit. By James Williams Gidley. pp. 553, 554, pl. XII.

No. 1436. The monkeys of the Macaca nemestrina group. By Gerrit S. Miller, jr. pp. 555–563, pls. XIII–XX.

No. 1437. A new lizard of the genus Phrynosoma, from Mexico. By Leonhard Stejneger. pp. 565–567.

No. 1438. A study of the wings of the Tenthredinoidea, a superfamily of Hymenoptera. By Alexander Dyer MacGillivray. pp. 569–654, pls. XXI–XLIV, figs. 1–20.

No. 1439. A new blattoid from the Cretaceous formation of North America. By Anton Handlirsch. pp. 655, 656, fig. 1.

No. 1440. On some bats of the genus Rhinolophus, collected by Dr. W. L. Abbott in the islands of Nias and Engano. By Knud Andersen. pp. 657–659.

No. 1441. Revision of American Paleozoic insects. By Anton Handlirsch. pp. 661–820, figs. 1–109.

FROM VOLUME 30 OF THE PROCEEDINGS.

No. 1442. A study of the James types of Ordovician and Silurian Bryozoa. By Ray S. Bassler. pp. 1–66, pls. I–VII.

No. 1443. The life history of the cave salamander, Spelerpes maculicaudus (Cope). By Arthur M. Banta and Waldo L. McAtee. pp. 67–83, pls. VIII–X, figs. 1–3.

No. 1444. Descriptions of new South American moths. By William Schaus. pp. 85–141.

No. 1445. Descriptions of six new species of fishes from Japan. By David Starr Jordan and Alvin Seale. pp. 143–148, figs, 1–6.

No. 1446. New American Paleozoic Ostracoda. Notes and descriptions of Upper Carboniferous genera and species. By Edward O. Ulrich and Ray S. Bassler. pp. 149–164, pl. XI.

No. 1447. A new ruminant from the Pleistocene of New Mexico. By James Williams Gidley. pp. 165–167, figs. 1–3.

No. 1448. Descriptions of new Hymenoptera from Japan. By William H. Ashmead. pp. 169–201, pls. XII–XV.

No. 1449. The osteology of Sinopa, a creodont mammal of the Middle Eocene. By William Diller Matthew. pp. 203–233, pl. XVI, figs. 1–20.

No. 1450. The Locustidæ and Gryllidæ (katydids and crickets), collected by W. T. Foster in Paraguay. By Andrew Nelson Caudell. pp. 235–244.

No. 1451. Brains and brain preservatives. By Aleš Hrdlička. pp. 245–320b, figs. 1–27.

No. 1452. Notes on Japanese, Indopacific, and American Pyramidellidæ. By William Healey Dall and Paul Bartsch. pp. 321–369, pls. XVII–XXVI.

No. 1453. Notes on South American grasshoppers of the subfamily Acridinæ (Acrididæ), with descriptions of new genera and species. By James A. G. Rehn. pp. 371–391.

No. 1454. Descriptions of two new naiads. By Paul Bartsch. pp. 393–395, pls. XXVII–XXIX.

No. 1455. A synopsis of the sturgeons (Acipenseridæ) of Japan. By David Starr Jordan and John Otterbein Snyder. pp. 397, 398.

No. 1456. Descriptions of new genera and species of South American geometrid moths. By William Warren. pp. 399–557.

No. 1457. A new salamander from North Carolina. By Leonhard Stejneger. pp. 559–562, figs. 1–6.

No. 1458. Cambrian faunas of China. By Charles D. Walcott. pp. 563–595.

No. 1459. Descriptions of three new species of katydids and a new genus of crickets from Costa Rica. By James A. G. Rehn. pp. 597–605, figs. 1–8.

No. 1460. Notes on some recent additions to the exhibition series of vertebrate fossils. By Chas. W. Gilmore. pp. 607–611, pls. XXX–XXXV.

No. 1461. Synoptic list of Paraguayan Acrididæ, or locusts, with descriptions of new forms. By Lawrence Bruner. pp. 613–694, pls. XXXVI–XXXVIII.

No. 1462. List of fishes collected on Tanega and Yaku, offshore islands of southern Japan, by Robert Van Vleck Anderson, with descriptions of seven new species. By David Starr Jordan and Edwin Chapin Starks. pp. 695–706, figs. 1–13.

No. 1463. A review of the American moths of the genus Cosmopteryx Hübner. By August Busck. pp. 707–713.

No. 1464. A review of the sand lances or Ammodytidæ of the waters of Japan. By David Starr Jordan. pp. 715–719, figs. 1, 2.

No. 1465. Tineid moths from southern Texas, with descriptions of new species. By August Busck. pp. 721–736, figs. 1–10.

No. 1466. Notes on the Malayan pigs. By Gerrit S. Miller, jr., pp. 737–758, pls. XXXIX–LXIV, fig. 1.

No. 1467. A new American pentremite. By Charles Schuchert. pp. 759, 760, figs. 1–3.

No. 1468. On a collection of fishes made by P. O. Simons in Ecuador and Peru. By Edwin C. Starks. pp. 761–800, pls. LXV, LXVI, figs. 1–10.

No. 1469. Notes on birds from German and British East Africa. By Harry C. Oberholser. pp. 801–811.

No. 1470. Descriptions of a new species of Threadfin (family Polynemidæ) from Japan. By David Starr Jordan and Richard Crittenden McGregor. pp. 813–815, fig. 1.

No. 1471. A new tree toad from Costa Rica. By Leonhard Stejneger. pp. 817, 818.

No. 1472. The mammals of Engano Island, West Sumatra. By Gerrit S. Miller, jr. pp. 819–825.

No. 1473. Three new fungiæ, with a description of a specimen of Fungia granulosa Klunzinger, and a note on a specimen of Fungia concinna Verrill. By T. Wayland Vaughan. pp. 827–832, pls. LXVII–LXXIV.

No. 1474. On a species of loach, Misgurnus decemcirrosus (Basilewsky), from northern China. By David Starr Jordan and John Otterbein Snyder. pp. 833, 834, fig. 1.

No. 1475. Description of a new genus and species of fossil seal from the Miocene of Maryland. By Frederick W. True. pp. 835–840, pls. LXXV, LXXVI.

No. 1476. The giant bass of Japan. By David Starr Jordan and John Otterbein Snyder. pp. 841–845, figs. 1, 2.

No. 1477. A new species of Cœnocyathus from California and the Brazilian astrangid corals. By T. Wayland Vaughan. pp. 847–850, pls. LXXVII, LXXVIII.

No. 1478. New fishes from Santo Domingo. By B. W. Evermann and H. Walton Clark. pp. 851–855, figs. 1–3.

FROM BULLETIN 39.

Part S. Directions for collecting information and objects illustrating the history of medicine. By James M. Flint, M. D., U. S. Navy (retired), pp. [1]–[5].

FROM VOLUME 10 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 1. North American species of Festuca. By Charles V. Piper. pp. i–vi, 1–48 vii–ix, pls. I–XV.

CLASSIFIED LIST OF PAPERS BASED WHOLLY OR IN PART ON THE NATIONAL COLLECTIONS.

MUSEUM ADMINISTRATION.

MASON, OTIS TUFTON. Report on the department of anthropology for the year 1903–4.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1904 (1906), pp. 61–75.

MERRILL, GEORGE P. Report on the department of geology for the year 1903–4.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1904 (1906), pp. 97–104.

RATHBUN, RICHARD. Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1904.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1904 (1906), pp. 1–186.

TRUE, FREDERICK W. Report on the department of biology for the year 1903–4.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1904 (1906), pp. 77–95.

ETHNOLOGY, ARCHEOLOGY, PHYSICAL ANTHROPOLOGY.

CASANOWICZ, IMMANUEL M. The S. S. Howland collection of Buddhist religious art in the National Museum.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1904 (1906), pp. 735–744, pls. I–XVII.

Gives a sketch of the origin, doctrines, and history of Buddhism, followed by a description of 27 objects.

FLINT, JAMES M. Directions for collecting information and objects illustrating the history of medicine.

Bull. U. S. Nat. Mus., No. 39, pt. S, Aug. 8, 1905, pp. [1]–[5].

HOLMES, WILLIAM H. Certain notched or scalloped stone tablets of the mound builders.

Am. Anthropologist (new series), VIII, No. 1, Jan.–Mar., 1906, pp. 101–108, pls. XII, XIII, 2 figs.

Calls attention to the paper of Mr. Clarence B. Moore, in which he describes and illustrates stone plates, which he is able to identify as mortar plates, or palettes, intended for grinding pigments. The distribution of the designs is carefully studied by the author.

HOUGH, WALTER. Pueblo environment.

Science (new series), XXIII, No. 597, June 8, 1906, pp. 865–869.

Treats of the geography, geology, meteorology, and biology of the Pueblo region and discusses the environment with regard to its general effects on man's body and activities. This paper was the address of the vice-president and chairman of Section H, American Association for the Advancement of Science.

HOUGH, WALTER—Continued.

——— Sacred springs in the southwestern United States.

Records of the Past, V, pt. VI, June, 1906, pp. 163–169.

Treats of spring worship among the Pueblo Indians, in whose country this feature of their life is emphasized by the arid environment and consequent importance of water. The ceremonies performed around springs, the offerings placed in them, and the lore connected with them are described.

HRDLIČKA, ALEŠ. Notes on the San Carlos Apache.

Am. Anthropologist (new series), VII, No. 3, July–Sept., 1905, pp. 480–495, pls. XXX–XXXII, 7 figs.

A brief account of the present status and mode of life of the Apaches on the San Carlos Reservation, Ariz., with notes on their subdivisions, dwellings, manufactured objects, habits, and customs, and on antiquities in the San Carlos Valley.

——— Diseases of the Indians, more especially of the southwest United States and northern Mexico.

Washington Medical Annals, IV, No. 6, Dec., 1905, pp. 372–394.

A résumé of personal observations, and special data furnished by physicians in the Indian Service, on diseases among the Indians, with a discussion.

——— Notes on the Pima of Arizona.

Am. Anthropologist (new series), VIII, Jan.–Mar., 1906, pp. 39–46, pls. VIII–IX, 8 figs.

Brief account of the tribe as it exists at the present time (1905), including notes on dwellings, manufactures, and customs.

——— Brains and brain preservatives.

Proc. U. S. Nat. Mus., XXX, No. 1451, June 4, 1906, pp. 245–320b, figs. 1–27.

A detailed account and graphic illustrations of the results of experiments in the laboratory of the divison of physical anthropology, U. S. National Museum, with 15 different preservatives containing formalin.

——— Contribution to the physical anthropology of California.

Pub. Univ. California, Am. Archeology and Ethnology, IV, No. 2, Berkeley, June, 1906, 20 figs.

A detailed description of a series of California mainland crania.

SETON-KARR, HEYWOOD WALTER. Flint implements of the Fayum, Egypt.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1904 (1906), pp. 745–751, pls. I–XII.

Describes and illustrates a great variety of chipped stone implements far antedating the historic period of lower Egypt.

MAMMALS.

ANDERSEN, KNUD. On the bats of the Rhinolophus philippinensis group, with descriptions of five new species.

Ann. Mag. Nat. Hist. (series 7), XVI, Aug., 1905, pp. 244–257.

Describes specimen No. 124767, U. S. N. M., collected by Dr. W. L. Abbott on Banka, as *Rhinolophus solitariarus*, p. 250. The types of four other new species are in the British Museum: *Rh. sedulus*, p. 247; *Rh. lanosus*, p. 248; *Rh. geminus*, p 253; *Rh. beddomei*, p. 253.

——— on the bats of the Rhinolophus arcuatus group, with descriptions of five new forms.

Ann. Mag. Nat. Hist. (series 7), XVI, Sept., 1905, pp. 282–288.

Systematic revision of and remarks on the group.

No. 125314, U. S. N. M., is made the type of *Rhinolophus inops*, p. 284.

——— on the bats of the Rhinolophus macrotis group, with descriptions of two new forms.

Ann. Mag. Nat. Hist. (series 7), XVI, Sept., 1905, pp. 289–292.

No. 105487, U. S. N. M., is made the type of *Rhinolophus hirsutus*, p. 289.

——— on some bats of the genus Rhinolophus, with remarks on their mutual affinities and descriptions of twenty-six new forms.

Proc. Zool. Soc. London, 1905, II, Oct. 17, 1905, pp. 75–145, pls. III, IV.

A systematic revision of eastern *Rhinolophi*, with remarks on affinities of the Ethiopian and western Palearctic species.

No. 101966, U. S. N. M., is made the type of new species *Rhinolophus virgo*, p. 88. No. 101714, U. S. N. M., is made the type of *Rhinolophus nereis*, p. 90. No. 104753, U. S. N. M., is made the type of *Rhinolophus affinis nesites*, p. 104.

——— On Hipposideros diadema and its closest allies.

Ann. Mag. Nat. Hist. (series 7), XVI, Nov., 1905, pp. 497–507.

Systematic revision of the group and general remarks on it.

——— A list of the species and subspecies of the genus Rhinolophus, with some notes on their geographical distribution.

Ann. Mag. Nat. Hist. (series 7), XVI, Dec., 1905, pp. 648–662.

ANDERSEN, KNUD. On some bats of the genus Rhinolophus, collected by Dr. W. L. Abbott on the islands of Nias and Enggano.

Proc. U. S. Nat. Mus., XXIX, No. 1440, Mar. 7, 1906, pp. 657–659.

Description of a new species and a new subspecies, *Rhinolophus circe*, and *R. trifoliatus niasensis*, and notes on other species.

——— On Hipposideros caffer, Sund., and its closest allies, with some notes on *H. fuliginosus*, Temm.

Ann. Mag. Nat. Hist. (series 7), XVII, Mar., 1906, pp. 269–282.

Systematic revision of and general remarks on the group.

BAILEY, VERNON. Identity of Thomomys umbrinus (Richardson).

Proc. Biol. Soc. Wash., XIX, Jan. 29, 1906, pp. 3–6.

Thomomys umbrinus (Richardson) redescribed and skull figured.

——— A new white-footed mouse from Texas.

Proc. Biol. Soc. Wash., XIX, May 1, 1906, pp. 57, 58. New subspecies: *Peromyscus pectoralis laccianus*, p. 57.

CARY, MERRITT. Identity of Eutamias pallidus (Allen), with a description of a related form from the South Dakota Bad Lands.

Proc. Biol. Soc. Wash., XIX, June 4, 1906, pp. 87, 90, No. 11656, U. S. N. M., selected as lectotype of *Eutamias pallidus* (Allen), which is redescribed. *Eutamias pallidus cacodemus* described as new, p. 89.

HAHN, WALTER L. A new bat from Mexico.

Proc. Biol. Soc. Wash., XVIII, Dec. 9, 1905, pp. 247–248.

New species *Hermiderma subrufum*, p. 247.

——— Myotis lucifugus in Kamchatka.

Proc. Biol. Soc. Wash., XVIII, Dec. 9, 1905, p. 254, No. $\frac{11189}{37449}$, U. S. N. M., *Myotis lucifugus*, recorded from Kamchatka.

LYON, MARCUS W., Jr. The pigmy squirrels of the Nannosciurus melanotis group.

Proc. Biol. Soc. Wash., XIX, May 1, 1906, pp. 51–56.

This paper is based mainly on material collected in the Malay Archipelago by Dr. W. L. Abbott and presented by him to the U. S. National Museum. Systematic revision of the group. New species: *Nannosciurus sumatranus*, p. 53; *N. borneanus*, p. 54; *N. bancanus*, p. 55.

LYON, MARCUS W., Jr. Type of the genus Pronolagus.

Proc. Biol. Soc. Wash., XIX, June 4, 1906, p. 95.

The type of this genus, based on No. 22972, U. S. N. M., is *Pronolagus crassicaudatus* Lyon (not Geoffroy) = *P. ruddi* Thomas and Schwann.

MILLER, GERRIT S., Jr. Note on the generic names Pteronotus and Dermanotus.

Proc. Biol. Soc. Wash., XVIII, Oct. 17, 1905, pp. 223–226.

Pteronotus Gray, 1838, is shown to be a valid name for a Phyllostomid genus.

——— A new bat from German East Africa.

Proc. Biol. Soc. Wash., XVIII, Dec. 9, 1905, pp. 227, 228.

Bat collected by Dr. W. L. Abbott at Taveta in 1889, described and named *Lavia rex*, p. 227.

——— A new genus of bats from Sumatra.

Proc. Biol. Soc. Wash., XVIII, Dec. 9, 1905, pp. 229, 230.

Description of the new Vespertilionine genus *Phoniscus*, p. 229, and of the new species *Phoniscus atrox*, p. 230, collected by Dr. W. L. Abbott in eastern Sumatra in 1903.

——— A second specimen of Odontonycteris meyeri Jentink.

Proc. Biol. Soc. Wash., XVIII, Dec. 9, 1905, p. 253.

Notice of a specimen of this rare bat collected by Dr. Edgar A. Mearns on Cagayan Sulu, Philippine Islands.

——— The monkeys of the Macaca nemestrina group.

Proc. U. S. Nat. Mus., XXIX, No. 1436, Feb. 3, 1906, pp. 555–563, pls. XIII–XX.

A revision of the monkeys of this group based mainly on specimens collected and presented to the U. S. National Museum by Dr. W. L. Abbott. *Macaca broca*, p. 258; *M. adusta*, p. 259; and *M. insulana*, p. 260, are described as new.

——— Two new carnivores from the Malay Peninsula.

Proc. Biol. Soc. Wash., XIX, Feb. 26, 1906, pp. 25–28.

Description of two Viverridæ collected by Dr. W. L. Abbott, and presented by him to the U. S. National Museum: *Arctogalidia major*, p. 25, and *Parodoxurus robustus*, p. 26.

——— A new name for Rhinolophus minutus Miller.

Proc. Biol. Soc. Wash., XIX, Feb. 26, 1906, p. 41.

Rhinolophus minutus Miller is shown to be preoccupied, and the species is renamed *Rhinolophus minutillus*.

MILLER, GERRIT S., Jr. The nomenclature of the flying lemurs.

Proc. Biol. Soc. Wash., XIX, Feb. 26, 1906, p. 41.

The family is named Cologidæ (new) and the genera *Colugo* Gray (Philippine flying lemurs) and *Cynocephalus* Boddaert (Malayan flying lemurs) are defined.

——— Some voles from the Tian Shan range.

Ann. Mag. Nat. Hist. (series 7), XVII, Apr., 1906, pp. 371–375.

Descriptions of 4 voles sent for determination by the British Museum. Duplicates have been presented to the U. S. National Museum. New species: *Alticola worthingtoni*, p. 372; *Evotomys centralis*, p. 373.

——— A new genus of sac-winged bats.

Proc. Biol. Soc. Wash., XIX, May 1, 1906, pp. 59, 60.

New genus: *Myropteryx* (Emballonuridæ), p. 59.

New species: *Myropteryx pullus*, p. 60.

——— Seven new Malayan bats.

Proc. Biol. Soc. Wash., XIX, May 1, 1906, pp. 61–66.

New species: *Cynopterus princeps*, p. 61; *C. major*, p. 62; *C. pagensis*, p. 62; *C. minutus*, p. 63; *Pteropus baveanus*, p. 63; *P. niadicus*, p. 64; *Kerivoula depressa*, p. 64.

——— Twelve new genera of bats.

Proc. Biol. Soc. Wash., XIX, June 4, 1906, pp. 83–86.

Diagnoses of new genera, family Pteropidæ: *Niadius*, p. 83; *Sphaerias*, p. 83. Family Megadermidæ: *Macroderma*, p. 84. Family Phyllostomidæ: *Ardops*, p. 84; *Erophylla*, p. 84. Family Desmodontidæ: *Diaemus*, p. 84. Family Noctilionidæ: *Dirias*, p. 84. Family Natalidæ: *Phodotes*, p. 85. Family Vespertilionidæ: *Pizonyx*, p. 85; *Rhinopterus*, p. 85; *Bæodon*, p. 85. Family Molossidæ: *Eumops*, p. 85.

——— A bat new to the United States.

Proc. Biol. Soc. Wash., XIX, June 4, 1906, pp. 95–98.

Chæronycteris mexicana recorded from Arizona.

——— The mammals of Engano Island, West Sumatra.

Proc. U. S. Nat. Mus., XXX, No. 1472, June 4, 1906, pp. 819–825.

An account of 70 mammals collected on Engano by Dr. W. L. Abbott and presented to the U. S. National Museum. New species: *Mus enganus*, p. 821; *Pteropus enganus*, p. 822; *Kerivoula engana*, p. 825.

——— Notes on Malayan pigs.

Proc. U. S. Nat. Mus., XXX, No. 1466, June 13, 1906, pp. 737–758, pls. XXXIX–LXIV.

Systematic revision of Malayan pigs, based on 62 specimens collected by Dr. W. L. Abbott and presented by him to the U. S. Na-

MILLER, GERRIT S., Jr.—Continued.

tional Museum, as well as on material in European museums. New species described: *Sus gargantua*, p. 743; *S. jubatus*, p. 745; *S. jubatulus*, p. 745; *S. rhionis*, p. 749; *S. peninsularis*, p. 749; *S. niadensis*, p. 751; *S. babi*, p. 751; *S. mimus*, p. 753.

OSGOOD, WILFRED H. A new vole from Montague Island, Alaska.

Proc. Biol. Soc. Wash., XIX, May 1, 1906, pp. 71, 72.

Describes *Microtus clymoctes* as new, p. 71.

STEJNEGER, LEONHARD. The systematic name of the Japanese deer.

Science (new series), XXII, Sept. 29, 1905, pp. 402, 403.

Shows that *Cervus nippon* Temminck, 1837, is 7 years older than *Cervus sika*.

BIRDS.

ALFARO, ANASTASIO. A new owl from Costa Rica.

Proc. Biol. Soc. Wash., XVIII, Oct. 17, 1905, p. 217.

Cryptoglaux ridgwayi is described as new.

BISHOP, LOUIS B. Notes on a small collection of California birds with description of an apparently unrecognized race of Hutton's vireo.

Condor, VII, No. 5, Sept. 19, 1905, pp. 141–143.

Notes on 32 species of California birds, of which *Vireo huttoni oberholseri*, p. 142, is described as new.

DEANE, RUTHVEN. The ruff (Pavoncella pugnax) in Indiana.

Auk, XXII, No. 4, Oct., 1905, pp. 410, 411.

Record of an Indiana specimen of this Old World species, with a list of previous North American records.

DWIGHT, JONATHAN, Jr. Status and plumages of the white-winged gulls of the genus Larus.

Auk, XXIII, No. 1, Jan., 1906, pp. 26–43, pl. I, 1 fig.

A discussion of the status of 5 species of this group, with a description of the plumage of each, accompanied by a table of measurements. *Larus barrovianus* is considered to be indistinguishable from *L. glaucus*.

EMERSON, W. OTTO. Oceanodroma leucorhoa and its relatives on the Pacific coast.

Condor, VIII, No. 2, Mar. 20, 1906, pp. 53–55.

The writer restricts *Oceanodroma leucorhoa* to the Atlantic, and describes 2 new species from the California coast, viz: *O. beali* and *O. beldingi*.

GRINNELL, JOSEPH. The Pacific night hawk.

Condor, VII, No. 6, Nov. 22, 1905, p. 170.

Description of a new form, *Chordeiles virginianus hesperis*, from the San Bernardino mountains, California.

JENKINS, HUBERT O. Variation in the hairy woodpecker (Dryobates villosus and subspecies).

Auk, XXIII, No. 2, Apr., 1906, pp. 161–171, 2 figs.

A discussion of the variation in pattern of coloration and size in the hairy woodpecker and its subspecies, with remarks on their geographical distribution. Observations on the probable causes of variation are added.

OBERHOLSER, HARRY C. The avian genus Bleda Bonaparte and some of its allies.

Smithsonian Misc. Colls., XLVIII, Quar. issue, III, pt. 2, No. 1588, July 1, 1905, pp. 149–172.

——— Birds collected by Dr. W. L. Abbott in the Kilimanjaro region, East Africa.

Proc. U. S. Nat. Mus., XXVIII, No. 1411, July 8, 1905, pp. 823–936.

This report is based upon a collection of 684 specimens made by Doctor Abbott during the years 1887–1889. The following genera and species are named as new: *Astur sparsimfasciatus accletus*, p. 829; *Lissotis notophila*, p. 836; *Œna capensis anonyma*, p. 843; *Chalcopelia chalcospila acanthina*, p. 845; *Asio maculosus amerimnus*, p. 856; *Tuchynautes*, p. 860; *Viridibucco*, p. 865; *Melignothes exilis meliphilus*, p. 869; *Odontospiza*, p. 883; *Arizelopsar*, p. 887; *Poncropsar*, p. 888; *Pycnonotus layardi micrus*, p. 891; *Acrocephalus orinus*, p. 899; *Notiocichla*, p. 900; *Anteliocichla*, p. 901; *Apalis thecsela*, p. 904; *Cichlomyia*, p. 908; *Arizelomyia*, p. 910; *Platysteira cryptolcuca*, p. 913; and *Helionympha*, p. 929.

——— The forms of Vermivora celata (Say).

Auk, XXII, No. 3, July, 1905, pp. 242–247.

A synopsis of the forms of this species, with the geographical distribution of each. *Vermivora celata orestera* is described as new.

——— Description of a new Querquedula.

Proc. Biol. Soc. Wash., XIX, June 4, 1906, pp. 93, 94.

Querquedula orinomus, allied to *Q. cyanoptera*, is described as a new species from Lake Titicaca, Peru.

——— Notes on birds from German and British East Africa.

Proc. U. S. Nat. Mus., XXX, No. 1469, June 4, 1906, pp. 801–811.

Notes on 26 species, based partly upon a re-examination of some of the material previ-

OBERHOLSER, HARRY C.—Continued.

ously reported upon by the author, in connection with a small collection from British East Africa in the Carnegie Museum. *Pomatorhynchus senegalus armenus*, p. 809, is described as new.

RIDGWAY, ROBERT. Descriptions of some new genera of Tyrannidæ, Pipridæ, and Cotingidæ.

Proc. Biol. Soc. Wash., XVIII, Sept. 2, 1905, pp. 207–210.

The following new genera are the result of the author's studies of the families Tyrannidæ, Pipridæ, and Cotingidæ, in the preparation of part IV of Bulletin 50, U. S. National Museum: *Aphanotriccus*, p. 207; *Terenotriccus*, p. 207; *Myiotriccus*, p. 207; *Atalotriccus*, p. 208; *Placostomus*, p. 208; *Cnemarchus*, p. 208; *Orodynastes*, p. 208; *Tyrannopsis*, p. 209; *Tolmarchus*, p. 209; *Phæotriccus*, p. 209; *Allocotopterus*, p. 209; *Stictornis*, p. 209; *Idiotriccus*, p. 210; *Elainopsis*, p. 210; *Microtriccus*, p. 210, and *Hylonax*, p. 210.

——— New genera of Tyrannidæ and Turdidæ, and new forms of Tanagridæ and Turdidæ.

Proc. Biol. Soc. Wash., XVIII, Oct. 17, 1905, pp. 211–213.

Describes the following as new: *Platytriccus*, p. 211; *Haplocichla*, p. 212; *Chlorospingus zeledoni*, p. 212; *Phœnicothraupis alfaroana*, p. 212; *Mimocichla rubripes*, p. 213, and *Catharus frantzii omiltemensis*, p. 213.

——— Description of an adult female Euphonia supposed to be Euphonia gnatho (Cabanis).

Proc. Biol. Soc. Wash., XVIII, Oct. 17, 1905, pp, 225, 226.

Description of a female *Euphonia* thought to represent the true *E. gnatho* from Costa Rica, with some observations on the history of the species.

——— A winter with the birds in Costa Rica.

Condor, VII, No. 6, Nov. 22, 1905, pp. 151–160, 6 text figs. and frontispiece.

A popular account of the writer's visit to Costa Rica on behalf of the National Museum.

——— Some observations concerning the American families of Oligomyodian Passeres.

Proc. Biol. Soc. Wash., XIX, Jan. 29, 1906, pp. 7–16.

A discussion of the characters diagnostic of the families of Mesomyodian Passeres, particularly of the section Oligomyodi, with a key to the 14 Mesomyodian families here recognized. This is followed by observations on the limits of the families Tyrannidæ, Pipridæ, and Cotingidæ, a study of which has produced very unexpected results. Thus *Lawrencia* is transferred from the Tyrannidæ

RIDGWAY, ROBERT—Continued.

to the oscine family Vireonidæ, and *Sirystes*, *Hylonax*, *Idiotriccus*, *Elainopsis*, *Tyrannulus*, *Ornithion*, and *Culicivora* are found to be members of the Cotingidæ, while *Stigmatura*, *Hapalocercus*, *Habrura*, and *Muscigralla* are removed from the Tyrannidæ and placed tentatively in the family Formicariidæ.

——— "Atratus versus Megalonyx."

Condor, VIII, No. 2, Mar. 20, 1906, p. 53.

Reply to an article by Harry S. Swarth respecting the status of *Pipilo maculatus megalonyx* and *P. m. atratus*.

RILEY, J. H. A new subspecies of ground dove from Mona Island, Porto Rico.

Proc. U. S. Nat. Mus., XXIX, No. 1418, Sept. 30, 1905, pp. 171, 172.

Columbigallina passerina exigua, p. 171, is described as new.

——— Descriptions of three new birds from the Merida region of Venezuela.

Proc. Biol. Soc. Wash., XVIII, Oct. 17, 1905, pp. 219–221.

The following species are described as new: *Leptasthenura montivagans*, p. 219, *Haplospiza montosa*, p. 220, and *Pheucticus uropygialis meridensis*, p. 220.

——— A new name for Lewis's woodpecker.

Proc. Biol. Soc. Wash., XVIII, Oct. 17, 1905, pp. 224, 225.

Asyndesmus lewisi is a new name for *Picus torquatus* Wilson, preoccupied.

——— List of birds collected or observed during the Bahama expedition of the Geographic Society of Baltimore.

Auk, XXII, No. 4, Oct., 1905, pp. 349–360.

An annotated list of species, 71 in number, obtained or seen by the author in the Bahamas.

STONE, WITMER. On a collection of birds from British East Africa obtained by Mr. George L. Harrison, jr.

Proc. Acad. Nat. Sci. Phila., for 1905, Jan. 24, 1906, pp. 755–782.

An account of a collection from British East Africa, numbering 212 species, with critical notes on many of them. *Cisticola harrisoni*, p. 771, is described as new.

REPTILES AND BATRACHIANS.

BAILEY, VERNON. Report on the Biological Survey collection of lizards and snakes from Texas.

North Am. Fauna, No. 25, pp. 38–51, pl. XII.

An annotated list of the species with special reference to the distribution of the species in relation to the various life zones.

BANTA, ARTHUR M., and MCATEE, WALDO L. The life history of the cave salamander, Spelerpes maculicaudus (Cope).

Proc. U. S. Nat. Mus., XXX, No. 1443, April 2, 1906, pp. 67–83, pls. VIII–X.

The entire material upon which this paper is based has been presented to the National Museum by the authors.

COKER, ROBERT E. Gardon's hypothesis of "orthogenetic variation" in Chelonia.

Johns Hopkins Univ. Circ. No. 178, May, 1905, pp. 9–24.

MCATEE, WALDO L. (See under Arthur M. Banta.)

STEJNEGER, LEONHARD. The geographical distribution of the bull-toads.

Science (new series) XXII, No. 564, Oct. 20, 1905, p. 502.

The discovery of *Bombina maxima* in Yunnan corroborates the author's theory that these batrachians originated in that part of the world.

——— A new lizard of the genus Phrynosoma, from Mexico.

Proc. U. S. Nat. Mus., XXIX, No. 1437, Feb. 2, 1906, pp. 565–567.

Phrynosoma ditmarsi described as a new species; type U. S. N. M. No. 36022.

——— A new salamander from North Carolina.

Proc. U. S. Nat. Mus., XXX, No. 1457, May 22, 1906, pp. 559–562.

Plethodon shermani described as a new species; type U. S. N. M. No. 36214.

——— A new tree toad from Costa Rica.

Proc. U. S. Nat. Mus., XXX, No. 1471, June 4, 1906, pp. 817, 818.

Hyla phlebodes described as a new species; type U. S. N. M. No. 29970.

FISHES.

BEAN, BARTON A. The history of the whale shark, Rhinodon typicus Smith.

Smithsonian Misc. Colls., XLVIII, Quar. issue, III, pt. 2, No. 1587, July 1, 1905, pp. 139–148, pl. XXXIV–XXXVI, 4 figs.

——— Notes on an adult goblin shark (Mitsukurina owstoni) of Japan.

Proc. U. S. Nat. Mus., XXVIII, No. 1409, July 6, 1905, pp. 815–818, figs. 1, 2.

CLARK, H. WALTON. (See under Barton Warren Evermann.)

EVERMANN, BARTON WARREN, and CLARK, H. WALTON. New fishes from Santo Domingo.

Proc. U. S. Nat. Mus., XXX, No. 1478, June 27, 1906, pp. 851–855, figs. 1–3.

GILBERT, CHARLES H., and THOMPSON, JOSEPH C. Notes on the fishes of Puget Sound.

Proc. U. S. Nat. Mus., XXVIII, Aug. 8, 1905, No. 1414, pp. 973–987, figs. 1–3.

GILL, THEODORE. The life history of the sea-horses (Hippocampids).

Proc. U. S. Nat. Mus., XXVIII, No. 1408, July 6, 1905, pp. 805–814.

After a section (1) on the characteristics of the family of Hippocampids and the genus *Hippocampus*, the habits of the sea-horses are considered in paragraphs relating to (2) their attitudes and movements, (4) their food, and (5) the sexual relations and manner of transfer of eggs from female to pouch of male. In concluding paragraphs, (6) the specific characters of four species are illustrated, and (7) some foreign relations of the subfamily of solegnathines noticed.

——— The family of cyprinids and the carp as its type.

Smithsonian Misc. Colls. Quar. issue, XLVIII, pt. 2, No. 1591, Sept. 8, 1905, pp. 195–217, pls. XLV–LVIII.

After introductory remarks follow discussions of relations to the cyprinids, characteristics of the cyprinids, especially those of the pharyngeal bones and teeth, distribution, and sexual differentiation. The "life history of the carp" is then considered (pp. 202–210), and this is followed by notices of other noteworthy cyprinids of Europe whose names have been perverted in other parts of the world to very different fishes. In addition to the four families recognized by the author in 1861 a new one (Gyrinochilidæ) is proposed (p. 196) for a remarkable generic type from Borneo (*Gyrinochilus*).

——— Flying fishes and their habits.

Rep. Smithsonian Inst., 1904 (1905), pp. 495–515, pls. 1–4.

After preliminary remarks on flight in general, the flying fishes are considered in two categories:

I. The exocœtoid flying fishes (497–508) are treated of with respect to (1) their adaptation for flight and the actual or alleged facts, (2) their food, (3) their procreation, (4) their enemies, (5) their economical value, and (6) the major differences among themselves.

II. The Dactylopterids, or flying gurnards (508–515), are likewise discussed with respect to (1) their characteristics and flight, (2) their food, (3) the sounds they utter, (4) their later developmental stages, and (5) their capture.

GUDGER, EUGENE WILLIS. The breeding habits and the segmentation of the egg of the pipefish, Siphostoma floridæ.

Proc. U. S. Nat. Mus., XXIX, No. 1431, Dec. 6, 1905, pp. 447–500, pls. V–XI, fig. 1.

JORDAN, DAVID STARR. A review of the sand lances or Ammodytidæ of the waters of Japan.

Proc. U. S. Nat. Mus., XXX, No. 1464, June 4, 1906, pp. 715–719, figs. 1, 2.

——— and MCGREGOR, RICHARD CRITTENDEN. Descriptions of a new species of threadfin (family Polynemidæ) from Japan.

Proc. U. S. Nat. Mus., XXX, No. 1470, June 4, 1906, pp. 813–815.

——— and SEALE, ALVIN. List of fishes collected by Dr. Bashford Dean on the Island of Negros, Philippines.

Proc. U. S. Nat. Mus., XXVIII, No. 1407, July 3, 1905, pp. 769–803, figs. 1-20.

——— ——— List of fishes collected in 1882-83 by Pierre Louis Jouy at Shanghai and Hongkong, China.

Proc. U. S. Nat. Mus., XXIX, No. 1433, Dec. 6, 1905, pp. 517–529, figs. 1–6.

——— ——— Descriptions of six new species of fishes from Japan.

Proc. U. S. Nat. Mus., XXX, No. 1445, Apr. 4, 1906, pp. 143–148.

——— and SNYDER, JOHN OTTERBEIN. A list of fishes collected in Tahiti by Mr. Henry P. Bowie.

Proc. U. S. Nat. Mus., XXIX, No. 1422, Oct. 7, 1905, pp. 353–357, figs. 1–3.

——— ——— A synopsis of the sturgeons (Acipenseridæ) of Japan.

Proc. U. S. Nat. Mus., XXX, No. 1455, May 9, 1906, pp. 397, 398.

——— ——— On a species of loach; Misgurnus decemcirrosus (Basilewsky), from northern China.

Proc. U. S. Nat. Mus., XXX, No. 1474, June 16, 1906, pp. 833, 834.

——— ——— The giant bass of Japan.

Proc. U. S. Nat. Mus., XXX, No. 1476, June 16, 1906, pp. 841-845.

——— and STARKS, EDWIN CHAPIN. List of fishes collected on Tanega and Yaku, offshore islands of southern Japan, by Robert Van Vleck Anderson, with descriptions of seven new species.

Proc. U. S. Nat. Mus., XXX, No. 1462, June 4, 1906, pp. 696–706, figs. 1–13.

MCGREGOR, RICHARD CRITTENDEN. (See under David Starr Jordan.)

SEALE, ALVIN. (See under David Starr Jordan.)

SNYDER, JOHN OTTERBEIN. (See under David Starr Jordan.)

STARKS, EDWIN CHAPIN. On a collection of fishes made by P. O. Simons in Ecuador and Peru.

Proc. U. S. Nat. Mus., XXX, No. 1468, June 14, 1906, pp. 761–800, pls. LXV, LXVI.

(See also under David Starr Jordan.)

THOMPSON, JOSEPH C. (See under Charles H. Gilbert.)

TUNICATES.

BYXBEE, EDITH S. (See under William E. Ritter.)

RITTER, WILLIAM E. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. Navy, commanding. IV.—Octacnemus.

Bull. Mus. Comp. Zool., XLVI, No. 13, Jan., 1906, pp. 233–252, pls. I–III.

A critical study of a new species of *Octacnemus, O. herdmani*, five specimens of which were taken by the *Albatross*, off the coast of Ecuador.

——— and BYXBEE, EDITH S. Reports on the scientific results of the expedition to the tropical Pacific in charge of Alexander Agassiz, in the U. S. Fish Commission steamer Albatross from August, 1899, to March, 1900, Commander Jefferson F. Moser, U. S. N., commanding. VIII.—The pelagic tunicata.

Memoirs Mus. Comp. Zool., XXVI, No. 5, Aug., 1905, pp. 195–214, pls. I–II.

The collections reported upon include many localities in the Pacific Ocean visited by the Albatross since 1888. A new species of *Pyrosoma, P. agassizi*, is described, and a new name given to a known form, *Oikopleura huxleyi*.

MOLLUSKS.

BARTSCH, PAUL. Descriptions of two new Naiads.

Proc. U. S. Nat. Mus., XXX, No. 1454, May 9, 1906, pp. 393–396, pls. XXVII–XXIX.

In this paper *Nephronaias flucki* and *Diplodon huapensis* are described as new; the first from Nicaragua, the second from Lake Huapé, Argentina.

(See also under William Healey Dall.)

DALL, WILLIAM HEALEY. A new genus and several new species of land shells collected in Central Mexico by Dr. Edward Palmer.

Smithsonian Misc. Colls., XLVIII, Quar. issue, III, pt. 2, No. 1590, July 1, 1905, pp. 187–191, text figs. 22–25, pls. XLIII, XLIV.

A description of shells collected and presented to the Museum by Doctor Palmer, together with a list of his previous donations from the same region. The new genus *Hendersonia* (afterwards changed to *Hendersoniella*) is proposed for a remarkable discoid urocoptid, and details of its anatomy furnished by Dr. H. A. Pilsbry are described and figured. The following species are figured and described as new: *Hendersonia palmeri*, *Xanthonyx potosiana*, *Strephostyla potosiana*, *S. palmeri*, *Schazicheila palmeri*, and *Sphærium mexicanum*.

——— Note on the name Hendersonia.

Proc. Biol. Soc. Wash., XVIII, July 12, 1905, p. 189.

The name *Hendersonia* published in the Smithsonian Miscellaneous Collections (Quarterly Issue) being preoccupied by a slightly earlier use of the name in Helicinidæ, the new name *Hendersoniella* is proposed for the later genus.

——— Note on a variety of Crepidula nivea C. B. Adams, from San Pedro, California.

Nautilus, XIX, No. 3, July, 1905, pp. 26, 27.

A singular race of Crepidula discovered on *Glottidia albida* Hinds, and therefore given the mutational name of *C. glottidiarum*.

——— A new proserpinoid land shell from Brazil.

Proc. Biol. Soc. Wash., XVIII, Sept. 2, 1905, pp. 201, 202.

The new species, *P. derbyi*, is described and referred to a new section called *Staffola*. The type was presented to the Museum by Dr. H. von Ihering and collected by Dr. O. A. Derby in Brazil.

——— A new chiton from the New England coast.

Proc. Biol. Soc. Wash., XVIII, Sept. 2, 1905, pp. 203, 204.

The new species, *Tonicella blaneyi*, is described, from the coast of Maine, collected by Mr. Dwight Blaney who presented the type to the National Museum.

——— Note on the name Hendersonia.

Smithsonian Misc. Colls., XLVIII, Quar. issue, III, pt. 2, Sept. 8, 1905, p. 239.

Notes that *Hendersoniella* is substituted for *Hendersonia*, p. 187, op. cit.

DALL, WILLIAM HEALEY. Thomas Martyn and the "Universal Conchologist."

Proc. U. S. Nat. Mus., XXIX, no. 1425, Oct. 6, 1905, pp. 415–432.

A discussion of Martyn's life and work, with a synopsis of the genera and species contained in the Universal Conchologist, evidence being adduced that the first 80 plates were issued in 1784 and the second 80 in 1786.

——— Land and fresh-water mollusks.

Harriman Alaska Expedition, New York, Doubleday, Page & Co., XIII, Nov. 20, 1905, pp. I–IX, 1–171, pls. I, II, text figs. 1–118.

This volume forms a manual of land and fresh-water shells of North America north of latitude 49° N. Statistics are given with geographical tables; the relations with the Asiatic, Californian, and Canadian faunas are discussed. The species are enumerated under a revised nomenclature, many of them are illustrated and some new ones described. The nomenclature of the genera of fresh-water gastropods is revised at length and the groups they contain diagnosed. The volume closes with a bibliography of works relating to the mollusk fauna of the region referred to. The following names are proposed as new: *Cyclolimnæa*, *Lymnæa anticostiana*, *L. perpolita*, *L. petersi*, *L. preblei*, *Paraspira*, *Picrosoma*, *Oreohelix stantoni*, *Planorbis megas*, *P. rudentis*, *Polygyra megasoma*, *Planorbula christyi*, *Torquis*, *Succinea alaskana*, *Valvata pelicoidea*, *V. nylanderi*, *Vitrina alaskana*.

The types are in the national collection.

——— A new chiton from the New England coast.

Nautilus, XIX, No. 8, Dec., 1905, pp. 88–90, pl. IV.

A reprint of the paper from the Proceedings of the Biological Society of Washington, further improved by an excellent plate.

——— On a new Floridian Calliostoma.

Nautilus, XIX, No. 11, Mar., 1906, pp. 131, 132.

The species *Calliostoma marionæ* is described as new from the type in the National Museum. It is shown that *Eutrochus* A. Adams, and other names which have been given to the umbilicate Calliostomas are, for various reasons, unavailable and the name *Leiotrochus* Conrad, 1863, is resuscitated for them. The type is unique.

——— Notes on some names in the Volutidæ.

Nautilus, XIX, no. 12, Apr., 1906, pp. 143, 144.

In revising the Volutidæ of the Museum, some changes in the nomenclature and new names were found to be necessary. The following new names are proposed for the types

DALL, WILLIAM HEALEY—Continued.

indicated: *Adelomelon* Dall (*V. ancilla* Solander); *Harpulina* (*V. arausaica* Sol.) for *Harpula auctorum* non Swainson; *Maculopeplum* Dall (*V. junonia* Hwass); the following old names are typified as indicated: *Scaphella* Swainson (*V. undulata* Lam.); *Amoria* Gray is probably a synonym; *Volutilithes* (*V. muricina* Lam.); *Plejona* Bolten (*V. spinosa* Lam.).

——— and BARTSCH, PAUL. Notes on Japanese, Indopacific, and American Pyramidellidæ.

Proc. U. S. Nat. Mus., XXX, No. 1452, May 9, 1906, pp. 321–369, pls., XVII–XXVI.

This is a revision of an important series of chiefly Pacific Pyramidellidæ, partly belonging to the National Museum and partly loaned for study by the Königliche Zoologische Museum of Berlin, Germany. Ten plates of magnified figures illustrate these difficult little shells. *Nisiturris, Babella, Egilina* are proposed as new subgenera. The following species are described as new: *Odostomia mauritiana, O. meta, O. dux, O. lecta, O. exaratissima, O. felix, O. lectissima, O. culta, O. limpida, O. desimana, O. densecostata* (Garrett), subsp. *upolucnsis; Pyramidella jacksoncnsis, P. japonica, P. digitalis, P. lischkei, Turbonilla abseida, T. approximata, T. acosmia, T. actopora, T. infantula, T. laticingula, T. bella, T. (nisiturris) crystallina;* the following new names are proposed for species of which the current names are preoccupied: *Turbonilla secura, T. candidissima, T. aulica, T. (Babella) cxlatior, T. garrettiana; Odostomia martensi; Pyramidella moffati. P. dunkeri;* and forty-one species named by other authors are discussed and adequately described, many of them, especially those of A. Adams, for the first time properly described and figured.

INSECTS AND ARACHNIDS.

ASHMEAD, WILLIAM H. A skeleton of a new arrangement of the ants, or the superfamily Formicoidea.

Can. Ent., XXXVII, June, 1905, pp. 381–384.

Gives an arrangement of the families, subfamilies, tribes, and genera, as arranged in his classification of the ants, which will probably appear in 1906.

——— Additions to the recorded hymenopterous fauna of the Philippine Islands, with descriptions of new species.

Proc. U. S. Nat. Mus., XXVIII, No. 1413, July 8, 1905, pp. 957–971.

——— New classification of the Poneridæ.

Tech. Series No. 10, Bur. Ent., U. S. Dept. Agric., July, 1905, pp. 38–40.

A synopsis of the subfamilies and tribes, with a list of the genera, furnished to Prof. O. F. Cook by Dr. Ashmead, from his forthcoming classification of the ants.

ASHMEAD, WILLIAM H. New Hymenoptera from the Philippines.

Proc. U. S. Nat. Mus., XXIX, No. 1416, Sept. 30, 1905, pp. 107, 119.

Describes 1 new genus, *Krugeria*, and 23 new species.

——— New genera and species of Hymenoptera from the Philippines.

Proc. U. S. Nat. Mus., XXIX, No. 1424, Oct. 5, 1905, pp. 397–413.

Describes 3 new genera, *Elasmognathus, Amauromorpha*, and *Hemiglyptus*, and 27 new species.

——— Two new Mymaridæ from Russian Turkestan.

Ent. News, XVI, 1905, pp. 213, 214.

Describes *Anagrus hydrophilus* and *Polynema bergi.*

——— Descriptions of new Hymenoptera from Japan.

Proc. U. S. Nat. Mus., XXX, No. 1448, May 11, 1906, pp. 169–201, pls. XII–XV.

In this paper 6 new genera and 73 new species, in the superfamily Ichneumonoidea, are described. The more conspicuous of these genera are figured.

BAKER, CARL F. The classification of the American Siphonaptera.

Proc. U. S. Nat. Mus., XXIX, No. 1417, Oct. 3, 1905, pp. 121–170.

BANKS, NATHAN. Descriptions of new species of neuropterous insects from the Black Mountains of North Carolina.

Bull. Am. Mus. Nat. Hist., XXI, July 24, 1905, pp. 215–218.

Describes 9 new species.

——— New genera and species of Perlidæ.

Psyche, XII, Aug., 1905, pp. 55–57, 3 figs.

Describes 2 new genera and 4 new species.

——— Descriptions of some new mites.

Proc. Ent. Soc. Wash., VII, Oct., 1905, pp. 133–142, 4 figs.

Describes 1 new genus and 20 new species.

——— A revision of the nearctic Hemerobiidæ.

Trans. Am. Ent. Soc., XXXII., Feb., 1906, pp. 21–51, 3 pls.

BARBER, HERBERT S. Illustrations of an undetermined coleopterous larva.

Proc. Ent. Soc. Wash., VII, Oct., 1905, p. 117.

——— The spread of Sphæridium scarabæoides Linnæus.

Proc. Ent. Soc. Wash., VII, Oct., 1905, p. 127.

——— Note on Phengodes in the vicinity of Washington, D. C.

Proc. Ent. Soc. Wash., VII, Dec., 1905, p. 196.

BRUNER, LAWRENCE. Synoptic list of Paraguayan Acrididæ, with descriptions of new forms.

Proc. U. S. Nat. Mus., XXX, No. 1461, June 5, 1906, pp. 613–694.

BUSCK, AUGUST. Descriptions of American moths of the genus Cerostoma.

Ent. News, XVII, Mar., 1906, pp. 96–99.

Synoptic table of genus and description of 4 new species.

——— New American Tineina.

Can. Ent. XXVIII, Apr., 1906, pp. 121–125.

Descriptions of 7 new species.

——— A new tortricid from Texas.

Can. Ent., XXVIII, May, 1906, p. 211.

Description of *Cydia grindeliana*, sp. nov.

——— A new injurious pine-needle moth.

Can. Ent. XXVIII, May, 1906, p. 212.

Description of *Recurvaria pinella*, sp. nov.

——— A review of the American moths of the genus Cosmopteryx Hübner.

Proc. U. S. Nat. Mus., XXX, No. 1463, June 4, 1906, pp. 707–713.

——— Tineid moths from southern Texas, with descriptions of new species.

Proc. U. S. Nat. Mus., XXX, No. 1465, June 4, 1906, pp. 721–736, figs. 1–10.

CAUDELL, ANDREW NELSON. The Locustidæ and Gryllidæ (katydids and crickets) collected by W. T. Foster in Paraguay.

Proc. U. S. Nat. Mus., XXX, No. 1450, Apr. 21, 1906, pp. 235–244.

CHITTENDEN, FRANK H. The larger canna leaf-roller (Calpodes ethlius Cram.).

Bull. Bur. Ent., U. S. Dept. Agric., No. 54, 1905, pp. 54–58. 1 fig.

Reference to recent damage in the South, with description of all stages, bibliography, and distribution.

——— The pond-lily leaf-beetle (Galerucella nymphaeae Linn.).

Bull. Bur. Ent., U. S. Dept. Agric., No. 54, 1905, pp. 58–60. 1 fig.

A popular account, with special reference to an unusual occurrence in the District of Columbia in August, 1904, on beans and willow; distribution and bibliography.

——— Insect enemies of the pecan.

The Nut Grower, IV, Jan., Feb., Mar., 1906, pp. 106–109, pp. 117–120, pp. 137–142.

Short accounts of the principal insects which affect the pecan in the United States. The principal species mentioned are: *Procopteryx deludana, Acrobasis nebulella, Colcophora caryaefoliella, Hyphantria cunea, Datana integerrima, Datana angusii, Catocala* sp., *Sesia scitula, Chrysobothris femorata, Amphicerus bicaudatus, Oncideres texana, Oncideres cingulata, Elaphidion villosum, Balaninus caryae, Conotrachelus juglandis, Enarmonia caryana, Lachnosterna hirticula, Eutermes flavipes, Pulvinaria innumerabilis*, and *Phylloxera* sp.

——— New species of Sphenophorus, with notes on described forms.

Proc. Ent. Soc. Wash. VII, (author's extras issued March 6) 1906, pp. 166–182, figs. 19, 20.

Descriptions of *Sphenophorus marinus*, n. sp., *graminis*, n. sp., *subopacus*, n. sp., *monterensis*, n. sp., *diversus*, n. sp., *nevadensis*, n. sp., *fallii*, n. sp., *subulatus*, n. sp., *destructor*, n. sp., *sublaevis*, n. sp., *soltauii*, n. sp., *blanchardi*, n. sp., *striatipennis*, n. sp., with notes on *parvulus, minimus, marinus, callosa* (*sculptilis* Horn), *cariosus* (*sculptilis* Uhler), *zeae, acqualis*, and *ochreus*.

——— An instance of the complete parasitism of the imported cabbage worm.

Bull. Bur. Ent., U. S. Dept. Agric., No. 54, p. 79.

A note of the complete destruction in August and September, 1904, of *Pieris rapæ* by *Apanteles glomeratus*.

——— and TITUS, E. S. G. The dock false-worm (Taxonus nigrisoma Nort.).

Bull. Bur. Ent., U. S. Dept. Agric., No. 54, 1905, pp. 40–43. 1 fig.

COQUILLETT, D. W. A new subapterous tipulid from New Mexico.

Can. Ent., XXXVII, Oct., 1905, p. 347.

Describes *Limnophila? aspidoptera*, n. sp.

——— A new dexiid parasite of a Cuban beetle.

Can. Ent., XXXVII, Oct., 1905, p. 362.

Describes *Thelairodes ischyri*, n. sp., which was bred from *Ischyrus flavitarsis* by Dr. George Dimmock.

——— On the breaking up of the old genus Culex.

Science (new series), XXIII, No. 582, Feb. 23, 1906, pp. 313–314.

Gives a synoptic table of 5 old and 2 new genera, based on the eggs, larvæ, and adults.

——— A new tabanid related to punctifer.

Ent. News, XVII, Feb., 1906, p. 48.

Describes *Tabanus subniger*, n. sp.

——— Five new Culicidæ from the West Indies.

Can. Ent. XXXVIII, Feb., 1906, pp. 60–62.

Describes *Stegomyia mediovittata, S. busckii, Taeniorhynchus palliatus, Melanoconion urichii*, and *Verrallina insolita*.

——— New Culicidæ from the West Indies and Central America.

Proc. Ent. Soc. Wash., VII, Mar., 1906, pp. 182–186.

Three new genera and 9 new species are described.

COQUILLETT, D. W. A new Culex near curriei.

Ent. News, XVII, Apr., 1906, p. 109.

Describes *Culex lativittatus*, n. sp.

——— A classification of the mosquitoes of North and Middle America.

Tech. Series, Bur. Ent., U. S. Dept. Agric., No. 11, Apr., 1906, pp. 31.

A brief history of the family and subfamilies, and synoptic tables for the identification of the subfamilies, genera, and most of the species.

DYAR, HARRISON G. A descriptive list of a collection of early stages of Japanese Lepidoptera.

Proc. U. S. Nat. Mus., XXVIII, No. 1412, July 8, 1905, pp. 937–956, figs. 1–23.

——— New genera of South American moths.

Proc. U. S. Nat. Mus., XXIX, No. 1419, Oct. 3, 1905, pp. 173–178.

——— A list of American cochlidian moths, with descriptions of new genera and species.

Proc. U. S. Nat. Mus., XXIX, No. 1423, Oct. 12, 1905, pp. 359–396.

——— On the classification of the Culicidæ.

Proc. Ent. Soc. Wash., VII, 1905, pp. 188–191.

——— A review of the Hesperiidæ of the United States.

Journ. N. Y. Ent. Soc., XIII, 1905, pp. 111–142.

——— Illustrations of the abdominal appendages of certain mosquitoes.

Journ. N. Y. Ent. Soc., XIII, 1905, pp. 185–188.

——— A new Oncocnemis from Nevada.

Journ. N. Y. Ent. Soc., XIII, 1905, p. 211.

——— Descriptions of new American moths.

Journ. N. Y. Ent. Soc., XIV, 1906, p. 30.

——— The life history of a cochilidian moth, Adoneta bicaudata Dyar.

Biological studies by the pupils of William Thompson Sedgwick, June, 1906, pp. 11–19.

——— The North American Nymphulinæ and Scopariinæ.

Journ. N. Y. Ent. Soc., XIV, 1906, pp. 77–107.

——— Description of four new species of North American moths.

Journ. N. Y. Ent. Soc., XIV, 1906, pp. 107, 108.

DYAR, HARRISON G. A note on the Euchoeca comptaria muddle.

Can. Ent., XXXVIII, 1906, p. 110.

HEIDEMANN, O. A new genus and species of the hemipterous family Ceratocombidæ.

Proc. Ent. Soc. Wash., VII, 1906, No. 4, pp. 192–194, fig. 1.

——— Account of a new tingitid.

Proc. Ent. Soc. Wash., VIII, 1906, pp. 10–13, figs. 1–4, Nos. 1, 2.

Describes adult and nymphs of *Corythuca pergandei*.

HOWARD, LELAND O. Concerning the geographic distribution of the yellow-fever mosquito.

Public Health Records, XVIII, No. 46 [Revised to Sept. 10, 1905], Washington, Oct. 2, 1905.

A complete account of the geographic distribution of *Stegomyia calopus* (*fasciata*.)

——— House flies.

Circ. Div. Ent., U. S. Dept. Agric., No. 71, Mar. 29, 1906, 9 pp., 8 figures.

A popular consideration of flies frequenting houses, with remedies, and some reference to their disease-bearing proclivities.

——— An interesting new genus and species of Encyrtidæ.

Ent. News, XVII, Apr., 1906, pp. 121, 122.

Description of *Comperiella*, n. g., *bifasciata* n. sp., from China, introduced into California by George Compere.

——— The gypsy and brown-tail moths and their European parasites.

Yearbook U. S. Dept. Agric., 1905 (June 22, 1906), pp. 123–138, pls. 2, figs. 8.

A brief account of the American occurrences of *Porthetria dispar* and *Euproctis chrysorrhoea*, with a consideration of their European parasites and the attempts of the Department of Agriculture to introduce and establish them in New England.

KLAGES, EDWARD A. On the syntomid moths of southern Venezuela collected in 1898–1900.

Proc. U. S. Nat. Mus., XXIX, No. 1434, Jan. 31, 1906, pp. 531–552.

MACGILLIVRAY, ALEXANDER DYER. A study of the wings of the Tenthredinoidea, a superfamily of Hymenoptera.

Proc. U. S. Nat. Mus., XXIX, No. 1438, Feb. 10, 1906, pp. 569–654, pls. XXI–XLIV.

MARLATT, C. L. The giant sugar-cane borer (Castnia licus Fab.).

Bull. Bur. Ent., U. S. Dept. Agric., No. 54, 1905, pp. 71–95.

REHN, JAMES A. G. Notes on exotic forficulids or earwigs, with descriptions of new species.

Proc. U. S. Nat. Mus., XXIX, No. 1432, Dec. 2, 1905, pp. 501–515, figs. 1–9.

Figures and describes many new species in the national collection.

——— Notes on the Orthoptera of Costa Rica, with descriptions of new species.

Proc. Acad. Nat. Sci. Phila., 1905, pp. 790–843.

This paper treats of over 100 species of Orthoptera found in Costa Rica, 11 of which are described as new.

——— Notes on South American grasshoppers of the subfamily Acridinæ (Acrididæ), with descriptions of new genera and species.

Proc. U. S. Nat. Mus., XXX, No. 1453, May 9, 1906, pp. 371–391.

Gives notes and bibliographies and describes many new species in the national collection.

——— Descriptions of three new species of katydids and a new genus of crickets from Costa Rica.

Proc. U. S. Nat. Mus., XXX, No. 1459, May 24, 1906, pp. 597–605.

Figures of these new Orthoptera are given in the text, the types being in the national collection.

SCHAUS, WILLIAM. Descriptions of new South American moths.

Proc. U. S. Nat. Mus., XXIX, No. 1420, Oct. 11, 1905, pp. 179–345.

——— Descriptions of new South American moths.

Proc. U. S. Nat. Mus., XXX, No. 1444, Apr. 2, 1906, pp. 85–141.

TITUS, E. S. G. (See under Frank H. Chittenden.)

WARREN, WILLIAM. Some new South American moths.

Proc. U. S. Nat. Mus., XXIX, No. 1421, Oct. 6, 1905, pp. 347–352.

——— Descriptions of new genera and species of South American geometrid moths.

Proc. U. S. Nat. Mus., XXX, No. 1456, May 11, 1906, pp. 399–557.

CRUSTACEANS.

CUSHMAN, JOSEPH A. Marine Ostracoda of Vineyard Sound and adjacent waters.

Proc. Boston Soc. Nat. Hist., XXXII, No. 10, Feb., 1906, pp. 359–385, pls. XXVII–XXXVIII.

CUSHMAN, JOSEPH A.—Continued.

Based largely on material dredged by the Bureau of Fisheries steamers Fish Hawk and Phalarope. Three families, 11 genera, and 26 species are represented, of which 1 genus and 10 species are described as new.

DUERDEN, J. E. On the habits and reactions of crabs bearing actinians in their claws.

Proc. Zool. Soc. London, II, 1905, pt. II, Apr. 1906, pp. 494–511, text figs. 72–76.

Based chiefly on studies made at the Hawaiian Islands, under the auspices of the Carnegie Institution, on *Melia* (correctly *Lybia*) *tessclata* and *Polydectus cupulifer*.

HAY, WILLIAM PERRY. Instances of hermaphroditism in crayfishes.

Smithsonian Misc. Colls., XLVIII, Quar. issue, III, part II, No. 1593, Sept. 8, 1905, pp. 222–228, text fig. 27.

Reviews the literature on the subject and adds observations on certain specimens of *Cambarus spinosus*, *C. propinquus*, and *C. affinis* which show evidences of hermaphroditism.

RATHBUN, MARY J. Fauna of New England. V.—List of the Crustacea.

Occasional Papers Boston Soc. Nat. Hist., VII, July 20, 1905, pp. 1–117.

This paper is the fifth in the series forming a catalogue of the animals of New England, and conforms to the general plan outlined for the series, the list including the accepted name (scientific and vernacular) for each species; reference to the original description with record of locality; reference to an authentic description and illustration; and habitat and occurrence. The list comprises 390 species.

——— Description of a new species of commensal crab.

Proc. Acad. Nat. Sci. Phila., 1905 (issued Aug. 2), pp. 371, 372.

Pinnotheres strombi, taken from *Strombus pugilis* at Clearwater Harbor, Florida, by Mr. H. S. Colton.

Based on a specimen in the Museum of the Academy of Natural Sciences, Philadelphia.

——— Les crabes d'eau douce (Potamonidæ).

Nouv. Arch. Mus. Hist. Nat., Paris, (4) VII, Dec., 1905, pp. 159–321, pls. XIII–XXII.

This is the second part of the monograph which began in volume VI of the Archives. The descriptions are carried through the subfamilies Potamoninæ and Pseudothelphusinæ, while the plates are completed in this number. Two hundred and ten species and subspecies are discussed, 39 of the species being new.

RATHBUN, MARY J. The Brachyura and Macrura of the Hawaiian Islands.

Bull. U. S. Fish Com. for 1903, part III, pp. 827–930, pls. I–XXIV. (Jan. 27, 1906.)

Based chiefly on collections made by the U. S. Fish Commission during several seasons. Three hundred and fourteen species are enumerated. Two genera, 76 species, and 4 subspecies are described as new.

——— Description of a new crab from Dominica, West Indies.

Proc. Biol. Soc. Wash., XIX, June 4, 1906, p. 91.

Pseudorhombila octodentata, a species allied to the type species of the genus *P. quadridentata* (Latreille). One specimen was collected by Mr. A. Hyatt Verrill.

——— Les crabes d'eau douce (Potamonidæ).

Nouv. Arch. Mus. Hist. Nat., Paris, (4) VIII, June 26, 1906, pp. 33–122.

The third and concluding part of the monograph begun in volume VI of the Archives. Deals with the subfamilies Trichodactylinæ, Gecarcinucinæ, and Deckeniinæ. There are 34 species and subspecies, 9 of which are described as new. At the close of the paper are given lists of *nomina nuda*, indeterminable species, and species wrongly assigned to the Potamonidæ, also a bibliography brought down to January 1, 1906, and an index.

RICHARDSON, HARRIET. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. Navy, commanding. II.—Description of a new genus of Isopods, typical of a peculiar family.

Bull. Mus. Comp. Zool, XLVI, No. 6, July, 1905, pp. 105, 106, 1 pl.

Genus *Colypurus* (type *C. agassizii* sp. nov.) and family Colypuridæ. Incidentally, a new family, Rhabdochiridæ, is made for an allied form, *Rhabdocherus incertus* Giard and Bonnier.

——— Description of a new species of Livoneca from the coast of Panama.

Proc. U. S. Nat. Mus., XXIX, No. 1430, Dec. 2, 1905, pp. 445, 446, text fig. 1.

The new species, *Livoneca convexa*, was collected by Dr. W. L. Jones, and the type is owned by the University of Pennsylvania.

——— A monograph | on the | Isopods of North America | By | Harriet Richardson | Collaborator, Division of Marine Invertebrates | [Seal] Washington | Government Printing Office | 1905 |

RICHARDSON, HARRIET—Continued.

Bull. U. S. Nat. Mus., No. 54, Dec. 19, 1905, pp. i–liii, 1–727, text figs. 740.

All the species of North America are described and figured. Twenty-nine families, 128 genera, 369 species, and 1 subspecies are represented. Of these, 9 genera and 12 species are described as new.

——— Sur les isopodes de l'expédition Française Antarctique.

Bull. Mus. Hist. Nat., Paris, 1906 (June), No. 4, pp. 187, 188.

Preliminary account of the isopods collected in the Antarctic regions by Mr. Jean Charcot. Thirteen species (5 new) and 4 new genera are noted.

WORMS, ECHINODERMS, HYDROIDS, PARASITES, ETC.

COE, WESLEY R. Nemerteans of the Hawaiian Islands collected by the steamer Albatross in 1902.

Bull. U. S. Fish Com. for 1903, pt. III, pp. 975–986, pl. I. (Mar. 14, 1906.)

Three species were collected, of which two are new to science, *Tæniosoma univittatum* and *T. cingulatum;* the third, a species of *Drepanophorus*, is represented by a proboscis only.

FISHER, WALTER K. The starfishes of the Hawaiian Islands.

Bull. U. S. Fish Com. for 1903, part III, pp. 987–1130. (June 30, 1906.)

The collection upon which the report is based numbers nearly 1,650 specimens and includes 60 species, of which 52 are new to science, and 5 are for the first time recorded from the Hawaiian Islands; 1 species only that had been previously reported from the region was taken by the *Albatross*.

——— On the generic name Stolasterias, Sladen.

Ann. Mag. Nat. Hist. (7), XVII, pp. 574–575. (June, 1906.)

Determines that *Polyasterias* Perrier 1894 is a synonym of *Stolasterias* Sladen 1889, and that *Stolasterias* Perrier 1894, *nec* Sladen, is a synonym of *Marthasterias* Jullien, 1878.

GOLDBERGER, JOSEPH. (See under Ch. Wardell Stiles.)

HASSALL, ALBERT. (See under Ch. Wardell Stiles.)

KOFOID, CHARLES ATWOOD. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. Navy, commanding. III.—Craspedotella, a new genus of the Cystoflagellata, an example of convergence.

KOFOID, CHARLES ATWOOD—Continued.

Bull. Mus. Comp. Zool., XLVI, No. 9, Sept., 1905, pp. 163–165, 1 pl.

Based on a new species, *Craspedotella pilcolus*, found in the plankton midway between the Galapagos Islands and Manga Reva, and bearing a striking resemblance in form to a craspedote medusa.

LINTON, EDWIN. Notes on cestode cysts, Taenia chamissonii, new species, from a porpoise.

Proc. U. S. Nat. Mus., XXVIII, No. 1410, July 14, 1905, pp. 819–822, pl. XXXV.

LUDWIG, HUBERT. | Memoirs of the Museum of Comparative Zoology. | At Harvard College. | Vol. XXXII. | — | Reports on an exploration off the west coast of Mexico, | Central and South America, and off the Galapagos Islands, | in charge of Alexander Agassiz, by the U. S. Fish Commis- | sion Steamer "Albatross," during 1891, Lieut. Commander | Z. L. Tanner, U. S. N., commanding. | XXXV. |

Reports on the scientific results of the expedition to the | Tropical Pacific, in charge of Alexander Agassiz, on the | U. S. Fish Commission Steamer "Albatross," from August, 1899, | to March, 1900, Commander Jefferson F. Moser, U. S. N., com- | manding. | VII. | Asteroidea. | By Hubert Ludwig. | With thirty-five plates | and a chart of the route. | [Published by permission of Marshall McDonald and George M. Bowers, U. S. Commissioners | of Fish and Fisheries.] | Cambridge, U. S. A.: | Printed for the Museum. | | July, 1905. |

pp. i–xii, 1–292, pls. 1–35, 1 chart.

The material represents 16 families, 38 genera, 67 species, and 2 varieties, of which 5 genera, 56 species, and 2 varieties are new. The descriptions are followed by lists of species taken at each dredging station and in each bathymetrical area, and a list of the literature involved.

MCCLENDON, J. F. The Myzostomes of the Albatross expedition to Japan.

Bull. Am. Mus. Nat. Hist., XXIII, May 26, 1906, pp. 119–130, pls. XV–XVII.

The material was mostly taken from crinoids and ophiurans dredged by the U. S. Bureau of Fisheries steamer Albatross off the eastern coast of Japan in the spring of 1900, and partly collected at Pacific Grove, Cal., by Dr. Bashford Dean. Ten species, of which 8 are new, and 1 new variety are described.

MAYER, ALFRED GOLDSBOROUGH. Medusæ of the Hawaiian Islands collected by the steamer Albatross in 1902.

Bull. U. S. Fish Com. for 1903, part III, pp. 1131–1143, pls. I–III. (June 30, 1906.)

Seven species are described, 2 of which are new, and the occurrence of several others is briefly noted.

NUTTING, CHARLES CLEVELAND. Hydroids of the Hawaiian Islands collected by the steamer Albatross in 1902.

Bull. U. S. Fish Com. for 1903, part III, pp. 931–959, pl. I–XIII. (Dec. 23, 1905.)

Of the 49 species collected 29 are new and are very distinct from previously known forms. Two of them form the types of new genera and families, viz: *Hydrodendrium gorgonoides*, type of Hydrodendridæ, and *Balea mirabilis*, type of Tubidendridæ.

STEVENSON, EARLE C. (See under Ch. Wardell Stiles.)

STILES, CH. WARDELL. Note sur un protozoaire (Ichthyophthirius multifiliis) parasite des poissons conservés dans les aquariums de l'exposition universelle de Chicago.

Bull. Soc. Cent. d'Aquic. de France, Par., v. 6, 2. s. (7–9), July–Aug.–Sept., 1905, pp. 165–167.

——— The international code of zoological nomenclature as applied to medicine.

Bull. Hyg. Lab. U. S. Pub. Health and Mar. Hosp. Serv., No. 24, Sept., 1905, pp. 1–50.

——— New species of parasite in man.

Journ. Am. Med. Assoc., XLVI, No. 16, Apr. 21, 1906, p. 1232.

New York Med. Journ., LXXXIII, No. 16, Apr. 21, 1906, pp. 839, 840.

——— A plan to insure the establishment of type species of genera.

Science (new series), XXIII, No. 598, June 15, 1906, pp. 913–915.

——— and GOLDBERGER, JOSEPH. A young stage of the American hookworm, Necator americanus (Stiles, 1902) eight to twelve days after skin infection in rabbits and dogs.

Am. Med., Phila., v. 11 (2), Jan. 13, 1906, pp. 63–65, figs. 1–6.

——— and HASSALL, ALBERT. The determination of generic types and a list of roundworm genera, with their original and type species.

Bull. Bureau Animal Indust., U. S. Dept. Agric., No. 79, 1905, pp. 1–150.

STILES, CH. WARDELL, and STEVENSON, EARLE C. The synonymy of Taenia, T. crassicollis, T. marginata, T. serialis, T. serrata, T. coenurus, and Echinococcus.

Bull. Bureau Animal Indust., U. S. Dept. Agric., No. 80, 1905, pp. 1–14.

TREADWELL, AARON L. Polychætous annelids of the Hawaiian Islands, collected by the steamer Albatross in 1902.

Bull. U. S. Fish Com. for 1903, part III, pp. 1145–1181. (June 30, 1906.)

The report includes, also, a specimen from Samoa and a number of specimens from the coast of California. In all, 79 species are discussed, of which 27 are new to science.

VAUGHAN, T. WAYLAND. Three new Fungiæ, with a description of a specimen of Fungia granulosa Klunzinger and a note on a specimen of Fungia concinna Verrill.

Proc. U. S. Nat. Mus., XXX, No. 1473, June 20, 1906, pp. 827–832, pls. LXVII–LXXIV.

One of the new species, *F. japonica*, is fossil, and the other two, *F. samboangensis* and *F. madagascarensis*, are recent. The specimen of *F. granulosa* was collected by the U. S. Exploring Expedition; that of *F. concinna* at Papeete by the Bureau of Fisheries steamer Albatross.

——— A new species of Cœnocyathus from California and the Brazilian astrangid Corals.

Proc. U. S. Nat. Mus., XXX, No. 1477, June 27, 1906, pp. 847–850, pls. LXXVII–LXXVIII.

The new species of *Cœnocyathus*, *C. bowersi*, is from San Miguel Island, California, donated by Dr. Stephen Bowers. Two new species of Brazilian *Astrangia* are described, *A. braziliensis* and *A. rathbuni*, both collected by Dr. Richard Rathbun, while on the Geological Commission of Brazil, 1875–1877.

BOTANY.

GREENE, EDWARD LEE. Three new Heucheras.

Leaflets, I, Oct. 6, 1905, pp. 111, 112.

H. pachyppoda from California, *H. versicolor* and *leptomeria* from New Mexico.

——— A proposed new genus Anotites.

Leaflets, I, Oct. 6, 1905, pp. 97–104.

The type of the genus is what has been known as *Silene menziesii*. Eighteen species are described, sixteen of which are new.

——— Some New England Persicarias.

Leaflets I, Oct. 6, 1905, pp. 105–110.

Notes on *P. fluitans, coccinea, novæ-angliæ*, and *hartwrightii*. *P. andrewsii* is described as new.

GREENE, EDWARD LEE. Segregates of the genus Rhus.

Leaflets, I, Nov. 24, 1905, pp. 114–144.

The genus *Toxicodendron* is reinstated, with 33 species, all from the United States and Mexico, except the Japanese *T. occidentale*. This and 23 others are described as new. The genus *Schmaltzia* is also restored, with 41 species (chiefly of the far western and southwestern United States and Mexico), 38 of which are described as new. With *Rhus microphylla* Engelm. as its type, the new genus *Rhoeidium* is proposed. Of the eight species, all of the arid regions along the Mexican boundary, six are defined as new.

——— On so-called Silene menziesii.

Ottawa Naturalist, XIX, Dec. 9, 1905, pp. 163–166.

A recension of *Anotites* as occurring in British America. One new species, *A. picta*, is described.

——— New plants from southwestern mountains.

Leaflets, I, Dec. 23, 1905, pp. 145–154.

Descriptions of 31 species, in 23 genera.

——— New species of Chaptalia.

Leaflets, I, Dec. 23, 1905, p. 158.

C. alsophila of New Mexico and *C. confinis* of Arizona.

——— A proposed new genus Callisteris.

Leaflets, I, Dec. 23, 1905, pp. 159–160.

Genus of Polemoniaceæ, with *Cantua aggregata* its type. Eight of the 10 species are defined as new.

——— A new northern Antennaria.

Ottawa Naturalist, XIX, Jan. 9, 1906, p. 197.

A. athabascensis, from Fort Chippewayan, Athabasca.

——— New species of Pentstemon.

Leaflets, I, Jan. 23, 1906, pp. 161–167.

Twenty-one species, all from between the Rocky Mountains and the Pacific coast, are described.

——— New species of Isocoma.

Leaflets, I, Jan. 23, 1906, pp. 169–172.

Eleven new specific types are named and described. They are mostly from California, although several are from adjacent sections of Arizona.

——— New asteraceous genera.

Leaflets, I, Jan. 23, 1906, p. 173.

Tumionella, based on *Aplopappus monactis*, Gray; *Hesperodoria*, founded on a new type of the Compositæ from Utah.

——— Segregates from Sieversia.

Leaflets, I, Jan. 30, 1906, pp. 174–179.

It is held that there is no *Sieversia* in North America. Plants that have been so referred are here distributed between two genera, both indicated as new: *Acomastylis* based on *S. rossii*, with five species, one of them new, *Erythrocoma*, with *S. triflora* for its type, has 14 species, 12 of them new.

GREENE, EDWARD LEE. Various new species.

Leaflets, I, Jan. 30, 1906, pp. 180, 181.

Two new members of the genus *Petasites*, three in *Polygonatum*, one in *Euthamia*.

——— Mutations in Viola.

Leaflets, I, Feb. 24, 1906, pp. 182–187.

Nine different species or mutates discussed, two of them described as new.

——— New species of Mimulus.

Leaflets, I, Feb. 24, 1906, pp. 189, 190.

Four species are from California and one from Arizona.

——— A further study of Chaptalia.

Leaflets, I, Feb. 24, 1906, pp. 191–196.

Diagnosis of 18 new species of the genus, Mexican, West Indian, Central and South American. The Mutisiaceæ to which *Chaptalia* belongs is indicated as a distinct natural family.

——— Icianthus and Sprengeria.

Leaflets, I, Feb. 24, 1906, pp. 197–199.

Two proposed new genera of Cruciferæ.

——— New or noteworthy species.

Leaflets, I, Feb. 24, 1906, pp. 199, 200.

——— Certain malvaceous types.

Leaflets, I, Apr. 10, 1906, pp. 205–208.

Sphæralcea and *Malvastrum* discussed taxonomically; *Iliamna*, *Malacothamnus*, *Eremalche*, and *Discila* proposed.

——— New plants from New Mexico.

Leaflets, I, June 5, 1906, pp. 211–213.

Eight new phanerogams, belonging to six different genera.

——— New species of Viola.

Leaflets, I, June 16, 1906, pp. 214–218.

Five new species and ten new varieties of *Viola*, all of eastern North America.

HOUSE, H. D. (See under Joseph N. Rose.)

MAXON, WILLIAM R. A new cloak fern from Mexico.

Proc. Biol. Soc. Wash., XVIII, Sept. 2, 1905, pp. 205, 206.

Describes *Notholæna bryopoda* n. sp., from Mexico, based on Pringle, No. 8802.

——— A new fern from Porto Rico.

Proc. Biol. Soc. Wash., XVIII, Oct. 17, 1905, pp. 215, 216.

Describes *Polystichum krugii* n. sp., closely related to the Jamaican *P. rhizophyllum* (Sw.) Presl.

——— A new Lycopodium from Guatemala.

Proc. Biol. Soc. Wash., XVIII, Dec. 9, 1905, pp. 231, 232.

Describes *Lycopodium dichacoides* n. sp., allied to the West Indian *L. aqualupianum* Spring.

MAXON, WILLIAM R. A new Botrychium from Alabama.

Proc. Biol. Soc. Wash., XIX, Feb. 26, 1906, pp. 23, 24.

Botrychium alabamense, a new member of the group of *B. ternatum* (Thunb.) Sw., is described from Alabama.

PAINTER, JOSEPH H. (See under Joseph N. Rose.)

PIPER, CHARLES V. North American species of Festuca.

Contrib. U. S. Nat. Herb., X, pt. 1, Mar. 30, 1906, pp. i–vi, 1–48, pls. 1–15.

ROSE, JOSEPH N. Five new species of Mexican plants.

Proc. U. S. Nat. Mus., XXIX, No. 1427, Sept. 30, 1905, pp. 437–439.

——— Two new umbelliferous plants from the coastal plain of Georgia.

Proc. U. S. Nat. Mus., XXIX, No. 1428, Oct. 5, 1905, pp. 441–442, pl. III.

——— and HOUSE, H. D. Descriptions of three Mexican violets.

Proc. U. S. Nat. Mus., XXIX, No. 1429, Oct. 6, 1905, pp. 443–444, pl. IV.

——— and PAINTER, JOSEPH H. Some Mexican species of Cracca, Parosela, and Meibomia.

Botan. Gazette, XL, Aug., 1905, pp. 143–146, pl. I.

Contains 3 new species and several new names.

SMITH, JOHN DONNELL. Undescribed plants from Guatemala and other Central American republics.

Botan. Gazette, XL, July, 1905, pp. 1–11, pl. I.

GEOLOGY AND MINERALOGY.

MERRILL, GEORGE P. [Petrographic description of the Coon Butte meteorite.]

Am. Journ. Sci., XXI, May, 1906, pp. 350–352.

This description is included in a paper by J. W. Mallet, entitled "A stony meteorite from Coon Butte, Arizona."

——— On a new stony meteorite from Modoc, Scott County, Kans. [Chemical analyses by Wirt Tassin.]

Am. Journ. Sci., XXI, May, 1906, pp. 355–360.

Contains a description of the phenomena of the fall, and the mineral and chemical nature of a stony meteorite which fell at Modoc, Kans., September 2, 1905.

MERRILL, GEORGE P. The division of applied geology in the U. S. National Museum.

Trans. Am. Inst. Mining Engineers. Bimonthly Bulletin No. 4, July, 1905, pp. 931–937.

Contains remarks descriptive of the collections, delivered at a meeting of the American Institute of Mining Engineers in the lecture hall of the Museum, May, 1905.

——— Contributions to the history of American geology.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1904 (1906), pp. 189–733, pls. I–XXXVII, text figs. 1–141.

The work traces the history and gradual development of geology in America from 1785 to the organization of the present U. S. Geological Survey, in 1880.

TASSIN, WIRT. See under George P. Merrill.

PALEONTOLOGY.

ARNOLD, RALPH. The Tertiary and Quaternary pectens of California.

Professional Paper U. S. Geol. Surv., No. 47, Series C, Systematic Geology and Paleontology No. 76, 1906, pp. 1–264, pls. I–LIII.

This paper consists of an introduction and parts I and II.

Part I discusses the Tertiary and Pleistocene formations of California, and presents a post-Cretaceous geologic column and a correlation table. The various formations recognized are the Martinez and the Tejon in the Eocene; the San Lorenzo in the Oligocene; the Vaqueros sandstone; the Monterey shale and the San Pablo formation in the Miocene; the Purisima and the Merced in the Pliocene; the San Pedro in the Pleistocene. Each of these formations is treated thus: Type locality, definition of the formation, localities, Pecten fauna, and a list of fossils of whatever class. Part I closes with a tabular presentation of the geologic range of the California pectens, both recent and fossil, and from recent time back through the Eocene, and a summary showing the number of species and varieties found in the Eocene, Oligocene, etc., the number restricted to each and the number found transitional from one formation into its successor or successors. Part II contains a synopsis and descriptions of subgenera and species.

The following species and varieties are described and figured as new:

From the Eocene: *Pecten* (*Chlamys*) *calkini*, *landesi proavus*.

From the Oligocene: *Pecten* (*Pecten*) *sanctaecruzensis*, *P.* (*Chlamys*) *branneri*, *P.* (*Propeamusium*) *clallamensis*, *waylandi*.

From the Miocene: *P.* (*Pecten*) *carrizoensis*, *keepi*, *P.* (*Patinopecten*) *oweni*, *P.* (*Chlamys*) *hamlini*, *nutteri*, *sespeensis* and var. *hydei*, *P.* (*Lyropecten*) *bowersi*, *crassicardo* Con., var. *hamiltoni*, *estrellanus* Con., var. *catalinæ*, and var. *terminus*, *miguelensis*, *perrini*, *vaughani*, *P.* (*Plagioctenium*) *andersoni*, and var. *barkerianus*, *cerrosensis* Gabb, *var. ? mendenhalli eldridgei*, *ncahensis*, *P.* (*Pseudamusium*) *lompicoensis*, *P.* (*Propeamusium*) *standfordensis*, *P.* (*Amusium*) *lompoensis*.

ARNOLD, RALPH—Continued.

From the Pliocene: *P.* (*Pecten*) *auburyi*, *coalingaensis*, *lecontei*, *merriami*, *vogdesi*, *P.* (*Patinopecten*) *healeyi*, *purisimaensis*, *turneri*, *P.* (*Chlamys*) *bartschi*, *bellilamellatus*, *lawsoni*, *washburnei*, *wattsi*, and var. *morani*, *P.* (*Lyropecten*) *ashleyi*, *P.* (*Plagioctenium*) *cooperi*, *P.* (*Propeamusium*) *riversi*.

From the Pleistocene: *P.* (*Chlamys*) *latiauritus* Gabb, var. *cerritensis*, and var. *delosi*.

Recent: *P.* (*Chlamys*) *hastatus* Sby., var. *albidus* Dall, *P.* (*Pseudamusium*) randolphi Dall, var. *tillamookensis*.

The paper closes with a bibliography of literature bearing directly or indirectly upon the pectens of California.

BAGG, RUFUS M. Miocene foraminifera from the Monterey shale of California, with a few species from the Tejon formation.

Bull. U. S. Geol. Surv., No. 268, 1905, pp. 1–78, pls. I–XI.

Sixty-six species of foraminifera are described and illustrated in this bulletin. These descriptions are preceded by a discussion of the geology of the region by Prof. J. C. Branner.

BASSLER, RAY S. Portland cement resources of Virginia.

Bull. U. S. Geol. Surv., No. 243, 1905, pp. 312–325.

Describes the stratigraphy and gives analyses of the Portland cement rocks of Virginia. The stratigraphic and paleontologic investigations are based upon Museum material.

——— Cement materials of the valley of Virginia.

Bull. U. S. Geol. Surv., No. 260, 1905, pp. 531–544.

In this article the stratigraphy, paleontology, and economic value of the various cement horizons in the Paleozoic rocks of the valley of Virginia are described. Analyses, maps, and details of localities are also given.

——— A study of the James types of Ordovician and Silurian Bryozoa.

Proc. U. S. Nat. Mus., XXX, No. 1442, April 2, 1906, pp. 1–66, pls. I–VI.

This paper presents (1) an introduction stating the necessity for a redescription of these types, (2) a bibliography of the James publications, (3) the laws of nomenclature applicable to the species under discussion, (4) a classification of the Ordovician strata in the vicinity of Cincinnati, Ohio, and (5) the de-

BASSLER, RAY S.—Continued.

scription of the species in alphabetical order. Under the last heading the types of the many species of bryozoans described by Messrs. U. P. and J. F. James as corals, bryozoans, or sponges, are discussed under 73 headings and are illustrated on 7 plates.

In the discussion of Ordovician strata the following new divisions are proposed: One group, Covington, three formations, Bromley, Fairview, and McMillan, and three members, Economy, Southgate, and McMicken.

(See also under Charles Schuchert and E. O. Ulrich.)

BIBBINS, ARTHUR. (See under Lester F. Ward.)

CRAGIN, FRANCIS WHITTEMORE. Paleontology of the Malone Jurassic formation of Texas.

Bull. U. S. Geol. Surv., No. 266, 1905, pp. 1–22, 34–172, pls. I–XXIX.

Describes and figures an Upper Jurassic invertebrate fauna occurring in the neighborhood of Sierra Blanca, El Paso County, Tex. The fauna, which is varied, appears to be somewhat closely related to the Jurassic faunas in San Luis Potosi and Oaxaca, Mexico. The collections here described are the property of the National Museum.

DALL, WILLIAM HEALEY. The Pelecypoda of the Miocene of Maryland.

Vanderbilt University Quarterly, VI, No. 1, Jan., 1906, pp. 70, 71.

Review of work, partly on Museum material, by L. C. Glenn.

(See also under Charles Schuchert.)

FONTAINE, WILLIAM M. (See under Lester F. Ward.)

GIDLEY, JAMES W. A fossil raccoon from a California Pleistocene cave deposit.

Proc. U. S. Nat. Mus., XXIX, No. 1435, Feb. 2, 1906, pp. 553, 554, pl. XII.

Procyon simus, n. sp., is here described and figured.

——— A new ruminant from the Pleistocene of New Mexico.

Proc. U. S. Nat. Mus., XXX, No. 1447, Apr. 4, 1906, pp. 165–167; text figs., 1–3.

A new genus and species of the subfamily Ovibovinæ is here described under the name *Liops zuniensis*. *Liops* being preoccupied, Mr. Gidley later proposed the term *Lissops* as a substitute.

(See also under William Diller Matthew.)

GILL, THEODORE. An interesting Cretaceous chimæroid egg case.

Science (new series), XXII, No. 567, Nov. 10, 1905, pp. 601, 602.

The first known American Chimæroid egg case is noticed. The fossil is in the U. S. National Museum and was obtained from "massive sandstone" a few miles west of Laramie, Wyo.; its form most resembles that of the living *Rhinochimæra*. Comments are made on the other known Mesozoic chimæroid ovicapsules and the relations indicated to modern types. The names *archidome* and *urodome* are also introduced for different regions of the egg case.

GILL, THEODORE—Continued.

GILMORE, CHARLES W. The mounted skeleton of Triceratops prorsus.

Proc. U. S. Nat. Mus., XXIX, No. 1426, Oct. 4, 1905, pp. 433–435, pls. I, II.

Gives a brief description of the mounted skeleton in the National Museum.

——— Notes on the osteology of Baptanodon, with a description of a new species.

Memoirs Carnegie Museum, II, No. 9, Feb. 6, 1906, pp. 325–337, pls. XXXVI–XXXVIII, text figs. 1–13.

Gives additional information regarding the skeletal structure of *Baptanodon*. Describes and figures *Baptanodon robustus*, n. sp.

——— Notes on some recent additions to the exhibition series of vertebrate fossils.

Proc. U. S. Nat. Mus., XXX, No. 1460, May 31, 1906, pp. 607–611, pls. XXX–XXXV.

Illustrates and briefly describes the skeletons of *Rhamphorhynchus gemmingi* and *Mammut americanum*. Enumerates for the first time the elements comprising the type specimen of *Triceratops calicornis*. Two views are given, together with brief notes on the type skull of *Diceratops hatcheri*.

HANDLIRSCH, ANTON. A new blattoid from the Cretaceous formation of North America.

Proc. U. S. Nat. Mus., XXIX, No. 1439, Mar. 7, 1906, pp. 655, 656, 1 text fig.

Describes and figures new genus and species, *Stantonia cretacea*. The type specimen is in the National Museum collection.

——— Revision of American Paleozoic insects.

Proc. U. S. Nat. Mus., XXIX, No. 1441, Mar. 7, 1906, pp. 661–820, text figs. 1–109.

This paper treats of all the known American Paleozoic insects and is therefore monographical in its scope. The systematic revision of American Paleozoic insects proper is preceded by an introduction by Prof. Charles Schuchert and a discussion of the geological position of the principal insect-bearing localities of the United States by Dr. David White.

One hundred and three new genera and 138 new species are described by Doctor Handlirsch. With the exception of a few species, all of the material illustrated is in the collections of the National Museum.

HATCHER, J. B. (See under T. W. Stanton.)

KNOWLTON, FRANK HALL. Fossil plants of the Judith River beds.

Bull. U. S. Geol. Surv., No. 257, 1905, pp. 129–168, pls. XIV–XIX.

The specimens described by Mr. Knowlton are contained in the Museum collections, having been transferred from the U. S. Geological Survey. The paper enumerates and describes 28 forms, 16 of which are new and 5 not specifically described. From his review of these forms he states that the flora of the Judith River beds, so far as now known, shows very little affinity with the true Laramie or with the Fort Union, but that it does exhibit an undoubted relationship with that of the Dakota Group, or with the Cenomanian and Senonian of the Old World; that is, with the lower and middle portions of the Upper Cretaceous.

(See also under T. W. Stanton and J. B. Hatcher.)

MARTIN, G. C. (See under T. W. Stanton.)

MATTHEW, WILLIAM DILLER. The osteology of Sinopa, a creodont mammal of the middle Eocene.

Proc. U. S. Nat. Mus., XXX, No. 1449, May 11, 1906, pp. 203–233, pl. XVI.

Describes and figures a complete skeleton of a new species of *Sinopa*, *Sinopa grangeri*, and discusses the affinities and relationships of the genus *Sinopa*.

——— and GIDLEY, JAMES W. New or little known mammals from the Miocene of South Dakota.

Bull. Am. Mus. Nat. Hist., XXII, art. VIII, May 26, 1906, pp. 135–153, texts figs. 1–20.

In part IV of this article, under the subtitle Equidæ, Mr. Gidley describes and figures new material of Miocene horses from South Dakota and Nebraska, and proposes three new species, *Protohippus simus*, *Neohipparion dolichops* and *Neohipparion niobrarense*.

OSGOOD, WILFRED H. Scaphoceros tyrrelli, an extinct ruminant from the Klondike gravels.

Smithsonian Misc. Colls., XLVIII, Quar. issue, III, pt. II, No. 1589, July 1, 1905, pp. 173–185, pls. XXXVII–XLII.

Describes and figures *Scaphoceros tyrrelli*, new genus and species. The name *Scaphoceros* being preoccupied, Mr. Osgood later proposes *Simbos* as a substitute.

SCHUCHERT, CHARLES. A new American pentremite.

Proc. U. S. Nat. Mus., XXX, No. 1467, June 11, 1906, pp. 759, 760, figs. 1–3.

Describes and figures *Pentremites maccalliei*, n. sp., from the Bangor limestone of Georgia.

SCHUCHERT, CHARLES. Catalogue of the type specimens of fossil invertebrates in the department of geology, U. S. National Museum. Assisted by W. H. DALL, T. W. STANTON, and R. S. BASSLER.

Bull. U. S. Nat. Mus., No. 53, pt. 1, Sept. 30, 1905, pp. 1–704.

This section of Bulletin 53 records the type material of invertebrate fossils in the U. S. National Museum. The introduction by Charles Schuchert contains a general discussion and classification of type specimens, with descriptions of the various kinds of primary and supplementary types and definitions of new type terms. Typical specimens, types of genera, marking of type material, and other more general subjects are discussed. The introduction closes with a list of the literature on type terms.

In the catalogue proper the types are recorded under the names as originally described. Subsequent descriptions of the same species under different names are referred to by cross references, while the present placement of the listed type, if different from the recorded reference, is likewise denoted.

SMITH, W. S. TANGIER. (See under E. O. Ulrich.)

STANTON, T. W. Stratigraphic notes on Malone Mountain and the surrounding region near Sierra Blanca, Tex.

Bull. U. S. Geol. Surv., No. 266, 1905, pp. 23–33.

Describes the Jurassic and Cretaceous rocks in a limited area lying between the Sierra Blanca, El Paso County, Tex., and the Rio Grande. The Jurassic rocks are those of the Malone formation yielding the fauna described by F. W. Cragin, and the Cretaceous is mostly referable to the Comanche series, though in fact somewhat different from the usual facies.

——— The Morrison formation and its relations with the Comanche series and the Dakota formation.

Journ. Geology, XIII, 1905, pp. 657–669.

It is shown that the Morrison formation, long known as the Atlantosaurus beds, passes beneath the marine beds of the Comanche series in southwestern Colorado and adjacent portions of New Mexico and Oklahoma. The attenuated marginal deposits of the Comanche series in this region have often been referred to the Dakota formation with which they are intimately associated, although there is some evidence of an unconformity between them.

——— and HATCHER, J. B. Geology and paleontology of the Judith River beds, with a chapter on the fossil plants by F. H. Knowlton.

Bull. U. S. Geol. Surv., No. 257, July, 1905, pp. 1–174, pls. I–XIX.

STANTON, T. W., and HATCHER, J. B.—Continued.

Presents the evidence as to the stratigraphic position of the Judith River beds in the Upper Cretaceous, showing they are considerably lower than the Laramie. The vertebrate fauna is discussed by Mr. Hatcher, and the invertebrate fauna by Mr. Stanton, with descriptions and figures of a few new or imperfectly known species. Mr. Knowlton describes and illustrates the flora. The collections discussed have been transferred to the National Museum.

—— and MARTIN, G. C. Mesozoic section on Cook Inlet and Alaska Peninsula.

Bull. Geol. Soc. America, XVI, 1905, pp. 391–410, pls. 67–70.

Describes the Triassic, Jurassic, and Cretaceous rocks of the region with detailed stratigraphic sections and notes on their distribution, correlation, and fossils. The great development of the Middle and Upper Jurassic is especially noteworthy. Large collections of fossils which will become the property of the National Museum were obtained in connection with this field study.

(See also under Charles Schuchert.)

TRUE, FREDERICK W. The first discovery of fossil seals in America.

Science (new series), XXII, No. 572, Dec. 15, 1905, p. 794.

—— Description of a new genus and species of fossil seal from the Miocene of Maryland.

Proc. U. S. Nat. Mus., XXX, No. 1475, June 16, 1906, pp. 835–840, pls. LXXV–LXXVI.

Proposes the new genus *Leptophoca* and describes and figures the new species *Leptophocalcuus*.

ULRICH, E. O., and BASSLER, RAY S. New American Paleozoic ostracoda. Notes and descriptions of Upper Carboniferous genera and species.

Proc. U. S. Nat. Mus., XXX, No. 1446, Apr. 4, 1906, pp. 149–164, pl. XI.

In this paper the writers continue their studies of fossil ostracods. Here the family Leperditellidæ and the genus *Paraparchites* are described as new, while descriptions and illustrations of new and previously known species of *Beyrichia*, *Beyrichiella*, *Cythere*, *Kirkbya*, *Bairdia*, and *Cypridina* are given.

—— and SMITH, W. S., Tangier. The lead, zinc, and fluorspar deposits of western Kentucky.

Professional Paper, U. S. Geol. Surv., No. 36, 1905, pp. 1–218, pls. I–XV.

In Part I of this paper the geology and general relations are discussed by E. O. Ulrich. Under the description of the stratigraphy of the region, five plates are given upon which

ULRICH, E. O., and SMITH, W. S. TANGIER—Continued.

the characteristic fossils of each formation are illustrated. The originals of these illustrations are all in the National Museum, being a part of the Ulrich collection.

WALCOTT, CHARLES D. Cambrian faunas of China.

Proc. U. S. Nat. Mus., XXIX, No. 1415, Sept. 6, 1905, pp. 1–106.

This is a preliminary paper devoted to a description of the Cambrian fossils collected in China for Doctor Walcott by the members of the expedition of the Carnegie Institution of Washington. This fauna is published in advance of the illustrated report for use in the correlation of the various sections and discussion of the stratigraphy. Descriptions of 126 species are given of which 106 are trilobites, the remainder being distributed among the Foraminifera, Porifera, Brachiopoda, Pteropoda, Gastropoda, Cephalopoda, and Ostracoda.

——— Cambrian faunas of China.

Proc. U. S. Nat. Mus., XXX, No. 1458, May 23, 1906, pp. 563–595.

This preliminary paper (No. 2) is a continuation of the description of the fossils collected in China by the members of the expedition of the Carnegie Institution of Washington. Twenty-six additional new species of trilobites are described as well as a number of brachiopods and gastropods, and the occurrence of the genus *Coscinocyathus* is noted.

WARD, LESTER F. Status of the Mesozoic floras of the United States. Second paper by Lester F. Ward, with the collaboration of William M. Fontaine, Arthur Bibbins, and G. R. Wieland.

Monogr. U. S. Geol. Surv., XLVIII, 1905, pt. I, text, pp. 1–616; pt. II, pls. I–CXIX.

The specimens described in this work are almost entirely in possession of the U. S. National Museum. The paper is divided into three parts: Part I, The Triassic Flora (continued from the first paper in the 20th Ann. Rept., U. S. Geol. Surv., 1900), devoted to the older Mesozoic of Arizona; Part II, The Jurassic Flora (continued from the first paper in the Twentieth Annual Report of the U. S. Geological Survey, 1900), which describes the Jurassic flora of Douglas County, Oreg., and other plant-bearing beds in the Jurassic and Jurasso-Cretaceous transition beds from other localities in Oregon and from Alaska, California, and Montana, including also the Jurassic cycads from Wyoming and the Black Hills; and Part III, The Cretaceous Flora, which includes the Lower Cretaceous flora of Queen Charlotte Islands, and the floras of the Shasta, Kootanie, Lakota, Trinity, and older Potomac formations. The latter is devoted to the older Potomac (James River, Rappahannock, Mount Vernon, and Aquia Creek beds) flora

WARD, LESTER F.—Continued.

of Maryland, Virginia, and the District of Columbia. From the study of these beds the conclusion is reached that the lower Potomac has a flora that is essentially Wealden, and also that the Wealden is Lower Cretaceous rather than Jurassic.

WIELAND, G. R. (See under Lester F. Ward.)

OCEANOGRAPHY.

AGASSIZ, ALEXANDER. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz; by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. Navy, commanding. v.—General report of the expedition.

Memoirs Mus. Comp. Zool., XXXIII, 1906, pp. i–xiii, 1–75, 96 plates and 8 text figs.

Contains accounts of the hydrography, character of the bottom, fauna of the different depths, temperatures, specific gravities, winds, records of stations occupied, and brief descriptions of some of the islands visited.

FLINT, JAMES M. A contribution to the oceanography | of the Pacific | compiled from data collected by the United | States steamer Nero while engaged in | the survey of a route for a | trans-Pacific cable | — | By | James M. Flint. | Medical Director, U. S. Navy; Curator, Division of Medicine, U. S. National Museum | [Seal] | Washington | Government Printing Office | 1905. |

Bull. U. S. Nat. Mus. No. 55, Dec. 26, 1905, pp. i–v, 1–62, pls. I–XIV.

The work of the Nero was from Honolulu to Midway Island, thence to Guam, thence to Luzon, and also from Guam to Japan. The number of soundings made was 2,074. The author gives an account of the track, depths, gradients, temperatures, and character of the bottom, the deposits at a selected number of stations being recorded in detail.

BIOGRAPHY.

DALL, WILLIAM HEALEY. Obituary notice, Marcus Baker, 1849–1903.

Bull. Philos. Soc. Wash., XIV, Aug., 1905, pp. 277–285.

A brief memoir of one who was for years a collaborator in the field work and collecting of the National Museum.

——— Obituary notice, John Wesley Powell, 1834–1902.

Bull. Philos. Soc. Wash., XIV, Aug., 1905, pp. 300–308.

Brief memoir of a distinguished associate in the work of the Museum.

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