
PART I.

REPORT UPON THE CONDITION AND PROGRESS OF THE
U. S. NATIONAL MUSEUM DURING THE YEAR
ENDING JUNE 30, 1902.

BY

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ASSISTANT SECRETARY OF THE SMITHSONIAN INSTITUTION,
IN CHARGE OF THE U. S. NATIONAL MUSEUM.

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GENERAL CONSIDERATIONS.

The United States National Museum had its origin in the act of Congress of 1846 founding the Smithsonian Institution, which made the formation of a museum one of the principal functions of the latter, and provided that—

Whenever suitable arrangements can be made from time to time for their reception, 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, which may be in the city of Washington, in whosoever custody they may be, shall be delivered to such persons as may be authorized by the Board of Regents to receive them, and shall be so arranged and classified in the building erected for the Institution as best to facilitate the examination and study of them; and whenever new specimens in natural history, geology, or mineralogy are obtained for the museum of the Institution, by exchanges of duplicate specimens, which the Regents may in their discretion make, or by donation, which they may receive, or otherwise, the Regents shall cause such new specimens to be appropriately classed and arranged.

The principal and accumulated interest of the Smithsonian fund amounted at that time to about \$750,000, a sum considered ample to meet the needs of the various operations in which it was proposed that the Smithsonian Institution should engage. In 1846 probably not more than one or two universities or learned establishments in America had so large an endowment, and it was apparently the idea of Congress that the fund was sufficient both for the erection of a building and for the care of the collections which would be turned over to it or acquired by the national surveys, and in other ways. The Museum thus began as an integral part of the Institution, coordinate with its library, and was required by law to provide for the Government collections which had previously accumulated, a duty which the

Institution did not see its way clear to fulfill until 1858, when Congress began to make small yearly appropriations to aid in this purpose. So inadequate, however, were the sums voted, that for many years the slender income of the Institution continued to be drawn upon to insure the maintenance of what was then justly called the Smithsonian Museum, since the building was paid for out of the Smithson fund, a considerable portion of the collections was and still is the property of the Institution, through exploration and gift, and a number of the officials connected with the Museum were employed at its expense.

The first scientific collection to come into the possession of the Institution—and, in fact, it accompanied the bequest—was the small but valuable mineralogical cabinet of James Smithson, the founder, who was himself a chemist and mineralogist of repute, and a Fellow of the Royal Society of London.

The nucleus of the National Museum was, however, virtually acquired by the National Institute, a society organized in Washington about 1840, having for its avowed purpose the direction of the Smithson bequest and the pursuit of objects in consonance with the terms of that foundation. One of these objects was the gathering of historical and natural history specimens from both official and private sources, most prominent among the former having been the United States Exploring Expedition around the world from 1838 to 1842. Rooms in the Patent Office building were secured for the museum of the society, which was practically recognized as the appropriate place of deposit for all Government collections retained in Washington. Another important service rendered by the society was, as the late Dr. G. Brown Goode has said, in the direction of educating public opinion "to consider the establishment of such an institution worthy of the Government of the United States." Failing, however, to secure the public recognition at which it aimed, it became inactive upon the establishment of the Smithsonian Institution in 1846, and its charter, which expired in 1861, was not renewed. The Government collections in its possession, which came practically under the care of the Commissioner of Patents, were turned over to the Smithsonian Institution in 1858. Other material directly under the control of the National Institute remained at the Patent Office until 1862, and a part of the historical objects were held there until 1883.

Previous to 1858, however, important materials for a museum were being accumulated at the Smithsonian Institution, at its own cost and through the activities of its assistant secretary, Prof. Spencer F. Baird, beginning even before his appointment to that office in 1850. The personal bent of Professor Baird was toward the collection of natural history specimens for purposes of study. With the approval of Secretary Henry he put into operation plans for the accomplishment of this object, which, fostered and encouraged, were soon yield-

ing regular and abundant returns. Professor Baird's own vacations were spent in field work. Officers of the Army and Navy and of other branches of the Government service, fishermen, fur traders, private explorers, and such powerful organizations as the Hudson's Bay Company and the Western Union Telegraph Company, were enlisted in the work and rendered valuable assistance. The influence exerted by these beginnings has been lasting and widespread, as shown in the extensive natural history operations of subsequent National and State surveys, the organization of the Fish Commission and Bureau of Ethnology, and the support given to scientific collecting by many other bureaus of the Government.

The discussion of plans for the organization of the Smithsonian Institution, which devolved upon the first Board of Regents, led, in January, 1847, to the unanimous adoption of the following resolution expressing approval of the museum feature as one of its important functions:

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. ^a

The policy thus announced has prevailed to the present day.

In 1879, when most of the existing Government surveys, whose work included the collecting of specimens in the field, had been established, Congress deemed it important to practically reenforce the provisions of the act founding the Institution, in order that there might be no doubt as to the proper disposition of the material certain to be derived from these various sources, by the following enactment in the sundry civil appropriation act for 1880:

All collections of rocks, minerals, soils, fossils, and objects of natural history, archaeology, and ethnology, made by the Coast and Interior Survey, the Geological Survey, or by any other parties for the Government of the United States, when no longer needed for investigations in progress shall be deposited in the National Museum.

Although the name "National Museum" was sometimes used in the earlier reports of the Smithsonian Institution, it did not appear in any of the laws of Congress until 1875. Its general employment may be said to date from the time of the Philadelphia Centennial Exhibition of 1876, the first exposition in this country in which the Government participated, and the first to make known to vast numbers of the people of the United States the existence of national collections at

^a Report of Committee on Organization, p. 20.

Washington, as well as new methods of installing and exhibiting museum materials, differing radically from the older cabinets of college or local museums, which had prevailed up to that period. After its close the Government exhibits brought back to Washington, together with the extensive gifts made to the United States by private persons and foreign governments, rendered necessary the early erection of a new and separate building, devoted entirely to museum purposes. Since that time Congress has mainly provided for the maintenance of the Museum, but its management remains, by the fundamental act, under the authority of the Regents of the Smithsonian Institution, administered through their Secretary, who is *ex officio* the keeper—a form of government insuring a consistent and uniform policy and a nonpartisan administration of its affairs. The greater part of the Smithsonian building is still used for museum purposes, and the Institution, as well as most of the scientific bureaus at Washington, cooperate, both through men and material, in enlarging and caring for the national collections.

The scope of the National Museum as defined by law comprises practically all branches of science and of the arts which admit of museum treatment. With exceedingly limited means for making purchases, and therefore almost entirely dependent as to the character of its collections upon Government explorations, personal donations, and exchanges, its different departments have had a very unequal growth. The subjects best represented are American ethnology and archæology, geology, zoology, and botany. A fair beginning has been made in the exceedingly important branches of the industrial arts and American history, and scarcely more is required to place these two departments on a proper basis than sufficient room to display the necessary collections, which are certain to be received, in greater part through gratuitous contributions, when it is known that the Museum is prepared to care for them. In the department of the fine arts the collection is still very small, but the subject is one which must sooner or later receive earnest consideration by the Government.

The specimens in all branches are classified in two series; one, comprising the bulk of the material, being arranged for the purposes of scientific research and reference in laboratories and storerooms, to which students are freely admitted; the other, selected with regard to their general educational value and public interest, and accompanied by descriptive labels, being displayed in glass-covered cases in the public halls. The duplicate specimens not required for exchanges are made up into sets for distribution to schools and colleges, as opportunity offers. Papers descriptive of the collections, both technical and popular, are published for gratuitous circulation to the extent of three or more volumes yearly, and, finally, the Museum has come to be regarded as a bureau of information in respect to all

subjects with which it is even in the remotest degree concerned, the correspondence which this involves now constituting one of its heaviest tasks.

The history of the Museum, as pointed out by the late Dr. Goode, may be divided into three epochs, which he characterized as follows:

First, the period from the foundation of the Smithsonian Institution to 1857, during which time specimens were collected solely to serve as materials for research. No special effort was made to exhibit them to the public or to utilize them, except as a foundation for scientific description and theory.

Second, the period from 1857, when the Institution assumed the custody of the "National Cabinet of Curiosities," to 1876. During this period the Museum became a place of deposit for scientific collections which had already been studied, these collections, so far as convenient, being exhibited to the public and, so far as practicable, made to serve an educational purpose.

Third, the present period (beginning in the year 1876), in which the Museum has undertaken more fully the additional task of gathering collections and exhibiting them on account of their value from an educational standpoint.

During the first period the main object of the Museum was scientific research; in the second, the establishment became a museum of record as well as of research, while in the third period has been added the idea of public education. The three ideas—record, research, and education—cooperative and mutually helpful as they are, are essential to the development of every great museum. The National Museum endeavors to promote them all.

In the same connection, Dr. Goode also defined the scope and objects of the Museum in the following concise manner:

It is a museum of record, in which are preserved the material foundations of an enormous amount of scientific knowledge—the types of numerous past investigations. This is especially the case with those materials that have served as a foundation for the reports upon the resources of the United States.

It is a museum of research, which aims to make its contents serve in the highest degree as a stimulus to inquiry and a foundation for scientific investigation. Research is necessary in order to identify and group the objects in the most philosophical and instructive relations, and its officers are therefore selected for their ability as investigators, as well as for their trustworthiness as custodians.

It is an educational museum, through its policy of illustrating by specimens every kind of natural object and every manifestation of human thought and activity, of displaying descriptive labels adapted to the popular mind, and of distributing its publications and its named series of duplicates.

AS A MUSEUM OF RECORD.

In its function as a museum of record the growth of the National Museum has been unprecedented, due mainly to the rapid exploration and development of a rich and extensive country under the liberal and progressive policy of the Government. From scientific institutions throughout the world, from foreign governments, and from individuals abundant stores of great value have been received, either as gifts or through the medium of exchange of specimens, and a small appropriation in recent years has permitted of some purchases to supply desiderata.

The principal sources of the collections may be briefly summarized as follows:

1. The explorations carried on more or less directly under the auspices of the Smithsonian Institution, or by the Institution in connection with educational institutions or commercial establishments, and the efforts, since 1850, of its officers and correspondents toward the accumulation of natural history and anthropological material.

2. The United States Exploring Expedition around the world from 1838 to 1842, the North Pacific, or Perry, Exploring Expedition from 1853 to 1856, and many subsequent naval expeditions down to and including the recent operations in the West Indian and Philippine waters.

3. The activities of members of the United States diplomatic and consular service abroad.

4. The Government surveys at home, such as the Pacific Railroad surveys, the Mexican and Canadian boundary surveys, and the surveys carried on by the Engineer Corps of the U. S. Army; and the activities of officers of the Signal Corps, and other branches of the Army stationed in remote regions.

5. The explorations of the U. S. Geological Survey, the U. S. Fish Commission, the Department of Agriculture, the Bureau of American Ethnology of the Smithsonian Institution, and other scientific branches of the Government.

6. Donations and purchases in connection with the several expositions at home and abroad in which the Museum and Fish Commission have participated, among these having been the Centennial Exhibition at Philadelphia in 1876, the international fisheries exhibitions at Berlin in 1880 and at London in 1883, the New Orleans Cotton Centennial Exposition in 1884 and 1885, the Cincinnati Exposition of 1888, the World's Columbian Exposition at Chicago in 1893, and the expositions at Atlanta in 1895, at Nashville in 1897, at Omaha in 1898, and at the Pan-American Exposition of 1901. The returns from the World's Fair in Philadelphia were of greatest extent, comprising, besides the collections displayed by the United States in illustration of the animal and mineral resources, the fisheries, and the ethnology of the native races of the country, valuable gifts from thirty of the foreign governments which participated, as well as the industrial collections of numerous manufacturing and commercial houses of Europe and America.

7. Exchanges with foreign and domestic museums and with individuals.

Immediately preceding the Centennial Exhibition of 1876, when the collections were entirely provided for in the Smithsonian building, the number of entries of specimens in the Museum record books was about 235,000. In 1884, when the additional room afforded by the new building gave opportunity for taking a provisional census of the large

accessions received from Philadelphia, and from other sources, the number had grown to 1,471,000. At the close of 1902 it amounted to nearly 5,500,000.

While these figures convey no impression of the bulk of the collections, when it is considered that by 1885 all of the space in both buildings was completely filled, and in fact so overcrowded that a third building was already being asked of Congress, some conception may be had of the conditions now existing. The storerooms are packed to their utmost capacity, making it difficult to gain access to the specimens or to provide adequately for their safety. For many years most of the objects received have had to be stored in outside and unsafe structures, where they are mainly piled up in the original packing boxes, and where has already accumulated enough material of great intrinsic and scientific value to fill an additional building as large as that now occupied by the main collections.

AS A MUSEUM OF RESEARCH.

In order to permit of their examination and study, as provided in the act of establishment, the collections of the Museum are, to the extent of its accommodations, arranged systematically and in a manner convenient for reference. Access to the reserve or study series, so called, consisting of the main body of the collections and as complete in all the groups as the accessions have made possible, is given to all properly qualified persons engaged in original research. The opportunities thus afforded are widely availed of, the Museum being visited every year by many investigators, some of world-wide distinction, coming from the scientific centers of European and other foreign countries, as well as from all parts of the United States. Material is also occasionally sent out to representatives of other institutions having the means of providing for its safekeeping, when required in the working up of special subjects, or for comparison in connection with their own collections.

The custodianship of the collections being the first and most imperative duty devolving upon the scientific staff of the National Museum, its members find comparatively little time during office hours for advancing knowledge, though they are mostly well qualified for such work, being selected with special reference to their ability to identify and classify the specimens under their charge in accordance with the latest researches. As a matter of fact, however, the staff does produce every year a large number of papers descriptive of the collections, which together constitute an important contribution to scientific literature.

Among the honorary officers having their laboratories at the Museum are a number of assistants employed by other scientific bureaus to con-

duct investigations on material kept here in their charge, and in whose results the Museum shares.

Many collections have, from time to time, been transferred by the Geological Survey, the Fish Commission, the Department of Agriculture, and other branches of the Government to the custody of the Museum in advance of their final working up, in order to provide for their safe storage and to secure the better facilities for study here afforded. Under this arrangement the amount of research work carried on in the Museum building has been greatly increased.

Though having little means to expend for field work, members of the Museum staff are occasionally given opportunities to participate in the explorations of other Government bureaus or of private expeditions, in connection with which special researches may be carried on, though the chief advantage results from the acquisition of new and valuable material and a knowledge of the conditions under which it occurred in nature.

AS AN EDUCATIONAL MUSEUM.

The educational side of the Museum is intended to consist mainly of an exhibition of all the classes of objects which it represents, so mounted, installed, and labeled as to directly interest and instruct the general public. The principal difficulty incident to the proper installation of such a collection, conceding all the space required, lies in the selection of its parts, so that while enough is displayed to convey the amount of information which it is intended to impart, the visitor shall not be overburdened or confused with details. While this policy is being followed in the National Museum so far as its means permit, the lack of room has always prevented a complete or satisfactory development of the plan, and every succeeding year the conditions in this respect grow worse instead of better through the increased crowding of the halls. The advances in recent years have been chiefly in the methods of display, in the character of individual and group mountings, and in the labeling, in all of which directions exceptional progress has been made.

A year ago it was announced that all of the halls designed for public use were then for the first time permanently open, though none were above addition or improvement, while in some the arrangement was entirely provisional. This was only accomplished by the transfer of large quantities of material to outside storage, but during the past year it has unfortunately been again necessary to shut off one of the most attractive halls in order to furnish increased space for work-rooms.

In this connection it seems appropriate to refer to the work of Dr. Goode, than whom no museum administrator ever had a better understanding of the public needs. He labored earnestly and conscientiously

tiously to make this a museum for, as well as of, the people, and the plans now being carried out are, in all their essential features, of his making. While the assistants might be relied upon to arrange and maintain the study series in a manner acceptable to the specialist, the interests of the public always remained in his immediate charge. He was ever occupied in devising ways for so presenting the features of nature and the activities of mankind that by the very force of his surroundings the visitor was bound to receive and carry with him some definite impressions, some new bit of knowledge. Dr. Goode's labors in this field ranged from the planning of the general scheme to the most minute details of case architecture and fittings. His official connection with nearly all the important expositions of the past quarter of a century and his exhaustive studies of all the principal museums of Europe and the United States gave him exceptional opportunities for observation and experiment. Though a young man when he died, none other had acquired so ripe an experience and none is more worthy of being followed.

An incidental though very popular educational feature of the Museum, having for its purpose the promotion of scientific teaching throughout the country, has been the distribution to schools and colleges of its duplicate specimens, properly identified and labeled, and put up in carefully selected sets. Inadequate means have prevented this measure from being carried out on the scale which the resources of the Museum would admit of, but many hundreds of such sets have already been given away.

Scarcely a year passes that some expedition, either at home or abroad, is not occupying the attention of the Museum, and through this means its existence and aims are brought constantly and prominently before the public. These expositions have of late followed one another so closely and have required such extensive preparations as to interfere greatly with the ordinary work of the Museum, but the practice of introducing new and varied features, of showing a fresh series of objects or improved groupings in connection with each one, insures a substantial gain, as the collections are returned to Washington, besides fulfilling the important function of making museum methods known to the people of the United States and stimulating the growth of museums in many quarters.

Though mainly technical and most useful to the investigator, the publications of the Museum can be classed, in a general way, as belonging to its educational side, being the medium through which the nature and extent of its collections are made known. The Annual Report, first printed as a separate volume of the Smithsonian Report in 1884, and now in its nineteenth volume, consists, besides the administrative part, mainly of semi-popular papers on interesting portions of the collections. The Proceedings and Bulletins are almost exclusively

technical, the shorter papers being assigned to the former and the larger and more exhaustive works to the latter. Of the Proceedings twenty-three complete volumes have been issued and of the Bulletins fifty-one numbers.

PRESENT CONDITION AND NEEDS OF THE MUSEUM.

The National Museum now occupies the building erected for its use in 1881, the greater part of the Smithsonian building, parts of three detached buildings on the Mall, and several rented buildings south of B street SW. The floor area represented, together with the general use to which the several floors of the larger buildings and each of the smaller buildings are devoted, is shown in the following table:

Smithsonian building:	Square feet.
Basement (mainly storage and heating plant)	11, 778
Ground floor (mainly exhibition halls)	17, 372
Second floor (mainly workrooms)	6, 587
Third floor (mainly exhibition)	10, 889
Upper part of north tower (workrooms and storage)	2, 617
East end (offices, shipping rooms, etc.)	2, 755
	51, 998
Museum building:	
Ground floor (exhibition)	74, 209
Gallery floor (mainly exhibition)	28, 986
Central towers and pavilions (mainly workrooms, storage, offices, library, etc.)	40, 293
	143, 488
Outside buildings:	
Smithsonian stable (taxidermist's workroom)	615
Frame building on Smithsonian reservation (taxidermist's and one mechanical workshop)	1, 400
Frame building on Armory square (storage of specimens)	7, 073
Buildings at No. 431 Ninth street SW. (rented, storage of speci- mens and property)	21, 129
Building No. 309 to 313 Tenth street SW. (rented, storage of specimens, preparators' and mechanical workshops)	6, 406
Building No. 217 Seventh street SW. (rented, carpenter shops) ..	3, 655
Building in rear of 915 Virginia avenue SW. (rented, paint and glass shop)	2, 925
	43, 203
Total space now occupied	238, 689

The allotments of space by subjects and by departments is as follows:

By subjects:	Square feet.
Exhibition	112, 697
Storage of reserve collections, scientific laboratories, and workrooms ...	75, 468
General and miscellaneous purposes, including mechanical workshops and storage, heating plant, library, lecture hall, public comfort, administrative offices, etc	50, 524
Total	238, 689

By departments:	Square feet.
Anthropology, including ethnology, archeology, American history, and arts and industries.....	78,280
Biology, including zoology and botany	72,914
Geology, including division of practical geology	36,971
General and miscellaneous purposes	50,524
Total	238,689

An inspection of the several buildings shows conditions which are very deplorable for the National Museum of a great country. Every branch is seriously hampered by the total inadequacy of the space assigned it, and the proper disposition of specimens long ago became impossible, with the result that year after year valuable collections, often of large size, have had to be packed away in insecure rented buildings, where they are also inaccessible. While the Museum building is not ill adapted to exhibition purposes, it is much too small to serve the present needs. Its halls are overcrowded, the cases being generally placed so near together that two persons can scarcely pass between them and no effective view of their contents can be obtained. An increase in space of one-half to two-thirds at least would be necessary to properly display the present contents of these halls.

Having practically no basement, the only space available for the reserve storage, workrooms, and offices is in the small rooms of the central towers and corner pavilions, except that some of the galleries designed for exhibition have from necessity been turned over to these purposes. In these quarters the specimens are packed almost solidly, in cases generally reaching to such a height as to make access to the upper ones extremely inconvenient. The workers have scarcely room in which to place their tables, and there is little place anywhere for the spreading out of specimens for purposes of study and classification or of preparation for exhibition.

In the Smithsonian building, which was originally intended to be used only in small part for museum purposes, the conditions are similar. There are four exhibition halls, three used for zoology and one for prehistoric archeology. The latter, occupying the entire upper floor of the main building, has, through the loosening and fall of large areas of plaster from the ceiling, been pronounced unsafe and closed to the public until funds can be obtained for its repair and renovation. The large corresponding room on the ground floor has four galleries extending nearly its entire length, which, some fifteen years ago, were turned into work and storage quarters for several branches of zoology. They are overcrowded with cases and tables and are, moreover, extremely unhealthful places for the assistants stationed there because of the impure air rising from the exhibition floor below.

In the basement is stored the greater part of the valuable alcoholic collection of the Museum, in a series of dark, damp rooms, wholly

unsuited to the purpose, and where a great deal of work has to be carried on. The other workrooms and storerooms in the Smithsonian building, besides two or three small ones on the main floor, are in the north tower, which is utilized for these purposes up to the height of the seventh story. It is scarcely necessary to explain that many of these rooms, all of which are very small, are inconvenient of access, and that specimens can be carried to and from them only with difficulty.

Many of the activities of the Museum and much the greater part of its storage have, for a long period, had to be provided for in outside buildings, partly on the Mall and partly rented at an annual expense of over \$4,000. The taxidermists are quartered in the upper part of the Smithsonian stable and in a temporary frame structure back of the Smithsonian building. On Armory square, adjoining the Fish Commission building, is an old, dilapidated wooden shed filled with specimens. On Ninth street SW, there is under lease a large area of land, covered with wooden sheds containing an immense amount of valuable collections and much other Museum property. The greater part of the so-called Marsh collection of vertebrate fossils, which has been valued at above \$150,000, is still stored in a rented building at Tenth street and Maryland avenue, which also provides space for several preparators' workshops. Two other rented buildings are likewise used to accommodate the extensive carpenter, paint, and glazing shops which are required for the making of furniture and for the repairs upon the main buildings.

In order to carry out the purposes for which it exists, the National Museum requires a greatly increased amount of space, and that any additional space provided be better adapted to its wants than that now occupied.

For the exhibition collections a connecting series of relatively large rooms or halls is needed to permit of the arrangement of the specimens and groups of specimens, many of considerable size, in such manner as will best adapt them to the comprehension of the public and, by the avoidance of crowding, allow them to be viewed effectively.

The record collections, commonly known as the reserve or study series, comprising the bulk of the material in most departments, while demanding such a convenient disposition as will insure the ready examination of specimens, require relatively less space than the exhibition collections, as they can be much more compactly arranged in drawers and on shelves. Yet their extent is so great that the question of their accommodation is one of the most important ones for consideration. They have been mainly derived from the Government surveys of the past sixty years, and represent a very large expenditure of public money.

For the activities of the Museum are needed many well-lighted and well-appointed rooms to serve as laboratories for classifying collections

and for scientific research, and as workshops for the preparation of specimens for study and for exhibition. It should also be noted that the Museum is called upon to furnish workrooms for several of the scientific bureaus, whose collections are partly studied there, and that, by a recent act of Congress, it is incumbent upon the Museum to provide facilities for such students and investigators from other parts of the country as may choose to visit it for purposes of research.

Finally, space must be provided for certain general and miscellaneous purposes, such as the mechanical workshops and storerooms, the heating plant, public-comfort rooms, the library, a lecture hall, the administrative offices, etc.

An estimate of the amount of space needed has been reached by a careful consideration of the several requirements as set forth below, namely:

(1) To relieve the present very congested condition of the exhibition halls.

(2) To provide for the display of objects now in storage which are suitable and intended for public exhibition.

(3) Convenient and systematic storage for the vast reserve or record collections which are now for the most part inaccessible for examination.

(4) Suitable scientific laboratories, preparators' workshops, etc.

(5) The mechanical workshops required in making repairs to buildings and in the construction and repair of cases and other furniture and fixtures.

(6) Offices necessary for administrative and other purposes common to all the branches of the Museum.

(7) The space required for the heating plant, the library, a lecture hall, public-comfort rooms, and other miscellaneous purposes.

(8) Provision for future growth.

The growth of the Museum for a number of years past has been mainly through the receipt of material which by law it must receive and care for. The amount of material declined or diverted elsewhere during the last ten or fifteen years because of the lack of room would have occupied a very large proportion of the present exhibition space and have greatly increased the money value of the collections. The same conditions have prevented the Museum authorities from soliciting large contributions, but with adequate facilities many extensive exhibits can be had for the asking. The department of arts and industries, the more practical side of the Museum, has perhaps suffered most from the lack of accommodations. Large exhibits have had to be removed to storage, and the growth of this most important and striking branch was necessarily stopped some time ago. It should be made here, as it has been in all the larger capitals of the world, one of the most important features of the national collections, and its

increase, once stimulated, would go forward rapidly and at relatively small expense, as generous donations might be expected from all quarters.

Using the above topics as a basis for calculations, the amount of space immediately required has been worked out in a tentative way for each of the departments. This information is summarized in the following table, which gives also for each subject the space now occupied. With regard to the present storage areas, it should be borne in mind that much of the material is now compactly stored in packing boxes, and if transferred to classified storage would spread out over many times the space. The departments named are those under which the Museum is classified for convenience of administration.

Subject.	Space now oc- cupied.	Space re- quired.
Exhibition space:	<i>Sq. ft.</i>	<i>Sq. ft.</i>
Department of anthropology, including ethnology, archeology, American history, and arts and industries	58,790	184,000
Department of biology, including zoology and botany	31,005	95,000
Department of geology, including museum of practical geology	19,902	74,000
Laboratories, workrooms, and storage:		
Department of anthropology	19,490	81,000
Department of biology	38,909	110,000
Department of geology	17,069	46,000
General and miscellaneous:		
Administrative offices, record files, etc	6,506	12,000
Mechanical workshops	8,789	15,000
Mechanical and miscellaneous storage	12,032	22,000
Library, photographic laboratory, lecture hall, restaurant, public comfort, heating and electrical plant, etc	19,056	31,000
Entrances, hallways, etc	4,141
Total.....	238,689	670,000

With regard to the space now occupied, there are certain areas which, for various reasons, should be abandoned, namely:

Rented buildings (area)	Square feet. 34,115
Outside buildings on the Smithsonian reservation and Armory Square, which have been used only as temporary expedients and are for the most part insecure structures (area)	9,088
Space used for storage and some other purposes in the basement, in the upper part of the north tower, and at the east end of the Smithsonian building, being partly unsuitable and partly inaccessible (area)	12,885
Total.....	56,088

Deducting this area from the total area now occupied (238,689 square feet) leaves 182,601 square feet as the amount of space now actually available and appropriate for the future needs of the Museum. Again, deducting this amount from the total space named above as required

for the Museum (670,000 square feet) there remain approximately 487,000 square feet to be provided for in a new building.

The facts on which the above remarks are based having been submitted to Congress in connection with the estimates for 1902-3, the following item was included in the sundry civil appropriation act approved June 28, 1902:

For the preparation, under the direction of the Secretary of the Smithsonian Institution, of preliminary plans for an additional fireproof, steel frame, brick and terracotta building, to cost not exceeding one million five hundred thousand dollars, for the United States National Museum, to be erected when appropriated for, on the Mall, between Ninth and Twelfth streets west, said plans when completed to be transmitted by the Secretary of the Smithsonian Institution to Congress, five thousand dollars.

It is hoped that through this initial enactment a period of greater prosperity for the Museum is about to ensue.

SUMMARY OF THE OPERATIONS OF THE YEAR.

APPROPRIATIONS AND EXPENDITURES.

The total amount appropriated by Congress for the maintenance of the National Museum during the year ending June 30, 1902, was \$289,400, as against \$263,540 for the previous year. The principal changes as compared with 1901 were as follows: An increase of \$2,500 under furniture and fixtures, an increase of \$5,500 under heating and lighting, of which \$5,000 was for completing the electric installation in the Museum building, and an increase of \$360 under rent of workshops and storage quarters. The two following special appropriations were made: For the purchase and installation of new boilers in the Museum building of a capacity for heating both buildings, \$12,500; for the construction of two galleries in the Museum building, \$5,000.

The expenditures up to the close of the year from the appropriations for 1901-2 amounted to \$274,271.20, leaving a balance of \$15,128.80 to meet outstanding liabilities. During the same year \$15,052.81 were disbursed from the balance of \$15,293.77 of the appropriations for 1900-1901 on hand July 1, 1901.

The following tables show the expenditures during the year 1901-2 under each item of the appropriations for the past two years:

Appropriations and expenditures for the fiscal year ending June 30, 1902.

Object.	Appropriations.	Expenditures.	Balance June 30, 1902.
Preservation of collections.....	\$180,000	\$171,290.22	\$8,709.78
Furniture and fixtures.....	20,000	17,863.85	2,136.15
Heating, lighting, and electrical service, including \$5,000 for electric installation.....	23,000	21,439.57	1,560.43
Books, pamphlets, and periodicals.....	2,000	857.03	1,142.97
Postage.....	500	500.00
Building repairs, including \$12,500 for the purchase and installation of new boilers.....	27,500	25,561.70	1,938.30
Construction of galleries.....	5,000	4,962.08	37.92
Rent of workshops and storage quarters.....	4,400	4,399.92	.08
Purchase of specimens.....	10,000	7,528.70	2,471.30
Printing and binding.....	17,000	16,868.13	131.87
Total.....	289,400	274,271.20	15,128.80

Disbursements from unexpended balances of appropriations for the fiscal year ending June 30, 1901.

Object.	Balance June 30, 1901.	Expendi- tures.	Balance June 30, 1902.
Preservation of collections.....	\$6,507.92	\$6,433.43	\$71.49
Furniture and fixtures.....	2,096.23	2,094.34	1.89
Heating, lighting, and electrical service and installation.....	1,888.09	1,887.86	.23
Books, pamphlets, and periodicals.....	858.04	765.90	92.14
Building repairs.....	881.93	881.89	.04
Purchase of specimens.....	3,058.56	2,986.39	72.17
Total.....	15,293.77	15,052.81	240.96

«The total balance on June 30, 1901, was \$16,715.33. No appropriations except those from which disbursements were made during the year are mentioned in this table.

Disbursements from the appropriation for 1899-1900 were made as follows: Preservation of collections, \$291.24; books, pamphlets, and periodicals, \$2.55, leaving balances of \$40.15 and \$28.09, respectively. These balances, together with unexpended balances of the appropriations for furniture and fixtures, heating and lighting, building repairs, and rent of workshops, amounting to \$12.80, have reverted to the surplus fund of the Treasury.

The appropriations for the year ending June 30, 1903, are as follows:

Preservation of collections.....	\$180,000
Furniture and fixtures.....	22,500
Heating, lighting, and electrical service.....	18,000
Postage.....	500
Books, pamphlets, and periodicals.....	2,000
Repairs to buildings, shops, and sheds.....	15,000
Rent of workshops and temporary storage quarters.....	4,400
Purchase of specimens.....	10,000
Printing labels and blanks and the <i>Bulletins and Proceedings</i> , and for binding books for the library.....	17,000
Printing and publishing the <i>Contributions from the U. S. National Herbarium</i>	7,000
Preparation of preliminary plans for an additional Museum building.....	5,000
Total.....	281,400

BUILDINGS.

Several important alterations and improvements have been made in the Museum building. Some additional space has been gained through the construction of galleries in three ranges—the west-north, the north-west, and the south-west—which are being fitted up for the library and as laboratories for the departments of anthropology and geology.

The steam boilers, which had become entirely worn out after a service dating from the erection of the building, have been replaced by a pair of water-tube boilers of modern pattern, with capacity for heating both buildings. The introduction of these made it neces-

sary to overhaul the entire heating plant and to make new and more ample connections with the Smithsonian building. The boilers formerly used in the latter building will be retained in place to guard against emergencies, and the employment of one set instead of two is expected to result in the economy of both fuel and labor.

The installation of a complete system of electric-light wiring and fixtures extending to all the exhibition halls as well as to the offices, laboratories, and storerooms, begun the previous year, was finished satisfactorily. Should it be decided to open the building at night, however, an increased appropriation will be required to cover the cost of extra current and the pay of several additional attendants.

The quarters allotted to the purposes of a lunch room have been somewhat extended and improved, but this very desirable museum adjunct must always remain poorly provided for in the present building.

The sundry civil appropriation act for 1903, passed just at the close of the year, contains an item of \$5,000 for the preparation of preliminary plans for an additional fireproof building for the National Museum, to cost not over \$1,500,000.

ADDITIONS TO THE COLLECTIONS.

The number of accessions received during the year was 1,409, containing an aggregate of 448,872 specimens, two and one-half times as many as were added in 1901, and increasing the total number of specimens in the national collections to 5,418,284, as shown by the records. This figure is, however, below the actual one, as the contents of many packages filled with very small objects are estimated at a nominal figure.

The most constant and important sources of accessions are certain bureaus of the Government whose collections are, by law, transferred to the custody of the Museum as soon as their study has been completed. Among these bureaus are the Geological Survey, the Fish Commission, the Biological Survey, and the Divisions of Entomology and Plants of the Department of Agriculture, and the Bureau of Ethnology of the Smithsonian Institution. Large quantities of valuable material are received from individuals and private establishments through donation and exchange, and many interesting features are added to the exhibition series through loans or deposits. Lack of funds has prevented the carrying on of field explorations by members of the Museum staff except to a very limited extent, but scarcely a year passes without some good returns through this means.

With a maximum annual appropriation of \$10,000 for the purchase of specimens, not much can be done toward filling the innumerable gaps which occur throughout the collections, though many important desiderata are thus supplied from year to year.

As a complete list of the accessions for the year is given in Appendix II, and the more important ones are described in the reports of the head curators, attention will be called in this connection to only such as are especially noteworthy.

The total number of specimens added to the Department of Anthropology was 40,083, prehistoric archeology heading the list with 22,197 specimens, ethnology following with 14,335 specimens, and history and biography standing third with 2,279 specimens.

Among the important contributions in ethnology were a quantity of baskets, weapons, ornaments, and parts of costumes collected by Dr. W. L. Abbott in the Andaman and Nicobar islands, some of which have been described and illustrated by Lient. W. E. Safford, U. S. Navy, in the Smithsonian Report for 1901; and many other objects, including crania, native clothing, lamps, and articles connected with the industries of the Eskimo, obtained in northern Greenland and Ellesmere Land by Mr. Robert Stein, of the U. S. Geological Survey, during his Arctic expedition. A number of Guatemalan costumes and of objects illustrating the first steps in the weaving of cotton as practiced in that country, as well as other ethnological material, were received from Mrs. Mary W. Owen, of Panzos, Guatemala. Two interesting donations were a series of weapons captured during the Philippine insurrection, including several Filipino swords of the ordinary type, some bolos, and a kris, from Maj. E. L. Hawks, U. S. Volunteers; and a collection consisting principally of the different types of "punal de kris," a weapon carried by the women and children in the Philippine Islands, together with a device formerly used in the Philippine army for decapitating wounded soldiers, from Dr. W. C. Warnsley, of Norwich, Connecticut. Another Philippine collection, secured by purchase from Mr. J. N. Harkins, of Calhoun, Georgia, comprises weapons, cooking utensils, tobacco boxes, charm belts, models of boats, newspapers, statuettes, and coins.

A collection of choice objects brought together by the late Dr. G. Brown Goode, and secured during the year, includes musical instruments, Japanese porcelains, domestic utensils, gambling devices, plaques, vases, an incense box, old Kutani ware, Marusi ware, Cloissonné plates and bowls, trays, English chinaware, and ironstone china from China. Other additions to the collection of musical instruments were a small series of instruments used by the American Indians and several from European countries, including a nyckleharpa obtained by exchange from Mrs. J. Crosby Brown, of Orange, New Jersey, and 78 pieces, comprising instruments of the Javanese, Chinese, Tibetans, Japanese, and Persians; Syrian and Egyptian kettledrums, a Turkish mandolin, etc., presented by Dr. Ryan Devereaux, U. S. Army.

A complete set of the gold and silver coins of Siam, and a series of Spanish coins minted in Mexico and the Philippine Islands, embracing

the various kinds issued by Spain for use in its colonies, were obtained by purchase.

Loan collections, chiefly of historical interest, received on deposit and exhibited in the main Museum hall, were as follows: Eighty-two relics of Colonial times and a gold watch worn by George Fayette Washington, a nephew of George Washington, from the National Society of Colonial Dames; relics of the War of the Revolution, including commissions in the Continental Army, from the Daughters of the American Revolution; several swords that had belonged to the late Rear-Admiral J. W. Philip, U. S. Navy, one presented by the children of Texas, another by the citizens of New York city, from Mrs. Philip; six swords belonging to Rear-Admiral R. D. Evans, U. S. Navy, including one presented by the State of Iowa and one by the crew of the battleship *Iowa*; and 21 guns captured at Tientsin, China, comprising the various types of European and American manufacture now employed in the Chinese army, from Col. W. H. Carter, U. S. Army. A desk and quadrant used by Dr. C. F. Hall on his *Polaris* Arctic expedition, were received as a gift from Miss Anne S. Hall, of Cincinnati, Ohio.

Among the important accessions in archaeology were the collection of flint implements, bone utensils, and remains of extinct and recent mammals resulting from the examination of a sulphur spring at Afton, Indian Territory, by Mr. W. H. Holmes, and a very large amount of material, comprising pottery, implements of stone, wood, and shell, bones, and human remains, obtained by Dr. Walter Hough during his investigations in Arizona, partly in conjunction with Mr. Peter G. Gates.

About 10,000 prehistoric objects from Georgia, including carvings, spearheads, polished stone hatchets, and other articles of stone, ivory, and pottery, were acquired from Dr. Roland B. Steiner. A collection of the implements used by the ancient inhabitants of the area now forming Columbia County, Pennsylvania, consisting of stone articles of domestic utility, stone hatchets, banner stones, arrow points, and spearheads, was presented by Mr. Charles Hummel, of Espey, Pennsylvania; a large series of prehistoric objects from the Potomac Valley was obtained by purchase; and material from the guano caves of Las Cruces, New Mexico, was contributed by Mr. J. R. De Mier.

Among the accessions in archeology from other countries were over 600 specimens of prehistoric vases, stone figures, carvings, and polished instruments, and figures and dishes in earthenware, from Mexico, received from Mr. E. O. Matthews; an image, mortar, and pestle of stone, from Porto Rico, presented by Mr. Henry Bird; and a series of flint implements and bones from the cavern of Kesslerlock, Schaffhausen, Switzerland, donated by Prof. J. Heierli, of the University of Zurich.

The additions to the technological collections include several of historical value, such as pieces of apparatus devised and used by Dr. Elisha Gray in his experiments with harmonic multiple telegraphy and with the telephone, received from Mrs. Gray; one of the tin-foil records made by Edison's first phonograph when exhibited before the National Academy of Sciences at the Smithsonian Institution in 1878, contributed by Mr. William J. Rhees; a number of electric-lighting and telephone devices, and one of the early forms of typewriting machines.

In the Department of Biology the additions numbered 377,227 specimens, of which 324,687 were zoological and 52,540 botanical. Among the zoological divisions the greatest increase was of mollusks, namely, 173,262 specimens, followed by insects with 118,292, marine invertebrates, exclusive of mollusks, with 18,380, mammals with 6,301 specimens, etc.

The collections sent by Dr. W. L. Abbott from the East Indies, consisting principally of mammals, birds, reptiles, and insects, formed the most important zoological accessions. Of mammals there were 848 specimens, including many new species, from the islands of Andaman, Nicobar, Sumatra, Linga, Sinkep, Johore, and others farther eastward; of birds, over 700 specimens, and of reptiles, a considerable number. The region visited by Dr. Abbott is in large part a new field, not previously represented in the National Museum, and the generous contributions from this indefatigable explorer give the Museum a collection from this region which is absolutely unrivaled.

Other specimens of mammals received deserving of mention were a fine skeleton of the huge Kadiak (Alaska) bear from Mr. J. H. Kidder, of Boston; African antelopes, monkeys, and birds from Dr. A. Donaldson Smith, of Philadelphia; many skulls of moose, elk, and other deer from Mr. Ernest Thompson Seton, of New York, and a large series of small mammals from Germany and of squirrels from Asia.

Among the ornithological material were about 300 Cuban and Porto Rican birds collected by Mr. B. S. Bowdish; a quantity of Cuban birds collected by Mr. William Palmer; a series of East Indian birds from the Royal Museum of Natural History at Leiden, Holland; a large number of Brazilian birds from the Museu Paulista at São Paulo, Brazil, besides smaller collections from Mexico, Cocos Island, Hawaii, and Great Britain. Several rare species of birds' eggs were also obtained.

The reptilian collection was enriched by the field work in Cuba and Porto Rico of Mr. B. S. Bowdish and Mr. William Palmer, and valuable specimens were also received from Japan, Sumatra, and the Philippine Islands.

The Division of Fishes was fortunate in securing, through Messrs.

Anderson and Price, of Ormond, Florida, the skin of a whale shark (*Rhinodon*) 13 feet long, the first of its kind recorded as having been taken in the North Atlantic Ocean. The Leland Stanford Junior University presented the types of a large number of Japanese fishes described by Dr. David S. Jordan, and also specimens from Panama, Cocos Island, and the Galapagos Islands. A collection of Egyptian fishes from the Nile was contributed by Dr. Bashford Dean, of Columbia University, and interesting material from several sources was transmitted by the U. S. Fish Commission.

Twelve species of land shells from Cocos Island, cotypes of species described in E. von Marten's work on the mollusks of that locality, were donated by Mr. William H. Dall. Some 2,000 shells from Lower California were received from Lieut. C. A. Clarke, U. S. Navy, and a number of new species of North American land shells from Mr. J. H. Ferris, of Joliet, Illinois.

The largest addition to the Division of Insects comprised about 65,000 specimens collected in Arizona by Mr. E. A. Schwarz, Custodian of the Coleoptera in the Museum, at his own expense, and by him presented to the national collections. The Museum was already indebted to this generous friend for the gift of his extensive private collection previously formed.* Some 7,000 insects of several groups were brought from the Hawaiian Islands by Mr. W. H. Ashmead, and 10,000 specimens of lepidoptera from Colorado by Dr. H. G. Dyar, assisted by Mr. A. N. Caudell. The expeditions on which this material was secured are referred to elsewhere. Ten thousand beautifully prepared specimens of butterflies, mainly from Mexico and Central America, have been deposited in the Museum by Mr. William Schaus, of Twickenham, England.

The Division of Marine Invertebrates received from the U. S. Fish Commission a series of Porto Rican sponges, identified by Dr. H. V. Wilson, of the University of North Carolina; echini and holothurians from the same locality, identified by Prof. H. L. Clark, of Olivet College; the crustaceans and echinoderms collected during the expedition of 1901 to the Hawaiian Islands; and a quantity of material from the marine station at Woods Hole, Massachusetts. The extensive collection of corals made some years ago at the Philippine Islands by Prof. J. B. Steere and Prof. Dean C. Worcester was obtained by purchase. Among the smaller accessions of importance were a quantity of marine invertebrates from Ellesmere Land, collected by Mr. Robert Stein; a series of the cave crustaceans of Kentucky and Tennessee from Prof. W. P. Hay; a number of Alaskan crustaceans from Mr. R. S. McGregor, of the U. S. Coast Survey steamer *Pathfinder*, and samples of the Atlantic sea bottom from the U. S. Navy.

Through the generous bequest of Dr. Charles Mohr, of Asheville, North Carolina, who died in July, 1901, the Division of Plants became

possessed of his entire collection of flowering plants, comprising more than 18,000 specimens, chiefly from the southern United States. Two years previously Dr. Mohr had presented to the Museum his collection of about 3,000 specimens of cryptogamic plants from the same region. From his trip to Central America during the summer of 1901 Dr. J. N. Rose brought back a large number of plants, including specimens from Mount Orizaba and Mount Popocatepetl, and also some living plants, which were deposited in the greenhouse of the Department of Agriculture. A valuable collection from China and the Philippine Islands was contributed by the Royal Botanic Gardens of Kew, England; over 6,000 plants from various parts of the United States and from Brazil, Guatemala, Mexico, and Porto Rico were transmitted by the Department of Agriculture; and about 4,200 Chinese plants were acquired by purchase.

In the Department of Geology the accessions have been numerous, and in some of its divisions of more than ordinary importance. The total number of specimens received was 31,563, nearly 90 per cent being fossil invertebrates. Among the rocks and ores transmitted by the U. S. Geological Survey were many specimens illustrative of its recent explorations in Colorado, Montana, and Oregon. A large quantity of ore samples from the United States exhibit at the Paris Exposition of 1900 was turned over to the Museum by the Government board. The minerals added comprise many varieties, a number of which were not previously represented. Especially worthy of mention are a fine specimen of native tellurium from Delamar, Nevada; a magnificent mass of moss gold on quartz from the "Miner's Dream" mine, Old Chester district, California; characteristic samples of Alaskan gold; fine specimens of molybdenite from Okanogan County, Washington; axinite from Switzerland and Japan; beautiful crystals of tourmaline from Mesa Grande, California; zeolites from Golden, Colorado; and a beautiful mass of the so-called needle ore (Göthite) from Ironwood, Michigan. The following species new to the collection were also obtained: Narsarsukite, perychite, yttrocerite, picroallumogene, bornite (in crystals), espistolite, plumboferrite, ankylite, sylvanite, thalénite, elpidite, and lossenite. Fine specimens of tourmaline and anethyst were received as a gift from Dr. L. T. Chamberlain, Honorary Custodian of Gems and Precious Stones.

The meteorite collection was increased during the year to the extent of 29 falls, and now comprises specimens representing a total of 356 distinct falls. The most valuable addition was a stony iron meteorite from Admire, Kansas. The sources of other important specimens were as follows: Misshof, Courland, Russia; Rafrüti, Switzerland; Cereseti, Piedmont, Italy; St. Mesmin, Salles and Lancon, France; São Julião de Moreira, Portugal; Limerick, Ireland; Shalka, Bengal, India; Rhine Villa, South Australia; Weston, Connecticut; Algona,

Wisconsin; Monroe, North Carolina; Tombigbee, Alabama; Tonganoxie and Kiowa County, Kansas, and San Angelo and Kendall County, Texas.

In invertebrate paleontology there were several very large and important additions. Some 15,000 specimens, including 10,000 brachiopods, 4,200 bryozoans, many cretaceous forms from New Jersey, and cystids and crinoids from Maryland, composing the private collection of Mr. Charles Schuchert, Assistant Curator of Stratigraphic Paleontology, were donated by him to the Museum. Prof. George M. Perdew also presented his entire collection of Silurian and Devonian fossils, about 1,300 specimens, from Cumberland, Maryland. The E. O. Ulrich collection of Ostracoda, containing about 5,000 specimens and the type and figured specimens of 100 species was acquired by purchase. The transmissions from the Geological Survey included 3,755 specimens of Cambrian brachiopods, which had been the subject of special study by the Director, Dr. Charles D. Walcott.

The extensive series of teeth of the elephant and mastodon, obtained by Mr. W. H. Holmes at Afton, Indian Territory, associated with prehistoric implements, has proved of great interest, several species being represented.

The accessions in paleobotany include a valuable collection of fossil plants, comprising the type specimens described by Prof. Ebenezer Emmons in his *American Geology*, part 6, 1857; 100 specimens from the auriferous gravels of California, collected by Mr. C. D. Voy; 40 specimens from what may be the Upper Jurassic formation in the vicinity of the Corwin coal mine, near Cape Lisburne, Alaska; about 300 specimens from the Miocene Lake beds of the South Fork of John Day River, in Grant County, Oregon, transmitted by the Geological Survey, and about 100 specimens of Upper Carboniferous plants from the vicinity of Plympton, Missouri, described by Mr. David White in the *Fossil Flora of the Coal Measures of Missouri*, and presented by Dr. John H. Britts, of Plympton.

The approximate number of specimens received by the Museum during the year and the total number in the possession of the Museum at the close of the year are recorded by subjects in the following table:

Division.	Received in 1901-2.	Total.
Anthropology:		
Ethnology	11,335	173,517
Historic archeology	116	2,203
Prehistoric archeology	22,197	356,798
Technology	66	31,044
Graphic arts	1	7,391
Medicine.....	82	6,882
Religions	307	2,677
History and biography.....	2,279	11,546
Somatology	278	2,671
Ceramics.....	293	4,464

Division.	Received in 1901-2.	Total.
Anthropology—Continued.		
Photography.....	7	1,791
Music.....	119	1,560
Biology:		
Mammals.....	6,301	475,000
Birds.....	3,915	129,735
Birds' eggs.....	908	62,575
Reptiles and batrachians.....	1,567	48,553
Fishes.....	2,000	156,501
Mollusks.....	173,262	922,705
Insects.....	118,292	1,486,000
Marine invertebrates.....	18,380	506,255
Helminthology.....		5,091
Comparative anatomy.....	62	15,830
Plants.....	52,540	526,002
Forestry.....		749
Geology:		
Physical and chemical geology.....	1,980	75,739
Mineralogy.....	167	35,433
Invertebrate paleontology.....	27,797	411,569
Vertebrate paleontology.....	222	
Paleobotany.....	1,397	
Total.....	448,872	5,418,284

^aIncluding the collection of the Biological Survey, Department of Agriculture.

The number of entries made in the catalogue books of the various departments was 40,370.

The number of accessions received annually since 1881 has been as follows:

Year.	Accession numbers (inclusive).	Number of accessions during the year.
1881.....	9890-11000	1,111
1882.....	11001-12500	1,500
1883.....	12501-13900	1,400
1884.....	13901-15550	1,650
1885 (January to June).....	15551-16208	658
1886.....	16209-17704	1,496
1887.....	17705-19350	1,646
1888.....	19351-20831	1,481
1889.....	20832-22178	1,347
1890.....	22179-23340	1,162
1891.....	23341-24527	1,187
1892.....	24528-25884	1,357
1893.....	25885-27150	1,266
1894.....	27151-28311	1,161
1895.....	28312-29534	1,223
1896.....	29535-30833	1,299
1897.....	30834-32300	1,467
1898.....	32301-33741	1,441
1899.....	33742-35238	1,497
1900.....	35239-36705	1,467
1901.....	36706-38175	1,470
1902.....	38176-39584	1,409

EXPLORATIONS.

Owing to the very limited means available for field researches, the amount of work of this character carried on by assistants of the Museum has been relatively small, and most of the expeditions made were only rendered possible through cooperation with other bureaus of the Government or through the generosity of individuals. The Government explorations by which the Museum is most benefited are those conducted by the Geological Survey, the Fish Commission, the Department of Agriculture, and the Bureau of Ethnology of the Smithsonian Institution. Officers of the Army and Navy, with the exceptional opportunities now afforded them, have also been doing some excellent work for the Museum, especially in the Philippine Islands. In this connection mention should likewise be made of the important explorations which Dr. W. L. Abbott, of Philadelphia, has been carrying on for several years in the East Indies entirely at his own expense, the results being generously donated to this Institution. The latter comprise large collections in zoology and ethnology, whose value is enhanced by the fact of their coming from a region hitherto but poorly represented in any museum in the world. The field work engaged in during the year by members of the Museum staff was as follows:

Mr. W. H. Holmes, Head Curator of Anthropology, visited Indian Territory and Missouri, in the former investigating an interesting deposit of flint implements and bone utensils associated with the remains of extinct and recent mammals at Afton and an ancient chert quarry on the Peoria Indian Reservation, and in the latter examining, near Kimmiswick, an extensive deposit of fossil mammals in which human remains were said to occur, and an ancient village site containing stone implements and pottery. The investigations begun by Dr. Walter Hough in Arizona, in June, 1901, were continued through the summer, in conjunction with Mr. Peter G. Gates, of Pasadena, California, and chiefly at the expense of the latter. An archeological section was made on a north and south line from Fort Apache to Moki, a distance of about 180 miles, and a large amount of material was obtained. Ethnographical work was also done among the Apache, Navaho, and Hopi Indians, and two new groups of ruins north of Holbrook were mapped.

Mr. W. H. Ashmead, who accompanied an expedition of the U. S. Fish Commission to the Hawaiian Islands in May, 1901, for the purpose of making collections of insects and of studying the insect fauna of these new possessions, returned late in the summer with an important lot of material. Mr. B. S. Bowditch, formerly of the U. S. Army in Porto Rico, was employed for about seven months in procuring zoological specimens, chiefly birds, in Porto Rico, in eastern Cuba, and on Mona Island. Mr. C. L. Pollard and Mr. William Palmer

accompanied Dr. Edward Palmer, of the Department of Agriculture, in the spring of 1902 on an expedition to eastern Cuba, where they obtained an interesting collection of plants, birds, bats, insects, and marine invertebrates.

The station of the Cabot Steam Whaling Company, on the south coast of Newfoundland, was visited during the summer of 1901 by Dr. Frederick W. True, who made a special study of the sulphur-bottom whales, obtained many photographs, and arranged for the preparation and shipment to Washington of the skeleton of a large whale. In a collecting trip to Colorado, Dr. H. G. Dyar, in company with Mr. A. N. Caudell, of the Department of Agriculture, secured some 10,000 specimens of Lepidoptera, and Mr. E. A. Schwarz made in Arizona, at his own expense, a very large collection of insects. Two months during the spring of 1902 were spent in southern Illinois by Mr. Robert Ridgway in the interest of the Division of Birds. Botanical explorations were carried on in Central America during the summer of 1901 by Mr. J. N. Rose, assisted by Mr. Robert Hay, of Washington.

Important collections were made by Mr. Charles Schuchert of Helderbergian fossils in New York and of Cretaceous fossils in New Jersey. Mr. F. W. Crosby obtained for the Museum a remarkably fine series of potholes from the basalt rocks near Snake River Falls, Idaho.

Outfits to be used in collecting material for the National Museum have been furnished to the following persons: Mr. F. L. J. Boettcher, Washington, District of Columbia; Dr. Edgar A. Mearns, U. S. Army; Mr. H. Caracciolo, Port of Spain, Trinidad; Capt. Luther S. Kelly, Surigao, Mindanao, Philippine Islands; Prof. O. F. Cook, U. S. Department of Agriculture; Mr. W. W. Simpson, Shanghai, China; Mr. Arthur B. Chilson, New York City; Miss Thora Stejneger, Washington, District of Columbia; Mr. Charles S. Banks, Bacolod, Negros, Philippine Islands; Dr. S. P. Bartlett, Quincy, Illinois; and Capt. Wirt Robinson, U. S. Army.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

Six thousand five hundred and three specimens have been sent to specialists for study, in some cases as loans, in others to be worked up for the Museum. The gifts to educational establishments and the material used in making exchanges comprised 30,893 specimens. The gifts have consisted of duplicate series of marine invertebrates and fishes, and of the collections, recently prepared, to illustrate rock weathering and soil formation.

A detailed statement of all the material sent out is contained in Appendix III. The following table shows the number of lots of specimens sent to each State and foreign country:

California.....	10	Ohio.....	7
Colorado.....	5	Oklahoma.....	2
Connecticut.....	9	Pennsylvania.....	28
District of Columbia.....	19	Rhode Island.....	2
Florida.....	2	Tennessee.....	3
Georgia.....	3	Texas.....	5
Idaho.....	1	South Carolina.....	3
Illinois.....	25	Utah.....	2
Indiana.....	6	Virginia.....	3
Indian Territory.....	2	West Virginia.....	2
Iowa.....	9	Wisconsin.....	9
Kansas.....	2	Hawaii.....	1
Kentucky.....	1	Austria.....	3
Louisiana.....	1	Barbados.....	1
Maine.....	2	Belgium.....	2
Maryland.....	2	Brazil.....	2
Massachusetts.....	24	Canada.....	3
Michigan.....	5	Cuba.....	1
Minnesota.....	9	Denmark.....	1
Missouri.....	3	England.....	17
Montana.....	2	New South Wales.....	1
Nebraska.....	1	Germany.....	10
New Hampshire.....	2	Holland.....	3
New Jersey.....	11	Italy.....	1
New Mexico.....	1	Switzerland.....	2
New York.....	43	Sweden.....	2
North Carolina.....	2	Portugal.....	1
North Dakota.....	3		

Among the more important exchanges received from foreign establishments were the following: From the Museum of Natural History, Paris, France, piece of a meteorite from Salles, Villefranche, and the same from St. Mesmin, near Troyes; from the K. K. Naturhistorische Hofmuseum, Vienna, Austria, 200 plants from different European localities; from the Zoological Institute, University of Upsala, Sweden, 3 species of holothurians; from the Rijks Museum of Natural History, Leiden, Holland, 381 bird skins from the Dutch East Indies and elsewhere; from the Imperial University, Tokyo, Japan, the skeleton of a giant salamander; from the Royal Botanic Gardens, Seebpore, near Calcutta, Bengal, 158 Indian plants. From the Botanical Gardens, Berea, Natal, Africa, a miscellaneous collection of African plants; from the Albany Museum, Grahamstown, South Africa, the skins and skulls of a wild pig and a South African lynx; from the Museu Paulista, São Paulo, Brazil, 161 skins of Brazilian birds; from the National Society of Mines, Santiago, Chile, a collection of native ores; from the National Museum of Mexico, 6 mounted Mexican plants; and from the Botanical Gardens, Kingston, 100 plants.

The material obtained through exchange with individuals abroad was as follows: From Mr. Edward Lovett, Croydon, England, a collection

of flints, reproductions of flint tools, and other interesting objects: from Rev. F. W. Galpin, Hatfield Vicarage, Harlow, England, musical instruments and a reproduction of an extinct Welsh instrument; from Mr. René Martin, Le Blanc, Indre, France, 25 species of Odonata from Europe, Africa, Indo-China, and other countries, and 26 species of dragon flies from Ecuador, Abyssinia, Madagascar, Tonkin, Seychelles Islands, India, Australia, Algeria, and France; from Prof. S. E. Lassi-monne, Moulins, Allier, France, 151 European plants; from Mr. C. Schirmer, Berlin, Germany, 87 species of European Diptera; from Mr. Sven Ekman, Upsala, Sweden, specimens of *Polyartemia forcipata*; from Mr. M. Buysman, Middleburg, Holland, three plants; from Mr. E. von Fellenberg, Bern, Switzerland, an iron meteorite from Rafrüti in the Emmenthal, Canton Bern; from M. Micheli, Romilly, Geneva, Switzerland, 100 plants from South America; from Dr. Filippo Silvestri, Bevagna, Italy, 48 species of Termites; from Prof. M. Bezzi, Sondrio, Italy, 280 species of European Diptera; from Luigi Gardinale, Vicenza, Italy, 100 species of Middle and Lower Oligocene fossils collected in the neighborhood of Vicenza; from Prof. Paul Choffat, Lisbon, Portugal, 12 specimens of *Ostrea jouthwe* from the Cretaceous system of Portugal; from Señor Serveriano de Olea, Montevideo, Uruguay, a number of rocks and fossils; and from Mr. J. M. Macoun, Ottawa, Canada, 101 plants.

RESEARCHES.

The amount of work involved in the care and preservation of the collections leaves to the members of the Museum staff comparatively little time for original investigation, though the act founding the Museum directs the classification and arrangement of the specimens placed in its custody. By consulting the Proceedings, Bulletins, and Annual Reports of the Museum, however, it will be seen that the scientific assistants do contribute extensively every year toward the advancement of science, each in the line of his special study. The working up of many groups of objects is also intrusted to scientific men not connected with the Museum, who give their services gratuitously, and many specimens are lent to aid in investigations carried on at the various scientific establishments throughout the country. Type specimens or choice objects, however, are only allowed to be taken away from the Museum in exceptional instances, and when their safety can be assured. In its present crowded condition the Museum has very scanty accommodations for visiting students, but all applicants are allowed to avail themselves of such facilities as exist.

In the Department of Anthropology the head curator continued his investigations in aboriginal art and the preparation of reports on pottery and stone implements. He also gave much time toward the completion of a paper on the Classification and Arrangement of the

Collections of an Anthropological Museum. Prof. O. T. Mason, Curator of Ethnology, made considerable progress in his researches on aboriginal basketry, on which subject he is preparing an important monograph. Dr. Walter Hough, Assistant Curator, was mainly occupied in working up the results of his explorations with Mr. Peter G. Gates in Arizona during the summer of 1901.

Some of the visiting specialists to the Department of Anthropology, with the objects of their inquiries, were Dr. Franz Boas, of the American Museum of Natural History, New York City, mainly the Indian tribes of the northwest coast of America; Dr. J. Walter Fewkes, of the Bureau of American Ethnology, the Pueblo tribes; Lieut. W. E. Safford, U. S. Navy, for several years stationed on the island of Guam, collections of ethnology from the South Sea islands; Dr. O. F. Cook, of the U. S. Department of Agriculture, ethnobotanic material from Mexico; Dr. Washington Matthews, U. S. Army, the industries of the American Indians; Prof. W. T. Brigham, of Honolulu, the Polynesian collections; and Prof. A. C. Haddon, of Cambridge, England, ethnological material in several branches. A collection of Hopi games and ceremonial objects was lent for study to Mr. Stewart Culin, director of the Free Museum of Science and Art of the University of Pennsylvania.

In all divisions of the Department of Biology a considerable amount of research work was accomplished. Mr. G. S. Miller, jr., published five papers on mammals, based mainly on collections recently received from Dr. W. L. Abbott, several notes on nomenclature and classification, and jointly with Mr. James A. G. Rehn a list of the land mammals of North America. Dr. M. W. Lyon, jr., completed two papers on bats and one on the Venezuelan mammals, collected by Capt. Wirt Robinson and himself, and has also studied the skeletons of American hares and pikas.

Good progress has been made by Mr. Robert Ridgway on his Manual of the Birds of North and Middle America, the first volume of which was published during the year, the second being now nearly ready for the press. The birds from the Andaman and Nicobar islands, presented by Dr. Abbott, have been reported on, and those from Linga Island identified by Dr. C. W. Richmond.

The general collection of reptiles and batrachians has been reidentified, preparatory to their rearrangement in new cases, by Mr. Leonhard Stejneger, who also continued his researches on the reptile faunas of the Antilles and Japan. Sixteen papers on the fishes of Japan, by President D. S. Jordan and Messrs. J. O. Snyder, E. C. Starks, and M. Sindo, were published in the Proceedings, types of the new species described being presented to the Museum. A collection of fishes made in Japan in 1883 and 1885 for the Museum by Mr. Pierre L. Jouy was also worked up by Messrs. Jordan and Snyder. Dr. Tarleton H.

Bean and Mr. B. A. Bean completed reports on the fishes of New York for the State museum, and of Great South Bay, New York, for the New York Fish Commission, and notes by the latter on a whale shark from Florida, a steelhead salmon, and a larval conger eel were published by the Museum. Dr. Theodore Gill and Mr. Bean reported on the collection of Egyptian fishes from the Nile presented by Dr. Bashford Dean.

In the Division of Mollusks the curator, Mr. William H. Dall, has continued his work of revising and summarizing the groups of American bivalves, both Tertiary and recent. His researches during the year have comprised the preparation of a report on the newly discovered Eocene of Alaska and the revision of the family Veneridæ, one of the largest and most interesting of all the groups of bivalves. Mr. Paul Bartsch has made good progress in his studies of the Pyramidellidæ of the Pacific coast, and Mr. Charles T. Simpson has continued his investigations on the Naiades of the world.

Mr. James E. Benedict has finished his monograph, begun some time ago, on the Crustacean family Galatheidæ. The work completed or in progress by Miss M. J. Rathbun has comprised studies upon the macruran and brachyuran crustaceans of the northwest coast; a list of the decapods of the northwest coast for the report of the Harriman Alaskan Expedition; a report upon the stalked-eyed crustaceans collected in Japan by Dr. D. S. Jordan and Mr. J. O. Snyder; a description of a new species of fossil crab from the northeast coast of Brazil, for Dr. J. C. Branner's work on the geology of that region; identifications of the brachyura and macrura collected by the U. S. Fish Commission in Hawaii, in 1901, and studies upon the fresh-water crabs belonging to the Museum of Natural History of Paris. Miss Harriet Richardson, collaborator, has completed for Prof. A. E. Verrill a report upon the Isopods of the Bermudas, and has begun studies upon the Japanese Isopods collected by the U. S. Fish Commission steamer *Albatross*, Dr. Jordan and Mr. Snyder, and upon the Bopyridæ in the Museum collection. She also has in press descriptions of a new fresh-water Isopod from Indiana and a new terrestrial Isopod from Cuba.

Under arrangements with specialists connected with other establishments, the collections in several of the groups of aquatic invertebrates are being worked up for the National Museum, as follows: The sertularian and companularian hydroids by Prof. C. C. Nutting, of Iowa University, whose monograph on the Plumularidæ was recently issued as a special bulletin; the holothurians by Prof. Charles L. Edwards, of Trinity College, Hartford, Connecticut, and Prof. H. L. Clark, of Olivet College, Michigan, the former having the Pedata, the latter the Apoda; the parasitic copepod crustaceans by Prof. Charles B. Wilson, of the State Normal School, Westfield, Massachusetts, who completed during the year a monograph on the family Argulidæ,

which has been printed in the Proceedings; the recent corals by Mr. T. Wayland Vaughan, of the U. S. Geological Survey; the crayfishes by Prof. W. P. Hay, of Howard University, Washington, District of Columbia; the Pycnogonidae by Prof. Leon J. Cole, of the University of Michigan; the Alpheidae by Dr. H. Coutière, of the Museum of Natural History, Paris; the leeches by Dr. J. Percy Moore, of the University of Pennsylvania, and the Ascidians from the North Pacific Ocean by Dr. William E. Ritter, of the University of California.

Dr. L. O. Howard, Honorary Curator of Insects, has published during the year a large number of papers, mainly of an economic character. Mr. William H. Ashmead has continued his classification work on the Hymenoptera, has completed his classification of the Chalcid flies and has spent some time on the preparation of a monograph of the North American Braconidae, begun ten years ago. He has also finished, for publication by the Washington Academy of Sciences, reports on the Rynchochaeta of the Harriman expedition, and on the Hymenoptera of the Galapagos Islands, collected by the expedition of the Leland Stanford Junior University. Mr. Ashmead has likewise made much progress upon a catalogue of the Hymenoptera of North America and the West Indies. Mr. D. W. Coquillett has completed a synopsis of the dipterous family Chironomidae. Dr. H. G. Dyar has in course of publication a bulletin entitled A Catalogue of North American Lepidoptera North of Mexico. Mr. Rolla P. Currie has been engaged in monographing the North American species of the ant-lion flies, and has begun the compilation of a catalogue of the Neuropteroid insects of North America.

In the Division of Plants, Mr. F. V. Coville, Honorary Curator, continued his investigations on the genera *Salix* and *Ribes* and the preparation of a work on the flora of Alaska. His publications during the year included papers on a new genus of Alaskan heather, *Harrimanella*, and on two species of *Ribes*. Dr. J. N. Rose was occupied in the study of Mexican plants, and engaged with Dr. N. L. Britton in preparing a revision of the Crassulaceae of North America. Mr. C. L. Pollard prepared several papers descriptive of new species of violets and of *Chamaecrista* and a popular account of plant families. Mr. W. R. Maxon published several notes on ferns.

The collections of mammals and birds are frequently consulted by the assistants of the Biological Survey of the Department of Agriculture. Dr. Edgar A. Mearns, U. S. Army, spent the summer and early autumn in continuing his work upon the natural history of the Mexican Boundary Survey, more especially in regard to the mammals and birds. Dr. D. G. Elliot, of the Field Columbian Museum, Chicago, examined the mammals of Mexico and Central America, and Mr. John S. McDonald, of Milwaukee, conducted studies upon the North American mammals in general.

The committee on nomenclature of the American Ornithologists' Union gave several days to the examination of recently described North American birds represented in the Museum. Among assistants of the Department of Agriculture who consulted the collection of birds in connection with their special researches were Mr. W. W. Cooke, Mr. E. W. Nelson, Mr. H. C. Oberholser, Mr. E. A. Preble, and Mr. Wilfred H. Osgood. Mr. Frank M. Chapman, of the American Museum of Natural History, made studies of South American birds; Mrs. Florence M. Bailey, of Washington, District of Columbia, of Western birds; Mr. Outram Bangs, of Boston, of neotropical and Japanese birds, and Dr. Jonathan Dwight, jr., of New York City, on the moulting of birds. Mr. E. A. Preble, of the Biological Survey, consulted the specimens of Northern batrachia in identifying the collection brought by him from the Hudson Bay region.

Dr. H. M. Smith, Dr. B. W. Evermann, Mr. E. L. Goldsborough, and Dr. W. C. Kendall, of the U. S. Fish Commission, made frequent use of the collections of fishes in connection with their researches, and specimens of fishes forwarded from time to time by Dr. D. S. Jordan and Dr. C. H. Gilbert, of Leland Stanford Junior University, were compared for them with type specimens in the possession of the Museum.

Among those who consulted the collections of insects were Mr. W. V. Warner, of the Washington High School; Mr. E. J. Voegtley, of Pittsburg, Pennsylvania; Mr. Ernest Shoemaker, of New York City; Mr. H. L. Viereck, of the Philadelphia Academy of Sciences; Mr. James A. G. Rehn, of Philadelphia; Mr. La Rue Klinge Holmes, of Summit, New Jersey; Mr. Henry H. Lyman, of Montreal, Canada; Dr. Edwin C. Van Dyke, of San Francisco, California, and Prof. Adolph Hempel, of the Instituto Agronomico, Campinas, Brazil.

The botanists who conducted researches at the Museum were Dr. N. L. Britton, director of the New York botanical garden; Dr. P. A. Rydberg, of the same establishment; Dr. Charles F. Millspaugh, of the Field Columbian Museum; Dr. L. M. Underwood, of Columbia University; Mrs. E. G. Britton, of New York City; Mr. J. B. Leiberger, of Athol, Idaho; Dr. E. L. Greene, of the Catholic University, Washington; Mr. E. L. Morris, director of biology in the Washington high schools.

The amount of biological material lent for study has been quite large. Mr. Oldfield Thomas, of the British Museum, has received a collection of rodents, mostly from the East Indies; Mr. James A. G. Rehn, of the Philadelphia Academy of Natural Sciences, specimens of bats and sloths; Mr. S. N. Rhoads, of the same museum, specimens of *Mustela*; Dr. J. A. Allen, of the American Museum of Natural History, a large number of mammals from Patagonia, of squirrels from Alaska, and seal skulls; Dr. D. G. Elliot, of the Field Columbian

Museum, a number of Mexican and Central American mammals; Mr. Glover M. Allen, of the Boston Society of Natural History, specimens of South American mammals; Dr. F. A. Jentink, of the Museum of Natural History, Leiden, Holland, skins and skulls of the genus *Mos*; Dr. Pierre A. Fish, of Cornell University, the brain of a walrus; Dr. W. C. Mills, of the Ohio State Archeological and Historical Society, the skeletons of various mammals; Dr. A. H. Frieberg, of Cincinnati, Ohio, femora of the orang and gibbon.

Of birds, specimens were sent to Mr. Outram Bangs, of Boston; Mr. William Brewster, of Cambridge, Massachusetts; Mr. Frank M. Chapman, of the American Museum of Natural History, and Mr. Reginald Heber Howe, jr., of Longwood, Massachusetts. Specimens of frogs were supplied to Dr. Burt G. Wilder, of Cornell University, and of water snakes to Prof. Hubert L. Clark, of Olivet College, Michigan. Fishes were transmitted as follows: To President David S. Jordan and Dr. C. H. Gilbert, of Stanford University, one of the collections to the former consisting of 315 specimens from Negros, Philippine Islands, which it was desired to have classified for the Museum; to Prof. Edwin Linton, of Washington and Jefferson College, Washington, Pennsylvania; to Dr. Bashford Dean, of Columbia University, specimens of *Harriota*; to Prof. S. E. Meek, of the Field Columbian Museum, and to the University Zoological Institution, Upsala, Sweden.

The material representing the molluscan family Achatinellidae, which had been in the possession of the late Prof. Alpheus Hyatt, was transferred to the custody of Prof. A. G. Mayer, of the Brooklyn Institute, for working up.

Insects of various groups have been lent to Prof. John B. Smith, of Rutgers College; Dr. W. J. Holland, of the Carnegie Museum, Pittsburgh; Dr. A. S. Packard, of Brown University; Prof. James G. Needham, of Lake Forest University; Mr. Chester Bradley and Mr. H. L. Viereck, of the Philadelphia Academy of Natural Sciences; Prof. H. A. Morgan, of the Louisiana State University; Prof. C. H. Fernald, of Amherst, Massachusetts; Prof. Ralph V. Chamberlain, of Latter Day Saints College, Salt Lake City, Utah; Mr. Alex. D. MacGillivray, of Cornell University; Mr. L. H. Joutel, of New York City; Dr. E. P. Felt, of Albany, New York; Dr. Joseph L. Hancock, of Chicago, and Sir George F. Hampton, of the British Museum.

A large number of shrimps of the species *Palaemonetes exilipes* has been furnished to Mr. Roswell H. Johnson, of Madison, Wisconsin, for the study of individual variation, and a few specimens of hydroids have been lent to Prof. S. F. Clarke, of Williams College.

The sendings of plants have been as follows: To the New York Botanical Garden, 372 specimens of mosses, fungi, and other groups; the Gray Herbarium, Cambridge, Massachusetts, 147 specimens of Mexican, Galapagos, and Cocos Islands plants; Mr. A. W. Evans,

Yale University, 125 specimens of Hepaticæ; the Field Columbian Museum, 14 specimens of *Euphorbia*; the Biltmore Herbarium, 214 specimens of the genera *Amorpha* and *Philadelphus*; Mr. C. F. Wheeler, Agricultural College, Michigan, 67 specimens; Mr. G. N. Best, Rosemont, New Jersey, 89 specimens; Mr. A. H. Curtiss, Jacksonville, Florida, 3 specimens; Mr. A. A. Eaton, Seabrook, New Hampshire, 200 specimens of *Equisetum*; Mr. L. H. Pammel, Ames, Iowa, 30 specimens of *Amelanchier*; Dr. Edgar A. Mearns, U. S. Army, 4 specimens of *Rhus*; Mr. W. A. Setchell, Berkeley, California, 574 specimens of Algae; the Royal Gardens, Kew, England, 30 specimens of *Juliania* and *Eryngium*; the Botanical Museum, Berlin, Germany, 589 specimens of *Cardamine*; Mr. Anton Heimerl, Vienna, Austria, 474 specimens; M. N. Patouillard, Paris, France, 2 specimens; Mr. Eugene Warming, Copenhagen, Denmark, 2 specimens of *Podostemon*; the Botanical Gardens, Sydney, New South Wales, 140 specimens of *Eucalyptus*.

In the Department of Geology important investigations regarding meteorites were carried on by the head curator and by Mr. Wirt Tassin, Assistant Curator of Mineralogy. Two papers by the former relating to the Felix and Admire meteorites were published during the year, and one by Mr. Tassin on a large mass of meteoric iron from Casas Grandes has been prepared. The latter has also continued his studies on the dehydration of the ferric hydrates.

Mr. Charles Schuchert, Assistant Curator of Paleontology, has given attention to the Silurian and Lower Devonian fossils of the Appalachian region and to fossil starfishes. The monograph of the Stegosauria, by Mr. Lucas, is still in course of preparation. He has also made studies of certain features in the structure of *Hesperornis* and *Baptornis*, and has examined a collection of fossil birds from the Pliocene of Oregon, submitted by Prof. J. C. Merriam.

Many specimens in the line of physical and chemical geology, requested for research work, have been supplied to assistants on the U. S. Geological Survey and to others, but the greatest amount of assistance rendered by this department has been given by the division of paleontology. Several eminent paleontologists have visited the Museum for the purpose of examining collections, and to a number of specialists material has been sent for investigation in their own laboratories. Among those who received aid in this direction were the following: Prof. H. F. Osborn, of the American Museum of Natural History, in connection with his monograph on the fossil mammalian group of Titanotheres; Dr. O. P. Hay and Mr. J. W. Gidley, of the same museum, the former having in preparation a work on the North American fossil turtles, and the latter a revision of the genus *Hippotherium*, or fossil horses; Mr. J. B. Hatcher, of the Carnegie Museum, Pittsburg, material for comparison with fossil Dinosaurs; Dr. George

F. Eaton, of the Peabody Museum of Yale University, in his studies of Triassic fishes of the genus *Ischypterus*; Mr. A. P. Martin, of the Maryland Geological Survey, and Dr. John M. Clarke, of the New York State Museum, in their researches on the Miocene and Devonian fossils, especially of Maryland; Prof. J. E. Duerden, of Johns Hopkins University, on Paleozoic corals; Dr. C. E. Beecher, of the Peabody Museum, on the fossil brachiopod genus *Platystrophia*; Mr. F. N. Balch, of Boston, on arctic fossil shells; Mr. and Mrs. T. S. Oldroyd, of California, on the fossil shells of the Pacific coast. The entire collection of Middle Devonian crinoids was sent to Miss Elvira Wood, of the Massachusetts Institute of Technology, who will classify and report upon the species. The collection of fossil plants from the Corwin coal mine at Cape Lisburne, Alaska, presented by Mr. A. G. Maddren, together with other specimens from the same place, were turned over to Prof. William M. Fontaine, of the University of Virginia, for study in connection with material recently procured from the same locality by Mr. F. C. Schrader, of the U. S. Geological Survey. Dr. Arthur Hollick, of the New York Botanical Garden, examined the collections of Upper Cretaceous and Tertiary plants in connection with researches on some parts of those groups.

PROGRESS IN THE INSTALLATION OF THE EXHIBITION COLLECTIONS.

The crowded state of most of the exhibition halls has prevented extensive additions to the display collections except in a few directions. Much was accomplished, however, toward improving the condition and appearance of these collections by small additions and by the substitution in many instances of better material and of a higher class of preparations. Considerable progress was also made toward completing the system of labeling. It had been anticipated that provision would have to be made during the year for housing the exhibit made by the Museum at the Pan-American Exposition. A large part of the material was, however, sent to the South Carolina Interstate and West Indian Exposition, but before the close of the year the entire collection was back in Washington. The objects returned directly from Buffalo have been mainly cared for by the transfer to storage of some of the less desirable preparations previously displayed, and by utilizing temporarily a part of the lecture hall.

In the Department of Anthropology several of the halls have been thoroughly renovated and in some the collections have been reinstalled. The cases in the north-west range, devoted to the northwest coast Indians, and in the Pueblo court, have been rearranged, and many have been removed to provide space for the large family groups returned from the Pan-American Exposition. Material from the Philippine and the South Sea Islands has been installed in Kensington cases on the north gallery of the west hall.

The work of arranging the collections of prehistoric archeology according to geographical divisions has been continued, six slope-top cases having been fitted up during the year with the following exhibits: Flint implements from ancient quarry sites and workshops in middle Egypt; stone implements, spearheads, stone beads, shell ornaments and small pottery vessels from the island of Utilla, Honduras; stone beads, carved stone pendants, a copper ax, pottery spindle-whorls, etc., from Mexico; stone implements and utensils, shell implements, pottery vessels, etc., from the islands of St. Kitts, St. Bartholomew, and Nevis, West Indies; polished stone hatchets from St. Elizabeths Parish, Jamaica; polished stone hatchets, shell implements, and large pottery bowls from Jamaica. In the alcove containing the antiquities from western Asia the plaster casts have been rearranged, and casts from Persepolis and a large relief map of Palestine have been added.

Thirty-eight wing frames containing photographs supplementing the collections relating to the Jewish religion, Mohammedanism, Brahmanism, and the Greco-Roman religions have been placed on the south gallery of the west hall, and many improvements in this series have been made.

Many articles have been added to the collections of American history in the north hall, but this hall has long been overcrowded, and a number of interesting objects which belong to it are still in storage.

Extensive improvements have been made in the installation of the collections in mechanical technology, especially in the sections of land and water transportation, and many additions have been made to the collections in electricity. The type collection of small firearms of early patterns and of modern breech-loading and magazine guns has been suitably installed and labeled. The series of time-keeping apparatus, including some interesting recent additions, has been arranged in special cases in the east hall. Noteworthy among its contents are a variety of sundials, including one used by the Montagnais Indians of Canada—a pole set upright in the snow—several rare sunglasses, a fine Persian astrolabe, a German time-indicating lamp, a water clock of the seventeenth century, and watches dating from the beginning of the fifteenth century.

Among the additions in the Department of Biology were many finely mounted specimens of American mammals and birds, a part of the display at the Pan-American Exposition, the former including a large specimen of Steller's sea lion, an Alaskan moose, a British Columbian caribou, a musk ox, a glacier and a Kadiak bear, two wild sheep (*Ovis dalli* and *O. stonci*), and a skeleton of the Kadiak bear. Three groups of game birds were added to the series of game animals. In the southeast Museum range, allotted to reptiles, batrachians, and fishes, some improvements have been made, several new cases being

provided, many new preparations replacing older ones, and a number of large forms not previously represented being added. Among the latter were a cast of the King Cobra snake with accessories representing the edge of an Indian jungle, a very large Mata-mata turtle from the Amazon River, a huge alligator snapper, the largest of the North American water turtles, several boas, lizards, toads, and frogs. An exhibit of lizards will be arranged in some of the wall cases. Among the additions to the exhibition series of fishes was the cast of a large white, or man-eater, shark.

The permanent installation of insects in the hall recently assigned to this group at the western end of the Smithsonian building has progressed to the extent of mounting about 2,700 specimens in 20 of the standard boxes occupying several upright cases. In the labeling of this series attention has especially been called to species of peculiar habits and to those of most interest to the public.

A partial set of the colored plates of flowering plants, published in the third edition of Blanco's *Flora de Filipinas*, has been placed on exhibition in the Division of Botany.

To the display of vertebrate fossils have been added partial skeletons of the large *Triceratops prorsus*, of the carnivorous dinosaur, *Allosaurus*, and of the toothed bird, *Hesperornis regalis*. The installation of the Harris collection of invertebrate fossils, in a section of the rail-case of the gallery in the southeast court, has been practically completed. This collection, received in 1898, is one of the finest yet made in the region it represents, being especially rich in erinoids, star-fishes, and trilobites, containing of the last group about 600 out of the 750 species known from the Cincinnati formation.

The collections relating to physical and chemical geology have, in part, been thoroughly overhauled and rearranged, and about 100 photographs, maps, and other pictures illustrative of these subjects have been placed on the adjoining walls. The building of galleries in the south-west range made it necessary to remove for a time the collection of minerals, which at the close of the year was being reinstalled after careful renovation.

VISITORS.

The number of visitors to the Museum building was 173,888 and to the Smithsonian building 144,107. The tables following 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 1901-2.

Year and month.	Smithsonian building.	Museum building.
1901.		
July.....	6,106	10,199
August.....	10,192	16,129
September.....	11,738	15,690
October.....	13,261	13,641
November.....	10,638	12,027
December.....	12,517	13,725
1902.		
January.....	10,101	11,688
February.....	9,935	11,066
March.....	16,267	18,425
April.....	17,761	19,437
May.....	13,993	16,533
June.....	11,598	15,328
Total.....	144,107	173,888
Approximate daily average on a basis of 313 days in the year.....	460	555

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

Year.	Museum building.	Smithsonian building.
1881.....	150,000	100,000
1882.....	167,455	152,714
1883.....	202,188	104,823
1884 (half year).....	97,661	45,565
1884-85 <i>a</i>	205,026	105,993
1885-86.....	174,225	88,960
1886-87.....	216,562	98,552
1887-88.....	249,665	102,863
1888-89 <i>a</i>	374,843	119,618
1889-90.....	274,324	120,894
1890-91.....	286,426	111,669
1891-92.....	269,825	114,817
1892-93 <i>a</i>	319,930	174,188
1893-94.....	195,748	103,910
1894-95.....	201,744	105,658
1895-96.....	180,505	103,650
1896-97 <i>a</i>	229,006	115,709
1897-98.....	177,254	99,273
1898-99.....	192,471	116,912
1899-1900.....	225,410	133,147
1900-1901 <i>a</i>	216,556	151,563
1901-2.....	173,888	144,107
Total.....	4,781,342	2,544,615

a Years of Presidential inaugurations.

On the evening of February 17, 1902, the Museum building was open from 8 to 11 o'clock to enable the historical collections to be specially viewed by the Society of the Daughters of the American

Revolution, then in session in the city. The President-general and other officers of the society received in the lecture hall. As the building is a public one, no one who applied was denied admission, though the attendance was chiefly made up of members of the society. The total number present was 2,987.

The meetings of the National Academy of Sciences were also held this year in the Museum building on April 15, 16, and 17. The offices of the assistant secretary were used for the business meetings of the academy and council, while the reading of papers took place in the lecture hall.

CORRESPONDENCE.

The Museum correspondence, which has always been very heavy, increases in volume from year to year. Outside of ordinary routine matters, it is occasioned for the most part by requests for information, coming from all parts of the world and relating to a wide range of subjects. Specimens, often in large lots, are transmitted for identification, and questions are submitted in regard to all branches of knowledge falling within the Museum's scope. The requests also have reference to Museum administration, the building up and maintenance of collections, the construction of cases, the installation, labeling, and cataloguing of specimens, and, in fact, no topic connected with a great museum or suggested by its existence escapes notice. In accordance with the time-honored custom of the Smithsonian Institution, every communication made in good faith and appropriate to be considered is fully answered, even though this necessitates incessant demands upon the members of the scientific staff, whose regular duties are quite sufficient to occupy their entire time. The number of lots of specimens determined and reported upon during the year at the request of correspondents was nearly 700.

A considerable proportion of the work of furnishing information is accomplished through the medium of Museum publications, of which more than 20,000 volumes and pamphlets were distributed during the year, besides the sendings to regular correspondents.

As the Museum has no facilities for making chemical analyses, requests for work of this kind have to be refused.

PUBLICATIONS.

The most noteworthy publication of the year was the first volume of a monographic series by Mr. Robert Ridgway on the Birds of North and Middle America, which appeared in the autumn of 1901. This volume describes the species of the family Fringillidæ or Finches. The families Tanagridæ, Icteridæ, Cerebidæ, and Mniotiltidæ, or Tanagers, Troupials, Honey-creeper, and Wood-warblers will be cov-

ered by the second volume, now in press. Mr. Ridgway has given much time and care to the preparation of this important work.

Volume xxiii of the Proceedings was issued in February, 1902. It contains 35 papers (numbered from 1206 to 1240, inclusive), 24 of which were written by members of the Museum staff and 11 by correspondents and collaborators. Eight of the papers relate to fishes, mainly Japanese, 7 to insects, and the remainder to fossil vertebrates, reptiles, recent and fossil mollusks, marine invertebrates, and plants. Proceedings papers 1241 to 1274, inclusive, comprising Volume xxiv, have been published in the form of separates.

A most useful work produced during the year, constituting Bulletin 51, was a list of the publications of the Museum, being a catalogue of all volumes and separate papers issued from 1875 to 1900, with an index by titles. It was prepared by Mr. R. I. Geare.

The papers comprising the general appendix to the annual report for 1900 have been issued in separate form, but the volume itself was not received from the Government Printing Office until after the close of the year. The opening article, by Mr. W. H. Holmes, is based on anthropological investigations by the author in California. Prof. O. T. Mason describes some aboriginal American harpoons. Mr. Charles K. Wead, of the United States Patent Office, contributes an article on the history of musical scales, and Dr. Walter Hough one on Hopi ceremonial pigments. A sketch of the history of ceramic art in China, with a catalogue of the Hippiusley collection of Chinese porcelains, is reprinted, with some additions, from the report of 1888. The author, Mr. Alfred E. Hippiusley, commissioner of the imperial maritime customs service of China, has had on deposit in the National Museum for several years a most interesting and valuable collection of Chinese porcelains, and is well fitted to write upon this subject. A catalogue of the collection of gems in the National Museum, by Mr. Wirt Tassin, contains descriptions of the gem minerals and their properties, comparative tables of the colors and distinguishing characters of the principal varieties, and articles on the cutting of gems, their artificial formation, supposed mystical properties, etc. A descriptive catalogue of the meteorite collection, by the same author, is designed partly to facilitate the exchange of specimens.

Part N of Bulletin No. 39, entitled Directions for Collecting and Preparing study Specimens of small Mammals, by Mr. Gerrit S. Miller, has been reprinted in a revised edition, with abstracts in German, French, and Spanish. Directions for collectors of American Basketry, by Prof. O. T. Mason, has been added to the same bulletin as Part P.

A circular designed to accompany a series of collections prepared by the Museum, illustrating rock weathering and soil formation, and

giving the results of the analyses of materials similar to those included in the collections, has been prepared by Dr. George P. Merrill, and published as No. 51 in the Museum series of circulars.

The distribution of Museum publications during the year to establishments and individuals in this country and abroad has amounted to about 6,500 volumes and 25,000 pamphlets.

In Appendix IV will be found a list of the publications of the Museum and of the members of its staff. The number of authors represented is 91 and the total number of papers cited 327. In the following table these papers are classed according to subjects:

Subject.	Papers by Museum officers.	Papers by other investig- ators.	Total.
Administration.....	4		4
Archaeology.....	1	1	5
Bibliography.....	1		1
Biography.....	1		1
Birds.....	11	21	68
Botany.....	15		15
Ethnology.....	6	1	7
Exploration.....	1	1	2
Fishes.....	17		17
Fossils.....	15	2	17
Geography.....	1	1	2
Geology.....	5	3	8
Insects.....	78	33	111
Mammals.....	17	1	18
Marine invertebrates.....	11	15	26
Minerals.....	3		3
Mollusks.....	8		8
Reptiles and batrachians.....	9	1	10
Technology.....	1		1
Miscellaneous.....	3		3
Total.....	211	83	327

Fifteen papers written by members of the Museum staff and based on Museum collections have, by permission of the Secretary of the Smithsonian Institution, been printed in publications other than those of the Museum. The authors of these papers are as follows: Mr. Robert Ridgway, Dr. C. W. Richmond, Mr. Gerrit S. Miller, jr., Mr. B. A. Bean, Mr. C. L. Pollard, Mr. W. R. Maxon, Dr. M. W. Lyon, jr., Mr. William Palmer, and Mr. J. H. Riley.

LIBRARY.

The Museum library now contains over 16,000 bound volumes and 28,500 unbound papers. The additions during the year consisted of 613 books, 13,065 pamphlets, and 5,885 parts of periodicals. There were catalogued 750 books, 1,439 pamphlets, and 5,297 parts of peri-

odicals. The number of books, pamphlets, and periodicals borrowed from the central library amounted to 23,149, including 6,800 withdrawn for assignment to the sectional libraries, of which there are now 30, as follows:

Administration.	Marine invertebrates.
Administrative assistant.	Materia medica.
Anthropology.	Mesozoic fossils.
Biology.	Mineralogy.
Birds.	Mollusks.
Botany.	Oriental archaeology.
Children's room.	Paleobotany.
Comparative anatomy.	Parasites.
Editor.	Photography.
Ethnology.	Prehistoric anthropology.
Fishes.	Reptiles.
Geology.	Stratigraphic paleontology.
History.	Superintendent.
Insects.	Taxidermy.
Mammals.	Technology.

PHOTOGRAPHY.

Mr. T. W. Smillie, the photographer of the Museum, reports that 1,621 negatives, 2,890 silver prints, 378 platinum prints, 32 lantern slides, and 2,060 blue prints were made during the year. A part of his time was also allotted to the Zoological Park, the Bureau of International Exchanges, and the Astrophysical Observatory.

Mr. Smillie was appointed chairman of the jury of awards on photography for the Pan-American Exposition, causing his absence from Washington during about a month of the summer of 1901. While serving in this capacity he made a large number of photographs of different exhibits for the Government Board of the Exposition.

TAXIDERMY AND OSTEOLOGICAL WORK.

Fifty-two mammals, including a specimen of Steller's sea lion, were mounted during the year and added to the exhibition series. Eighty-five specimens in the flesh, from the National Zoological Park and other sources, were received and properly treated. Between 300 and 400 of the small skins in vats were freed from grease and made over into suitable form for permanent preservation. These included a number of type specimens. Three new groups of game birds were completed during the year, and 38 large birds and 12 smaller ones were also mounted. Fifty-one skins were prepared from birds received in the flesh, and 112 specimens in the exhibition series were dismounted and made into skins.

One thousand and sixty-four skulls of mammals, mostly of large size, were cleaned by the Museum preparators, and more than 2,100 small skulls were cleaned by contract.

COOPERATION OF THE EXECUTIVE DEPARTMENTS OF THE GOVERNMENT.

Valuable assistance has continued to be received from various departments and bureaus of the Government. Officers of the Army and Navy stationed in the Philippine Islands and in other of the new possessions have made important contributions, having in some cases been furnished with special outfits to facilitate their work of collecting. Representatives of the Department of State abroad have also been instrumental in securing interesting material. Special acknowledgments are due to the Quartermaster's Department of the Army for many courtesies in connection with the transportation of specimens and outfits to and from distant points. The relations of the Museum to the U. S. Geological Survey, the U. S. Fish Commission, the Biological Survey, and the Divisions of Entomology and Botany of the Department of Agriculture, and the Bureau of American Ethnology, in regard to collections transmitted, are referred to elsewhere.

Through the courtesy of the Secretary of the Navy, Lieut. W. E. Safford, U. S. Navy, who was stationed for some time on the island of Guam, was permitted to spend several months at the Museum during the winter of 1901-2 in classifying and labeling collections of anthropology from the South Sea Islands.

EXPOSITIONS.

Pan-American Exposition, Buffalo, New York.—This exposition was opened on May 1, 1901, and continued until November 1 of the same year. The large and attractive exhibit made by the National Museum has been described in the Annual Report for 1901, in a joint paper by Dr. Frederick W. True, the representative of the Smithsonian Institution and the Museum on the Government Board of Management, and Mr. William H. Holmes and Dr. George P. Merrill, head curators, respectively, of anthropology and geology.

South Carolina Interstate and West Indian Exposition, Charleston.—In accordance with the direction of the President of the United States that the Executive Departments and bureaus of the Government participate in this exposition, which continued from December 1, 1901, until May 31, 1902, a large collection selected from the exhibit of the Museum at the Pan-American Exposition was shipped directly to Charleston, the limitations of space making it impossible to utilize the entire exhibit in that connection. Notwithstanding the short period available for arranging this display, it presented a fine appearance and attracted much attention. A report by Dr. F. W. True on the exhibit of the National Museum at this exposition is printed as Appendix V to this report.

Louisiana Purchase Exposition, St. Louis, Missouri.—For this exposition, which will be held during the summer of 1904, Congress has

appropriated \$450,000 toward the erection of a Government building and \$800,000 for the preparation and installation of an exhibit by the several departments and bureaus of the Government. Dr. Frederick W. True, Head Curator of Biology, and with a long experience in exposition work, has been appointed to represent the Smithsonian Institution and the National Museum on the Government Board of Management.

ORGANIZATION AND STAFF.

The organization of the Museum comprises an administrative office and three scientific departments, as follows: Anthropology, with 8 divisions and 4 sections; Biology, with 9 divisions and 12 sections; and Geology, with 3 divisions and 3 sections.

Besides the 3 head curators in charge of the departments, the scientific staff at the close of the year consisted of 17 curators, 12 assistant curators, 14 custodians, 11 aids, 4 associates, and 2 collaborators, making a total of 63 persons, of whom, however, only about one-half received compensation from the Museum. Of the remainder, who are serving in a volunteer or honorary capacity, the majority were attached to other scientific bureaus of the Government.

The death of Dr. Thomas Wilson, which occurred on May 4, 1902, deprived the Museum of one of its most earnest and helpful workers. Widely distinguished for his studies and contributions on a variety of anthropological subjects, Dr. Wilson's interests lay chiefly in the field of prehistoric archeology, and from 1889 he had charge, as curator, of the extensive and important collections of this division of the Museum.

Mr. William V. Cox, who was appointed to the Museum in 1879, and has been its chief clerk since 1886, with important duties in connection with all the recent expositions in which the Government has participated, severed his official relations with the Museum in February, 1902, greatly to the regret of his associates, to accept a more responsible position elsewhere. The duties of this office have been somewhat modified to better consolidate the administrative work, and the title of its chief officer has been changed to administrative assistant. This position was filled by the appointment of Mr. W. de C. Ravenel, previously the assistant in charge of fish culture in the U. S. Fish Commission, who has joined to a long experience in the administrative work of that Bureau a familiarity with the preparation and installation of Government exhibits.

Mr. George B. Turner has been made chief taxidermist, and Mr. W. C. Phalen an aid in the Department of Geology. Dr. Peter Fireman, chemical geologist, resigned on September 9.

Mr. Leonhard Stejneger, Curator of Reptiles and Batrachians, represented the Smithsonian Institution and National Museum at the Fifth

International Zoological Congress, held at Berlin, Germany, beginning on August 12. A brief account of the congress by Mr. Stejneger will be found in Appendix VI.

A list of the members of the Museum staff is given in Appendix I.

NECROLOGY.

Dr. Thomas Wilson, Curator of the Division of Prehistoric Archeology in the National Museum, died on May 4, 1902. He was born in New Brighton, Beaver County, Pennsylvania, on July 18, 1832. He lived for a time in Ohio, Illinois, and Missouri, and later in Iowa, enlisting in the Second Iowa Cavalry at the beginning of the civil war. He served in the cavalry and infantry branches of the service until 1864 and was mustered out with the rank of colonel. For a number of years he was engaged in the practice of law, from which he retired in 1881 to enter the consular service of the United States. He represented this country at Ghent, Nantes, and Nice. His service as consul extended over a period of five years, after which he spent two years in traveling.

During his residence abroad Dr. Wilson devoted a great deal of attention to the study of archeology, visited many of the localities where ancient treasures were to be found, and had opportunities for meeting and working with several of the noted anthropologists of Europe. After returning to this country, he was placed in charge of the Division of Prehistoric Archeology in the U. S. National Museum, which position he held from 1889 to the time of his death. He was a member of the Société d'Anthropologie de Paris, the Société d'Archéologie de Nantes, the Anthropological Institute of Great Britain and Ireland, the Order of Isabella of Spain, and the Order of Leopold; also vice-president of the Anthropological Society of Washington, a fellow of the American Association for the Advancement of Science, a member of the American Oriental Society and of the Military Order of the Loyal Legion. Dr. Wilson was a member of the Commission to the Madrid Exposition of 1893, and of the Commission to the Brussels Exposition in 1897, and a delegate to the International Congress of Archeology in Paris in 1900.

Some of the important papers published by Dr. Wilson are as follows: The Swastika, the earliest known Symbol, and its Migrations, with Observations on the Migration of certain Industries in prehistoric Times; Prehistoric Art, or the Origin of Art as manifested in the Work of Prehistoric Man; Arrowpoints, Spearheads, and Knives of Prehistoric Times; The Golden Patera of Rennes: A Study of Prehistoric Anthropology; and Anthropology at the Paris Exposition.

Mr. Charles T. Mohr, a generous benefactor of the National Museum, was born in Esslingen, Wurtemberg, December 28, 1824, and died at

Asheville, North Carolina, July 17, 1901. Although most of his life was spent in the calling of a druggist, yet Dr. Mohr devoted much of his time to the study of plants, and it is chiefly as a botanist that he is known to the scientific world. He came to the United States in 1848, having previously traveled to South America. He stopped first in Cincinnati, but early the next year started for California. In 1857 he settled at Mobile, Alabama, where he was engaged in the drug business for many years. After making numerous smaller contributions, he finally gave his entire private herbarium, comprising some 20,000 specimens, to the Smithsonian Institution, the cryptogamic plants having come as a gift about two years before his death, and the flowering plants as a bequest. This collection has now been installed and is accessible to students of Southern plants, in which it is especially rich. Dr. Mohr was the author of various botanical papers, but his crowning work was *Plant Life of Alabama*, which was published posthumously. It was the one regret of his last days not to see this work finished, but he corrected all of the proofs and died only two weeks before the volume was issued. Personally Dr. Mohr was a charming and lovable man.

REPORTS OF HEAD CURATORS.

REPORT ON THE DEPARTMENT OF ANTHROPOLOGY.....By WILLIAM H. HOLMES.
REPORT ON THE DEPARTMENT OF BIOLOGY.....By FREDERICK W. TRUE.
REPORT ON THE DEPARTMENT OF GEOLOGY.....By GEORGE P. MERRILL.

REPORT ON THE DEPARTMENT OF ANTHROPOLOGY FOR THE YEAR 1901-2.

By WILLIAM H. HOLMES,
Head Curator.

During the year a number of changes in the personnel of the Department have taken place. Dr. Thomas Wilson, curator of the Division of Prehistoric Archeology, died on May 4, 1902, after an illness of several months. On May 1 Mr. Paul Brockett was transferred from the position of clerk to the Head Curator, to the library of the Smithsonian Institution, and Mr. Paul Beckwith, Aid in the Division of History and Biography, was designated to fill his place temporarily. In June, Miss Louise A. Rosenbusch, stenographer, was transferred from the office of the curator of Prehistoric Archeology to that of the Head Curator.

WORK OF THE YEAR.

The work of the year in the Department has been carried forward with all possible dispatch. The extensive exhibit shown at the Pan-American Exposition in Buffalo has been returned and reinstalled in the Museum, constituting a very considerable addition to the exhibition series. The exhibit sent to Charleston was returned about the close of the year and will be placed on exhibition at an early date.

The energies of the Department have been in a great measure expended on the work of reinstalling the exhibits in halls in which galleries were built during the year. The occasion was taken to rearrange cases, perfect the classification, and improve the installation; and the close of the year finds the exhibition series of the department much enlarged and in every way improved. The new galleries afford much additional space for laboratory purposes and for storage.

COLLECTIONS.

The collections received during the year are of average importance, and a number of them are enumerated in the following list:

COLLECTED FOR THE MUSEUM.

1. Archeological collection, consisting of a large number of flint implements, utensils of bone, and the remains of extinct and recent

species of mammals (860 specimens), obtained from a sulphur spring at Afton, Indian Territory, by W. H. Holmes, Head curator.

2. Explorations in Arizona, begun during the preceding year by Dr. Walter Hough, Assistant Curator, Division of Ethnology, yielded a large body of material (2,200 specimens), consisting of pottery, implements of stone, wood, shell ornaments, and human remains.

3. Explorations in Arizona conducted jointly by Mr. Peter G. Gates and the National Museum, the latter represented by Dr. Walter Hough, yielded large collections of archeological material. One-half of the product, consisting of 701 specimens, was turned over to the Museum. These collections are to be regarded as in large part a gift to the Museum by Mr. Gates, as the expenses of the field work were defrayed by him.

GIFTS TO THE MUSEUM.

1. Ethnological collections from the East Indies (236 specimens); presented to the Museum by Dr. W. L. Abbott.

2. Stone implements from Columbia County, Pennsylvania (585 specimens); presented by Mr. Charles Hummel.

3. Ethnological collection from the Eskimo of Ellesmere Land (74 specimens); presented by Mr. Robert Stein.

4. Ethnological collection from Guatemala (41 specimens); presented by Mrs. Mary W. Owen.

5. Weapons captured during the Philippine insurrection; presented to the Museum by Maj. E. L. Hawks, U. S. Volunteers.

6. Collection of Philippine relics (60 specimens); presented by Dr. W. C. Warmlesley.

7. Archeological collection from Guano caves, Las Cruces, New Mexico (21 specimens); presented by J. R. De Mier.

8. Image, mortar, and pestle of stone from Porto Rico (3 specimens); presented by Mr. Henry Bird.

9. Flint implements and animal bones from the cavern of Kesslerlock, Thayingen, Schaffhausen, Switzerland (383 specimens); presented by Prof. J. Heierli.

10. Series of objects illustrating successive steps in the manufacture of the medal presented by Congress to participants in the battle of Manila Bay, May 1, 1898 (5 specimens); gift of Tiffany and Company.

11. Electric lumps (3 specimens); presented by the Nerust Lamp Company.

12. Watch movement; presented by the Elgin National Watch Company.

13. Tricycle; presented by Mr. Robert Atwater Smith.

14. Desk and quadrant used by Dr. C. F. Hall on the *Polaris* expedition; presented by Miss Anne S. Hall.

15. Phonograph tin foil used by Edison in experimenting at the Smithsonian Institution in 1878; presented by Mr. W. J. Rhees.

16. Telephone receivers, etc. (24 specimens); presented by Mrs. Elisha Gray.

17. Collection of pottery from the Canary Islands (19 specimens); gift of Hon. Solomon Berliner.

18. Archeological collections from Kentucky (627 specimens); presented by Mr. W. F. Young.

PURCHASED BY THE MUSEUM.

1. Collection of Philippine ethnological material (186 specimens); from Mr. J. M. Harkins.

2. Collection of Philippine hats (16 specimens); from J. B. Wood.

3. Collection of material illustrating the Parsee religion and customs (12 specimens); from Dr. Emily B. Ryder.

4. Collection of Siamese coins (22 specimens); from Miss M. C. McFarland.

5. Collection of Colonial Spanish coins minted in Mexico and the Philippine Islands (98 specimens); from Mr. A. H. Quarles.

6. Archeological collection from Honduras (105 specimens); from Dr. Spencer Franklin.

7. Collection of pottery, porcelain, etc. (180 specimens); from Mrs. G. Brown Goode.

PURCHASED BY THE BUREAU OF AMERICAN ETHNOLOGY AND DEPOSITED IN THE NATIONAL MUSEUM.

1. Collection of archeological material from Mexico (614 specimens); from Mr. E. O. Matthews.

2. Collection of archeological material from Georgia (9,484 specimens); from Dr. Roland Steiner.

3. Archeological collection from the Potomac Valley, etc. (747 specimens); from Mr. Robert Proudfit.

EXCHANGES.

1. Musical instruments and copies of instruments (6 specimens); through exchange with Mrs. J. Crosby Brown for similar material.

2. Collection of photographs of architectural and sculptural subjects (763 views); from Brooklyn Institute of Arts and Sciences, in exchange for Pueblo pottery.

LOANS.

1. Miscellaneous historical relics (82 specimens); by the National Society of Colonial Dames.

2. Guns captured at Tientsin, China (21 specimens); by Col. W. H. Carter, U. S. Army.

3. Miscellaneous historical relics (7 specimens); by the National Society of the Daughters of the American Revolution.

4. Death mask of President McKinley; by E. L. S. Pausch.

5. Relics of Admiral J. W. Philip, U. S. Navy, swords, etc. (9 specimens); by Mrs. J. W. Philip.

6. Swords, etc. (6 specimens); by Admiral R. D. Evans, U. S. Navy.

7. Musical instruments, etc. (78 specimens); by Dr. Ryan Devereaux, U. S. Army.

8. Collection of Indian relics (7,837 specimens); by Dr. Roland Steiner.

CARE OF COLLECTIONS.

The various collections received by the Department have been catalogued and cared for as in previous years. Much attention has been given to the important work of destroying insect pests, and the Department is now practically rid of them. The cataloguing is quite up to date, and considerable work has been done on the recataloguing of collections imperfectly entered in previous years.

In the laboratories much work has been accomplished. Numerous casts of specimens have been made, a large number of vases have been mended, and copies and models of many objects pertaining to the Division of Technology have been constructed.

INSTALLATION OF EXHIBITS.

As already indicated, much progress has been made in the work of installing exhibits. Not only have the Exposition exhibits been placed, but several of the halls have been entirely reinstalled and the display made more attractive and instructive. Labeling has received special attention and is more nearly complete than at any previous period.

STORAGE.

Owing to the crowded condition of the Museum, a large body of material, comprising a considerable percentage of valuable specimens, has been stored in outside buildings. During the year an attempt has been made to find space for the more important storage material within the Museum building, and nothing is now sent out which has any special value or which could not readily be replaced in case of loss.

FIELD WORK.

The field work of this year has not been extensive. Dr. Walter Hough continued explorations in Arizona begun during the preceding

year, having taken up on June 1 of the preceding year the joint exploration arranged between the Museum and Mr. P. G. Gates, who furnished the equipment. This portion of the season was spent in making an archeological section from Fort Apache to Moki, about 180 miles on a north and south line, with good results. Ethnological work was done among the White Mountain Apaches, the Navahos, and Hopi. After the close of the Museum-Gates expedition, Dr. Hough mapped two new groups of ruins north of Holbrook, returning to Washington on September 22. During the season 60 ruins were visited and 18 excavated, many plans of ruins were made, and 3,000 specimens collected.

The Head Curator spent a few weeks in archeological exploration in the Middle West. A visit was made to Kimmswick, Missouri, where examinations were made of an extensive deposit of fossil mammals with which human remains were said to be associated, and to an ancient village site where numerous specimens of pottery and stone implements were secured. Later, collections were secured from an ancient chert quarry on the Peoria Indian Reservation, Indian Territory, and important explorations were made at Afton, Indian Territory. Reports had reached the Museum from Dr. R. H. Harper, of Afton, of the occurrence of flint implements in association with fossil animals in a sulphur spring near that place. The spring was cleaned out and about 800 very interesting implements were obtained, as well as a great number of remains of fossil and recent animals. It was determined that the fossil bones were connected with the original deposits through which the spring rises and that the spring had been made a place of sacrifice by the Indian tribes, and various articles had been cast in as offerings to their gods.

The Head Curator also made a short trip into Pennsylvania, examining ancient soapstone quarries near Christiana, Lancaster County, and rhyolite quarries in South Mountain, Adams County.

Dr. W. L. Abbott has continued his exploration in the East Indies, and has forwarded important ethnological collections from Java and elsewhere.

RESEARCHES.

The Head Curator continued his investigations in several branches of aboriginal art, papers on pottery and stone implements being under way. Particular attention was given to the completion of a paper on the "Classification and arrangement of the collections of an anthropological museum."

Prof. O. T. Mason, Curator of the Division of Ethnology, has continued his investigations on aboriginal basketry, and has devoted much time to the preparation of an extensive work on this subject. Assistant Curator Walter Hough was engaged largely, after his return from

the field of his explorations in Arizona, in preparing a catalogue of his extensive collection, and writing his report.

Lieut. W. E. Safford, U. S. Navy, has prosecuted studies for a number of months, giving especial attention to the ethno-botany of Guam, and his paper is approaching completion.

The papers based on Museum material, published during the year by the Head Curator, Professor Mason, Dr. Hough, and Dr. Thomas Wilson, are mentioned by title in the Bibliography (Appendix IV).

REPORT ON THE DEPARTMENT OF BIOLOGY FOR THE YEAR 1901-2.

By FREDERICK W. TRUE,
Head Curator.

The work of the fiscal year 1901-2 has been characterized by continued effort along lines already laid down rather than by new departures. The collections have grown steadily and the scientific investigation of new accessions has progressed continuously.

The zoological collections of the National Museum have grown to immense size, rivaling, and in some cases surpassing, those of any other museum. Of insects there are in the Government collection nearly 1,500,000 specimens; of recent shells nearly 1,000,000 specimens; besides at least 500,000 specimens of other aquatic invertebrates, about 200,000 specimens of fishes, more than 60,000 birds' eggs, 130,000 specimens of birds, more than 40,000 reptiles and batrachians, and between 75,000 and 100,000 specimens of mammals, including the collection of the Biological Survey, U. S. Department of Agriculture.

The Pan-American Exposition (opened May 1, 1901, closed November 2, 1902) continued until the end of the first third of the fiscal year covered by this report, and was followed by the South Carolina Exposition (opened December 1, 1901, closed May 31, 1902), which continued until the close of the year. At both of these expositions exhibits were made by the divisions dealing with vertebrates. A full account of the Pan-American exhibit will be found in the Annual Report for 1900-1901, pages 177-231.

EXHIBITION COLLECTIONS.

The principal improvements were in the halls devoted to the exhibition of insects and reptiles and batrachians. At the close of the last year there were on exhibition 73 reptile casts and 11 batrachian casts. The number of the former has been increased to 78 and of the latter to 13. These figures do not give a just idea of the real improvement made. Three new cases were provided and many inferior casts were replaced by better ones, and several very large forms not previously represented were added. These include a king cobra snake, with accessories representing the edge of an Indian jungle; a very large

Amazon River turtle (*Podocnemys*); a mata-mata turtle, one of the most remarkable of existing animals; a huge alligator snapper, the largest of North American fresh-water turtles; several large boas and other snakes, together with various lizards, toads, and frogs. The series is far finer than ever before shown in the Museum. The space available has now been practically all taken up, except certain cases against the walls, in which it is proposed to make an exhibit of specimens of lizards in formalin of species too small to cast. The entire series shown, with but one or two exceptions, is American, and chiefly North American. The reptile faunas of the Old World can not be shown in the present restricted quarters.

An opportunity was found in April to proceed with the mounting of a new insect exhibit, for which preparations were long under way. With the aid of special assistants, the entire series of North American beetles was mounted, and in June placed on exhibition. This series occupies 20 standard exhibition boxes and comprises about 2,700 insects, representing 682 species. The collection is very carefully installed and labeled, and in the case of species having habits or peculiarities of more than ordinary interest the facts are briefly mentioned in untechnical language. Work on other orders was progressing favorably at the close of the year.

In other classes than those mentioned the improvement of the exhibition series was less marked, though many fine mounted specimens of American mammals and birds exhibited at Buffalo were added. The portion of the Pan-American exhibit sent to the Charleston Exposition was returned just at the close of the fiscal year. The chief taxidermist, with the occasional help of one assistant, completed about 50 mammals for exhibition during the year, including one very large specimen, a Steller's sea-lion. This specimen had originally been planned for the Pan-American Exposition but could not be exhibited for lack of space. It replaced a similar mounted specimen which had been on exhibition over twenty-five years and had deteriorated. Mention of the principal vertebrates exhibited at Buffalo and now in the Museum will be found in my previous report (p. 63) and in the Appendix to the Museum Report for 1901 (p. 185).

The two large wall maps in the bird hall, representing the faunal areas of the globe, were repainted and lettered, so as to be more intelligible to the general public. Three new groups of American game birds were added to the series begun last year, but the work could not be continued further for lack of funds. A fine skeleton of the Kadiak bear, presented by Mr. J. H. Kidder, and a skeleton of the giant salamander of Japan, presented by Dr. C. Ishikawa, were added to the exhibition series of the division of comparative anatomy. New wall cases for the south end of the south hall were under construction during the year, but not completed.

The descriptive labels for vertebrates prepared for the Buffalo Exposition were made use of in the permanent exhibition series as far as practicable. The great series of labels of all kinds which had accumulated in the editor's office and was transferred to the custody of the head curator some time ago, was examined by the curators of the several divisions, and such labels as were no longer of use were picked out and discarded. Typewritten labels, many of them descriptive, were prepared for the new exhibition series of North American Coleoptera.

EXPLORATIONS.

As noted in last year's report, Mr. W. H. Ashmead, Assistant Curator, Division of Insects, accompanied the U. S. Fish Commission expedition to the Hawaiian Islands for the purpose of collecting insects. He left Washington in May, 1901, and returned in September, 1901, having been in the islands about three months. An expedition to Arizona for the purpose of collecting insects was undertaken by Mr. E. A. Schwarz, Custodian of Coleoptera, at his own expense. He also paid the expenses of an assistant, and very generously turned over to the Museum the large collection made. He was in the field from May to August, 1901. Dr. H. G. Dyar, Custodian of Lepidoptera, accompanied by Mr. A. N. Cudell, who was detailed from the U. S. Department of Agriculture, made a very successful expedition to Colorado for collecting Lepidoptera. The work occupied about two months—from May, 1901, to July, 1901. By invitation of Dr. Edward Palmer, Messrs. C. L. Pollard and William Palmer, of the Museum, spent two months in eastern Cuba in the spring of 1902, and collected plants, birds, bats, insects, and marine invertebrates. The Head Curator visited the whaling station of the Cabot Steam Whaling Company on the south coast of Newfoundland in June, 1901, and obtained much valuable information regarding the Sulphurbottom whales there taken, and many photographs. He made arrangements for obtaining a skeleton of one of these large animals at a later date. By arrangement with the War Department, Mr. B. S. Bowdish, a private in the Army, was detailed to make collections of birds in Porto Rico, Mona Island and eastern Cuba. This work was carried on in the winter of 1901-02 and occupied about seven months. Late in the fiscal year Mr. R. Ridgway, Curator, Division of Birds spent two months in southern Illinois in collecting birds for the Museum. In the summer of 1901 Dr. J. N. Rose, Assistant Curator, Division of Plants, accompanied by Mr. Robert Hay, assistant, spent ten weeks in central Mexico in botanical explorations. He ascended Mount Orizaba and Mount Popocatepetl, and from each mountain obtained a large series of plants, some of which were brought alive to the United States and deposited in greenhouses of the U. S. Department of Agriculture, where they are now growing.

ACCESSIONS.

The largest accessions of the year were Dr. W. L. Abbott's East Indian collections; a collection of insects from Arizona, comprising 65,000 specimens, made by Mr. E. A. Schwarz; the bequest of Dr. Charles Mohr, consisting of 18,500 flowering plants, and the collections of invertebrates transmitted by the U. S. Fish Commission.

Dr. W. L. Abbott continued his zoological explorations in the East Indies during the year, making numerous interesting discoveries, and sending to the Museum great numbers of valuable specimens, especially mammals, birds, reptiles, and insects. Dr. Abbott's field of operations during the year was in the South China Sea, between Sumatra, the Malay Peninsula, and Borneo. Three months (January to March, 1901) he spent in exploring the Andaman and Nicobar islands, accompanied by Mr. C. B. Kloss. From May 26 to August 7, 1901, he visited various groups of small islands immediately east of Singapore and also the coast and rivers of Johore. In August and September, 1901, he explored the Indragiri River, Sumatra, and the neighboring islands Linga and Sinkep. Linga Island had been visited by him previously in July, 1899, on which occasion he was accompanied by Mr. C. B. Kloss.

From the Andaman and Nicobar islands Dr. Abbott sent to the Museum 278 mammals, among which were specimens of 15 new species. This collection is by far the most complete ever brought together from these islands and greatly increased the knowledge of their mammal fauna. In Sumatra and Linga and Sinkep islands 166 mammals were obtained, including representatives of 11 new species. Among the latter was a new pig related to the Borneo pig (*Sus barbatus*), and named *Sus oi* by Mr. G. S. Miller, jr. It is one of the most interesting of Dr. Abbott's many discoveries in the Malay region. From Johore and various islands to the eastward Dr. Abbott obtained 404 mammals for the Museum. This material has not yet been thoroughly examined, but is known to be extremely valuable. The great collections of mammals of the East Indies resulting from Dr. Abbott's extensive and long-continued explorations are unrivaled, and the mammal fauna of the region which they cover can now be studied to better advantage in the National Museum than in any other establishment.

Besides mammals, Dr. Abbott collected over 700 birds, a large series of eggs of the Nicobar Island Megapode, *Megapodius nicobarensis*, reptiles and batrachians, and numerous insects. The reptiles and batrachians are the first the Museum has received from the Nicobar and Andaman islands.

Dr. A. Donaldson Smith presented 6 African antelopes and 2 monkeys, and also 81 birds, from Somaliland, the first from that region which the Museum has received.

Among the important specimens received from the Fish Commission were the types of the fishes *Mistichthys luzonensis*, of the Philippine Islands, and *Eulophius tauucri*, together with the sponges collected in Porto Rico in 1899, and identified by Dr. H. V. Wilson, and the holothurians and echini from the same locality, identified by Prof. H. L. Clark. Added to these were the crustaceans and echinoderms collected by the Commission in the Hawaiian Islands in 1901; about 1,500 specimens of common species of invertebrates from Woods Hole, Massachusetts, intended to be made up into sets for distribution to educational institutions; about 1,300 shells and 2,750 packages of miscellaneous invertebrates of other classes which had accumulated in the laboratories of the Commission; and seven lots of crayfishes from Maine. The Commission also transmitted a collection of about 300 plants made by Messrs. Evermann and Clark in Indiana.

The Museum having agreed to publish a series of papers by President D. S. Jordan, the Leland Stanford Junior University presented a collection of Japanese fishes, including the types of species described by Dr. Jordan. Collections of fishes from Panama and Cocos and Galapagos Islands, and of crustaceans from the Hopkins-Stanford Galapagos Expedition of 1898-99 were also presented.

The Museum purchased from Prof. Bashford Dean some excellently preserved reptiles and invertebrates from Negros Island, Philippine Islands, and Professor Dean presented a collection of fishes from the Nile River.

A collection of about 300 birds, including many species of importance, was obtained for the Museum by Mr. B. S. Bowdish in Cuba and Porto Rico (see Explorations, p. 61). Mr. Bowdish also obtained several exceedingly rare reptiles, and one new species from these islands, and collected reptiles in Mona Island, from which the Museum had not previously received specimens. Other collections of Cuban reptiles and birds were obtained by Mr. William Palmer during a two months' sojourn at the eastern end of the island.

Mammals.—A remarkably fine skeleton of an adult Kadiak (Alaska) bear was presented by Mr. J. H. Kidder. The skeleton conveys an even more vivid impression of the strength of this huge beast than the mounted skin recently added to the collection. Mr. Harry Pidgeon presented an excellent series of skins of the wild sheep of the northern Rocky Mountains, *Ovis stonci*. The Museum was fortunate in obtaining numerous additions to its collection of bats during the year, amounting in all to about 260 specimens, of which 35 were from the Philippine Islands; 58 specimens were the gift of Mr. Charles E. Ashcroft, jr., U. S. Weather Observer at Roseau, Dominica Island, West Indies.

Dr. E. A. Mearns, U. S. Army, having received word of the stranding of a small whale near Newport, Rhode Island, notified the Museum

of the occurrence, and a preparator was detailed to obtain the skeleton. Through the good offices of Capt. James Sodermann the specimen was held for the Museum. It proved to be the ziphioid, or bottlenose, whale, *Ziphius cavirostris*. The specimen was adult, and the skeleton is remarkably fine.

The Museum obtained by purchase about 275 specimens of obscure and little-known species of small mammals from Germany; 104 mammals of Ecuador, including an undescribed species of native cat, named *Felis æquatorialis*, by Dr. E. A. Mearns, and 60 Asiatic squirrels especially needed for comparison with Dr. Abbott's collection. Fourteen moose skulls, 8 elk skulls, and 12 skulls of other deer were obtained at a nominal price from Mr. E. Thompson Seton.

Birds.—A valuable series of East Indian birds, 281 in number, which are of special use for comparison with Dr. Abbott's collection, was obtained from the Royal Museum of Natural History, Leiden, in exchange. A series of 161 Brazilian birds was obtained by exchange with the Paulista Museum, São Paulo, Brazil. Mr. Anastasio Alfaro presented 12 birds from Cocos Island, a locality seldom visited. This sending includes several specimens of the rare sparrow *Cocornis agassizi*. Mr. R. D. Lusk presented a specimen of the thick-billed parrot, *Rhynchopsitta pachyrhyncha*, obtained in Arizona. This parrot had not been taken previously within the limits of the United States. Mr. H. W. Henshaw presented 14 rare Hawaiian birds, and Mr. A. Boucard added 16 humming birds in continuation of his earlier donations in 1895 and 1896. Mr. J. H. Riley gave the Museum a collection of 286 birds of Maryland and Virginia for use in exchanges.

The Museum purchased a select collection of 105 much-needed Mexican birds.

Birds' eggs.—The great collection of birds' eggs received several important accessions during the year, besides those presented by Dr. Abbott and already mentioned (p. 62). Dr. Ralph added to his numerous donations of previous years a collection containing several sets of eggs of the rare Everglade Kite, *Rostrhamus sociabilis*. A series of eggs from Texas, including those of *Vireo atricapillus*, was given by Mr. H. P. Attwater. A collection presented by Mr. J. P. Babbitt contained eggs of *Larus schistosagus*, a species of which the Museum lacked specimens.

The Biological Survey of the Department of Agriculture transmitted a number of sets of eggs from different parts of the United States, including two sets of eggs of the Tennessee warbler, of which the Museum had no representative previously. A small collection of rare eggs from Arizona was purchased.

Reptiles and batrachians.—An excellent skeleton of the Giant Salamander of Japan was presented by Dr. C. Ishikawa.

Mr. Robert T. Matthews presented two very rare snakes from Nicaragua, and Rev. Cyrus A. Clark an equally rare Japanese species, with some other specimens. The skeleton of a large leather-back turtle was donated by Mr. W. E. West. This was a very welcome accession, as the skeleton in the exhibition series of the Museum was not perfect. The Museum made a number of purchases of reptiles during the year, of which the most important were 50 specimens from Sumatra and vicinity for comparison with Dr. Abbott's collections, and 137 especially well-preserved specimens from Costa Rica to strengthen the Museum collections from that country, which, though extensive, are not in the best condition. The material obtained from the Philippine Islands and from Porto Rico has already been referred to (see p. 62).

Fishes.—Besides the collections obtained from the U. S. Fish Commission, Stanford University, and Professor Dean, already mentioned, the Museum secured through the good offices of Messrs. Anderson and Price, of Ormond, Florida, the skin of a whale shark, *Rhinodon*, about 13 feet long, the first ever taken in the North Atlantic.

Mollusks.—The principal donations in this class were 2,000 shells from Lower California, presented by Lieut. C. A. Clark, U. S. Navy; 35 specimens of new and rare species of land shells from various localities in the United States, presented by J. A. Ferris; a collection containing specimens of 12 species of land shells from Cocos Island, representing cotypes of species described in Van Marten's work on the shells of the island. These were obtained by Mr. William H. Dall.

Insects.—The number of insects added to the collection during the year, including deposits, exceeded 100,000 specimens, or nearly three times as many as were received during the previous year. Included among the accessions were four large collections, the principal of which was that made by Mr. E. A. Schwarz, Custodian of Coleoptera, assisted by Mr. H. S. Barber. This collection, which Mr. Schwarz made at his personal expense and presented to the Museum, contained 65,000 insects. Mr. W. H. Ashmead collected about 7,000 insects in the Hawaiian Islands. Dr. H. G. Dyar, Custodian of Lepidoptera, assisted by Mr. A. N. Caudell, of the U. S. Department of Agriculture, collected 10,000 Lepidoptera and Orthoptera in Colorado. This collection comprised a large number of blown lepidopterous larvæ prepared in the field by Mr. Caudell. The fourth large accession was a deposit made by Mr. William Schaus, consisting of about 10,000 beautifully prepared specimens of butterflies, chiefly from Mexico and Central America.

Besides these four large accessions there were 306 smaller ones, all of which are referred to in Appendix II. Only a few can be mentioned in this place. Prof. T. D. A. Cockerell presented various

collections of insects from New Mexico, containing many types and cotypes. Mr. D. W. Coquillett, Custodian of Diptera, presented a valuable collection comprising 2,214 specimens of American Diptera. Two accessions of insects of the Philippine Islands were received from Dr. Paul L. Stangl, and one from Maj. M. L. Robb. Mr. W. P. Hay presented 500 Mexican Lepidoptera. A collection of Homoptera was presented by Prof. Elmer D. Ball, including types of many species described by him. Types and cotypes of new species were also presented by Prof. E. B. Williamson, Prof. H. Bird, Prof. Ralph V. Chamberlin, and Mr. H. H. Newcomb. The deposit of these types is a matter of great satisfaction to the Museum, and much to the interest of entomologists.

At the close of the year arrangements were entered into for the purchase of 4,000 finely prepared Costa Rican insects, in which the Museum collections are deficient. This was the only purchase during the year. Several excellent collections were procured by exchange, the principal of which were 744 European Diptera from Prof. M. Bezzi, and a series of exotic Termitidae, including many types, obtained from Dr. Felippo Silvestri.

Marine invertebrates. Besides the collections from the U. S. Fish Commission and Stanford University, already referred to (p. 63), mention should be made of the crustaceans from caves in Kentucky and Tennessee, including types of two blind species, which were presented by Mr. W. P. Hay; crustaceans from Alaska, presented by Mr. R. C. McGregor, of the U. S. Coast Survey steamer *Pathfinder*; samples of Atlantic Ocean bottom, from the Bureau of Equipment, U. S. Navy, and a collection of miscellaneous marine invertebrates from Ellesmere Land, presented by Mr. Robert Stein.

One large purchase was made during the year, consisting of 96 boxes of corals collected by Prof. J. B. Steere and Prof. Dean C. Worcester in the Philippine Islands. This collection contained a great variety of valuable study material.

Plants.—The accession lots added to the herbarium for the year were 342 in number. In 1899-1900 Dr. Charles Mohr, of Asheville, North Carolina, presented to the Smithsonian Institution his collection of cryptogamic plants, comprising about 3,000 specimens, and at the same time bequeathed to the Institution his extensive herbarium of flowering plants. Dr. Mohr died July 17, 1901, and on August 23, 1901, the flowering plants, comprising about 18,500 specimens, were received from his executors. This valuable bequest is of much importance to the National Herbarium, as it consists chiefly of plants of the Southern States, which were not well represented previously. Dr. J. N. Rose, Assistant Curator, collected about 3,000 plants in Mexico, chiefly on Mount Orizaba and Mount Popocatepetl. Dr. E. A. Mearns, U. S. Army, presented 748 plants from Rhode Island. A

collection of 681 plants, chiefly from the Philippine Islands, was received as a donation from the Royal Botanic Gardens, Kew, England.

A large amount of valuable material, comprising more than 6,000 specimens, was transmitted by the U. S. Department of Agriculture during the year. The more important collections are as follows: From Porto Rico, collected by Messrs. Cook, Underwood, and Griggs (1,100 specimens); from Guatemala and Mexico, collected by Messrs. Cook and Griggs (1,000 specimens); from Brazil, collected by José de Campos Novaes (511 specimens); from Idaho and Wyoming, collected by E. D. Merrill and C. V. Wilcox (804 specimens); from Alaska, Oregon, Washington, and California, collected by F. A. Walpole (711 specimens). The U. S. Geological Survey transmitted a collection of 485 specimens, collected in Arizona by Mr. John B. Leiberg, and the U. S. Fish Commission a collection of 314 specimens, collected by Professors Evermann and Clark in Indiana.

Several important exchanges were effected during the year. Mention may be made here of the following: 747 Porto Rican plants and 444 Mexican plants from the New York Botanic Garden; 554 Colorado plants from Mr. Frank Tweedy.

During the year the Museum made purchases of plants to the amount of \$1,000 and about 10,100 specimens were obtained. The largest collections were 4,249 specimens from China and 1,000 specimens from Mexico. The remaining purchases consisted chiefly of plants from various parts of the United States, as follows: Colorado, 1,383; Utah, 455; California, 450; Gulf States, 415; Georgia, 558; Florida, 523.

WORK ON THE STUDY SERIES.

In the Division of Mammals a considerable amount of time was spent in making uniform, complete labels to replace earlier ones, many of which had deteriorated from long use or the infiltration of oily matter from the skins. The rearrangement of the small mammals was practically completed last year as far as space would permit. On account of the cramped quarters it has been necessary to store many trays of less frequently used material in boxes, a very undesirable plan. During the year covered by this report five new cases were made for the large mammals, and they are now all reasonably well protected from dust and insects, but are still much overcrowded, so that they are to a certain extent inaccessible and can not be properly arranged. The large skins in vats are still uncleaned and in danger of destruction, no money having been available for their renovation. Of the small skins, between 300 and 400 were freed from grease and made over into a suitable form for permanent preservation. Among these were included many type specimens. The rooms for mammals in alcohol were improved by the addition of several hundred feet of shelving.

but as this was not put in place until near the close of the year little was done toward rearrangement. The specimens themselves are in good condition. During the year 1,064 mammal skulls, mostly of large size, were cleaned by the Museum preparators, of which 590 belonged to the collection of the Biological Survey, U. S. Department of Agriculture, and 474 to the regular collections. In addition, 2,167 small skulls were cleaned by contract. This work is of special importance, as in the study of mammals cranial characters are largely depended upon for the discrimination of species. The additions to the collections of the Biological Survey were catalogued in the Museum as hitherto, and 13 new storage cases were constructed for their reception. At the request of Dr. D. G. Elliot, of the Field Columbian Museum, the skulls of a considerable number of types and rare species were photographed for his work on the mammals of Mexico and Central America.

In the Division of Birds the conditions existing last year continued with little change. The curator being occupied the greater part of the time in preparing manuscript for the press, the routine work fell almost altogether on the assistant curator, who was without assistance except for a few weeks. During this period some progress was made toward completing the rearrangement of the birds in the new cases provided last year. The assistant curator took charge of the repacking of exhibits at the Buffalo Exposition and installing them at the Charleston Exposition.

In the Division of Reptiles a beginning was made in rearranging the study collections on the new shelving provided last year, but as this work involves a large amount of re-identification of species it necessarily proceeds slowly. The collections are in a good state of preservation.

Little more can be accomplished in the Division of Fishes by the present small force than to keep the collections from deteriorating, and to enter and care for new accessions and to attend to the scientific correspondence. Toward the close of the year, however, the work of preparing 100 sets of duplicate specimens for distribution to educational institutions was begun, and good progress made. The assistant curator went to Charleston in January to install the collection of fishes in formalin which was transferred from the Buffalo Exposition.

A large number of standard drawers was added to the equipment of the Division of Insects, and the re-arrangement of the collections thereby much facilitated. The Lepidoptera have now all been well arranged by Dr. Dyar in the standard drawers. Mr. Schwarz has been engaged in similar work on the Coleoptera and completed 50 drawers during the year. The Ichneumonidea and Chalcidoidea were arranged by Mr. Ashmead. Mr. Currie has worked continuously on the Neuroptera and by his efforts the collection of Odonata has been

greatly increased and improved. Work on the Diptera was continued by Mr. Coquillett, and at present the collection of insects of that order is probably at least as good as any other similar collection in the country. The Diptera are still in old style boxes. In all other orders, except the Rhynchota, the collections are in good condition, though less work has been done on them. The Rhynchota is a large order of great economic importance and should have the care of a properly qualified specialist.

The accessions to the Division of Marine Invertebrates were for the most part cared for as soon as received, but the large collection of Philippine corals purchased from Professor Steere was not all unpacked for want of room. With the present force the specimens can not be catalogued as fast as identified, but a large amount was accomplished during the year.

It has been fully recognized that the collections of the Division of Plants, also known as the National Herbarium, are not housed as satisfactorily as could be desired, while the offices and laboratories are cramped almost beyond sufferance, and it has been necessary to resort to many ingenious devices to accommodate the working force.

When the Herbarium was transferred from the U. S. Department of Agriculture to the National Museum, the old cases in which it had been kept were also brought over and when set up were remodeled and improved as far as possible. It was obvious, however, that they could not be made tight enough to absolutely exclude dust and insects without a greater expenditure of money than would be justified. About three years ago a new form of case was devised, and at the beginning of the present fiscal year 104 of these new cases were in use. During the past year 40 additional cases were constructed, making 144 in all. It is estimated that about 200 additional cases will still be required to replace the old ones. Congress was asked to supply funds for these much-needed cases, and it is hoped that the amount appropriated for mechanical work will enable the Museum to construct the greater part of them, if not all, during the coming year.

Mr. F. V. Coville, Honorary Curator, reports as follows regarding the cataloguing of specimens:

At the time the herbarium was actually transferred to the National Museum, in 1894, we began to stamp and record the accessions. It was assumed that there were then about 200,000 sheets in the herbarium, and the stamp was set at 200,001.

The number of specimens catalogued during the past eight years is 202,945. Of these 15,975 were added last year.

The work of recording the old part of the herbarium has almost ceased and specimens are only stamped when they are to be sent away as a loan. This record runs from 1 to 26346. In addition to this, specimens have been stamped with numbers from 125000 to 156409.

The Division of Plants has been rather more favorably situated as regards funds than any other division of the Museum. Since its trans-

fer from the U. S. Department of Agriculture in 1894 it has expended each year, as agreed upon, the sum of \$10,000, a larger amount than allotted to any other division. In the present quarters, however, it can not hope for the facilities which a less crowded building would afford. On the other hand, it is to be stated that the division has not maintained an extensive exhibition series, as has been the case with nearly all other divisions of the Museum.

Plans of the new cases adopted for the Division of Plants were sent by request to Mr. F. D. Gardner of the Porto Rico Agricultural Experiment Station, and to Mr. E. L. Morris, director of biology, Washington high schools.

CATALOGUE BOOKS.

The supply of catalogue books for the several divisions having been exhausted, the opportunity was taken to revise the headings, which had been in use with but little modification for about fifty years. After full consideration it was found impracticable to make the catalogues conform to those of the other two departments of the Museum, but by introducing two columns without headings a form was devised which can be used by all the divisions of the Department of Biology, except the Division of Plants. The size of the books was not changed.

SCIENTIFIC RESEARCHES AND PUBLICATIONS.

As already said in another place, much of the work done during the year covered by this report was continuation of work begun last year or earlier. The first volume of the large manual by Mr. R. Ridgway, entitled *Birds of North and Middle America*, which was mentioned last year, was published on October 24, 1901. The second volume is nearly ready to issue, and the third volume is well under way and will probably go to press sometime during the coming year. Mr. Ridgway has had little time for other duties than reading proof and completing manuscript on this work.

Dr. C. W. Richmond prepared a report on the large collection of birds from the Andaman and Nicobar islands presented by Dr. W. L. Abbott, and identified the collections from Linga Island, Sumatra.

Much of the time of Dr. Stejneger was occupied in re-identifying the general collections of reptiles and batrachians preparatory to their re-arrangement in the new cases already mentioned. Although this work affords nothing for publication, it amounts to a revision of many genera. The investigations of the reptile faunas of the Antilles and of Japan, mentioned in last year's report, were continued. The monograph on the reptiles and batrachians of Porto Rico was not completed as expected, owing to the receipt of new material from Mona Island which required description and illustration. In the course of his

studies in Europe Dr. Stejneger encountered important collections which necessitated a partial revision of his manuscript.

Mr. G. S. Miller, jr., published five papers based on the mammal collections during the year, the principal ones containing descriptions of Dr. Abbott's collections from the Nicobar and Andaman islands and Indragiri River, Sumatra. In both numerous new species were described. Mr. Miller also published several nomenclatural and classificatory notes, and jointly with Mr. James A. G. Rehn, of Philadelphia, a very carefully prepared list of mammals of North America, entitled *Systematic results of the study of North American land mammals to the close of the year 1900*. Dr. M. W. Lyon, jr., published two papers on bats and one on the Venezuelan mammals collected by Capt. Wirt Robinson and himself. He has been engaged in the study of the skeletons of American hares and pikas.

The Museum published during the year a series of papers by President D. S. Jordan, and Messrs. J. O. Snyder, E. C. Starks, and M. Sindo, on the fishes of Japan. These papers covered 16 groups, such as the eels, cardinal fishes, surf fishes, anglers, etc. The types of new species were deposited in the National Museum. President Jordan also published conjointly with Mr. J. O. Snyder a list of the fishes collected for the Museum by the late Pierre L. Jouy in Japan in 1883 and 1885. Dr. Tarleton H. Bean and Mr. B. A. Bean completed reports on the fishes of New York for the State Museum and of Great South Bay, New York, for the New York Fish Commission. Notes on the whale-shark received by the Museum from Ormond, Florida, on a steelhead salmon, and on a larval conger eel were also published by Mr. B. A. Bean. A report on the fishes of the Nile River presented by Prof. Bashford Dean was prepared by Dr. Theodore Gill and Mr. Bean.

The conchological work accomplished during the year is summed up by Mr. W. H. Dall, Honorary Curator, as follows:

The curator has continued his work of revising and summarizing the groups of American bivalves. The revision of the fossil species (Tertiary), those of the general collection (recent), and of the American recent species all proceed together, so that for the most part concluding the work on a group means that the specimens in the collection belonging to that group have been brought up to date. The work which has chiefly occupied the curator during the past year has been (1) the preparation of a report now finished, but not yet printed, on the newly discovered Eocene of Alaska, and (2) the revision of the family Veneridae, one of the largest and most interesting of all the groups of bivalves, including 137 American species not including those of southern South America. The work on the recent species, including the description of 22 new ones discovered during the research, is completed, but the fossil forms will require further study as comprising many undescribed species.

Mr. Bartsch, under the supervision of the curator, has continued his researches in the Pyramidellidae of the Pacific coast, a wholly unexpected influx of undescribed forms having come to light by search in the sand and gravel reserved for the scrutiny of the student of Foraminifera. The nomenclature being in a bad state, a large

amount of research has been necessary, and this has occupied the time not taken up by the multifarious duties in the division which the absence of an efficient clerk makes it necessary to call upon Mr. Bartsch to perform.

Mr. Simpson has been continuing his work on the Naiades of the world, which has made reasonable progress, but has called for little in the way of publication during the year.

A very large number of identifications and lists of species for correspondents was made during the year, as usual, but this work, though taking much time and more or less directly beneficial to the Museum, calls for no extended remarks.

Prof. Charles B. Wilson, who has volunteered to work up the collections of parasitic copepod Crustacea belonging to the Museum, completed a monograph of the family Argulidae. The monograph of the Crustacea of the family Galatheidæ by Dr. J. E. Benedict, mentioned in last year's report, was completed, but has not yet been published. Miss M. J. Rathbun completed a study of the macruran Crustacea of the northwest coast of America, and prepared preliminary descriptions of both Macrura and Brachyura, which were published in the Proceedings of the Museum. She also prepared a list of decapods of the Northwest, with descriptions of new and rare forms, for insertion in one of the volumes of the report of the Harriman Alaska expedition, now in press. The collection of stalk-eyed Crustacea made by Dr. D. S. Jordan and Mr. J. O. Snyder in Japan was also reported on by Miss Rathbun. In addition she described a new species of fossil crab for Branner's Geology of the Northeast Coast of Brazil, identified the Brachyura and Macrura collected by the U. S. Fish Commission in the Hawaiian Islands, 1901, and renewed work on the fresh-water crabs belonging to the collections of the Paris Museum, publishing in that connection a description of a new species of *Parathelphusa*. Prof. W. P. Hay described two blind crustaceans from Mammoth Cave, Kentucky, and Nickajack Cave, Tennessee. Miss Harriet Richardson, collaborator, continued studies on the isopods. She prepared, at the request of Prof. A. E. Verrill, a report on the isopods of the Bermudas, and began reports on the Japanese isopods. She also took up the study of the general collection of Bopyridæ, and prepared descriptions of two new isopods from Indiana and Cuba, respectively.

Dr. L. O. Howard, Honorary Curator of the Division of Insects, who is also Entomologist of the U. S. Department of Agriculture, published during the year a large number of papers having for the most part an economic bearing. A list of these will be found in the bibliography accompanying this report. In addition Dr. Howard published a large popular work entitled The Insect Book, treating of North American insects exclusive of Lepidoptera and Coleoptera. The scientific work of other members of the staff of the Division of Insects for the year is thus summarized:

Mr. Ashmead still continues his classificatory work on the Hymenoptera and has published much on the subject. He has just finished his classification of the

chalcid-flies of the superfamily Chalcidoidea, a complex fully as large as the Ichneumonoiden. The material in this superfamily in the national collection is most valuable and has been arranged by Mr. Ashmead according to his classification. He also continues his work on a monograph of the North American Braconidae begun ten years ago, and has every reason to believe that his manuscript will be ready for publication in the Proceedings of the Museum this fall. He has also finished and handed in for publication in the Proceedings of the Washington Academy of Sciences his reports on (1) the Rynchota of the Harriman expedition, and (2) the Hymenoptera of the Galapagos Islands, collected by the Leland Stanford Junior University expedition. Mr. Ashmead has also done much work upon a catalogue of the Hymenoptera of North America and the West Indies. A complete bibliographical catalogue of our species has never been published, and it is believed that such a work will be found useful and valuable. Difficulty has been found in placing some of the species described from Mexico and Central America, and before these can be assigned to their proper genera it will be necessary to examine the types in the British Museum.

Mr. Coquillett has completed a synopsis of the dipterous family Chironomidae.

Dr. Dyar has completed and handed in for publication in the Proceedings a catalogue of the North American Lepidoptera north of Mexico.

Mr. Currie has been engaged when other work would permit in monographing the North American species of the antlion flies, family Myrmeleonidae. He has begun the compilation of a catalogue of the neuropteroid insects of North America.

Mr. F. A. Lucas completed a paper on latiloid fishes.

The scientific work of the botanists has covered a wide field. Mr. F. V. Coville, Honorary Curator of the Division of Plants, continued his studies upon the genera *Salix* and *Ribes*, and is also preparing a flora of Alaska. He published during the year a paper on a new genus of heather, *Harrimanella*, of which specimens were obtained by the Harriman Alaska expedition, and a paper on two species of *Ribes*. Dr. J. N. Rose continued work on the Mexican flora, and engaged with Dr. N. L. Britton in preparing a revision of the Crassulaceae of North America. Mr. C. L. Pollard published papers describing new species of violets and of *Chamverista*, also a popular account of plant families and on the formation of the Florida Keys. Mr. W. R. Maxon published various notes on ferns.

COOPERATION OF SPECIALISTS AND LOAN OF SPECIMENS.

The Museum has always enjoyed the cooperation of specialists in different branches of systematic zoology and botany in classifying the collections and identifying species in groups with which the members of the scientific staff are not familiar. These transactions are of a varied nature. Sometimes the use of all the Museum specimens of a group are solicited by a specialist engaged in preparing a monograph, to enable him to base his conclusions on greater masses of material than he personally has at his disposition. In cases of this kind the Museum benefits chiefly by having the specimens in its collection identified. In other instances the Museum asks the assistance of an expert in working up a collection, both to get the specimens identified and to

obtain a paper for publication in the Proceedings, or Bulletin. In still other instances both the above-mentioned objects are aimed at, the expert getting the use of material for use with other collections in a work of general scope, and the Museum receiving a report on its own specimens.

The system has worked to the advantage of the Museum and also, it is believed, has facilitated in no small degree the work of zoological and botanical specialists, both in the United States and abroad. Many collections were in the hands of specialists at the beginning of the year covered by this report and others were sent out during the year. The most important were as follows: A series of 208 Patagonian mammals sent to Dr. J. A. Allen, American Museum of Natural History, for use in connection with his work on the Mammals of the Princeton expedition to Patagonia; 68 Alaska squirrels, also sent to Dr. Allen; 49 mammals sent to Dr. D. G. Elliot, Field Columbian Museum, for use in connection with his work on the mammals of Mexico and Central America; 68 martens sent to Mr. S. N. Rhoads, Academy of Natural Sciences, Philadelphia, for use in a study of the genus *Mustela*; 315 fishes from Negros Island, Philippines, to Dr. D. S. Jordan, to be identified for the benefit of the Museum; the general collection of Salpæ and simple ascidians to Dr. William E. Ritter, University of California, to be identified for the benefit of the Museum; the general collection of Pycnogonida (which had previously been in the hands of Dr. Meinert, of Copenhagen) and other specimens, to Prof. Leon J. Cole, University of Michigan, to be worked up for the benefit of the Museum; 14 lots of Porto Rican echinoderms to Prof. H. L. Clark, Olivet College, to be identified at the request of the U. S. Fish Commission; 64 lots of Alpheidaæ to Dr. H. Contière, Paris Museum, added to the collections of the same kind previously sent him, to be classified for the benefit of the Museum; 11 lots of leeches to Dr. J. Percy Moore, University of Pennsylvania, added to similar lots previously sent him and identified for the Museum. The following insects, with many smaller lots, were lent for study: One hundred specimens of the genus *Leucania* to Prof. J. B. Smith, Rutgers College; 118 specimens of Ophionini to Dr. E. P. Felt; 138 Lepidoptera to Dr. W. J. Holland, Carnegie Museum; about 400 specimens, illustrating the natural history of the dragon-flies and their allies, to Prof. James G. Needham, Lake Forest University, for monographic work; 332 Tettigidaæ to Dr. J. L. Hancock.

Loans of plants were 30 in number, among which the following deserve notice: 214 specimens of *Amorpha* and *Philadelphus* to the Biltmore Herbarium; 197 specimens of *Equisetum* to Mr. A. A. Eaton; 589 specimens of *Cardamine* to Dr. A. Engler, Royal Botanical Museum, Berlin; 100 Hepaticæ to Dr. A. W. Evans, Yale University; 474 specimens of Nyctaginaceæ to Dr. A. Heimerl, Vienna; 223 mis-

cellaneous plants to the New York Botanical Garden; 574 Algae to Mr. W. A. Setchell; 140 specimens of *Eucalyptus* to the Botanical Garden, Sydney, New South Wales.

The shells of the family Achatinellidae which were in the possession of the late Prof. Alpheus Hyatt at the time of his death were transferred to Prof. A. G. Mayer, of Brooklyn, who is engaged in completing Professor Hyatt's unfinished work.

LABORATORY USE OF THE COLLECTIONS BY INVESTIGATORS AND STUDENTS.

In addition to the use made of the collections by the specialists to whom specimens were sent, various investigators and students work in the laboratories every year for longer or shorter periods. A great deal of such work is done by the scientific staff of the various bureaus of the U. S. Department of Agriculture which are concerned in zoological and botanical researches and by the officers of the U. S. Fish Commission. Dr. E. A. Mearns, U. S. Army, spent the summer and early autumn of 1901 in work on the natural history of the Mexican boundary. Dr. D. G. Elliot, Field Columbian Museum, spent a few weeks in January and February, 1902, in examining Mexican and Central American mammals. Mr. Outram Bangs, Museum of Comparative Zoology, spent some time in studying South American and Japanese birds. Mr. Frank M. Chapman, American Museum of Natural History, examined the collections of South American, and especially Peruvian, birds. Mrs. Florence M. Bailey made some investigations on the bird collections preparatory to the publication of a work on the birds of western North America.

Prof. W. P. Hay continued the work on the crayfishes mentioned last year, and rendered valuable assistance to the Museum by identifying recent additions to the collections. Mr. T. Wayland Vaughan continued work on the general collections of corals, as opportunities occurred.

Numerous specialists and students examined various portions of the collections of insects.

Dr. N. L. Britton, director of the New York Botanical Garden, was a frequent visitor to the Herbarium during the year, especially in connection with his studies on the Crassulaceae and Cyperaceae. The collection representing the genus *Plantago* was studied by Mr. E. L. Morris, director of biology in the high schools of Washington City. Dr. P. A. Rydberg examined the Rocky Mountain plants, Dr. Charles F. Millspaugh the plants of Yucatan, Dr. L. M. Underwood the fern collection, and Mrs. E. G. Britton the mosses. Prof. E. L. Greene, of the Catholic University of America, was a frequent visitor to the Herbarium, and Mr. J. B. Leiberger devoted much time during the

winter in identifying a western collection of his own and one obtained by Prof. L. F. Ward in Arizona.

Several students whose purpose was to familiarize themselves with different groups of animals have had desks assigned to them for longer or shorter periods. Such students are always welcome, but in the present cramped condition of the building they work under great disadvantages both as regards space and light.

DISTRIBUTION OF DUPLICATE SPECIMENS.

The distribution of so-called "duplicate" specimens to educational institutions continued as far as circumstances would permit. The preparation of these sets consumes much time, and with the limited force only a moderate number can be got together in any one year. The sets of marine invertebrates mentioned in last year's report were distributed to 71 institutions, chiefly colleges, normal schools, and high schools. In May work was begun on the preparation of a new series of 100 sets of fishes.

EXPOSITIONS.

The Pan-American Exposition, Buffalo, New York, closed November 2, 1902, and certain members of the staff were detailed to repack the exhibits of the Department. This work was under the supervision of Dr. Charles W. Richmond. The President having signified his desire that such portion of the Government exhibit at Buffalo as could be accommodated should be transferred to the Charleston Exposition, a selection of objects was made, packed separately, and shipped direct to that city. The remainder of the Buffalo exhibit was returned to Washington and installed in the permanent exhibition cases. The Charleston Exposition closed May 31, 1902, and just prior to that date several members of the scientific staff were detailed to repack the objects exhibited there.

PERSONNEL.

The Head Curator was appointed representative of the Smithsonian Institution and National Museum on the U. S. Government Board for the Louisiana Purchase Exposition, 1904.

Dr. M. W. Lyon, jr., returned to the service of the Department, September 1, 1901.

Mr. George B. Turner was appointed chief taxidermist, September 21, 1901.

Miss A. R. Knapp was appointed on April 1, 1902, to a clerical position in the Division of Plants.

REPORT ON THE DEPARTMENT OF GEOLOGY FOR THE YEAR 1901-2.

By GEORGE P. MERRILL,
Head Curator.

The year that has passed, though characterized by no single event of great importance, has, nevertheless, been one of steady progress along lines essential to good administration. More has probably been accomplished in the way of systematizing and completing the records of the collections than in any single year in the history of the Department. Changes of importance in the personnel have occurred, involving the resignation of Dr. Peter Fireman, on the 9th of September; the furloughing of Mr. John W. Coleman, preparator in the Section of Vertebrate Paleontology; the appointment of Mr. R. S. Bassler, preparator in the Section of Invertebrate Paleontology, and the appointment of Mr. W. C. Phalen as aid in the Division of Geology. The resignations and furloughs, it should be stated, were voluntary, Dr. Fireman retiring to accept a more lucrative position elsewhere, and Mr. Coleman accepting temporary employment in Mexico on account of the condition of his health. Temporary services have been rendered by Miss Moody and Miss Vouté.

ACCESSIONS.

The total number of accessions received by the various divisions of the Department is shown in tabular form below.

For purposes of comparison those for the years 1899-1900 and 1900-1901 are also given.

Divisions.	1901-2.	1900-1901.	1899-1900.
Geology	276	282	297
Mineralogy	197	149	157
Vertebrate Paleontology	36	18	30
Invertebrate Paleontology	65	93	72
Paleobotany	10	21	21

From this it might appear that there has been a steady falling off in the amount of material received. The discrepancy is, however, largely apparent. With the gradual increase in the size and degree of completeness of the collections we are enabled to exercise more and more

discrimination as the years go on, and material that would at one time have been acceptable is now rejected. No idea of the value of the accessions, moreover, can be derived from these figures, and it is safe to say that in at least two of the divisions the materials are of a value equal to that of any corresponding period in the history of the Museum.

It is well to note in this connection that as time passes a proportionally smaller amount of desirable material comes to the Department in the way of gifts, while the funds that can be devoted to purchase and collecting remain far too small. As a natural consequence the growth of the collection is likely in time to be seriously checked.

The most important of the accessions noted above have been:

1. A collection of 173 specimens of ores and 6 transparencies of mining regions received from the Government exhibit at Paris in 1900.
2. A fine example of native tellurium from Delamar, Nevada, gift of B. F. Swindler.
3. A magnificent mass of moss gold on quartz from the Miner's Dream mine in California.
4. Twelve samples of Alaskan gold illustrating the characteristic material from different parts of the territory.
5. A fine series of pot holes in basalt from Snake River Falls, Idaho, collected by Mr. F. W. Crosby.
6. Rocks and ores from the U. S. Geological Survey, including collections from:

The Silver and Rico Mountains quadrangles, Colorado, collected by F. L. Ransome; the Highwood and Crazy Mountains of Montana, collected by W. H. Weed; the Denver Basin, Colorado, collected by Whitman Cross; the Bohemia mining district of Oregon, collected by J. S. Diller; the Livingston Quadrangle, Montana, collected by W. H. Weed.

7. A beautiful mass of the so-called needle ore (Göthite) from Ironwood, Michigan, the gift of the Cleveland Cliff Iron Company.

8. A collection of rocks from Ellesmere Land, gift of Robert Stein.

9. Three fine specimens of molybdenite from Okanogan County, Washington; two fine specimens of axinite from Switzerland and Japan.

10. Two beautifully perfect crystals of tourmaline (rubelite) from Mesa Grande, California.

11. A suite of zeolites from Golden, Colorado.

12. Minerals as below, the first 12 of which were not represented in the collection: Narsarsukite, Narsarsuk, Greenland; perylite, Sierra Gorda, Chile; ytrocercite, Orange County, New York; picroallumogene, France; bornite (in crystals), Dognaska, Hungary; epistolite, Tulup, Greenland; plumboferrite, Jacobsberg, Sweden; ankyllite, Narsarsuk, Greenland; sylvanite, Burra Burra, South Australia; tha-

lenite, Osterby, Sweden; epidote, Narsarsuk, Greenland; lossenite, Laurium, Greece; sphalerite with quartz, Cumberland, England; meliphanite, Langesund, Norway; hydrocerussite on native lead, Langban, Sweden; epididymite, Narsarsuk, Greenland; caryinite, Langban, Sweden; cerussite, Sardinia; gibbsite, Dundas, Tasmania; cyanotrichite on stibnite, Felsobanya, Hungary; cordylite, Narsarsuk, Greenland; octahedrite, Dauphiny, France; galenobismutite, Falun, Sweden; amethyst, Silver Star, Madison County, Montana; niccolite, Tasmania; chalcanthite, Grandola, Portugal.

13. Gems as follows: Chrysoprase, Tulare County, California (3 cut and 2 unfinished stones), gift of M. Braverman; three tourmalines, Mesa Grande, California, weights $5\frac{9}{16}$, $31\frac{5}{16}$, and $10\frac{1}{2}$ carats, the gift of L. T. Chamberlain, and four amethysts, from Amity Hill, North Carolina, weight $43\frac{3}{4}$ carats; Upper Providence, Pennsylvania, weight $50\frac{1}{4}$ carats; Nelson County, Virginia, weight $18\frac{1}{4}$ carats, and Franklin, North Carolina, weight $20\frac{1}{2}$ carats, the gift of L. T. Chamberlain.

14. Meteorites as follows: Shalka, Bengal, India, weight 53 grams; Cereseto, Piedmont, Italy, 65 grams; Limerick, Ireland, 24 grams; Misshof, Courland, Russia, 109 grams; Admire, Kansas, 14,665 grams; Ness County, Kansas, 1,578 grams; Rafrüti, Switzerland, 23 grams; Tombigbee, Alabama, 2,443 grams; Tonganoxie, Kansas, 195 grams; Ballinoo, Australia, 1,226 grams; Kendall County, Texas, 767 grams; San Angelo, Texas, 607 grams; Iredell, Texas, 98 grams; St. Mesmin, France, 69 grams; Salles, France, 41 grams; Putnam, Georgia, 2,455 grams; Lumpkin, Georgia, 32 grams; Kiowa County, Kansas, 5,271 grams; Rhine Villa, South Australia, 118 grams; Algona, Wisconsin, 16 grams; Eagle Station, Kentucky, 189 grams; Bath, South Dakota, 687 grams; Nanjemoy, Maryland, 13 grams; Honolulu, Hawaiian Islands, 13 grams; Emmitsburg, Maryland, 7 grams; São Juliao de Moreira, Portugal, 164 grams; Monroe, Cabarrus County, North Carolina, 49 grams; Langon, France, 72 grams; Weston, Connecticut, 10 grams; in all, representing 29 distinct falls, the most important being the Admire stony iron. These bring the number of distinct falls represented in the collection up to 356.

15. The E. O. Ulrich collection of invertebrate fossils (in part), comprising some 10,000 specimens, representing not less than 1,250 species, of which some 180 are types.

16. Three thousand seven hundred and fifty-five specimens of Cambrian Brachiopods, representing Dr. C. D. Walcott's Cambrian studies, and by him transferred to the Museum.

17. One thousand three hundred specimens of Silurian and Devonian fossils from Cumberland, Maryland, the gift of Prof. George M. Perlew.

18. Some 15,000 invertebrate fossils, including 10,000 Brachiopods, 4,200 Bryozoa, several hundred Cretaceous fossils from New Jersey,

and Cystids and Crinoids from Maryland, the gift of Mr. Charles Schuchert, the Assistant Curator of the Division of Stratigraphic Paleontology. This is an important series and formed a part of Mr. Schuchert's private collection at the time he became connected with the Museum.

19. Teeth of *Elephas columbi* and *Elephas imperator*, obtained at Afton, Indian Territory, by Mr. W. H. Holmes.

20. Sixty-eight specimens of fossil plants from the Triassic of North Carolina, received from Mr. H. F. Cleland, of Williams College, Williamstown, Massachusetts, a valuable collection representing the type specimens of Prof. Ebenezer Emmons and described by him in his *American Geology*, Part 6, 1857.

21. One hundred specimens of fossil plants collected from the auriferous gravel of California, by Mr. C. D. Voy, prior to 1878.

22. Forty specimens of fossil plants from the vicinity of Corwin Coal Mine, near Cape Lisbourne, in Arctic Alaska, the gift of Mr. A. G. Maddren, of Seattle, Washington.

23. About 300 specimens of fossil plants from the Miocene lake beds of the South Fork of John Day River in Grant County, Oregon. Collected by Messrs. F. H. Knowlton and John C. Merriam, and received from the U. S. Geological Survey.

24. About 100 specimens of Upper Carboniferous fossil plants from the vicinity of Clinton, Henry County, Missouri, the gift of Dr. J. H. Britts, of Clinton, Missouri. The collection includes a number of types described by Dr. David White in the *Fossil Flora of the Coal Measures of Missouri*.

SOURCES OF NEW MATERIAL.

The sources of the new material are in part indicated above. As in years past the U. S. Geological Survey has been the principal contributor, though several valuable specimens have been obtained by purchase and exchange, as noted.

Mr. F. W. Crosby collected for the Museum a remarkably fine series of pot holes in basalt, found in the vicinity of Snake River Falls, Idaho.

The meteorite collection and the collection of minerals have been enriched mainly through exchanges and purchase. As noted, Dr. L. T. Chamberlain has made an important addition to the gem collection.

Mr. Schuchert, during his vacation, made important additions to the collections in the way of Helderbergian and Cretaceous materials from New York and New Jersey. Mr. Bassler, while at the Pan-American Exposition, devoted a few days to collecting Bryozoa in the Devonian and Silurian rocks of the vicinity.

ROUTINE.

In all the divisions of the Department there were received upward of 4,100 specimens requiring entering and numbering, and in many

cases the preparation of cards for card catalogues and, perhaps, labels for exhibition purposes as well. In addition, considerable progress was made in working over the old materials.

Much time, as before, is occupied in identifying material received from other institutions or from individuals, and for which the Museum receives no adequate return. Some 297 of these temporary accessions have received attention during the year.

Mrs. Jouy, who has been placed in charge of the records of the Department, reports the following entries in the catalogue books: Division of Geology and Sections of Paleobotany and Vertebrate Paleontology, 1,759; Section of Invertebrate Paleontology, 2,102; Division of Mineralogy, 129. Three thousand one hundred and fifty-seven catalogue cards have been prepared, also manuscript for 558 labels for the Government Printer. Some 30,000 numbers have been painted upon specimens by Mr. Cruikshank and the Misses Vouté and Moody.

Several of the collections, including the concretions and cave and glacial deposits, in the Division of Geology, have been thoroughly overhauled and rearranged, and over 500 specimens re-installed in new exhibition jars. Some one hundred photographs, maps, and other illustrations have been distributed among the exhibition series. The details of this work, as in years past, have been looked after by Mr. Newhall. The mineralogical hall was disarranged in January, owing to the erection of the new galleries, and is now in process of restoration. The work can scarcely be finished during the present fiscal year.

Mr. Schuchert reports that altogether he has put away in final museum form during the year some 21,000 specimens. Twenty-five boxes of old material have been withdrawn from storage and the material worked into the Museum collections. The installation of the Harris collection has been completed.

Mr. Lucas, who still remains in charge of the vertebrate fossils, reports the mounting of the hind legs and pelvis of *Triceratops prorsus* and similar parts of the carnivorous dinosaur *Allosaurus*.

The time of Dr. Peale has been fully taken up in attending to the routine of his department, and no progress whatever has been made on the exhibition series. The study material, which has received his chief attention, is rapidly becoming systematized and put in first-class condition.

A systematic effort has been made toward preparing a catalogue of the type and illustrated specimens in all the sections and divisions of the Department. This has taken a considerable amount of time on the part of the heads of the various divisions, the clerical work remaining largely in the hands of Mrs. Jouy and Miss Graves. The manuscript for nearly 6,000 type and illustrated specimens has thus been prepared.

It was hoped that this catalogue might be completed in season to hand in with my annual report.

In accordance with the plan originated several years ago, a small series of rocks, illustrating the various stages of rock decomposition and formation of soils, was prepared for distribution to schools and colleges. Ninety-one sets were prepared, comprising eleven specimens each. These were accompanied by a descriptive pamphlet of three pages, giving localities and analyses.

As the years go on, and particularly as the halls grow more and more crowded, there accumulates a large amount of duplicate and less desirable material, which has been stored away in boxes or wherever available space can be found. This is especially the case with the Division of Geology proper, where the character of the material is such that it often comes to the Museum in bulk to be trimmed up and prepared for exhibition on the ground. During the past year a systematic effort has been made to sort this and dispose, to the advantage of the Museum, of such as was not actually needed for study or exhibition. Nearly 2,500 specimens and upward of 4,500 pounds of rocks and ores in the rough have been thus disposed of, the returns coming in the form of meteorites and minerals in which a maximum value is represented by a minimum amount of material.

The regular routine of the Museum has been somewhat disturbed this year, as in years past, by exposition work. Messrs. Newhall, Stewart, and Bassler were at Buffalo for a period of eighteen days in November, engaged in packing the exhibit of the department, which had been there throughout the exposition, and in January following Messrs. Schuchert and Stewart went to Charleston to install the exhibit there. In May, Messrs. Stewart and Newhall and the Head Curator visited Charleston for the purpose of packing the collections for their return to Washington. I may note here that the collections forming the exhibit at Buffalo and Charleston have been all returned, those from Charleston arriving too late to receive attention during the present fiscal year. Mr. Bassler was engaged during July, August, and a part of September, at Newport, Kentucky, in packing the Ulrich collection, noted elsewhere.

PRESENT CONDITION OF THE COLLECTIONS.

The condition of most of the collections of the Department is fairly satisfactory. We are, of course, badly hampered for space, and a large amount of material is needed to render many of the collections complete or systematic. The final installation, in the Section of Invertebrate Paleontology, of the Harris collection, received in 1898, is practically accomplished. The exhibition portion now comprises some 3,400 specimens mounted on 365 tiles and blocks and occupying 50 running feet of the gallery rail case in the southeast court.

This collection, which has been briefly referred to in previous reports, is the result of nearly fifty years of work on the part of Mr. Harris, and is generally accepted as being the finest collection of its kind extant. It is particularly rich in Crinoids, of which, in the form of slabs and free specimens, there are not less than 1,300 specimens. It is also extremely rich in Silurian starfishes and Trilobites, containing some 600 out of the 750 known species of this crustacean so far described from the Cincinnati formation. The Museum, as well as the country at large, is to be congratulated on the fact that so valuable a collection has become permanently housed where it will be accessible to all workers. Much credit is due Mr. Schuchert for the efficient manner in which he has handled this and, indeed, all the collections that come under his care.

It may be well to remark in this connection that the skeleton of *Hesperornis regalis*, obtained a year ago for the Pan-American Exposition, has been returned in safety and now constitutes one of the most interesting exhibits in the Section of Vertebrate Paleontology.

The collections in the mineral hall are not yet fully restored from the confused condition into which they were thrown in January by the erection of galleries, as already noted.

RESEARCH AND PUBLICATION.

Work of research in the Division of Geology has been greatly curtailed through the resignation in September of Dr. Peter Fireman, chemist of the Department, as before noted. What investigations have been carried on have been limited mainly to meteorites. As will be seen by reference to the bibliography, two papers relating to the Felix and Admire meteorites have been prepared and published during the last year by the Head Curator, the chemical work having been done in part by Dr. Fireman and in part by Mr. Tassin, the Assistant Curator in the Division of Mineralogy. This investigation has yielded what is believed to be important contributions to our knowledge of these interesting bodies, the Felix stone having been shown to be a tuff containing minerals of undoubted secondary origin, and that of Admire showing the iron under such conditions as to suggest its origin through reduction of a chloride or sulphide.

Mr. Tassin has himself studied and prepared for publication a paper on the large mass of meteoric iron from Casas Grandes, Mexico, and has continued his studies on the dehydration of the ferric hydrates. He hopes to be able to publish the result of this latter work during the next calendar year.

Mr. Schuchert has continued his study of the Silurian and Lower Devonian of the Appalachian region, and has in preparation monographs of these fossils from the Maryland region, to be published in the main by the Maryland Geological Survey. He has also continued

his work on the monograph of the fossil startishes. A monograph on the fossil Ostracoda is in contemplation.

Mr. Lucas is still engaged on the monograph of the Stegosauria mentioned in my last report, and has also devoted some time to the study of certain points in the structure of *Hesperornis* and *Baptornis*. He has also studied a series of birds from the Pliocene of Oregon submitted by Prof. J. C. Merriam.

ASSISTANCE TO INDIVIDUALS AND INSTITUTIONS.

The usual custom of lending material for study has been followed, as in previous years. Material from the divisions of Geology and Mineralogy has thus been lent to the U. S. Geological Survey and vertebrate material to Messrs. Osborn, Gidley, and Hay, of the American Museum of Natural History in New York, and to Mr. J. B. Hatcher, of the Carnegie Museum at Pittsburg. Material from the Section of Invertebrate Paleontology has been lent to Dr. John M. Clarke, of Albany; Dr. C. E. Beecher, of New Haven; Mr. J. E. Duerden, of Johns Hopkins University, and Miss Elvira Wood, of the Massachusetts Institute of Technology. The U. S. Geological Survey, as usual, has had free access to the materials whenever occasion demanded.

PLANS FOR THE FUTURE.

The generalized section across the entire American continent, which was referred to in my last annual report, remains as yet unfinished, owing to lack of funds. The collection which was to accompany the same is also incomplete and remains in an old wall case entirely unsuited for this use, but which, it is hoped, may shortly be replaced.

It is expected that the skeleton remains of the *Triceratops* or *Claosaurus* will be mounted for exhibition during the coming year and, possibly, also, that of the *Mastodon* obtained at Church, Michigan, in the summer of 1901.

Further development along lines other than those already established is rendered practically impossible, owing to lack of space.

It is extremely desirable, if not essential to the welfare of the Museum, that the Department should be allowed to have an annual allowance for field and collecting expenses. No museum can rely wholly upon gifts for its advancement. Collections coming by this means are invariably lacking in certain essential materials which can be only in part supplied by purchase. More than that, the scientific force can not, I believe, be kept up to the desired point of efficiency if they are obliged to remain at their desks throughout the summer months. I am strongly in favor of sending men into the field whenever it is possible. At present there are at least three regions capable of furnishing desirable fossil invertebrates, which it is very essential we should investigate at once, besides numerous localities for vertebrate fossils, minerals, and general geological materials.

APPENDIX I.

THE MUSEUM STAFF.

[June 30, 1902.]

S. P. Langley, 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:

W. H. Holmes, Head Curator.

- (a) *Division of Ethnology*: O. T. Mason, Curator; Walter Hough, Assistant Curator;
J. W. Fewkes, Collaborator.
- (b) *Division of Historic Archaeology*: Paul Haupt, Honorary Curator; Cyrus Adler,
Honorary Assistant Curator; J. M. Casanowicz, Aid.
- (c) *Division of Prehistoric Archaeology*.
- (d) *Division of Technology (Mechanical phases)*: J. E. Watkins, Curator; George
C. Maynard, Assistant Curator.
Section of Electricity: George C. Maynard, Custodian.
- (e) *Division of Graphic Arts*:
Section of Photography: T. W. Smillie, Custodian.
- (f) *Division of Medicine*: J. M. Flint, U. S. N. (Retired), Honorary Curator.
- (g) *Division of Religions*:
Section of Historic Religious Ceremonials: Cyrus Adler, Custodian.
- (h) *Division of History and Biography*:
Section of American History: A. H. Clark, Custodian; Paul Beckwith,
Aid.

DEPARTMENT OF BIOLOGY:

Frederick W. True, Head Curator.

- (a) *Division of Mammals*: Frederick W. True, Acting Curator; G. S. Miller, jr.,
Assistant Curator; Marcus W. Lyon, jr., Aid.
- (b) *Division of Birds*: Robert Ridgway, Curator; Charles W. Richmond, Assist-
ant Curator; J. H. Riley, Aid.
Section of Birds' Eggs: William L. Ralph, Honorary Curator.
- (c) *Division of Reptiles and Batrachians*: Leonhard Stejneger, Curator.
- (d) *Division of Fishes*: Tarleton H. Bean, Honorary Curator; Barton A. Bean,
Assistant Curator.
- (e) *Division of Mollusks*: William H. Dall, Honorary Curator; C. T. Simpson,
Aid; Paul Bartsch, Aid.

DEPARTMENT OF BIOLOGY—Continued.

- (f) *Division of Insects*: L. O. Howard, Honorary Curator; W. H. Ashmead, Assistant Curator; R. P. Currie, 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 Arachnida: Nathan Banks, Custodian.
- (g) *Division of Marine Invertebrates*: Richard Rathbun, Honorary Curator; J. E. Benedict, Assistant Curator; Miss M. J. Rathbun, Assistant Curator; Miss Harriet Richardson, Collaborator.
 Section of Helminthological Collections: C. W. Stiles, Custodian.
- (h) *Division of Comparative Anatomy*: Frederic A. Lucas, Curator.
- (i) *Division of Plants (National Herbarium)*: Frederick V. Coville, Honorary Curator; J. N. Rose, Assistant Curator; C. L. Pollard, Assistant Curator; W. R. Maxon, Aid.
 Section of Forestry: B. E. Fernow, Honorary Curator.
 Section of Cryptogamic Collections: O. F. Cook, Honorary Assistant Curator.
 Section of Algae: W. T. Swingle, Custodian.
 Section of Lower Fungi: D. G. Fairchild, Custodian.
 Associates in Zoology (Honorary): Theodore N. Gill, C. Hart Merriam, R. E. C. Stearns.

DEPARTMENT OF GEOLOGY:

George P. Merrill, Head Curator.

- (a) *Division of Physical and Chemical Geology (Systematic and Applied)*: George P. Merrill, Curator; W. H. Newhall, Aid; W. C. Phalen, Aid.
- (b) *Division of Mineralogy*: F. W. Clarke, Honorary Curator; Wirt Tassin, Assistant Curator; L. T. Chamberlain, Honorary Custodian of Gems and Precious Stones.
- (c) *Division of Stratigraphic Paleontology*: Charles D. Walcott, Honorary Curator; Charles Schuchert, Assistant Curator.
 Section of Vertebrate Fossils: F. A. Lucas, Acting Curator.
 Section of Invertebrate Fossils: Paleozoic, Charles Schuchert, Custodian; Carboniferous, George H. Girty, Custodian; Mesozoic, T. W. Stanton, Custodian; Cenozoic, W. H. Dall, Associate Curator.
 Section of Paleobotany: Lester F. Ward, Associate Curator; A. C. Peale, Aid; F. H. Knowlton, Custodian of Mesozoic Plants; David White, Custodian of Paleozoic Plants.
 Associate in Paleontology (Honorary): Charles A. White.

ADMINISTRATIVE STAFF.

Superintendent, J. E. Watkins.
 Chief of Correspondence and Documents, R. L. Geare.
 Librarian, Cyrus Adler.
 Assistant Librarian, N. P. Scudder.
 Disbursing Clerk, W. W. Karr.
 Editor, Marcus Benjamin.
 Photographer, T. W. Smillie.
 Registrar, S. C. Brown.
 Supervisor of Construction, J. S. Goldsmith.
 Property Clerk, W. A. Knowles (Acting).

APPENDIX II.

LIST OF ACCESSIONS.

- ABBOTT, DR. WILLIAM L., Straits Settlements, Malay Peninsula: Valuable collection of ethnological material and natural history specimens from Tenasserim, and the Andaman and Nicobar islands (38307); natural history specimens and ethnological objects from Andaman and Nicobar islands, South China Sea, and the eastern coast of the Malay Peninsula (38608); material of the same character from Sinkep Island, Linga Island, Nicobar Islands and Sumatra (38896).
- ABEL, J. C., Lancaster, Pa.: Broken arrow points and workshop refuse found in a field near Conestoga Creek, Lancaster County (38413); rude pieces of quartz and quartzite from the Conestoga Hills and a specimen of *Aethrophyicus harlani* (38586).
- ACADEMY OF NATURAL SCIENCES, Philadelphia, Pa.: South American mammals. Exchange. 39085.
- ADAMS, C. F., Independence, Mo.: Twenty-nine specimens of Diptera. (38477, 38842.)
- AGASSIZ, DR. ALEXANDER (See under Fish Commission, U. S.)
- AGRICULTURE, DEPARTMENT OF, Hon. James Wilson, Secretary: Thirty specimens of Heteroptera and 5 specimens of Homoptera collected by Messrs. Scott and Fiske of the Georgia Experiment Station (38201); a small collection of mosquitoes from Jamaica, including 4 species new to the collection (38324); 2 crabs from Yucatan obtained by E. W. Nelson and E. A. Goldman (38787); land and fresh-water shells from Mexico (39000); specimen of fruit belonging to the *Bigonia* family collected by Dr. Gomez de la Maza, of Habana, Cuba (39065); lizard, *Holbrookia maculata*, collected by E. B. Sterling, and received through C. L. Shear (39336); 483 moths collected by E. A. Schwarz in Victoria, Tex. (39350); 10 species of land shells from Mexico (39361).
- Material deposited in the National Herbarium:* Four plants collected by Charles C. Plitt, Baltimore, Md. (38183); through Biological Survey, 3 specimens of Cacti collected in Texas by Vernon Bailey (38197); 20 plants collected by J. B. Flett (38263); 2 specimens of Cacti collected in Texas by Vernon Bailey, received through Biological Survey (38264); 60 plants from Alaska obtained by F. A. Golder (38322); 511 plants collected by C. Novaes in Brazil (38354); plant from Florida (38355); 194 plants collected by E. L. Norris and David Griffith in Nevada and Oregon (38500); 1,100 plants collected in Porto Rico by Drs. O. F. Cook and L. M. Underwood, and R. F. Griggs (38521); 76 plants collected in Alaska by W. C. Mendenhall (38565); 5 plants from Texas collected by J. B. Moorhead (38576); 5 specimens of *Equisetum* collected in Alaska by Lieut. G. T. Emmons, U. S. N. (38627); 109 plants collected by A. J. Pieters in Ohio (38651); 6 plants from Texas collected by Vernon Bailey (38691); plants from Panama collected by D. G. Fairchild (38774); 132 plants collected by David Griffith and E. L. Norris in Nevada

AGRICULTURE, DEPARTMENT OF—Cont'd.
and Oregon (38775); 105 plants from Canada collected by Preble Brothers (38776); 2 plants collected by Charles C. Dean in Indiana (38824); 804 plants collected in eastern Idaho and western Wyoming by Elmer D. Merrill and E. N. Wilcox (38881); 4 plants collected by C. L. Shear in Colorado (38893); portion of type of *Ribes irriguum* received from the Royal Botanic Gardens, Kew, England (38894); 4 plants collected by Dr. C. Hart Merriam in California (38898); 6 plants from Germany (38916); 59 plants collected in Alaska by H. P. Nielsen (38917); 70 plants collected in Alaska by Israel Jones (38923); 31 plants collected in Alaska by C. C. Georgeson (38924); plant collected by C. R. Bridges in Massachusetts (38979); 200 plants from Texas collected by G. L. Crockett (39010); 192 plants collected in Arizona by T. H. Kearney (39064); 7 plants collected in California by Dr. C. Hart Merriam (39091); 362 plants collected by various field agents of the Division of Agrostology in the western section of the United States (39150); 711 plants collected in Oregon, Washington, California, and Alaska by F. A. Walpole (39151); 4 plants collected in Oregon by A. J. Johnson (39152); plant collected in Oregon by B. L. Cunningham (39153); 45 plants collected in Washington and Oregon by H. D. Langille (39202); 2 plants from northwestern British America collected by R. S. Williams, Messrs. Drummond, Richardson, and Krause Brothers (39226); 2 plants collected in British America and on the Siberian coast of Bering Sea by Messrs. Drummond, Richardson, and Krause Brothers (39227); 10 type specimens of plants collected by E. N. Wilcox in Montana (39265); plant collected by R. D. Nevins in Washington (39270); plant collected by Amos Willits in Oregon (39271); 5 plants from California (39272); 54 plants from Oregon collected by H. D. Langille (39294); 2 plants from Alaska col-

lected by F. E. Blaisdell (39306); 85 plants collected in Oregon by H. D. Langille (39307); 62 plants collected in California by I. G. Holmes (39308); plant from North Carolina (39321); plant from Germany sent by L. Spath (39355); plants from Olympia (39442); 1,000 plants collected in Mexico and Guatemala by R. F. Griggs and Dr. O. F. Cook (39463); 2 plants (*Chireia*) from the Brazilian legation, received through Division of Agrostology (39475); 2 plants from Alaska collected by J. B. Flett (39488); 7 plants from Washington collected by J. B. Flett (39489); 20 plants collected by F. A. Walpole in northern Alaska (39518); 6 plants from California collected by M. H. Lapham (39519); 5 plants from Washington collected by J. B. Flett (39521); 500 plants collected in western Mexico by Edward Palmer (39564); 10 photographs of plants, and 35 plants collected in Montana by Messrs. V. K. Chestnut and Israel Jones (39579).

(See under Bird, Henry; Cockerell, T. D. A.; Davidson, A.; Ehrhorn, E. M.; Espin, J. M.; Fowler, James; Gorman, M. W.; Hyatt, James; Interior Department, U. S. Geological Survey; Iowa Agricultural College; James, Mrs. J. F.; Kenoyer, Leslie A.; Seeman, von H.; Sherman, Franklin J.; Slingerland, M. J.; Smith, Benjamin H.; Ulrich, F. W.; Whited, Kirk; Worddell, George P.)

ALASKA COMMERCIAL COMPANY, San Francisco, Cal.: Gold dust samples. Purchase. 39178. (See under Clarke, Lieut. C. A., U. S. N.)

ALBANY MUSEUM. (See under Grahams-town, South Africa.)

ALDRICH, T. H., Birmingham, Ala.: Fifty specimens of Eocene corals from Alabama and Mississippi, containing types of 20 species or varieties and figured specimens of 8 species or varieties. 38986.

ALEXANDER, R. M., Stranger, Kans.: Stone celts and hatchets, arrow points and spear points (38748); 11 stone axes and celts (38815). Exchange.

- ALFARO, SEÑOR ANASTASIO, Director Archivos Nacionales, San José, Costa Rica: Twelve birds' skins obtained principally from Cocos Island. 39018.
- ALLEN, GLOVER M., Cambridge, Mass.: Bat, *Rhogessa minutilla*. 39160.
- ALLEN, HON. HORACE N. (See under Landis, Dr. E. B.)
- ALLEN, DR. J. A. (See under American Museum of Natural History, New York City.)
- ALLEN, O. S., Amelia Court House, Va.: Virginia Horned owl, *Bubo virginianus*. 38680.
- ALLISON, ANDREW, Bay St. Louis, Miss.: Three water lilies from Mississippi (39421); 5 birds' skins (39427).
- ALTER, N. B., Fort Hunter, N. Y.: Four fragments of pottery and an arrow point from Minden, Montgomery County, N. Y. 39500.
- ALWOOD, Prof. W. B., Blacksburg, Va.: Specimens of *Pteronotus gracilis* Ashm. 39460.
- AMERICAN MUSEUM OF NATURAL HISTORY, New York City: Two specimens of *Lepus floridanus chapmani* (39084); through Dr. J. A. Allen, skin and skull of bat, paratype of *Myotis incantus* (39209). Exchange.
- ANDERSON AND PRICE, ORMOND, Fla.: Specimen of shark (*Rhinodon* sp.). 38960.
- ANDREWS, C. L., Skagway, Alaska: Skull of a mountain goat and skull of a porcupine. 38330.
- ANDREWS, EMMETT, Charlotte, N. C.: Specimen of *Megarhysa lunator* Fabr. 38622.
- ANDREWS, L., Southington, Conn.: Plant. 39366.
- ANKENY, MRS. LEVI, Walla Walla, Wash.: Imbricated basket pat showing method of sewing. 38983.
- ARETHUSA SPRING WATER COMPANY, Seymour, Conn.: Mineral water. 38769.
- ARNOLD, HON. DELOS, Pasadena, Cal.: Types of fossil shells from the Post Pliocene of San Pedro, California (38298); 37 species of Pliocene and Pleistocene fossils from San Pedro (38452).
- ARNOLD, J. W., Jacksonville, Ill.: Upper and lower teeth and fragments of tusk and jaw of Mammoth. Purchase. 38809.
- ASHCRAFT, C. E., jr., Observer, U. S. Weather Bureau, Dominica, West Indies: Bats and a centipede from the West Indies (38942); centipede (38995).
- ASHERMAN, GEORGE, Cincinnati, Ohio: Slab containing specimens of *Heteocerinus geniculatus*, and slab containing *Meroerinus cutus*; also 300 selected Ostracoda. Exchange. 38689.
- ASHMEAD, W. H., U. S. National Museum: Insects, spiders, myriapods, mollusks, crustaceans, etc., from Honolulu and Waialua, Hawaiian Islands (38205); collections of natural history specimens from the Hawaiian Islands (38232, 38261, 38287, 38311, 38341, 38350).
- ATTWATER, H. P., Houston, Tex.: One hundred and sixty-nine birds' eggs and 19 birds' nests from Texas. 38750.
- AGUIRREBAUGH, DR. W. E., Caracas, Venezuela: Ashes from the volcanic eruption in St. Vincent which fell in Barbados, 98 miles distant. 39385.
- AUSTIN, DR. GEORGE M., Wilmington, Ohio: Four ostracode slabs, specimens of Richmond and Clinton washings. Exchange. 38551.
- AVERILL, H. K., Washington, D. C.: Blue prints illustrating Commodore Downie's tomb; blue prints of key to Commodore MacDonough's victory, and House of Representatives resolution authorizing delivery of rifles to Captain Aikin's volunteers; iron lamp. 39077.
- BABB, GEORGE F., Amherst, Mass.: Specimen of *Aphaereta auripes* Prov. 39397.
- BABBITT, J. P., Taunton, Mass.: Ten birds' eggs from the Arctic coast of British America. Purchase. 39394.
- BABCOCK, A. S., Rockville, R. I.: Moth, *Eudryas grata* Fabr. 39502.
- BABCOCK, LICUT. C. E., U. S. A. (See under Smithsonian Institution, Bureau of Ethnology.)
- BACH, JOHN, U. S. Coast and Geodetic Survey, Manila, P. I.: Mammal skull, invertebrate fossils, and ethnographic objects from Patagonia. 39543.

- BADE, J. A., Washington, D. C.: Marine shells, land shells, corals, and echinoderms from Negros Islands (38568); old-fashioned flame-shaped kris, with scabbard bands of carabao hide and hoop iron (38571).
- BAILEY, Gen. G. W., Waterville, Minn.: Tobacco pouch made by the Chippewa Indians (39164); Indian doll cradle and an Indian quiver (39499). (See under Smithsonian Institution, Bureau of Ethnology.)
- BAILEY, VERNON, Biological Survey, Department of Agriculture: Snake, *Ophiodrys aestivus*, from Rock Creek Park, D. C. 39380. (See under Agriculture, Department of.)
- BAIRD, W. R., New York City: Crystal of celestite from Put in Bay, Lake Erie. Exchange. 38626.
- BAKER, Prof. C. F., Stanford University, Cal.: Four species of land and fresh-water shells from California (gift) (38816); 850 plants from western central Colorado (purchase) (38953); 6 plants from Colorado (exchange) (39218).
- BALDWIN, D. R., Ravenden Springs, Ark.: Beetle, *Cotalpa lanigera* Linnaeus. 39555.
- BALL, C. R., Washington, D. C.: Twenty-one plants of the United States (gift) (38395); specimen of *Asplenium* from New York (gift) (38554); 42 plants of the District of Columbia (exchange) (38737); 29 plants collected in Louisiana and Iowa by Messrs. C. R. Ball and L. H. Pammel (exchange) (39042).
- BALL, Prof. ELMER D., Fort Collins, Colo.: Fifty-two specimens of Homoptera, including 15 types (38662); 22 specimens of Homoptera (10 species), types of new species (39230).
- BANGS, OUTRAM, Boston, Mass.: Specimen of *Carpodectes antoniae* from Chiriqui (exchange) (38658); type specimen of *Comptosithypis petiagami speciosa* from Chiriqui (gift) (38682); specimen of *Rhodinaocichla rosae*, new subspecies (type), from Chiriqui (exchange) (38706).
- BARBER, A. W., Washington, D. C.: Corn-cobs and chewed yucca fiber found in the cliff dwellings of Walnut Canyon, near Flagstaff, Ariz. 38432.
- BARBER, C. M., and C. H. T. TOWNSEND, El Paso, Tex.: Six terrapins from Mexico. 39582.
- BARBER, H. S., U. S. National Museum: Fifty Diptera, including 13 species of *Ceratopogon*, 11 of which are new to science, from Washington, D. C. (38559); snake from Maryland (38663); 22 specimens belonging to the family Perlidae and 100 specimens representing the genus *Thrips* (38845). (See under E. A. Schwarz.)
- BARBER, V. S., Fort Bidwell, Cal.: Lizard. 38618.
- BARBOUR, E. H. (See under Morrill, Charles H.)
- BARLOW, C., Santa Clara, Cal.: Skin of *Dendragapus* from California. 38289.
- BARRETT, A. F., Washington, D. C.: Stone ax found at Bennings, D. C. 39389.
- BARRETT-STRAIT, Miss CLARA, Lancaster, S. C.: Mole cricket, *Gryllotalpa borealis*. 39544.
- BARTLEY, D. C., Grand Rapids, Mich.: Spirifer from the Hamilton formation of Petoskey, Mich. 38240.
- BARTON, JOHN, Madison, Ind.: Skin and head of a Ground mole. 38352.
- BARTSCH, PAUL, U. S. National Museum: Reptiles, crustaceans, and insects from Iowa and Illinois. 38364.
- BASSLER, R. S., U. S. National Museum: Specimens of Niagara (Rochester) shale with bryozoans, shells, and ostracoda; 4 specimens of *Caryocrinus ornatus*; 1 specimen of *Lecanocrinus*, and 12 specimens of *Stephanocrinus*. 38687.
- BEADLE, C. D., Biltmore, N. C.: Water lilies collected by C. L. Boynton in North Carolina. 39467.
- BEAMAN, Mrs. G. W., Cambridge, Mass.: Specimens of marine gastropod shells. 39187.
- BEAN, B. A., jr., Washington, D. C.: Hawk moth, *Hemaris thysbe* Fabr. 38254.
- BEAN, TARLETON, and BARTON, Washington, D. C.: Tree frog from the District of Columbia. 38252.
- BECKWITH, PAUL, U. S. National Museum: Badge of the Sons of the American Revolution of Maryland, struck in com-

BECKWITH, PAUL—Continued.

- memoration of the unveiling of the monument in Baltimore, October 19, 1901 (gift) (38757); spade-shaped coin of the Chinese Empire (exchange) (38897); pipe of radfinit with an amber mouth piece, from Pipestone quarry, Minnesota (gift) (39170); African silver nose ring and chain, and a silver medal given by Gustavus Adolphus of Sweden to participants in the battle and siege of Maarsberg, 1677 (exchange) (39211); 2 Chinese coins (gift) (39258); District of Columbia Spanish-American War Veteran badge (purchase) (39414); silver 8-real piece, Bolivia, 1838; silver 30-baiochi piece, Rome, 1830, and copper piece, 4 soldi, from Rome, 1869 (gift) (39456); Columbian silver quarter of a dollar issued in 1893 (gift) (39491); coronation medal in bronze of King Edward VII (gift) (39479); 2 coins of the Canton of Geneva (gift) (39965); Filipino razor (gift) (39510).
- BEECHER, Dr. C. E., Yale University, New Haven, Conn.: Casts of dermal plate and spine of *Stegosaurus*. 38929.
- BELDING, L., Stockton, Cal.: Thirteen birds' eggs and 3 birds' nests from California. 38283.
- BELL, GEORGE, Denver, Colo.: Quartzifer aragonite from Cripplecreek, Colo. 38455.
- BENEDICT, J. E., U. S. National Museum: Tiger beetles, *Tetracha virginica* Linnaeus (38292); 2 specimens of Tiger beetle (38296); 4 caterpillars of Catalpa Sphinx moth, *Ceratonia catalpa* Bvd. (38334); 33 specimens of Coleoptera, including 31 specimens of *Tetracha virginica* Linnaeus, and 2 of *Parandra brunnea* Fabr., from Washington, D. C. (38562).
- BENEDICT, J. E., jr., Woodside, Md.: Fifty specimens of the dipterous genus *Ceratopogon*, including 6 species, one of which is new to science, from Washington, D. C. (38560); 110 dragon flies, including 15 species from the District of Columbia, Maryland, and Virginia (38561).
- BENJAMIN, Mrs. CAROLYN G., Washington, D. C.: Six coins of the Junior Republic. 38557.
- BENNETT, Gen. W. F., Philadelphia, Pa.: Gold ore from the district of Camarines, Luzon, P. I. 38635.
- BERLINER, SOLOMON. (See under Smithsonian Institution.)
- BERTHOLE, Lieutenant. (See under Roberts, Hon. E. W.)
- BESSENT, G. P., Glenrose, Tex.: Beetle, *Strategus julicatus* Burm. 38288.
- BEZZI, Prof. M., Sondrio, Italy: Seven hundred and forty-four specimens (208 species) of European Diptera. Exchange. 39073.
- BIEDERMAN, C. R., Goldhill, Ore.: Specimens from Indian graves and placer mine; also insects. 38735.
- BIGELOW, E. F., Stamford, Conn.: Specimens of *Linac marianus*. 38343.
- BILTMORE HERBARIUM, Biltmore, N. C.: Three plants from Georgia (gift) (38346); plant from Lookout Mountain, Alabama (exchange) (38566); specimens of *Crataegus* (gift) (38692).
- BIRD, Henry, Rye, N. Y.: Received through Department of Agriculture. Two types of *Hydracca lapidiv.* 38868. (See under Smithsonian Institution.)
- BISHOP, JAMES A., Geneva, N. Y.: Specimen of Holboell's Grebe, *Colymbus holboelli*. 39013.
- BISSELL, G. P., Woods, Ore.: Skull of a porpoise, *Logeorrhynchus obliquidens*. 38715.
- BLACKFORD, Dr. C. M., Washington, D. C.: Black stone used as a charm by the negroes in Virginia (38558); water bug, *Benacus griseus* Say (39311).
- BLACKFORD, Dr. C. M., jr. (See under Woodson, Charles W.)
- BLAISDELL, F. E. (See under Agriculture, Department of.)
- BLANC, A. (See under Fraile, M.)
- BLAND, J. C. W., Redfork, Ind. T.: Specimen of iron ore and of concinnone from the vicinity of Redfork. 39295.
- BLANKINSHIP, JOSEPH, Friars Hill, W. Va.: Copper hatchet blade, stone hatchet, arrow point, fragment of a human skull, and 2 human teeth from a mound in Greenbrier County. Purchase. 38642.
- BLINN, H. S., Omaha, Nebr.: Forty-five photographs of folk life. 39037.

- BOETTCHER, F. L. J., Washington, D. C.: Mammals, birds, and shells, from Königsberg, Germany. Purchase. 38607.
- BOGART, Guy, Brookville, Ind.: Snapping beetle, *Ahaus oculatus*. 39515.
- BONNELL, W. B., Macon, Ga.: Seeds of palm (*Phytolophas macrocarpa* Ruiz and Pav.). 38974.
- BOTANICAL GARDENS. (See under Durban, Natal, Africa.)
- BOUCARD, A., Oak Hill, Spring Vale, near Ryde, Isle of Wight, England: Sixteen skins of humming birds from British Guiana. 39495.
- BOUVIER, Prof. E. L. (See under Paris, France, Museum of Natural History.)
- BOWDISH, B. S., Mayaguez, P. R.: Bat, in alcohol, from Porto Rico (38220); birds' skins, and nest and egg of a bird (38369); birds' skins, birds' eggs, and a mammal skin (38377^a); birds' skins, reptiles, and insects (38381^a); bats and a bird skin from Porto Rico (38552^a); natural-history specimens from Porto Rico and Mona Island (38553^a); 25 birds' skins and 3 mammals (38572^a); natural-history specimens from Porto Rico (38676^a); reptiles, batrachians, and bats (38727^a); iguana from Porto Rico (38762^a); 48 birds' skins from Cuba (38804^a); 75 birds' skins from Cuba (38825^a); 25 birds' skins from Cuba (38858^a); 16 specimens of insects, spiders, etc. (38869^a); reptiles and batrachians from Cuba (38873^a, 38874^a); blind snake from Porto Rico (38879); 18 birds' skins from Guama, Cuba (38880^a); 26 birds' skins from Cuba (38908^a); 13 birds' skins, 2 bat skins, 2 reptiles, and some insects (38939^a); natural history specimens (39003^a); batrachians and a lizard (39030^a); osprey skin from Vieques Island, Porto Rico (39162); 2 birds' nests and 6 birds' eggs from Porto Rico (39190).
- BOWEN, Capt. F., Atlantic City, N. J.: Sea mouse, *Aphrodita aculeata* Linnaeus. 39186.
- BOWMAN, ROSCOE, Hamburg, Pa.: Caddis worms and neuropteroid insects. 39146.
- BOYD, W. S., San Francisco, Cal.: Specimen of native gold in quartz, from Miner's Dream mine, Old Shasta district, California. Purchase. 38835.
- BOYNTON, C. L. (See under Beadle, C. D.)
- BRACKETT, FRED, Baltimore, Md.: Twenty woodplanes. 38784. (See under Paris Exposition.)
- BRADFORD, Rear-Admiral R. B., U. S. N. (See under Navy Department.)
- BRADFORD, W. R., Roxbury, Mass.: Engraved ivory tusk. Purchase. 38219.
- BRADLEY, Dr. G. P., Washington, D. C.: Snake (*Eutania*). 39290.
- BRAINERD, EZRA, Middlebury, Vt.: Eight specimens of violets from Vermont. 39422.
- BRANCH, H. SELWYN, Roseau, Dominica, West Indies: Bats and a snake. Purchase. 39231.
- BRANDEGEE, Mrs. T. S., San Diego, Cal.: Two plants (gift) (39367); 10 plants (exchange) (39575).
- BRANDEGEE, T. S., San Diego, Cal.: Plant from Banning, Cal. 39391.
- BRANDEL, PHILLIP, Buffalo, N. Y.: Specimen of wood inlaying. 39455.
- BRASS, J. L., Bristol, Tenn.: Four-inch cube of granite from Rip Shin Mountain, Doe River, East Tennessee. 39506.
- BRAVERMAN, M., Visalia, Cal.: Pilinite on dolomite from Almaden; 5 specimens of topazolite from Tulare County; large specimen of chrysoprase with one side polished; 1 slab, polished; 4 small slabs; 2 unfinished stones, and 3 cut and polished gems. 38661.
- BRECKINRIDGE, Gen. J. C., U. S. A., War Department, Washington, D. C.: Philippine quail (*Excalfactoria chinensis lineata*), from the Philippine Islands. 38914.
- BRENNAN, J. F., Black River, Jamaica, West Indies: Potsherds from Indian graves in the West Indies. Purchase. 38792.
- BRESSEL, J. B., Danville, Pa.: Chrysalis of *Grapta comma* Harris. 38442.
- BREWER, E. A., Miami, Fla.: Pond-lily leaves, flowers, fruit, and roots (*Nymphaea* and *Castalia*) from the vicinity of Miami. Purchase. 39283.

- BRIDGERS, MARCUS M., Tarboro, N. C.: Two-shilling currency issued by General Baden-Powell during the siege of Mafeking. 39573.
- BRIDGES, C. R. (See under Agriculture, Department of.)
- BRIEMLEY, H. H. and C. S., Raleigh, N. C.: Insects and a myriapod (38194); reptiles from Mississippi and Florida (purchase) (38196);^a insects (39439); insects (38496); lizard (39234).
- BRISSENDEN, J. C., Flora, Ill.: Stagbeetle, *Lucanus claphus*. Purchase. 38245.
- BRITTS, Dr. J. H., Clinton, Mo. Received through David White: Types of fossil plants from the coal measures of Missouri. (See under Haysler, Morris.)
- BROADHEAD, G. C., Columbia, Mo.: Specimens of Unionidae from Missouri. Exchange. 38936.
- BROOKE, CHARLES H., Olney, Md.: Barn owl, *Strix pratincola*. 39369.
- BROOKLYN INSTITUTE OF ARTS AND SCIENCES, Brooklyn, N. Y. Received through Dr. Alfred G. Mayer: Five hundred and sixty-four photographs of mediæval and Italian buildings and Greek temples; and 199 photographs of works of Etruscan, Greek, and Roman art. 38716.
- BROOKS, ALLAN, Cariboo, British Columbia: Twelve birds' skins (purchase) (38605); mammals (gift) (38713); shrew (*Sorex*) (gift) (39087).
- BROWN, BARNUM, U. S. National Museum: Bones of Belodonts and Dinosaurs. 38274.
- BROWN, HENRY, Washington, D. C.: One hundred and fifteen specimens of lice from the Philippine Islands. 38366.
- BROWN, HERBERT, Yuma, Ariz. Received through Dr. L. O. Howard: Snake and lizard from Arizona. 38827.
- BROWN, MRS. J. CROSBY, New York City: Pottery bell, reed instrument, reed horn, transverse bow, flute, and an alto trombone (39032); violin mute (39298). Exchange.
- BROWN, L. B., Bridgetown, Barbados, West Indies: Land and fresh-water shells from Barbados. 39089.
- BRUSH, G. W., Coscojoc Comm.: Female specimen of Hellgrammite fly, *Corydalis cornuta* Linnaeus. 38222.
- BUCHANAN, Dr. CHARLES M., superintendent Tulalip Indian Agency, Tulalip, Wash.: Unfinished basket made by a Snohomish squaw. 38472.
- BERGDORF, C., and P. SCHULD, New York City: Insects, reptiles, batrachians, crustaceans and fishes from Costa Rica. Purchase. 38962.
- BURG, F., Rochester, N. Y.: Mantid (*Stagnomantis carolina*). 38460.
- BURNS, A. J., Admire, Kans.: Meteorite. Purchase. 38344.
- BURNS, ESTHER H., Jackson, Ohio: Chrysalis of a Vanessid butterfly (*Grapta* sp.). 38358.
- BURNS, Dr. FRANK. (See under Sanders, Samuel.)
- BURNS, W. R., Concord, Ky.: Pothole, clay concretion, from a mound in Kentucky. 39053.
- BERR, CLAUDE S., Bigfork, Mont.: Fresh-water mollusks from Montana. 38528.
- BESH, B. F., Courtney, Mo.: Seventy plants from Texas. Purchase. 39090.
- BESH, B. J. (See under Maxon, W. R.)
- BETTS, CHARLES. (See under Interior Department, U. S. Geological Survey.)
- BYSSMAN, M., Middleburg, Holland: Three plants. Exchange. 39450.
- BYSSSEN, Dr. M. le Marquis HENRI, Chateau Vernet, Allier, France: Nine specimens of Coleoptera. 38806.
- CAHN, LAZARD, New York City: Green tourmaline, tourmaline, rubellite on quartz from Mesa Grande, Cal. (38744); specimen of native tellurium from Vulcan mine, near Iola, Colo. (38958). Purchase.
- CALDWELL, H. R., Fuchau, China: Insects from China. 38780.
- CALIFORNIA ACADEMY OF SCIENCES, San Francisco, Cal.: Duplicate type of *Paeceolanum jaredi*, collected by Miss Alice Eastwood in California (gift) (38667); plant (gift) (38736); 2 plants collected in California by J. W. Cargdon (exchange) (39320).
- CALIFORNIA, UNIVERSITY OF, Berkeley, Cal. Received through Dr. John C. Merriam, custodian: About one hundred specimens of fossil plants from

- CALIFORNIA, UNIVERSITY OF—Continued.
the auriferous gravels of California (39242); received through Dr. William E. Ritter, three specimens (cotypes) of *Sphaeroma pentadon* Richardson, from Sausalito (39252). Exchange.
- CALL, R. ELLSWORTH. (See under Children's Museum, Brooklyn, N. Y.)
- CALLORDA Y ACOSTA, DON PEDRO. (See under de Olea, Señor Don Severiano.)
- CAMPBELL, M. R. U. S. Geological Survey: Salt from Inyo County, Cal., and 2 specimens of colemanite from San Bernardino County, Cal. 39071.
- CAMUS, E. G., Academy of Sciences, Paris, France: Two plants. 39425.
- CANDLIN, HENRY, Greeley, Colo.: Snake, *Eutamias parietalis*. 38198.
- CANTWELL, L. E., Charleston, S. C.: Luna moth. 39229.
- CARGDON, J. W. (See under California Academy of Sciences.)
- CARLIART, HENRY S. (See under Gray, Mrs. Elisha.)
- CARNEGIE MUSEUM, Pittsburg, Pa. Received through J. B. Hatcher: Oligocene slab containing fresh-water shells. Exchange. 38688.
- CARRICO, E. T., Stithton, Ky.: Shells from near Mill Creek, Kentucky (38445); snake (38841).
- CARSON, JOHN H., Santa Mesa, Manila, P. I.: Bombycine moth. 38392.
- CARTHAGE LAKE HUNTING AND FISHING CLUB, Burlington, Iowa: Received through Edwin G. Kirk. Albino specimen of dogfish, *Ania calva*. 38579.
- CASE, DR. C. E., Brookville, Ind.: Sixteen specimens of chert from a cache in Indiana. Exchange. 39001.
- CADELL, A. N., Department of Agriculture: Ant lion (38235); 8,000 specimens of Orthoptera and Lepidoptera, with larvae (38513); snake and 2 lizards from Colorado (38590). (See under H. G. Dyar.)
- CHAGNON, G., Montreal, Canada: Sixteen specimens of Hymenoptera (38527, 38856).
- CHAMBERLAIN, J. S., Brooklyn, N. Y.: Cecropia moth, *Attacus cecropia* Linnaeus. 39525.
- CHAMBERLAIN, DR. L. T. (See under Smithsonian Institution.)
- CHAMBERLIN, Prof. R. V., Latter Day Saints College, Salt Lake City, Utah: Seven types of *Hemicops dolichopoda*. 38857.
- CHANDLER, H. P., University of California, Berkeley, Cal.: Two hundred and eight plants from California (purchase) (39049); 11 plants from California (39448).
- CHARLTON, GEORGE J., Chicago, Ill.: Six photographs illustrating the operation of the largest camera in the world, and a photograph of a Chicago and Alton limited train. 38420.
- CHESTNUT, V. K. (See under Agriculture, Department of.)
- CHILDREN'S MUSEUM, Brooklyn, N. Y.: Received through R. Ellsworth Call. Hermit crab, *Pagurus acadianus*, from Rockaway Beach, Long Island. 39082.
- CHILDRESS, R. H., Deloit, Iowa: Skull of a fossil bison, *Bison bison*. Purchase. 38394.
- CHILTON, J. I., Greensboro, Ala.: Skin of Golden-winged woodpecker. 38985.
- CHOFFAT, Prof. PAUL, Lisbon, Portugal: Twelve specimens of *Ostrea joanna* Choffat, from the Cretaceous of Portugal. Exchange. 38872.
- CLARK, Rev. A. B., Rosebud Agency, S. Dak.: Six photographs of Indians of the Rosebud Agency. 39253.
- CLARK, Rev. CYRUS A., Miyazaki, Japan: Received through Prof. A. A. Wright, Oberlin, Ohio. Japanese insects, spiders, myriapods, mammals, fishes, marine invertebrates, and shells. 39562.
- CLARK, Prof. H. L., Olivet College, Olivet, Mich.: Three water snakes from Michigan. 39533.
- CLARKE, Lieut. C. A., U. S. N., San Diego, Cal.: Received through Alaska Commercial Company. Large collection of marine and land shells from Lower California and the Gulf of California. 38909.
- CLARKE, Lieutenant. (See under Saford, Lieut. W. E.)
- CLARKE, HOPEWELL, St. Paul, Minn.: Specimens of scheelite, telluride of bismuth and gold from near Winston, Mont. 39371.

- CLARKE, DR. JOHN M., Albany, N. Y.: Plaster cast of a fossil specimen of *Paropsonema* (38467); 2 geological specimens and thin sections from near Arisaig River, Nova Scotia. 39401.
- CLELAND, H. F., Williams College, Williamstown, Mass.: Types of plants from the Triassic of North Carolina, constituting the collection of Professor Emmons. 38797. Exchange.
- CLEMENTS, FREDERICK E., Lincoln, Nebr.: Five hundred and thirty-three plants from Pikes Peak. Purchase. 38952.
- CLEVELAND-CLIFFS IRON COMPANY, Ironwood, Mich.: Specimen of "needle ore" and specimen of manganese ore. 38387.
- CLOWES, HERBERT, Smithsonian Institution: Two specimens of *Pelidnota punctata* Linnaeus and one of *Lachnosterna* sp. (38200); larva of Hawk moth, *Philampelus achemon* Dr. (38206).
- CLUTE, W. N., Binghamton, N. Y.: Ten specimens of *Pteris longifolia* from Louisiana. Exchange. 39337.
- COATS, E. E., Marion, Ind.: Pupa cases of seventeen-year cicada. 39481.
- COCKERELL, Prof. T. D. A., East Las Vegas, N. Mex.: Collection of Diptera and Microlepidoptera (38204); 3 plants from New Mexico (38209); received through Department of Agriculture 13 plants from New Mexico (38494); 39 specimens of insects from New Mexico (39513); insects and 3 types of new bees (38832); mollusks from California (39292); 12 specimens of insects from New Mexico (39494); 2 plants from New Mexico (39330); miscellaneous collection of insects, principally Diptera (39343); 47 specimens of insects from New Mexico (39423); insects and 6 slides of insects (39461); 8 plants from New Mexico (39464); 19 insects from New Mexico (39465).
- COE, DR. WESLEY R., Sheffield Scientific School, Yale University, New Haven, Conn.: Forty-seven specimens (16 species) of decapod crustaceans. 39219.
- COHN, Mrs. A., Carson City, Nev.: Fish net, with specimen of the plant from which it was made. 39539.
- COKER, R. E., Goldsboro, N. C.: Specimens of *Hypurauchilus geminatus*. 38376.
- COLBURN, A. E., Washington, D. C.: Bird skins and mammals from southern Mexico. Purchase. 38606.
- COLLES, G. W., U. S. Patent Office, Washington, D. C.: Snake from the Dismal Swamp. 38384.
- COLLETT, J. D., Fort Worth, Tex.: Received through U. S. Geological Survey. Specimen of alunogen from near Fort Worth. 38848.
- COLLETT, Robert, Natural History Museum, Christiania, Norway: Plant from Norway. 38747.
- COLLIER, ARTHUR J. (See under Interior Department, U. S. Geological Survey.)
- COLLINS, C. L. (See under International Acheson (Graphite Company).)
- COLLINS, F. S., Malden, Mass.: Fifty plants. Purchase. 38493.
- COLLINS, G. N., Department of Agriculture: Parasitic hymenopteron (38375); specimens of *Chondrioderma* from Plummers Island, Maryland. (38673.)
- COMMERCIAL APPEAL COMPANY, Memphis, Tenn.: Plant. 38892.
- COMMONS, ALBERT, Wilmington, Del.: Ninety-four plants from New Jersey. 38208.
- CONARD, D. M., Livermore, Colo.: Geological material from near Livermore. 38482.
- CONNEDY, WILLIAM, Morristown, Ariz.: Specimen of *Danais archippus* Fab. 38459.
- CONRAD, E. T. & Co., Daytona, Fla.: Molar of an adult male Mastodon, *Mastodon americanum*. 38331.
- COOK, O. F. (See under Agriculture, Department of.)
- CORBIN, Mrs. H. C., Washington, D. C.: Model of a Filipino house. 38553.
- COVERT, FRANK M., New York City: Hupa burden basket-top (38783); 2 Jicarilla baskets (38473); 2 Navajo basket bowls (39329). Purchase.
- COVILLE, F. V., Botanist, Department of Agriculture: Forty-four insects belonging to the family Bombidae, from Lake of Bays, Ontario, Canada. 38502.
- COX, EMERY, Brightwood, D. C.: Bat (*Lasius borealis*). 39410.

- COX, MISS HAZEL, Brightwood, D. C.: Song sparrow, *Melospiza fasciata*. 39248.
- COX, MISS MINNIE, Willows, Md.: Abnormal hen's egg. 38447.
- COX, WILLIAM V., Brightwood, D. C.: Bound volume containing history of silver vase presented to the late Hon. S. S. Cox by the U. S. Life-Saving Service (38906); colored lithograph of the "Campbell" U. S. General Hospital at Washington, D. C., 1861-1865 (39043).
- CRAFTS, REV. WILBUR F., Washington, D. C.: Two figurines in marble. Purchase. 38850.
- CRAIGS & FIELD, Kilbourne, Ill.: Hair worm. 38188.
- CRAIN, MRS. M. J., Washington, D. C.: Nest of Trap-door spider from Kansas. 38697.
- CRAVY, R. L., Armstrong, Iowa: Two hundred plants from Iowa. Exchange. 39124.
- CRITCHLEY, J. W., New York City: Group of Snow buntings. Purchase. 39359.
- CROCKET, G. L. (See under Agriculture, Department of.)
- CROSBY, D. J., Department of Agriculture: Specimen of *Hypopitys hypopitys* from the District of Columbia. 38575.
- CROSBY, F. W., Washington, D. C.: Obsidian from Yellowstone National Park, and oolitic sand from Great Salt Lake (38436); 6 potholes from Idaho Falls, Idaho (39507).
- CROSS, WHITMAN. (See under Interior Department, U. S. Geological Survey, Smith, Fred D.)
- CROZET, M., Hartford, Conn.: Fifteen specimens of European and American beetles. 38870.
- CRYSTAL GRAPHITE COMPANY, Kansas City, Mo.: Specimens of graphite. 39243.
- CUNNINGHAM, B. L. (See under Agriculture, Department of.)
- CURRIE, JOHN D., Minneapolis, Minn.: Three eggs of Broad-winged hawk, *Buteo platypterus*, from Minnesota. 39584.
- CURRIE, R. P., U. S. National Museum: One hundred and seventeen insects from Washington and vicinity. 38503.
- CURTISS, A. H., Jacksonville, Fla.: Four plants (gift) (38669); plants from the southern section of the United States (purchase) (38954); 523 plants from Florida (exchange) (39086); 3 plants from the southern section of the United States (gift) (39116); 7 plants (gift) (39179).
- CUSICK, W. C., Union, Oreg.: Eighteen plants from Oregon (gift) (39056); 269 plants from Oregon (exchange) (39323).
- DALL, W. H., U. S. Geological Survey: Cicada (38425); bone implement from a kitchen midden near Crescent City, Cal. (38470); 12 species of land shells collected by M. Paul Biolley, of the Museo Nacional, Costa Rica, from Cocos Island, Gulf of Panama, including cotypes of 3 species described by Von Martens (39403).
- DALLMAN, J., Richmond, Va.: Virginia land-grant deed. Purchase. 38578.
- DALTON, A. P., Arabia, Ohio: Polished stone implement. 39287.
- DANIEL, J. W., jr., Washington, D. C.: Specimen of Bachmann's sparrow, *Pooecia vestivalis bachmani*, from Virginia (39006); land and fresh-water shells from Cuba (39007); 3 plants (39441).
- DANIEL, DR. Z. T., Siletz Agency, Oreg.: Toy pistol, of wood, made by a Klamath Indian. 38417.
- DANIELS, L. E., Mount Carmel, Ill.: Two specimens of *Lampsilis simpsoni* from Indiana (38401); Unionidae from Indiana (38443); Unionidae (38582); specimen of *Spelerpes danielsi* from North Carolina (39101).
- DARRAH, Capt. THOMAS W., U. S. A. (See under Wood, J. B.).
- DAVENPORT, HOMER C., East Orange, N. J.: Specimen of *Fuligula cristata*. 39016.
- DAVIDSON, DR. A., Los Angeles, Cal. Received through Department of Agriculture: Two plants from Arizona and New Mexico (38360); plant from Arizona (39041).
- DAVIS, DANIEL, Phillipsburg, N. J.: Copy of "Manual of Magnetism," published by the late Daniel Davis, photograph, and a diploma awarded to him in the year 1839 by the Massachusetts Charita-

- DAVIS, DANIEL—Continued.
 ble Mechanics Association for his exhibit of electro-magnetic instruments. 38315.
- DAVY, J. B., University of California, Berkeley, Cal.: Fifty-four plants from California (gift) (38992); 10 plants (exchange) (39576).
- DAY, DR. DAVID T., U. S. Geological Survey: Specimens of mohawkite from near Houghton, Mich. 39177.
- DE MIER, JOHN R., Las Cruces, N. Mex.: Ethnological and archaeological objects. 39278.
- DEAN, BASHFORD, Columbia University, New York City: Natural history specimens from the Philippine Islands. Purchase. 38683.
- DEAN, C. C. (See under Agriculture, Department of.)
- DEAN, SAMUEL B., Boston, Mass.: Lamps. Purchase. 39405.
- DENGLER, J. D. F., Washington, D. C.: Elaterid beetle, *Monocrepidius viridis* De Geer, inclosed in a spider's web. 38305.
- DES CHAMPS, L. W., Elliott, S. C.: Stag beetle, *Lucanus claphus* Fab. 38313.
- DILL, R. M. GORDON, Lama, N. Mex.: Two Aztec implements from New Mexico. 39557.
- DODGE, C. R., Washington, D. C.: Nine specimens of fiber plants from Mexico. 39417.
- DOLMAGE, DR. M., Washington, D. C.: Skin of an Ivory-billed woodpecker, *Campephilus principalis*. Purchase. 39017.
- DRIVER, FRED, Richmond, Montserrat, West Indies: Specimen of Agouti (*Dasyprocta*) from Montserrat. 39388.
- DRUMMOND, LOUIS, Washington, D. C.: Frying pan used during the Revolutionary times, in Mobile, Ala. Purchase. 39554.
- DRUMMOND, RICHARDSON, and KRAUSE BROTHERS. (See under Agriculture, Department of.)
- DU BOIS, MISS CONSTANCE GODDARD, Waterbury, Conn.: Brush of soaproot from Mesa Grande, Cal., redo or carrying net of milkweed, and a carrying net of palm-leaf fiber (38918); old-fashioned twined wallet from California Mission Du Bois, Miss Constance Goddard (Continued). (38946). Purchase. (See under Smithsonian Institution, Bureau of Ethnology.)
- DU BOIS, E., Bluffton, S. C.: Specimens of Yucca borer. 39197.
- DUBOSE, G. M., Octagon, Ga.: Two teeth of Drummfish, *Aplodinotus grunniens*. 39293.
- DU BOSE, JOEL H., Huguenot, Ga.: Crab spider, *Misumena vatia* Clerk (38234); turtle and snake (38640).
- DUCK, D. R., McHenry, S. Dak.: Belted piping plover, *Aegialitis meloda circumcincta*. 38273.
- DUENKEL, WILLIAM, Tacoma, Wash.: Cottoid fish, *Nautichthys oculifasciatus*. 38490.
- DUGÉS, DR. A., Guanajuato, Mexico: Four spiders (*Epeira oaxensis* Keyserling) (38365); 5 specimens (3 species) of Mexican moths (38510); 2 specimens of fungi from Mexico (38514); skin of *Carpodacus frontalis rhodocalypus* (38732); plant (38819); plant from Mexico (39115); specimen of *Piranga rubra* (39351).
- DUNDSON, WILLIAM, Alpine, Utah: Nineteen eggs of Jay (4 sets) with nests. 38177.
- DUNN, MISS C. E., Sharon, Pa.: Pupaarium of Syrphid fly, *Eristalis tenax*. 39514.
- DURBAN, AFRICA, NATAL BOTANIC GARDENS: Received through J. Medley Wood. Forty-eight plants from Africa. Exchange. 38537.
- DURY, CHARLES, Cincinnati, Ohio: Two specimens of *Euceros facians* Davis. 39382.
- DUSEN, PROF. P., care Museu Nacional, Rio de Janeiro, Brazil: One hundred and forty specimens of Bryophyta collected in South America, principally in Patagonia. 39339.
- DUTTON, R. W. (See under Fire Department, District of Columbia.)
- DYAR, DR. H. G., and A. N. CAUDELL, U. S. National Museum: Eight thousand specimens of Orthoptera and Lepidoptera with larvae. 38513.
- EASTMAN, DR. C. R. (See under Museum of Comparative Zoology, Cambridge, Mass.)

- EASTWOOD, Miss ALICE, San Francisco, Cal.: Specimen of *Polypodium* from Alaska (38598); 2 specimens of *Cotyledonia* from Nevada City, Cal. (39432). (See under California Academy of Sciences.)
- EDWARDS, VINAL N. (See under Fish Commission, U. S.)
- EHRHORN, Prof. E. M., Mountain View, Cal.: Received through Department of Agriculture. Forty-seven insects. 38711.
- EILERS, KARL, Denver, Colo.: Sylvanite from the eleventh level of Last Dollar Mine, Cripple Creek, Colo. 38743.
- EKMAN, SVEN, Upsala, Sweden. Specimens of *Polyartemia forcipata*. Exchange. 38938.
- ELGIN NATIONAL WATCH COMPANY, Chicago, Ill.: Received through J. B. Warren. Veritas watch movement. 38919.
- ELLENVILLE ZINC COMPANY, Ellenville, N. Y.: Received through T. B. Hornbeck, treasurer. Specimens of zinc, lead, and copper ores, and three crystals. 39357.
- ELLIOT, CHARLES, Riverside, Conn.: Spider (*Aerosoma rugosa* Hentz). 38383.
- ELLIOT, D. G. (See under Field Columbian Museum.)
- ELLIOTT, Mrs. B. S., Washington, D. C.: Trilobite, *Phacops rana*, and a Lower Silurian pebble with fossils. 38450.
- ELMER, A. D. E., Palo Alto, Cal.: Four hundred and fifty plants from California. 38888.
- ELSE, W. J., Curator, Torquay Museum, Torquay, England: Archaeological objects from Kent's Cavern, Torquay. Purchase. 38778.
- EMMONS, Lieut. G. T., U. S. N., Princeton, N. J.: Festival headdress of a Chilkat Indian, made from scalp-locks. 39254. (See under Agriculture, Department of, and Smithsonian Institution, Bureau of Ethnology.)
- ENGLE, H. M., Roanoke, Va.: Eight specimens of Devonian fossils and 1 specimen of Lower Silurian fossil from Walker Mount, Virginia. 38534.
- ENGLISH, G. L., & Co., New York City: Minerals from Japan and the State of Washington (39345); specimen of twin quartz from Japan (39493). Purchase.
- ESPIN, J. M., Guantanamo, Cuba. Received through Department of Agriculture: Two specimens of insects, one representing a new genus and species of Ichneumonidae. 38497.
- ETHERIDGE, ISAAC, Woodleigh, N. C.: Wood ibis, *Tantalus loculator*, in immature plumage. 38257.
- EVERSEN, CHRISTIAN, Cataumet, Mass.: Clam pierced by a growing shoot of marsh grass. 38731.
- FAIRCHILD, D. G. (See under Agriculture, Department of.)
- FANNIN, WILLIAM H., Appleton, Wis.: Worm. 38308.
- FANT, A. L., U. S. National Museum: Bronze button of the Royal Arcanum. 39034.
- FARNSWORTH, Capt. C. S., U. S. A., Vancouver Barracks, Wash.: Skin and skeleton of an Alaskan Brown bear (purchase) (38968); 12 birds' skins from Alaska (gift) (38972).
- FAXON, Dr. WALTER. (See under Museum of Comparative Zoology, Cambridge, Mass.)
- FEATHERSTONHAUGH, Dr. THOMAS, Washington, D. C.: Two watch movements. 38464.
- VON FELLEBERG, Dr. E., Director Museum of Natural History, Bern, Switzerland: Iron meteorite from Rafrüti, Canton Berne, Switzerland. Exchange. 38545.
- FERRISS, J. H., Joliet, Ill.: Land shells from Arkansas (exchange) (38817); 25 plants (gift) (38249).
- FIELD COLUMBIAN MUSEUM, Chicago, Ill. Received through D. G. Elliot: Twelve bats in alcohol, from Chapala, Jalisco, Mexico. 38591.
- FIELD, GEORGE, Washington, D. C.: Specimen of *Cimber* sp., found attached to the roots of an orchid (*Dendrobium wardianum*) imported from India. 39466.
- FILCHER, J. A., San Francisco, Cal.: Mineral waters from California. 38771.
- FINSCH, Dr. OTTO. (See under Leiden, Holland, Rijks Museum of Natural History.)
- FIRE DEPARTMENT, DISTRICT OF COLUMBIA. Received through R. W. Dutton, chief engineer: Injured hoof from a

- FIRE DEPARTMENT, DISTRICT OF COLUMBIA—Continued.
horse belonging to the fire department. 39400.
- FISH COMMISSION, U. S., Hon. G. M. Bowers, Commissioner. Received through Vinal N. Edwards: Seven hundred and eighty specimens of invertebrates (38176); land, fresh-water, and marine shells, also alcoholic mollusks from the Central Pacific Ocean, received through Dr. Alexander Agassiz (38267); marine invertebrates and a specimen of Hawkbill turtle from Honolulu, received through Dr. David S. Jordan (38474); received through Vinal N. Edwards, marine invertebrates (38594); crustaceans, echinoderms, dry and alcoholic mollusks, skulls of two porpoise and alcoholic tadpoles, collected in the Hawaiian Islands in 1901 (38623); 314 plants collected in Indiana in 1901 (38628); echinoderms from Porto Rico (38733); type specimens of *Mistichthys luzonensis* from Luzon, Philippine Islands, collected by Dr. F. W. Richardson (39155); type specimen of *Eulophiastaneri* (39156); sponges collected by the steamer *Fish Hawk* in Porto Rico (39165); 2 plants collected by Mr. Kimball in Maine (39166); specimens of silversides and of crayfishes (in alcohol) from Maine (39237); rocks and ores from Crazy Mountains, Judith Mountains, Highwood Mountains, Elkhorn Mining District, etc., collected by Messrs. W. H. Weed and J. S. Diller (39285); fossils (39316); fishes from Mexico; type and cotype of *Mosa ohionensis*; shad from the Ohio River (39318); 3 specimens of crabs and 8 specimens of starfishes dredged by the *Albatross* off Monterey, Cal. (39349); natural history material (39409); received through Vinal N. Edwards, marine invertebrates (39439); canoe obtained by the *Albatross* in 1900 in the South Sea Islands (39534); received through Prof. Charles B. Wilson, State Normal School, Westfield, Mass., Argulidae (39551).
- FISHER, C. A., Durango, Mexico: Nine cases of a neuropteroid insect belonging to the order Trichoptera. 38441.
- FISHER, H. L., Califon, N. J.: Lepidopterous larva. 38423.
- FISHER, WILLIAM J., Kodiak, Alaska: Beetle. 38411.
- FISKE, Mr. (See under Agriculture, Department of.)
- FLETCHER, Dr. JAMES, Ottawa, Canada: Parasite of *Lygellus unipunctatus*. 38611.
- FLETCHER, O. K., U. S. A., Manila, P. I.: Grasshoppers (*Pachytylus migratorides* Reich.) 38393.
- FLETT, J. B., Tacoma, Wash.: Eight specimens of ferns and fern allies from Alaska and Washington (38519); 75 plants from Alaska (38773); 20 flowers of *Nymphaea polysepala* (39563). (See under Agriculture, Department of.)
- FLINT, Dr. JAMES M., U. S. N.: Specimen of *Houstonia* from Florida. 39239.
- FLOWER, F. G., Spokane, Wash.: Specimen of *Raphidia oblita* Hagen (38378); pupa case of a neuropteroid insect (38486).
- FOERSTE, A. F., Dayton, Ohio: Fifteen brachiopods from the Niagarian formation of Tennessee. 38801.
- FOOTE MINERAL COMPANY, Philadelphia, Pa.: Iron meteorite from Tombigbee River, Alabama (purchase) (38569); meteoric iron from Bosque County, Tex. (exchange) (38728); minerals (purchase) (39348); lead and wolframite (purchase) (39347).
- FOSDICK, E. H., Los Angeles, Cal.: Specimen of lepidolite from the mines at Pala, San Diego County, Cal. 38740.
- FOSTER, Miss E. C., Nashville, Tenn.: Butterfly (*Papilio asterias*). 39309.
- FOSTER, F. H., Claremont, N. H.: Seven specimens of larva of *Hoploa*. 38511.
- FOWLER, JAMES, Kingston, Ontario, Canada. Received through Department of Agriculture. Four hundred and sixteen plants from Canada. Exchange. 39273.
- FRAILE, M., Department of Agriculture: Plant collected by A. Blanc in Florida. 38286.
- FRANKLIN, SPENCER. (See under Smithsonian Institution, Bureau of Ethnology.)
- FRENCH, Maj. F. H., U. S. A., Manila, P. I.: Filipino hat. 39070.
- FRIERSON, LORRAINE S., Frierson, La.: Unionidae from Texas (38276); Unionidae (38761); fresh-water mussels from Lake Charles, Louisiana (38808).

- FRYE, C. J., Baracoa, Cuba: Two prehistoric earthenware vessels from a cave near Santiago. 39281.
- FULLER, CLAUDE, Pietermaritzburg, Natal, Africa: Nineteen specimens (2 species) of Diptera, including the man-infesting Sarcophagid, *Beugalia depressa* Walker. 38280.
- GALLARD, Capt. R. D., Engineer Corps, Duluth, Minn.: Letter in the Chippewa language; photographs of Chippewa snowshoes. 38943.
- GALLAHER, JAMES, JR., New Haven, Conn.: Piece of keel of the frigate *Constitution*. 38907.
- GALPIN, Rev. F. W., Hatfield Vicarage, Harlow, England: Musical instruments, including a recorder, flute-à- bec, and galoubet (originals); hornpipe (reproduction of a Kettie, an extinct Welsh instrument). Exchange. 39033.
- GAMBINO, J., Keyser, W. Va.: Seven hundred specimens of fossils from the Lower Helderberg formation at Keyser (38347); 380 cystids, 3 trilobites, and 400 shells from the Helderbergian of Keyser (38788). Purchase.
- GANTER, H. C., Mammoth Cave, Ky.: Cave insects. 38753.
- GARDINALE, LUIGI, Vicenza, Italy: One hundred species of Middle and Lower Oligocene fossils from Vicenza, Italy. Exchange. 39459.
- GARET, E., Washington, D. C.: Death mask of Calixto Garcia. 38854.
- GARY, L. B., Austinburg, Ohio: Six species of Unionide from Ohio. 38444.
- GATCHEL & MANNING, Philadelphia, Pa.: Portrait of E. H. Davis, archaeologist and explorer. Purchase. 38876.
- GATES, PETER G., Pasadena, Cal.: Collection of archaeological specimens from White Mountains and Tusayan, Apache County, Ariz. 38480. (See under Hough, Dr. Walter.)
- GEER, O. L., Phoenix, Ariz.: Snake from Arizona. 39009.
- GEORGESON, C. C. (See under Agriculture, Department of.)
- GERMAN, Rev. W. S., Govanston, Md.: Luna moth, *Actias luna* L. 39548.
- GERRARD, E., & SON, London, England: Two skeletons of birds (38312); skeleton of an Indian stork (*Xenorhynchus*) (38386). Purchase.
- GESSFORD, O., Smithsonian Institution: Spider. 38859.
- GIBSON, C. C., Ness City, Kans.: Two specimens of meteorites. Purchase. 38726.
- GILBERT, Mrs. A. P., Logan, Okla.: Solpugid (*Eremobates pallipes* Say) (38327); arachnid (38612).
- GILBERT, B. D., Clayville, N. Y.: Six specimens of ferns from New York. Exchange. 38803.
- GILBERT, Prof. C. H., Stanford University, California: Parasitic isopods from a mullet. 39075. (See under Leland Stanford Junior University.)
- GILBERT, G. K. (See under Interior Department, U. S. Geological Survey.)
- GILBERT, Mrs. J. LORING, Washington, D. C.: Small basket made by the Moravians of North Carolina, and a plaster cast used as a mold for casting "Moss plates" for printing. Exchange. 39057.
- GILG, Dr. E., Berlin, Germany: One hundred and eighty plants collected in Siam by R. Zimmermann. Purchase. 39063.
- GILLETTE, Capt. C. E., Engineer Corps, U. S. A., Savannah, Ga.: Siliceous cast of skeleton of a septarian nodule from near Grovetown, Ga. 38937.
- GILLETTE, Prof. C. P., Fort Collins, Colo.: Moth (*Arctia boreci*). Exchange. 39451.
- GILLILAN, J. D. (See under Martin, H. J.)
- GOLDER, F. A. (See under Agriculture, Department of.)
- GOLDMAN, E. A., Washington, D. C.: Sixty plants from Mexico (38231); 71 plants from Mexico (38242). Purchase. (See under Agriculture, Department of.)
- GOOD, Rev. J. B., San Diego, Cal.: Haida totem post. Purchase. 38217.
- GOODE, Mrs. Sarah F. J., Middletown, Conn.: Collection of ceramics, coins, and ethnological objects from various parts of the world. Purchase. 38947.
- GOODING, C. F., Washington, D. C.: Turtle from Virginia. 38621.
- GORDON, H. C., San Diego, Cal.: Two specimens of tourmaline. Purchase. 39264.

- GORDON, ROBERT H., Cumberland, Md.: Two new species of Helderbergian cystids, one new species of Helderbergian crinoid, and a specimen of *Eldriocrinus*. 38686.
- GORE, Prof. J. H. (See under Siamese minister.)
- GOUMAN, M. W., Portland, Oreg.: Received through Department of Agriculture. One hundred and eighty-one plants from Alaska. 38614.
- GOSLING, E., Goodwin, Hamilton, Bermuda: Invertebrates, mollusks, and fishes from Bermuda. 38875.
- GRAENICHER, Dr. S., Milwaukee, Wis.: Specimens of Hymenoptera, Hemiptera, and Diptera (38696, 38739).
- GRAHAMSTOWN, SOUTH AFRICA, ALBANY MUSEUM: Received through Dr. S. Schönland. Mammals (exchange); shells (gift). 39158.
- GRAY, Mrs. ELISHA, Highland Park, Ill.: Received through H. S. Carhart. Apparatus illustrating the harmonic telegraph and telephone apparatus of the late Prof. Elisha Gray. 38810.
- GRAY HERBARIUM, Boston, Mass.: Plants from Mexico and Nevada (gift) (39184, 39196); 2 plants (exchange) (39322).
- GREGORY, V. H., Chiswick, London, England: Piece of a meteorite from Eagle Station, Ky. Purchase. 39478.
- GRIFFITH, DAVID. (See under Agriculture, Department of.)
- GREGG, R. F., Office of Tropical Agriculture, Department of Agriculture, Washington, D. C.: Fifty-four insects. 39418. (See under Agriculture, Department of.)
- GROTHWELL, V., San Francisco, Cal.: Collection of religious objects from the Philippine Islands. Purchase. 38529.
- GROUT, A. J., Brooklyn, N. Y.: Plants from the United States and other parts of North America. (38885, 38887.)
- GRUBBS, Dr. R. B., U. S. A., Iligan, Mindanao, P. I.: Fragments of skins of *Python reticulatus* and a specimen of *Typhlops brahimus*; also mammals. 39194.
- GULICKSON, G., Osborn, Idaho: Minerals from Big Creek, Idaho (38596); specimen of manganese (38654); specimen of ore from Shoshone County (38765).
- HADLEE, R. B., England, Ark.: Nest of leaf-cutting bee, *Megachile* sp. 38521.
- HALE, S. S., Oxford, N. Y.: Locustid. 38440.
- HALL, Miss A. S., Walnut Hills, Cincinnati, Ohio: Writing desk and quadrant formerly owned by Captain Hall, of the *Polaris* expedition. 38781.
- HALL, C. F., U. S. N. (No address.) Two gun barrels. 38900.
- HALL, H. M., University of California, Berkeley, Cal.: One hundred and eighty-five plants from California. Purchase. 39048.
- HAMLIN, HOMER, U. S. Geological Survey: Arrow point, scrapers, and flakes of jasper from Salinas Valley, Monterey County, Cal. 38585.
- HANCOCK, J. L., Chicago, Ill.: Six specimens (2 species) of Tettigide, representing cotypes. 39266.
- HANLEY, JOHN, Flathead Agency, Jocko, Mont.: Caterpillar. 38489.
- HARKINS, J. M., Calhoun, Ga.: Ethnological objects and insects from the Philippine Islands. Purchase. 38708.
- HARPER, R. M., New York City: Five hundred and fifty-eight plants from Georgia. Purchase. 38718.
- HARRIMAN, E. H., New York City: One hundred and seventeen specimens of Algae from Alaska, collected by Dr. W. Trelease and Dr. A. Saunders, of the Harriman Alaskan Expedition. 39484.
- HARRIS, Mrs. C. G., Brooklyn, N. Y.: Lichens from near Chilson Lake, Essex County (39221, 39331). Exchange.
- HARRIS, W. (See under Kingston, Jamaica, Jamaica Botanical Gardens.)
- HARVEY, FRANK, Cumberland, Md.: A large specimen of *Canavaccinus*, and 3 specimens of *Spirifer arenosus*. 38685.
- HASSE, H. E., Soldiers' Home, Cal.: Plant, 32 lichens from California; 8 specimens of Cotyledons; 5 plants from Santa Monica Range, California; Cotyledon from San Gabriel Mountains, California; 15 specimens of Cotyledons from southern California (39368, 39390, 39471, 39483, 39492, 39581).
- HATCHER, J. B. (See under Carnegie Museum.)

- HAY, R. H., U. S. National Museum: Five hundred specimens of Mexican Lepidoptera. 38512.
- HAY, Prof. W. P., Howard University, Washington, D. C.: Concretionary pebbles from Nickajack Cave, Tennessee (38367); batrachians from Kentucky and Tennessee (38828); types of 3 species of crustaceans from a cave in Tennessee (39029); 4 crayfishes from Plummers Island, Potomac River (39212); a Bat (*Myotis lucifugus*) from Nickajack Cave, Tennessee (39275); snake (*Lampropeltis rhombomaculatus*) (39381); salamander from Plummers Island, Virginia (39383); 30 specimens of Lepidoptera from Mexico (exchange) (39474).
- HAYS-LER, MORRIS, Clinton, Mo.: Received through J. H. Britts. Albino fox squirrel, *Sciurus ludovicianus*. 38987.
- HEARD, MRS. AMORETTE, Greensboro, Ga.: Male specimen of Rhinoceros beetle, *Dynastes tityus* Linnaeus. 38211.
- HEGEN, R. H., Miami, Fla.: Fifty moths from southern Florida. 38483.
- HEIERLI, Prof. J., University of Zurich, Zurich, Switzerland: Collection of archa-ological relics from a cave near Schaffhausen. 38268.
- HEIGHWAY, A. E., Los Angeles, Cal.: Tourmaline from Mesa Grande, Cal. (38454, 38845).
- HEIKES, V. C. (See under Swindler, B. F.)
- HEIL, DR. JOHN, Hospital Corps, U. S. A., Dosmarinas, Cavite Province, P. I.: Two specimens of insects representing the order Rhynchota and family Reduviidae (38462); insects representing various orders (39891).
- HELLER, A. A., Lancaster, Pa.: Fifty-three specimens of *Volva* from Pennsylvania (exchange) (38396); 1,000 plants from Pennsylvania (purchase) (38926). (See under New York Botanical Garden.)
- HELLER, EDWIN. (See under Leland Stanford Junior University.)
- HEMSTREET, S., Chattanooga, Tenn.: Three specimens of fossil wood from Mississippi. 39173.
- HENDERSON, PETER, Glasgow, Scotland: Bagpiper's outfit. Purchase. 39176.
- HENDRICKSON, H. C., Miami, Fla.: Eighty-five specimens of insects, principally Lepidoptera. 38284.
- HENRY, Augustine, Kew, England: A collection of Chinese plants, consisting of 4,249 specimens. Purchase. 38672.
- HENSHAW, H. W., Hawaiian Islands: Hawaiian insects (gift) (38416); crabs and shrimps from the Hawaiian Islands (gift) (38655); cockroaches from the Hawaiian Islands (gift) (38695); specimen of Scyllarid (gift) (39074); 4 birds' skins (purchase) (39188); 5 skins of Hawaiian crow, *Corvus hawaiiensis* (purchase) (39327); 5 skins of *Corvus hawaiiensis* (gift) (39328).
- HERRE, A. C., Springfield, Ill.: Two crystals of aphrosiderite pseudomorph after garnet, of the variety almandite, from Michigamme, Lake Superior, Michigan. 39137.
- HERRICK, H. D., New Brighton, Pa.: Nine moths. 39206.
- HERRICK, Prof. G. W., Agricultural College, Miss. (received through Prof. A. D. MacGillivray): Two Pompilids, *Agonia bombycina* Cress. 39147.
- HERZER, Rev. H., Marietta, Ohio (received through U. S. Geological Survey): Ten small slabs containing fossil remains of fishes. 39203.
- HICKMAN, JOHN, Mountain Home, Ark.: Stag beetle, *Lucanus elaphus* Fab. 38233.
- HILL, DR. R. T., U. S. Geological Survey: Specimen of cinnabar from Terlinger district, Brewster County, Tex. 38871.
- HINCKLEY, ROBERT, Washington, D. C.: Piece of embroidery (gift) (39291); piece of tapestry bought in Paris after the Commune. Purchase. 39508.
- HITCHENS, G. D., Brighton, Va.: Specimen of Dovekie, *Alle alle*. 38940.
- HITT, J. E., Augusta, Ga.: Longicorn beetle, *Urographis fuscatus* De Geer. 38277.
- HOBBS, W. H., Madison, Wis.: Two pieces of Algoma meteorite and model of the meteorite. Exchange. 39468.
- HODGE, F. W., Smithsonian Institution: Rhinoceros beetle, *Dynastes tityus* Linnaeus (38303); caterpillar (39391).

- HODGE, H. G., York, Ill.: Large crayfish. 38244.
- HOLCOMB, BENTON, West Granby, Conn.: Two shells from Connecticut (38215); Caddis-worm cases resembling a small shell (39517).
- HOLLINGSWORTH, J. H., Washington, D. C.: Moth (*Telea polyphemus* Cram.). 38335.
- HOLLISTER, N., Delavan, Wis.: Six birds' skins from Wisconsin. 38216.
- HOLMES, G. W., Manomet, Mass.: Beetle (*Monohamus confusor* Kirby). 38694.
- HOLMES, I. G. (See under Agriculture, Department of.)
- HOLMES, W. H. (See under Smithsonian Institution, Bureau of Ethnology.)
- HOLWAY, E. W. D., Decorah, Iowa: Three plants. Exchange. 39117.
- HOLZINGER, J. M., Winona, Minn.: Plant from Wisconsin (38719); 2 specimens of mosses (*Psilopilum* sp. and *Ulotia* sp.) from Alaska (38950).
- HOPE, C. W., Royal Botanic Gardens, Kew, England: Two plants from north-western India (gift) (38320); 282 plants from British India and Ceylon (purchase) (39223); 75 specimens of ferns from British India and Ceylon (gift) (39261).
- HORNBECK, T. B. (See under Ellenville Zinc Company.)
- HORNUNG, DR. JOHN, San Francisco, Cal.: Nine specimens of kelp crab, *Epiplatys dentatus*. 38297.
- HOUGH, DR. WALTER, U. S. National Museum: Archeological and ethnological material, also fossils, from the Pueblo region of Arizona (38478); 136 plants from Arizona (38675); concretions, from Jedido Valley, Moki Reservation, Arizona (38707). (See under Gates, Peter G., and Scorse, H. H.)
- HOUSE, H. D., Oneida, N. Y.: Six plants from central New York. Exchange. 38408.
- HOUTZ, MRS. R. C., Washington, D. C.: Luth-shaped guitar. Purchase. 38865.
- HOWARD, DR. L. O. (See under Brown, Herbert, and Knaus, W.)
- HOWARD, O. W., Los Angeles, Cal.: Fifty-six birds' eggs and 3 nests from Arizona. Purchase. 38975.
- HOWE, S. W., Orlando, Fla.: Beetle (*Strategus antons* Fabr.). 38639.
- HOWELL, A. H., Department of Agriculture: Plants from New York. (38446, 38515.)
- HOWELL, E. E., Washington, D. C.: Three meteorites from Tonganoxie, Leavenworth County, Kans., San Angelo, Tex., and Kendall County, Tex. (exchange) (38638); meteorite from Ballinoo, Western Australia (purchase) (38659); Casas Grandes meteorite, from Mexico (exchange) (38722); section of meteorite from Kiowa County, Kans. (exchange) (38949); Kiowa County meteorite (exchange) (39046).
- HOWELL, N. P., Newark, N. J.: Four insects from Maine. 38461.
- HOWLAND, S. S. (See under Smithsonian Institution.)
- HUME, H. H., Florida Agricultural College, Lake City, Fla.: Sixty-six plants from Florida. 39055.
- HUMMEL, CHARLES, Espy, Pa.: Indian relics from Columbia County, Pa. 38269.
- HUNGERFORD, HENRY, Lake of Bays, Ontario, Canada: Two plants of the genus *Picea*, from Canada. 38671.
- HUNTER, WILLIAM, Washington, D. C.: Plant (38516); cones from Virginia (39217); 6 plants from the District of Columbia (39302).
- HUNTINGTON, J. H., Baker City, Oreg.: Two specimens of rocks from the base of Elkhorn Mountains. 39399.
- HURTER, JULIUS, St. Louis, Mo.: About one hundred specimens of Chester formation fossils from Baldwin, Ill. 38891.
- HUTCHASON, MISS LILA, Admire, Kans.: Specimen of meteorite. Purchase. 38465.
- HYATT, JAMES, Bengall, N. Y. Received through Department of Agriculture. Plant. 38632.
- ISHIKAWA, Prof. C. (See under Tokyo, Japan, Imperial University.)
- IHERING, VON, DR. H. (See under São Paulo, Brazil.)
- INTERIOR DEPARTMENT: Received through the Secretary's office. Had typewriting machine. Deposit. 38579.

INTERIOR DEPARTMENT—Continued.

United States Geological Survey. Four hundred and five Cambrian brachiopods, principally orthids, from various localities (38221); 1,410 specimens of *Aerotretra* and *Aerathele* from the Cambrian formation of various localities in the United States (38451); 147 specimens of ores from the Silverton quadrangle, and 109 specimens from Rico Mountains, Colorado, collected by F. Leslie Ransome (38458); about 500 specimens of Cambrian *Aerotretra* from various localities (38533); piece of flaked flint from New Mexico (38664) (deposit); received through Department of Agriculture, specimen of *Yucca glauca*, collected in Utah by G. K. Gilbert (38670); 110 specimens of Cambrian fossils (38677); 6 slabs representing pseudomorphie casts of salt crystals from probable Devonian strata in the Needle Mountain quadrangle of southwestern Colorado, collected by Whitman Cross on the divide between Needle and Tan creeks (38791); received through Charles Butts, type specimen of *Lepidodiscus alleganius* Clarke (38802); collection of rocks and minerals from the Highwood Mountains and Crazy Mountains, Montana, collected by W. H. Weed (38863); specimen of *Beatrecia*, collected by R. S. Spence, Paris, Idaho (38931); 485 plants collected by J. B. Leiberger in Arizona (38935); geological specimens from Cameron Mine, Grand Canyon, Arizona (38978); refractory fire clays, coals, shales, and a specimen of quartzitic sandstone, with cast of *Lepidodendron ellipticum*, collected by David White (39104); 28 plants collected in Alaska by Arthur J. Collier (39122); 117 plants from Montana, collected by Stuart Weller (39123); rocks from Denver Basin, Colorado, collected by Whitman Cross (39133); block of marble from Idaho (39167); rocks and ores from Bohemia and Blue River mining districts, Lane County, Ore. (39192); fossil plants from the John Day Basin, Oregon, collected by F. H. Knowlton (39236); 210 sections of rocks from Elkhorn Mountain, Montana, collected by W. H. Weed (39263); 275

INTERIOR DEPARTMENT—Continued.

specimens of Cambrian brachiopods, *Linmarssonella girtyi* (39276); 85 plants collected in Colorado by Whitman Cross (39305); 1,055 specimens of Cambrian brachiopods of the genera *Linmarssonella*, *Lingula*, *Obolus*, and *Aerotretra* (39362); English flint, asbestos, from Sall Mountain, Georgia, red slate from Arkansas, iron ore and tale from Newfoundland (39386); 23 duplicate rock specimens from California and Oregon (39408); geological material from Livingston, Mont., Montana quadrangle and Little Belt Mountains, collected by W. H. Weed (39424). (See under Collett, J. D.; Heikes, V. C.; Herzer, Rev. H.; Russell, Prof. I. C.; War Department.)

INTERNATIONAL ACHESON GRAPHITE COMPANY, Niagara Falls, N. Y. Received through C. L. Collins: Samples of Acheson graphite. 39288.

IOWA AGRICULTURAL COLLEGE, Ames, Iowa. Received through Department of Agriculture: Seventy-eight plants from Iowa, collected by L. H. Pammel and others. Exchange. 39092.

ISRAEL, A. R., Washington, D. C.: Mole cricket, *Gryllotalpa columbix* Scudder. 38379.

ISTHMIAN CANAL COMMISSION, Washington, D. C. Received through Rear-Admiral J. J. Walker, U. S. N.: Relief map of the proposed Panama Canal route. 38764.

JACKSON, SIDNEY W., Woollahra, Sydney, New South Wales, Australia: Two specimens of *Ptilorhis paradisea*, with nest and 2 photographs (39314); 2 eggs of *Parra gallinacea* (39363). Purchase.

JAMES, Mrs. J. F., Washington, D. C. Received through Department of Agriculture: Ninety-six plants of the United States. 39132.

JAMAICA BOTANICAL GARDENS. (See under Kingston, Jamaica.)

JANSON, O. E., & SOX, London, England: Nine birds' skins from Costa Rica and Guatemala. Purchase. 39504.

JENNERSON, H. G., Pine Ridge Agency, Rosebud, S. Dak.: Sand crystals ("Walkerite"), from Pine Ridge Indian Reservation. 38409.

- JOHNSON, A. J. (See under Agriculture, Department of.)
- JOHNSON, Hon. BENJAMIN, F. S. consul, Utiilla, Honduras: Potsherds. 38316.
- JOHNSON, Prof. C. W., Wagner Free Institute, Philadelphia, Pa.: Sixteen specimens of Diptera, six of them being new to the collection. 39118.
- JOHNSON, HERBERT P., West Roxbury, Mass.: Two cotypes of *Nereis limicola* Johnson from Lake Merced, California. Exchange. 39125.
- JOHNSON, M. D., Los Angeles, Cal.: Seeds of *Stimmodia californica* from California. 38359.
- JONES, CHARLES W. (See under Smithsonian Institution.)
- JONES, ISRAEL. (See under Agriculture, Department of.)
- JORDAN, Dr. D. S. (See under Fish Commission, U. S., and Leland Stanford Junior University.)
- KALES, Dr. J. W., Franklinville, N. Y. Received through Smithsonian Institution, Bureau of Ethnology: Steel ax of archaic pattern (gift) (38631); small ax of archaic pattern (exchange) (38714).
- KARCHER, D. I., Paris, France: Reptiles and batrachians from Sumatra. Purchase. 38412.
- KEARNEY, T. H. (See under Agriculture, Department of.)
- KEENAN, EDWARD, Watertown, N. Y.: Specimen of *Oromoceras*, specimen of *Chlamydia*, a bryozoan, and a specimen of *Hornotoma*. 38535.
- KEENAN, MICHAEL, Springer, N. Mex.: Tiger beetle, *Cicindela pulchra*, and nest of a bee belonging to the family Megachilidae. 38487.
- KEESE, SAMUEL, Washington, D. C.: Lock from a cell at Fort Monroe in which Jefferson Davis was confined; key picked up at Wakefield, Va., Washington's birthplace, and a pocket compass-sundial, owned by General Washington, and presented to him by General Braddock on the occasion of the retreat through Paris Gap, Virginia. 39044.
- KEISER, J. K., Spottswood, Va.: Specimens of bag worms representing the species *Thyridopteryx ephemeriformis* Haworth. 38438.
- KELSEY, F. W., San Diego, Cal. Four specimens of *Serridans oblonga* Cpr. from San Diego (38999); land and fresh-water shells from California and Lower California (39235).
- KENDALL, Dr. W. C., U. S. Fish Commission. Fresh-water mollusks from Maine (38709); 2 tails of Canadian ruffed grouse, *Bonasa umbellus togata*, from Frankfort, Me. (38751).
- KENNARD, F. H., Raquette Lake, N. Y.: Larva of Giant water bug, *Belostomat americanum* Leidy. 38293.
- KENNEDY, CLARENCE, Bloomington, Ill. Received through E. B. Williamson: Unionide from Indiana. 38475.
- KENNEDY, J. S., Fort Sam Houston, San Antonio, Tex.: Larva of *Lagoa opercularis* S. & A. 38516.
- KENOVER, L. A., Independence, Kans. Received through Department of Agriculture: Plant (38679); specimen of *Lesquerella* (38994).
- KEW, ENGLAND, ROYAL BOTANIC GARDENS. Received through Sir W. T. Thiselton-Dyer, director: Valuable collection of Oriental plants. 38182. (See under Agriculture, Department of.)
- KIAH, J. G. (See under Treasury Department, U. S. Life-Saving Service.)
- KIDD, J. L. J., Patton, Tex.: Twenty-eight specimens of ticks from Texas. 39145.
- KIDDER, D. G., Coulterville, Cal.: Larva of a Potter-wasp, *Odynerus* sp. 38915.
- KIDDER, J. H., Boston Mass.: Skeleton of Kadiak bear (39052); received through Dr. C. Hart Merriam, 2 skins of Kadiak bear, *Ursus mullendorffi* (39068); received through Dr. Merriam, specimen of Pennatulid, *Terrillia blakei* Stearns, from Prince William Sound, Alaska (39250).
- KIDWELL, Dr. J. W., and W. M. SLATER, Washington, D. C.: Rutile in gangue and rutile separated from gangue, from Nelson County, Va. 38624.
- KIMBALL, J. H. Modena, Utah: Fragments of Indian earthenware found near Modena. 39129.
- KIMBALL, Miss L. F., National City, Cal.: Eight specimens of ferns from California. Exchange. 39245.

- KIMBALL, Mr. (See under Fish Commission, U. S.)
- KINCAID, Prof. T., University of Washington, Seattle, Wash.: Eighteen specimens (6 species) of crustaceans. 39172.
- KING, Dr. E. H., Muscatine, Iowa: Unionide from the Mississippi River (exchange) (38300); shells and animals of *Tritogonia* (gift) (38389).
- KING, Mrs. F. P., Valdez, Alaska: Eskimo coat made of the breasts of native ducks, and a small clay figurine of a Mexican squaw. 38419.
- KING, G. KIRKWOOD. (See under Smithsonian Institution, Bureau of Ethnology.)
- KING, W. H., U. S. National Museum: Fishes from Difficult Run, Virginia. (38228); specimens of Mountain trout, *Salvelinus fontinalis*, from Stony Man, Virginia. (38437).
- KING, W. H., and WILLIAM PALMER, U. S. National Museum: One hundred and seventy plants from Virginia (38368); 11 myriapods from Page County, Va. (38390); 139 plants from Virginia (38397); reptiles and batrachians from Virginia (38400); 50 plants from Virginia (38407).
- KINGSTON, JAMAICA, JAMAICA BOTANICAL GARDENS: One hundred plants, collected by W. Harris in Jamaica. Exchange. 38179.
- KIPLINGER, Mrs. E. A., Akron, Iowa: The first flag raised in Dakota (July 4, 1867). 39452.
- KIRK, E. G., Burlington, Iowa: Four specimens (3 species) of *Eactinopora*, 2 specimens of *Belenuospongia* and 2 specimens of *Orthoceras*, from Burlington. 38956. (See under Carthage Lake Hunting and Fishing Club.)
- KIRKMAN, Lieut. Col. J. T., U. S. A., Washington, D. C.: Head of a wild Caribao from the Philippine Islands. 38790.
- KIRSCH, Prof. LOUIS. (See under Williamsburgh Scientific Society, Brooklyn, N. Y.)
- KITTREDGE, Miss E. M., Springfield, Mass.: Two plants from North Carolina and Vermont. 39332.
- KIZER, Dr. D. T., Springfield, Mo.: Fresh-water shells. 38584.
- K. K. NATURHISTORISCHEN HofMUSEUM. (See under Vienna, Austria.)
- KLAGES, E. A., Crafton, Pa.: Thirty specimens of Lepidoptera from Venezuela. 39268.
- KNAUS, W., McPherson, Kans.: Received through Dr. L. O. Howard. Two specimens of *Cicindela echo* Casey, from Saltair, Utah. Exchange. 38266.
- KNIGHT, Prof. W. C., Laramie, Wyo.: Geological specimens and fossils. 38195.
- KNOWLTON, F. H. (See under Interior Department, U. S. Geological Survey.)
- KNOWLTON, MILLARD, Sims, Ind.: Plant. 38281.
- KNOWLTON, Mrs. STEPHEN, Danville, Vt.: Thirty-two specimens of ferns from Japan. 38402.
- KNY-SCHERER COMPANY, New York City: Model of an eye (39149); model of the head of a viper (39238). Purchase.
- KRANTZ, Dr. F., Bonn, Germany: Section of meteorite from Rhine Villa, South Australia. Purchase. 39346.
- KRAUSS, F. S., Vienna, Austria: Two Jewish amulets printed on paper. 38989.
- KUINS, D. B., Hilo, H. I.: Hawaiian insects from near Hilo (38415, 38704).
- KUNTZE, Dr. OTTO, Iowa City, Iowa: Stalactitic sphalerite from Galena, Ill., and rhodochrosite from Saguache County, Colo. Exchange. 38657.
- LACHENAND, GEORGES, Limoges, France: Sixty specimens of mosses and hepatica from France. Exchange. 39222.
- LANDIS, Dr. E. B. Received through Hon. Horace N. Allen, consul-general, Seoul, Korea: Collection of 1,639 Korean copper coins. 39469.
- LANDIS, J. M., Middletown, Ohio: Spider's nest covered with commingled pebbles. 38922.
- LANDSBERG, F., Victoria, British Columbia: Fish basket from Victoria. 39503.
- LANGASSE, E. (See under M. Micheli.)
- LANGILLE, H. D. (See under Agriculture, Department of.)
- LANGLEY, S. P., Secretary, Smithsonian Institution: Vanilla pods from Tahiti. 38690.
- LAPHAM, M. H. (See under Agriculture, Department of.)

- LASSIMONNE, Prof. S. E., Moulins, Allier, France: One hundred and fifty-one plants from Europe. Exchange. 39015.
- LATHY, Percy L., Sydney Road, Enfield, England. Received through Levi Mengel: Fourteen butterflies. 39148.
- LAWSON, J. C., Washington, D. C.: New York Red bat, *Lasiurus borealis*, with four young specimens. 39532.
- LEA, Rev. FRANK C., Ashton, Md.: Bow and 14 arrows from the Lowkundi negroes on the Congo at Equatorville. 39444.
- LEE, D. C., Harbor Springs, Mich.: History of Chippewa Indians and a photograph of Ki-was-si, an old Chippewa porcelain quill worker. 39031.
- LEE, Prof. L. A., Brunswick, Me.: Two specimens of columbite from Topham, Me. 39260.
- LEE, Dr. T. E., Terre Haute, Ind.: Indian beads. 39182.
- LEIBERG, J. B. (See under Interior Department, U. S. Geological Survey.)
- LEIDEN, HOLLAND, ROYAL MUSEUM OF NATURAL HISTORY. Received through Dr. Otto Finsch: Three birds' skins (39546); 278 birds' skins from the Dutch East Indies (39545). Exchange.
- LELAND STANFORD JUNIOR UNIVERSITY, Stanford University, Cal. Received through Dr. D. S. Jordan: Fishes from Formosa (38723); Japanese fishes, including type specimens (38883); Embiotocoid fishes from Japan (38941); collected by E. Snodgrass and Edwin Heller, fishes from Cocos and Galapagos Islands (38959); received through Edmund Heller, crustaceans (38971); Japanese fishes (39095); Panama fishes collected by Dr. C. H. Gilbert (39210); 2 specimens of Lernaean parasites from Japan (39419).
- LEMBKY, WALTER I., Treasury Department, Washington, D. C.: Skin of Ivory gull, *Pagophila alba* from St. George Island, Bering Sea. 38681.
- LEWIS, GEORGE A., Wickford, R. I.: Flasher, *Lobotes surinamensis*, from Narragansett Bay. 38564.
- LEWIS, Rev. T. L., Bozeman, Mont.: Two specimens of minerals. 39404.
- LIND, E. G., Keene, Va.: Specimen of Hellgrammite-fly, *Corydalis cornuta* Linnaeus. 38243.
- LINDSEY, G. A., Redlands, Cal.: Stone celt. Purchase. 38633.
- L'INSTRUMENTAL, Paris, France: Trombone ("Basse a coulisse"). Purchase. 38397.
- LISTER, Mrs. ADDIE, Clearwater, Idaho: Opal in the matrix. 38199.
- LONDON, ENGLAND, CORPORATION OF THE CITY OF. (See under Smithsonian Institution.)
- LÖNNBERG, Dr. EINAR. (See under Upsala, Sweden, University of Upsala.)
- LOPER, Prof. S. WARD, Middletown, Conn.: Specimens of Eocene fishes. Exchange. 38831.
- LOUBAT, M. le Duc de, Paris, France: Facsimile reproduction of the Codex Fejérváry-Mayer (38589); copy of Dr. Eduard Seler's work on the "Codex Fejérváry-Mayer" (39142).
- LOUNSBURY, Prof. C. P., Cape Colony, South Africa: Sixteen specimens of a Hemipteron. 39200.
- LOVE, R. E., Erwin, Tenn.: Lepidopterous larva. 38693.
- LOVE, Col. W. H., Baltimore, Md.: Three stone arrow-points. 39505.
- LOVETT, EDWARD, Croydon, England: Collection of flints and reproductions of flint tools, etc. (exchange) (38449); 4 English stamps issued under the reign of King Edward VII (gift) (38944); set of King Edward coronation money (gift) (39215).
- LOW, THOMAS, Anclote, Fla.: Specimens of crustaceans and a worm. 38523.
- LOWE, H. N., Long Beach, Cal.: Two specimens of crab, *Hapalogaster evecanda* Stimpson, from San Nicholas Island, California. 39485.
- LUMPKIN, T. J., New England City, Ga.: Beetle larva affected with fungus (*Entomophora* sp.). 39143.
- LUSCOMBE, GEORGE, U. S. National Museum: Model of the "Stonbridge Lion." Purchase. 39180.
- LUSK, R. D., Oracle, Ariz.: Skin of Olive warbler (38481), skin of Thick-billed parrot, *Rhynchopsitta pachyrhyncha* from Arizona (38620).
- LYCETT, EDWARD, Atlanta, Ga.: Three pieces of decorated porcelain. 39028.
- LYLE, VICTOR E. (See under Smithsonian Institution.)

- LYMAN, Miss V. C., Syracuse, N. Y.: Nest, probably of Yellow warbler. *Dendroica aestiva*, containing egg of Cowbird, *Molothrus ater*. 38700.
- LYON, M. W., jr., U. S. National Museum: Sixty-three birds' eggs from Illinois and Wyoming. 38577.
- LYON, W. W., Washington, D. C.: Red Bat, *Lasiurus borealis* (38574); specimen of Cedar wax-wing, *Amphisp. cedrorum*, and Sanderling, *Calidris arenaria*, from California (38599).
- MACCURDY, Dr. G. G., New Haven, Conn.: Cast of top of skull of *Pithecanthropus erectus*. 39130.
- MACGILLIVRAY, Prof. A. D. (See under Herrick, Prof. G. W.)
- MACGROTTY, Miss. (See under Odell, T. T.)
- MCBRIDE, MARY J., Chesapeake Beach, Md.: Specimen of Carolina Rail or Sora, *Porzana carolina*. 39317.
- MCCOY & KLEIN, Belgrade, Mont.: Specimens of aragonite from between Big Horn River and Crooked Creek, Big Horn County, Wyo., and a specimen of corundum from Belgrade. 38342.
- MCCLURE, PHILLIPS & Co., New York City: Drawings of extinct animals, including *Thespesius*, *Hesperornis*, and *Ceratosauros*. 39026.
- MCGEE, Dr. ANITA NEWCOMB, Washington, D. C.: Type specimen of *Odocoileus hemionus eremicus* Mearns, made up in form of a rug. Purchase. 39490.
- MCGUIRE, Capt. T. L., U. S. A., Mindanao, P. I.: Thirty species of land and marine shells from Mindanao. 38301.
- MCGREGOR, R. C., U. S. Coast Survey: Mollusks, crustaceans, worms, reptiles, and insects. 38581.
- MCGUIRE, J. D., Frederick, Md.: Hammer stone from Nautilus Island; celt from Holbrook Island; knife from Barren Island, Lawrence Bay; potsherds from Barren Island, and a natural formation from Indian Bar (38431); flints and arrowheads from Howard County, Md., and potsherds from Point of Rocks, Md. (38665); small bowlder from a shell heap (39093); piece of jadeite (39131); collection of prehistoric flint implements and pottery found by Messrs. W. H. Holmes and Mr. McGuire at Point of Rocks, Md. (39269).
- MCINTOSH, W., St. Johns, New Brunswick: Fourteen specimens of Diptera. 38754.
- McKOWEN, Dr. J. C., Clinton, La.: Head and rattle of a rattlesnake. 38424.
- McTAMAHAN, W. C., Redding, Cal.: Larva of a neuropteroid insect (*Raphidia oblita* Hagen). 38911.
- MACE, JOSEPH, Washington, D. C.: Flintlock gum made at Harpers Ferry in 1815. 38538.
- MACOUN, J. M., Ottawa, Canada: One hundred and one plants from Canada (exchange) (39022); 26 plants from Canada (gift) (39154).
- MADDREN, A. G., Seattle, Wash.: Thirty-two specimens of Lower Cretaceous plants from Corwin coal mine, Arctic Alaska; and 16 specimens of Middle Devonian corals from Cape Lisburne, Arctic Alaska. 38889.
- MAGRETTI, Dr. PAOLO, Milan, Italy: Four specimens of Hymenoptera from Africa. 38506.
- MAXX, W. L., Upperville, Va.: Two male specimens of Rhinoceros beetle, *Dynastes tityus* Linnaeus. 38190.
- MARRIOTT, J. H., Osceola, Nev.: Specimens of tungsten ores from the claims of the Tungsten Mining Company. 39342.
- MARSHALL, ERNEST, Laurel, Md.: Crayfishes, 2 specimens of Pirate perch, fishes, and a salamander, from Maryland (39255). (See under Marshall, George.)
- MARSHALL, GEORGE, Laurel, Md.: Lizard (38246); turtle (39329); shrew (*Sorex*) (38763); Pine mouse, *Microtus pinetorum* (38934); bat (*Vespertilio fuscus*) (39241); 6 crayfishes collected by Ernest Marshall (39249).
- MARTIN, H. J., American Falls, Idaho. Received through J. D. Gillilan. Bone of a fossil elephant. 38855.
- MARTIN, M. RÉNÉ, La Blanc (Indre), France: Forty specimens (25 species) of Odonata from Europe, Africa, Indo-China, and other localities (38820); 37 specimens (26 species) of dragonflies from Ecuador, Abyssinia, Madagascar, Tonkin, Seychelles Islands, India, Australia, Algeria, and France (38998). Exchange.

- MASON, Prof. O. T., U. S. National Museum: Fifty-seven copper and nickel coins of various countries. 39445.
- MATTHES, FRANÇOIS, U. S. Geological Survey: Three specimens of parasitic Diptera. 38755.
- MATTHEWS, E. A. (See under Smithsonian Institution, Bureau of Ethnology.)
- MATTHEWS, ROBERT, Andalusia, Philadelphia, Pa.: Three snakes from Nicaragua. 38237.
- MAXON, Mrs. S. A., Oneida, N. Y.: Two specimens of *Aporogonum*. 38406.
- MAXON, W. R., U. S. National Museum: Forty-one specimens of dragonflies and a cicada from central New York (38310); 8 specimens of mosses collected in Missouri by B. J. Bush (38321); 10 specimens of dragonflies from the vicinity of Cabin John, Md. (38371); Katydid, *Microcentrum retineris* Burm, and a sand-wasp, *Spherocephalus occidentalis* Linnaeus (38380); 95 specimens of ferns from Baltimore, Md. (38428); 5 specimens of *Helianthus* and *Solidago* from Cabin John, Md. (38501); specimens of beech-tree aphids (38517); 15 specimens of *Isotus* from near Alexandria, Va. (38520); 25 specimens of *Lycopodium* from near Kenilworth, D. C. (38530); 40 specimens of ferns from Maryland (38531); snake from Mt. Vernon, Md. (38542); 12 specimens of *Myromyza* from Virginia (38556); crayfishes from Munnsville, Madison County, N. Y. (38600); 2 plants from the Eastern section of the United States (38756); 3 corals from the Corniferous formation near Oneida, N. Y. (38837); 13 specimens of mosses collected in Illinois by M. B. Waite (38851); 24 specimens of *Crataegus* from central New York (38951); 25 plants from central New York (38955); 5 plants from New York (39011); specimen of *Staphylea* from Virginia (39,92); skin of Blue-winged yellow warbler, *Helminthophila pinus*, from Maryland (39396); bat (*Myotis subulatus*), from Plummers Island, Maryland (39435); nest and 3 eggs of Acadian flycatcher, *Empidonax virens*, from Fairfax County, Va. (39449); 3 eggs and nest of Acadian flycatcher, *Empidonax virens* (39487);
- MAXON, W. R.—Continued.
50 specimens of moss from near Cabin John, Md. (39416); 48 specimens of ferns from the District of Columbia and vicinity (39429); 3 birds in first plumage from Virginia (39497); specimen of Cerulean warbler, *Dendroica cerulea*, from Maryland (39536).
- MAXON, JAMES W., U. S. Marine Corps, Mare Island, Cal.: Chinese tactic book, Chinese military map, and a Chinese loan certificate of 1888. 39088.
- MAYER, Dr. A. G. (See under Brooklyn Institute of Arts and Sciences.)
- MAYNARD, GEORGE C., U. S. National Museum: Greene breech-loading carbine. Exchange. 38323.
- MAZA, DE LA, Dr. GÓMEZ, Habana, Cuba: Three plants representing the species *Pithecolobium nuscicatum*, *Martynia diandra*, and *Clitoria ternatea*. 39069. (See under Agriculture, Department of.)
- MEARNS, Dr. E. A., U. S. A., Kissimmee, Fla.: Turtles from Florida (38453); plant from Rhode Island (38710); Moon-fish, *Vomer scipionis* (38725); 28 plants from Massachusetts and Rhode Island (38779); a large and valuable collection of natural history specimens from Rhode Island (39157); toads from Wyoming (39289).
- MEARNS, Louis di Z., Fort Adams, Newport, R. I.: Nine birds' skins (deposit) (39138); fresh-water and marine shells (gift) (39531).
- MEDFORD, H. C., Tupelo, Miss.: Upper portion of fibula of Dinosaur and a piece of the shell of *Radiolites*, a large mollusk (38746); fossil fish (38794).
- MEEKER, Dr. J. W., Brooklyn, N. Y.: Larvæ on quince leaves. 38185.
- MENDENHALL, W. C., Washington, D. C.: Eighty-two plants from Alaska. 38818. (See under Agriculture, Department of.)
- MENGEL, LEVI. (See under Lathy, Percy I.)
- MERRIAM, Dr. C. HART. (See under Agriculture, Department of, and Kidder, James H.)
- MERRIAM, Dr. JOHN C. (See under California, University of.)
- MERRICK, H. D., New Brighton, Pa.: Twenty-six moths. 38738.

- MERRILL, E. D. (See under Agriculture, Department of.)
- MERRILL, DR. G. P., U. S. National Museum: Quartz and feldspar from East Poland, Me. (38309); rutile with associations from Roseland, Nelson County, Va. (38724); rocks and ores from Roseland, Va. (39356).
- MERRITT, W. A., U. S. National Museum: Bumblebee. 39310.
- MESSINA, PETER, Washington, D. C.: Tarantula from Cuba. 38255.
- MEUNIER, DR. STANISLAS, Museum of Natural History, Paris, France: Piece of a meteorite from Salles, Villefranche, and a piece of a meteorite from St. Mesmin, near Troyes. Exchange. 38785.
- MEXICO, MEXICO, MUSEO NACIONAL DE MEXICO. Received through Dr. Manuel Urbina: Six plants. Exchange. 38537.
- MEYER, S. N., Washington, D. C.: Badge of the Medal of Honor Legion and badge of the Washington Commandery, K. T., at the Toledo Conclave, 1901. 38588.
- MICHEL, M., Romilly, Geneva, Switzerland: One hundred plants from South America, collected by E. Langasse. Exchange. 39299.
- MICHIGAN STONE AND SUPPLY COMPANY, Maybee, Mich.: Native sulphur from Woolmuth quarries. Purchase. 38505.
- MIGHT, G. R., Waddington, N. Y.: Tail of an albino muskrat (*Fiber zibethicus*). 38563.
- MILBURN, REV. U. S., Cortland, N. Y.: Stone implement and 2 photographs. 38224.
- MILLER, A. W., Portland, Oreg.: Cobalt ore and mineral waters from Oregon, collected by W. H. Newhall. 38770.
- MILLER, MRS. ELIZABETH PAGE, care G. S. Miller, jr., U. S. National Museum. A series of 25 specimens of a fungus (*Mutinus*) from Virginia. 38536.
- MILLER, GERRIT S., jr., U. S. National Museum: One hundred and two plants from Virginia (38229); 2 plants from Virginia (38333); snake and tree-frogs from Quantico, Va. (38544); specimen of *Harpidium* from Montana (38597); snake from Fairfax County, Va. (38699); Short-eared owl from Geneva, N. Y. (38838); tree-frogs from Virginia (38849); plant and snake from Virginia (39159, 39434).
- MILLER, MISS LIZZIE B., Minneola, Fla.: Flint flakes and potsherds. 38418.
- MILLER, R. B., Richlands, Va.: Stalagmitic calcite from mines at Richland (38867); specimens of zinc and lead from Virginia (39213).
- MILLS, W. C., Columbus, Ohio: Three photographs of a human effigy pipe. 38721.
- MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: Three plants. 39225.
- MITCHELL, Hon. J. D., Victoria, Tex.: Specimen of *Callinectes* and several specimens of *Uca* (38238); specimens of *Callinectes* and claws (38812); crustaceans and worms from Matagorda Bay, Texas (39486); fossil oyster (39472).
- MOHR, DR. CHARLES (deceased), through Mrs. SOPHIA MOHR. (See under Smithsonian Institution.)
- MONCTON, Hon. JOHN B. (See under Smithsonian Institution.)
- MONTAGUE, H. C., Washington, D. C.: Muzzle-loading U. S. Army musket made by the Amoskeak Manufacturing Company in 1863. Manchester, N. H. Purchase. 38468.
- MOORE, CLARENCE B., Philadelphia, Pa.: Two negatives and photographs of pottery. 39099.
- MOORE, T. G., Danville, Va.: Specimen of Longicorn beetle, *Monohammus titillator* Fabricius. 38372.
- MOORHEAD, J. R. (See under Agriculture, Department of.)
- MORE, R. L., Beaver, Tex.: Fossils. 39354.
- MOREHEAD, C. R., El Paso, Tex.: Tin ore from Franklin Mountains. 38335.
- MORGAN, G. D., Maxey, Tenn.: Water-snake, *Natrix rhombifera*. 39447.
- MORGAN, MRS. G. W., Washington, D. C.: Badge of the Loyal Legion; cap ornament, Fifteenth U. S. Infantry, 1847-48; cane carried by General Morgan, and a cane received from General Morgan's father. 39334.
- MORRILL, CHARLES H., Lincoln, Nebr. Received through E. H. Barbour. Sand concretions from Devil Hill, South Dakota, and Sioux County, Nebr. Purchase. 39339.

- MORRISON, A. S., New Albany, Ind.: Specimen of *Thalassa lunator* Linnaeus. 39398.
- MORRISON, JAMES H. (See under Printz, Isaiah.)
- MORSE, MAX, Columbus, Ohio: Eight birds' skins. Exchange. 38882.
- MOSS, WILLIAM, Ashton-under-Lyne, England: Small marine shells from Lifons, Loyalty Islands. 39437.
- MOSS, G., Berkeley Springs, W. Va.: Chrysalis of the Yellow swallow-tail, *Jasoniades (Papilio) turus* Linnaeus. 38291.
- MUDD, DR. J. A., Hyattsville, Md.: Beetle (*Ailus oculatus* L.). 39560.
- MULFORD, MISS F. A., Hempstead, Long Island, N. Y.: Eight specimens of violets from Long Island. 39406.
- MURGUENDO, HON. PRUDENCIO. (See under de Olea, Señor Don Serveriano.)
- MUSEO NACIONAL DE MEXICO. (See under Mexico, Mexico.)
- MUSEU PAULISTA. (See under São Paulo.)
- MUSEUM OF COMPARATIVE ZOOLOGY, Cambridge, Mass. Received through Dr. Walter Faxon: Nine specimens (5 species) of crayfishes (39083); received through Dr. C. R. Eastman, 2 casts of teeth of fossil sharks (39420).
- MUSEUM OF NATURAL HISTORY. (See under Paris, France.)
- NAHL, MISS JENNIE, Traver, Cal.: Lizard. 38239.
- NATAL BOTANIC GARDENS. (See under Durban, Natal, Africa.)
- NATIONAL SOCIETY OF MINES. (See under Santiago, Chile.)
- NATTRESS, REV. THOMAS, Amherstburg, Ontario, Canada: Specimen of glaciated rock, 5 specimens of minerals from the Corniferous formation, and 125 specimens of fossils from the Corniferous and Hamilton formations. Exchange. 38836.
- NAVY DEPARTMENT, Washington, D. C. Received through Rear-Admiral R. B. Bradford, Chief Bureau of Equipment: Volcanic dust collected in the South Atlantic Ocean (39109); 14 specimens of the bottom of the Atlantic Ocean obtained by the steamship *Rhynland* on the passage from Liverpool to Philadelphia, and a table of soundings (39228); sample of volcanic dust which fell on the decks of the British steamship *Louisianian* on the passage from Barbados to Trinidad (39446); sample of dust which fell on board the bark *Beechwood*, May 9, 1902, when about 600 miles to the windward of Martinique (39498); specimen of volcanic dust forwarded to the Hydrographic Office by acting United States consular agent at Natal, Rio Grande do Norte (39528); volcanic dust which fell on the decks of the British ship *Comerie* (39553). Received through Mr. A. C. Wrenn: Specimens of the bottom of the Atlantic Ocean obtained by the U. S. S. *Dolphin* on a passage between Cape Hatteras and Mora Passage, West Indies (39251).
- NEEDHAM, Prof. J. G., Lake Forest, Ill.: Specimen of *Copidosoma gelechia* How. 38610.
- NELSON, AVEN, University of Wyoming, Laramie, Wyo.: Nine hundred and forty-one plants. Purchase. 39114.
- NELSON, E. W. (See under Agriculture, Department of.)
- NERNST LAMP COMPANY, Pittsburg, Pa. Received through Charles A. Terry and A. J. Wurts: Three Nernst lamps, with glower holders. 38852.
- NEUMANN, GEORGE, U. S. National Museum: Bamboo tobacco pipe from the island of Luzon. 39174.
- NEVINS, R. D. (See under Agriculture, Department of.)
- NEWCOMB, H. H., Boston, Mass.: Two cotypes of *Chionobas katahdin* Newcomb. 38570.
- NEWMALL, W. H., U. S. National Museum: Silicified wood from Washington, D. C. (38469); monazite sand and mineral waters from Brazil (38768). (See under Miller, A. W.)
- NEW YORK BOTANICAL GARDEN, Bronx Park, N. Y.: Four hundred and forty-four plants collected in Mexico by G. Schaffner (38963); 747 plants collected in Porto Rico by A. A. Heller (39060); 7 plants from California (39072); plant (39140); 2 plants from California (39220); 8 plants (39274); plant from California (39300). Exchange.

- NICEVILLE DE, LIONEL, Indian Museum, Calcutta, India: Seven specimens of Diptera (4 species), new to the collection (38729); 15 specimens (3 species) of Hymenoptera, new to the collection (38821).
- NICKLES, J. M., Cincinnati, Ohio: Ten specimens of Bryozoa (*Stigmatilla* n. sp.). Exchange. 38814.
- NIELSEN, H. P. (See under Agriculture, Department of.)
- NIXON, S. D., Baltimore, Md.: Specimen of *Natrix leberis* (38319); specimens of *Storeria dekayi* (38518).
- NOBLE, Mrs. M. A., Lake Helen, Fla.: Fern, *Vittaria lineata*, from Florida. 38405.
- NORRIS, E. L. (See under Agriculture, Department of.)
- NORTHWESTERN TRAFFIC COMPANY, Llano, Tex.: Egg-case of Mantid, or "rear-horse," embedded in sandstone. 38363.
- NOVAES, C. (See under Agriculture, Department of.)
- NOWELL, J. R., Anderson, S. C.: Grackle, *Quiscalus quiscula virens*, and a Night-hawk (38256); reptiles from South Carolina (38422).
- NOYES, WILLIAM B., Washington, D. C.: Upper molar of a Southern mammoth. Purchase. 38325.
- NYE, WILLARD, JR., New Bedford, Mass.: Two birds' skins and a skeleton of a Sparrow hawk, from Florida (39019); skeleton of a Sparrow hawk (39120).
- OAKLEY, G. C., Rochester, N. Y.: Miniature wooden bell made from timbers of Perry's flag-ship *Lawrence* at the battle of Lake Erie; 5 shillings, 2-shillings, and 20 shillings (currency) issued in 1771, and a pound (currency) issued in 1761. 38421.
- OBERHOLSER, H. C., Department of Agriculture: Two birds' skins from Bolivia. 38861.
- ODELL, T. T., St. Andrews, New Brunswick. Received through Miss MacGrotty, Washington, D. C.: Seven specimens of Micmac basketry. 39169.
- ODEN, Lieut. GEORGE J., U. S. A., Pototan, Panay, P. I.: Five specimens of ferns from the islands of Samar and Panay. 38674.
- OGDEN, HERBERT G. (See under Smithsonian Institution.)
- OGDEN, Dr. H. V., Milwaukee, Wis.: Bat (*Myotis lucifugus*) (38348); rodents from Lake Superior, Ontario (38786); 15 specimens of batrachians from Wyoming (39038).
- OLDS, H. W., Washington, D. C.: Plant from Maryland (38181); plant (39301).
- OLEA, Señor DON SERVERIANO de, Montevideo, Uruguay. Received through Hon. Prudencio Murguiondo and Don Pedro Callorda y Acosta: Rocks and fossils from Uruguay. Exchange. 38805.
- OSBORN, Prof. H. F., American Museum of Natural History, New York City: Five casts of small models of heads of Titanotheres. 39365.
- OSBURN, Prof. RAYMOND, Fargo College, Fargo, N. Dak.: Fifty-nine specimens (36 species) of dragon flies. Exchange. 38997.
- OWEN, Mrs. MARY W., Sepacuite, Panzos, Guatemala: Ethnological objects and plants from Guatemala. 38895.
- PAINE, P. R., Jr., Charleston, S. C.: Tree frogs from South Carolina (38254, 38258).
- PALMER, Dr. EDWARD, Department of Agriculture: Iron grease lamp from North Carolina (38866); marine and land shells from Cuba (39110); basket wallet from St. Luis, Province of Santiago; Panama hat from Santiago, and a cigarette holder from Habana (39128). (See under Agriculture, Department of.)
- PALMER, G., Rosslyn, Va.: Mammals from England. Purchase. 38925.
- PALMER, JOHN W., Port Republic, Va.: Male specimen of Rhinoceros beetle, *Dynastes tityus* Linnaeus. 38306.
- PALMER, WILLIAM, U. S. National Museum: Snake from Maryland (38414); three tickets for seats in the public parks of Habana, Cuba, obtained in 1898 (38498); natural history specimens from Cuba (38382, 38990, 38991, 38996, 39014, 39047, 39050, 39058, 39061, 39062, 39107); reptiles and batrachians, set of 3 eggs of Scarlet tanager, *Piranga erythromelus*, and a set of 5 eggs of the Kentucky warbler,

- PALMER, WILLIAM—Continued.
Oporornis formosa, from Virginia (39412, 39426); 91 plants from South Carolina (39473, 39520); specimens of *Succinea* from Sullivan's Island, S. C. (39511); 10 birds' skins (39568); 47 birds' skins (39569).
- PALMER, WILLIAM, and W. H. KING, U. S. National Museum: Three hundred and fifty-nine plants, 11 myriapods, and reptiles and batrachians, from Virginia (38368, 38390, 38397, 38400, 38407).
- PAMMEL, L. H. (See under Ball, C. R., and Iowa Agricultural College.)
- PARIS EXPOSITION, UNITED STATES COMMISSION. Received through Fred. Brackett, Baltimore, Md.: Eight boxes containing a collection of ores (dep. sit) (38223); busts of President McKinley, Vice-President G. A. Hobart, General George Washington, and Benjamin Franklin (gift) (38317).
- PARIS, FRANCE, MUSEUM OF NATURAL HISTORY. Received through Prof. E. L. Bouvier: 7 specimens (4 species) of South American Argulidæ (39583). Exchange.
- PARISH, S. B., San Bernardino, Cal.: Fern, *Polypodium hesperium*, from California (gift) (38404); plant (gift) (38603); 235 plants (purchase) (39205).
- PARKER, JOHN F., Lenang, Samar, P. I.: Beetle. 38921.
- PARTELO, J. M. T., Langayan, P. I.: Moth (*Attacus atlas* Linnaeus). 39259.
- PATTON, H. B., State School of Mines, Golden, Colo.: Rocks and minerals from Colorado. Exchange. 39163.
- PATTON, J. D., Cleveland, Tenn.: Lizard, *Ophisaurus ventralis*. 38543.
- PAYN, E. J., Olympia, Wash.: Geological material from Thurston County, Wash. 39168.
- PEARSE, A. S., Omaha, Nebr.: Sixty-four birds' eggs from Nebraska, Montana, and Colorado. 39002.
- PECK, BRADFORD, jr., Randsburg, Cal.: Specimen of *Polyplodium californicum*. 38615.
- PEÑAFIEL, DR. ANTONIO, City of Mexico, Mexico: Plaster casts of bas-reliefs discovered at Palenque. 39126.
- PERDEW, G. M., Cumberland, Md.: One thousand and ninety fossils from the Helderbergian, Oriskanian, Hamilton, and Carboniferous formations (gift) (38184); 200 specimens of Silurian fossils (purchase) (38187).
- PERRY, JAMES, Washington, D. C.: Shrew (*Blarina*). 39161.
- PEYTON, MRS. E. G., Staunton, Va.: Sponge from Mexico. Purchase. 39438.
- PFORDE, O. F., Rutherford, N. J.: Copper from Bisbee, Ariz. 39127.
- PIDGEON, HARRY. (See under Stanfield, Arthur E.)
- PIETERS, A. J. (See under Agriculture, Department of.)
- PILGER, DR. R., Royal Botanical Museum, Berlin, Germany: Two hundred and eighteen plants from Australia. Purchase. 38839.
- PIPER, C. V., Pullman, Wash.: One hundred and forty-two plants from Washington State (exchange) (38830); 25 plants (exchange) (38862); 96 specimens of Hymenoptera and 36 specimens of Lepidoptera (gift) (39121).
- PIPER, H. L. (See under Treasury Department, U. S. Life-Saving Service.)
- PIPER, MISS M. G., U. S. National Museum: Catocala moth. 38186.
- PITTIER, H., Costa Rica, Central America: One hundred and fifty plants from Central America. Purchase. 38226.
- PLANK, E. N., Decatur, Ark.: Ninety-seven plants, principally from Texas. 39078.
- PLITT, CHARLES C. (See under Agriculture, Department of.)
- POLING, O. C., Quincy, Ill.: Forty-five specimens of *Catocala* and other moths (38525); 10.9 specimens of western species of Lepidoptera (38846); 12 specimens of *Hemleuca tricolor* Packard (39538).
- POLLARD, C. L., U. S. National Museum: Plants from Maryland, District of Columbia, and Cuba (39304, 39415).
- POLLOCK, AMAZI, Hutchins, Wis.: Splinters of rock elm, from a tree struck by lightning. 38259.
- POPPE, WOLFRAM, Burlington, Iowa: Anal tube of an unknown crinoid. 38353.

- POWER, WILLIAM F., Prophetstown, Ill.: Longicorn beetle, *Eburia quadrigemita* Say. 38318.
- POWERS, HIGLEY & Co., Chicago, Ill.: Royal scroll representing the history of the Bible and the life of Christ. 38666.
- PRAIN, DAVID. (See under Seelphore, Calcutta, Bengal, India.)
- PREBLE, HENRY, Washington, D. C.: Fifteen packs of playing cards from various cities in Europe. 38616.
- PREBLE BROTHERS. (See under Agriculture, Department of.)
- PRENTISS, D. W., and F. W. TRUE: Sulphur-bottom whale (histological and embryological specimens) from Balena, Newfoundland. 38491.
- PRICE, Miss S. F., Bowling Green, Ky.: Specimen of *Nymphæa*.
- PRINGLE, C. G., Charlotte, Vt.: Two hundred and twenty-nine plants from Mexico (purchase) (38884); 300 plants from Mexico (purchase) (38993); 3 plants from Mexico (exchange) (39522); plant from Mexico (gift) (39578).
- PRINTZ, ISAIAH, Stony Man, Va. Received through James H. Morrison: Skull of New York weasel, *Putorius northboracensis*. 39279.
- PROSSER, C. S., State University, Columbus, Ohio: Fossil coral, *Siderastrea*, from Florida. 38800.
- PROUDFIT, S. V. and R. (See under Smithsonian Institution, Bureau of Ethnology.)
- PROWTEX, Mrs. BERTHA, Cleves, Ohio: Beetle (*Alaus oculatus* Linnaeus). 39530.
- PUGA, Prof. A. J., Guadalajara, Mexico: Nine plants from Mexico. 38653.
- PURGET, W. S., Purgettsville, W. Va.: Arrow point. 38282.
- PURRINGTON, A. J., Washington, D. C.: Land, fresh-water, and marine shells; also minerals. 38275.
- QUAINANCE, A. L., Experiment, Ga.: Parasite bred from *Margaronia utidialis* (*Vogaster hertii* Ashm.). 38203.
- QUARLES, A. H., Washington, D. C.: Spanish coins. Purchase. 38793.
- QUARTERMAN, G. M., jr., Canaveral, Fla.: Rice rat (*Oryzomys*). 38337.
- QUINN, M. A., Washington, D. C.: Two spikes taken from the *Niagara*, Commodore Perry's second flagship, which was sunk near Presque Isle, Misery Bay, Lake Erie, August 4, 1813. 38295.
- RABBITT, C. F., U. S. National Museum: State currency of North Carolina (50 cents), issued January 1, 1870. 38382.
- RAGAN, W. H., Washington, D. C.: Polished flint gouge found near New Amsterdam, Ind. 38625.
- RALPH, Dr. W. L., U. S. National Museum: Twenty-three birds' eggs and a skin of Roseate spoonbill, *Ajaja ajaja*, from Louisiana (38178); rabbit (*Lepus americanus*) (38227); skin of spotted skunk, *Spilogale*, from Florida (39036); 28 birds' eggs and 6 birds' nests from Grand Manan, New Brunswick, Canada (39134); 190 birds' eggs from the eastern section of the United States (39136); 54 birds' eggs from New York and Florida (39558).
- RANDALL, C. W., Lockport, N. Y.: Three specimens of Two-spotted ladybird, *Adalia bipunctata* Linnaeus. 38549.
- RANDOLPH, J. C. F., New York City: Diamonds from West Borneo. 38920.
- RANKIN, Dr. W. N., Princeton, N. J.: Three specimens of crabs from Bermuda. 39181.
- RANSOME, F. LESLIE. (See under Interior Department, U. S. Geological Survey.)
- RAPP, SEVERIN, Sanford, Fla.: Ferns and plants from Florida. (39315, 39430.) Exchange.
- REDDINGTON & LEE, St. Augustine, Fla.: Moon-fish, *Selene vomer*, and a Calico crab, *Hepatus epheliticus* (Linnaeus). 38573.
- REHN, J. A. G., Philadelphia, Pa.: Four specimens of Mantid, *Tenodera sinensis* Sauss (38547); 5 specimens of Orthoptera (39144).
- REID, J. S., Belmont, N. Y.: Chrysalis of Yellow papilio, *Jasoniades* (*Papilio*) *turmus* Linnaeus. 38302.
- RUEES, W. J., Smithsonian Institution: Piece of tin foil used by Thomas A. Edison in his early experiments with the phonograph. 38617.
- RICHARDSON, Dr. F. W. (See under Fish Commission, U. S.)

- RICKER, P. L., Washington, D. C.: One hundred and twenty-five plants from Maine, Africa, and South America. 39566.
- RIDGWAY, ROBERT, U. S. National Museum: Twenty-two birds' skins and a collection of plants from southern Illinois. (39496, 39565.)
- RILEY, J. H., U. S. National Museum: Two eggs of Broad-winged hawk, *Buteo platypterus*, from Fairfax County, Va. (39333); 5 birds' skins and 261 birds' skins from Virginia and West Virginia (39352, 39353); set of three eggs of Broad-winged hawk, *Buteo platypterus*, from Fairfax County, Va. (39393); 2 squirrels and a chipmunk (39411); 3 birds in first plumage from Virginia (39497); 20 birds' skins from Virginia (39537).
- RINEHART, MRS. NELLIE, Weston, Mo.: Marine shells and a fish from the Philippine Islands. 38767.
- RITLAW, WALTER, Dania, Fla.: Specimen of Portuguese Man-of-war, *Nomocys granovii*. 39039.
- RITTER, Dr. W. E., University of California, Berkeley, Cal.: Twenty-eight specimens (14 species) of decapod crustaceans. 39216. (See under California, University of.)
- ROBB, M. L., Ordnance Department, Manila, P. I.: Natural history specimens from the Philippine Islands and China. 38826.
- ROBERSON, GEORGE, Washington, D. C.: Two Tuscarora bows and arrows, blow-tube and arrow. Purchase. 39102.
- ROBERTS, Dr. ANNIE E., Myrtle Point, Oreg.: Specimen of *Papilio rubulus* Boisduval. 38485.
- ROBERTS, Hon. E. W., Washington, D. C.: Pair of Chuckchi snowshoes from northeastern Siberia, worn by Lieutenant Bertholf, U. S. Revenue-Cutter Service, while introducing tame reindeer into Alaska; also one cedar-bark wallet from Sitka. Exchange. 39443.
- ROBERTS, Miss MONA, Washington, D. C.: Eyed elater, *Alaus oculatus* Linnaeus. 38253.
- ROBERTSON, Prof. CHARLES, Carlinville, Ill.: Nineteen cotypes of Hymenoptera. 38385.
- ROBINSON, THOMAS A., Galveston, Tex.: Pumice dust. 38207.
- ROCKHILL, Hon. W. W., Washington, D. C.: Three pairs of mandarin's silk socks from Peking, China. 38984.
- ROGERS, L. T., Milton Junction, Wis.: Four photographs of the Rogers family, and a photograph of the steamboat *Saramah*. 38218.
- ROSE, J. N., U. S. National Museum: Three thousand specimens, consisting of herbarium material, seeds, and fruits in formalin, and living plants, collected in Mexico in 1901 (38813); four species of fishes from Mexico (38961); 100 plants collected principally in greenhouses of Washington, D. C. (39303).
- ROSENBERG, W. F. H., London, England: One hundred and six specimens of mammals from western South America. Purchase. (38969.)
- ROSENDAL, C. O., University of Minnesota, Minneapolis, Minn.: One hundred plants from Vancouver Island, Canada. Purchase. 39023.
- ROSS, BERNARD R. (no address). Collection of Arctic relics. 38899.
- ROSS, JOHN R., Charlotte, N. C.: Hair-worm (*Gordius*). 39066.
- ROUS, SLOMAN, Jersey City, N. J.: Specimens of Hammerhead plumarian, *Bipatium kewense*. 38522.
- ROUSSEAU, M. C., Rousseau, S. Dak.: Plant from South Dakota. 39139.
- ROWLAND, Mr. and Mrs. J. H., Seattle, Wash.: Twenty-five specimens (6 species) of Jurassic fossils from Hianna Bay, Cook Inlet, Alaska. 38782.
- ROYAL BOTANIC GARDENS. (See under Agriculture, Department of, and Kew, England.)
- ROYAL BOTANIC GARDEN. (See under Seebore, Calcutta, Bengal, India.)
- ROYAL MUSEUM OF NATURAL HISTORY. (See under Leiden, Holland.)
- RUDD, HARRY, Alexandria, Va.: Two photographs of the grand jury which indicted Jefferson Davis. 39025.
- RUFFIN, Hon. J. N. (See under Smithsonian Institution, Bureau of Ethnology.)
- RUGGLES, E. S., Dissington Farm, Rappahannock River, King George County, Va.: Ferruginous concretions. 38370.

- RUSSELL, Prof. I. C. Received through U. S. Geological Survey. Fossils representing 5 species of vertebrates, one of the specimens being a bone from the scapula of a camel. 38650.
- RUST, A. D., Rock Island, Tex.: Siliceous pseudomorphs after aragonite, from the western bank of Canadian River, Texas panhandle. 38932.
- RYAN, Hon. THOMAS. (See under Interior Department.)
- RYDER, Dr. EMILY B., Bronxville, N. Y.: Model of the "Tower of Silence" (39326); Parsee temple outfit (39395). Purchase.
- SAFFORD, Lieut. W. E., U. S. N.: Thirty-four specimens of ferns collected near Rio Janeiro in 1885 by Lieutenant Clarke (38652); Filipino mat (38948); flute from Peru (38977); 2 specimens of ferns from Kerguelen (39482); 60 plants from South America (39523); 5 plants from La Union, Salvador (39540); 9 plants from Payta, Peru (39541); 100 plants from Guam (39570).
- SANDBERG BOTANICAL EXPERIMENT BUREAU, University of Minnesota, Minneapolis, Minn.: Three hundred and fifty-three plants from the United States and Canada. Exchange. 38795.
- SANDERS, SAMUEL, Wards, S. C.: Received through Dr. Frank Burns. Brick mold used in the building of Fort Sumter. 39509.
- SANNER, J. HARRY, Blue Ridge Summit, Pa.: Caterpillar. 38426.
- SANNER, Mrs. J., Mont Ridge, Elme Ridge Summit, Pa.: Specimen of Walking-stick, *Diapheromera femorata* Say. 38345.
- SANTIAGO, CHILE, NATIONAL SOCIETY OF MINES. Received through Guillermo Yunge: Ores from Chile. Exchange. 38844.
- SÃO PAULO, BRAZIL, MUSEU PAULISTA. Received through Dr. H. von Ihering: One hundred and sixty-one birds' skins from Brazil. Exchange. 38945.
- SAUNDERS, Dr. A. (See under Harriman, E. H.)
- SAVAGE, JAMES, Buffalo, N. Y.: Bat (*Pipistrellus subflavus*), from New York. 38290.
- SAWYER, Mrs. M. E., Washington, D. C.: Two specimens of wasp (*Trypoxylon crearatum* Smith). 38213.
- SAWYER, R. J., Menominee, Mich.: Head and tail of salmon from Green Bay. 39277.
- SCANLAN, THOMAS, Central City, S. Dak.: Abnormal specimen of puppy. 39100.
- SCHAFFNER, G. (See under New York Botanical Garden.)
- SCHAUS, WILLIAM, Twickenham, England: Butterflies from tropical America (38326, 38509) (deposit); 38 specimens of insects from Jamaica (gift) (39106).
- SCHILD, P., and C. BERGDORF, New York City: One hundred and twelve specimens of land shells from Costa Rica. Purchase. 39094.
- SCHIRMER, C., Berlin, Germany: Two hundred and forty-one specimens of Diptera (87 species). Exchange. 39413.
- SCHMID, E. S., Washington, D. C.: Salamander from Kansas (39256); African gray parrot, *Psittacus erithacus* (39547).
- SCHMITT, Dr. J., Island of Anticosti, Canada: Natural history material and fossils from Anticosti. 39193.
- SCHÖNLAND, Dr. S. (See under Grahams-town, South Africa, Albany Museum.)
- SCHRADER, F. C., Washington, D. C.: One hundred and one plants from Alaska. 38822.
- SCHUBER, Miss E. W., Livingston, Mont.: Three hundred and seventy-two plants from Montana and the Yellowstone National Park. Purchase. 39240.
- SCHUCHERT, CHARLES, U. S. National Museum: About four hundred specimens of Helderbergian fossils from the region of Litchfield, N. Y. (38466); 10,000 specimens of duplicate brachiopods and 4,200 specimens of Lower Silurian bryozoans from Minnesota (39296, 39297); egg of *Rhca* from Patagonia (39453); cretaceous fossils from Vincentown, N. J. (39454). (See under United States National Museum.)
- SCHÜTTER, WILHELM, Halle, Germany: Six small mammals from Greece (38902); 4 specimens of *Mus* (39571); Asiatic squirrel (39572). Purchase.

- SCHUMANN, Mrs. P. J., Spokane, Wash.: Old German book bound in tortoise shell and silver. 38927.
- SCHWARZ, Dr. E. A., Department of Agriculture: Plant from Victoria, Tex. 38340. (See under Agriculture, Department of.)
- SCHWARZ, Dr. E. A., and H. S. BARBER: Sixty-five thousand insects and Arachnida, exclusive of Lepidoptera, constituting a very large and valuable collection containing many new species and many species heretofore not noted in the United States fauna. 38398. (See under Agriculture, Department of.)
- SCHWARZER, FRANK, Washington, Mo.: Part of the skeleton of a catfish. 38860.
- SCIDMORE, Miss E. R., Washington, D. C.: Javanese paint brush used for painting sarongs. 38641.
- SCORSE, H. H., Holbrook, Ariz. Received through Dr. Walter Hough: Three hundred and twenty-five specimens of pottery from ancient pueblos in the Holbrook region. 38479.
- SCOTT, Mr. (See under Agriculture, Department of.)
- SEARS, CRAIG E., Washington, D. C.: Pocketknife to which is attached a ferruginous concretion, found at Cape May, N. J. 38601.
- SEEBPORE, CALCUTTA, BENGAL, INDIA: ROYAL BOTANIC GARDEN, David Prain, director: One hundred and fifty-eight plants from India. Exchange. 38356.
- SEEMAN, VON H., Sprintlack dei Grünhain, Kreis Wehlau, Ostpreussen, Germany. Received through Department of Agriculture. One hundred and seventy-nine specimens of willows. Exchange. 38698.
- SELLERS, Prof. J. F., Mercer University, Macon, Ga.: Portion of a meteoric stone from Stewart County, Ga., and a piece of meteoric iron from Putnam County, Ga. Exchange. 38910.
- SETCHELL, Prof. W. A., University of California, Berkeley, Cal.: Two specimens of Algae from California. 39428.
- SETON, ERNEST THOMPSON, New York City: Mammal skins and skulls (purchase) (38278); mammal skulls from Manitoba (purchase) (38351); mammals from Colorado (gift) (38511); batrachians from Manitoba (gift) (38864); skins and skulls of large mammals from Colorado (gift) (39004); skull of reindeer (*Rangifer*) (gift) (39097).
- SHACKELFORD, Mrs. R. S., The Dalles, Oreg.: Two Klikitat baskets. Purchase. 39119. (See under Smithsonian Institution, Bureau of Ethnology.)
- SHAFFNER, Prof. J. H., Columbus, Ohio: Fossil cone from Bloom Township, Clay County, Kans. 39008.
- SHANERS, C. A., Ness City, Kans.: Meteorite from Ness. Purchase. 38507.
- SHAW, C. H., Phoenix, Ariz.: Pimo gambling stick ("kins-goot"). 38463.
- SHAW, R. E., Alberene, Va.: Shrew (*Blarina parva*). 39208.
- SHEAR, C. L., Department of Agriculture: Specimen of *Physarum* from New Jersey (38555); horned toad from Colorado (38692); plant from Colorado (39040); specimens of *Holbrookia maculata* from Denver, Colo., obtained by E. B. Sterling (39433). (See under Agriculture, Department of.)
- SHELDON, CHARLES, Chihuahua, Mexico: Skin of an immature specimen of *Tyrannus vociferans* from Mexico. 38260.
- SHEPHERD, T. M., Grady, Tex.: Large spider, lizards, snake, bat (*Vesperugo fuscus*), specimen of *Sigmodon*, and a Civet cat (*Bassariscus*) (38285, 38433, 38840, 38988).
- SHEPPARD, Miss S. D., Albion View, Tenn.: Plant and a photograph. 39577.
- SHERMAN, CHARLES E., New York City: Two human skulls, human bones, and a bundle of emu sinew. 38192.
- SHERMAN, FRANKLIN, JR., Raleigh, N. C. Received through Department of Agriculture: Twelve specimens of *Audubon* sp. 39247.
- SHIPMAN, M. P., Skyland, Va.: Plant from Virginia. 38964.
- SHUFELDT, Dr. R. W., New York City: Bones of fossil birds (38388); skeleton of Gannet, *Sula gossi* (38410).
- SIAMESE MINISTER, Washington, D. C. Received through Prof. J. H. Gore, Columbian University: Nineteen Siamese gold and silver coins. Exchange. 39214.

- SILVESTRI, Dr. FILIPPO, Bevagna, Umbria, Italy: Forty-eight species of termites, etc. Exchange. 38752.
- SILVEY, W. R., Dillwyn, Va.: Two specimens of Mantis, *Stagmomantis carolina* L. 38488.
- SIMMES, Dr. JOSEPH, New York City: Specimen of the work of a hickory scolytid. 39105.
- SIMONDS, E. B., Riverdale, Md.: Six ead-dis words. 39324.
- SKELLINGER, A. G., Ledgewood, N. J.: Bot-fly, *Cuterebra buccata*. 39516.
- SKINNER, Ed., care B. A. Bean, Smithsonian Institution: Pileated woodpecker, *Ceophloeus pileatus*, from Marshall Hall, Md. 38702.
- SKUES, R. A., Gunnison, Colo.: Lace-wing fly, *Polystachotes punctatus* Fabricius. 38294.
- SLATER, W. M., and Dr. J. W. KIDWELL, Washington, D. C.: Rutile in gangue, and specimens separated from it, from Nelson County, Va. 38624.
- SLINGERLAND, Prof. M. I., Ithaca, N. Y. Received through Department of Agriculture: Two species of mantids with egg cases. 38678.
- SLOAN, C. G., & Co., Washington, D. C.: Two hundred and fifty-two pieces of mummy cloth. Purchase. 39232.
- SLOCUM, Capt. JOSHUA, Washington, D. C.: United States service saber. 39286.
- SLOSSON, Mrs. A. T., Franconia, N. H.: Thirty-two specimens of Diptera from near Mount Washington (38328); 33 specimens of Hymenoptera, new to the collection (38730).
- SMITH, Dr. A. DONALDSON, Philadelphia, Pa.: Mammals and birds from Africa. 39103.
- SMITH, Mrs. A. M., Brooklyn, N. Y.: Forty specimens of mosses from the vicinity of Chilson Lake, Essex County, N. Y. Exchange. 39201.
- SMITH, BENJAMIN H., Philadelphia, Pa.: Twenty-nine specimens of Cyperaceae and Juncaceae from Pennsylvania and Colorado (38613); received through Department of Agriculture 29 plants from Pennsylvania (38720).
- SMITH, FRED. D., Ely, Nev. Received through Whitman Cross: Specimens of vitreous rhyolite from Ely. 38789.
- SMITH, HORACE G., Germantown, Philadelphia, Pa.: Copy of Boydell's engraving of Benjamin West's picture of William Penn's treaty with the Indians, taken from the original copper plate. 39080.
- SMITH, Capt. J. DONNELL, Baltimore, Md.: Plant from Central America. Exchange. 38967.
- SMITH, JENNINGS, Sanibel, Fla.: Snake (*Elaps*) from Florida. 39344.
- SMITH, L. E., Oakton, Va.: Specimen of *Citheronia regalis* Fabricius. 39530.
- SMITH, RALPH A., Washington, D. C.: Tricycle. 38279.
- SMITH, S. D., Washington, D. C.: Specimens of *Corydalis cornuta* L. 39470.
- SMITHSONIAN INSTITUTION, Mr. S. P. Langley, Secretary:
Ethnological objects from the Canary Islands. 38270. Received from Mr. Solomon Berliner, United States consul, Teneriffe, Canary Islands.
Inscribed stone and stone mortar with grinding stone. 38271. Received from Mr. Henry Bird, Fajardo, P. R. Collected by Mr. Victor E. Lyle and transmitted by Mr. Herbert G. Ogden.
Seven cut stones, to be added to the Lea collection. 39556. Received from Dr. L. T. Chamberlain, New York City.
Medal struck in commemoration of the raising and equipment of the City of London Imperial Volunteers and their service in South Africa. 38712. Received from the Corporation of the City of London through Hon. John B. Moncton, town clerk.
Valuable collection of oriental religious objects. 39535. Deposited by Mr. S. S. Howland, Washington, D. C.
Two tobacco pipes. 39224. Received from Mr. Charles W. Jones, Battersea, London, England.
Eighteen thousand plants and 500 specimens of woods and fruits. 38362. Bequeathed by the late Dr. Charles Mohr, through Mrs. Sophia Mohr, Asheville, N. C.
Dervish skull from the battlefield of Omdurman. 38901. Received from Mr. Henry S. Wellcome, London, England.

SMITHSONIAN INSTITUTION—Continued.

Bronze medal struck in commemoration of the bicentennial of Yale University. 38648. Received from Yale University, New Haven, Conn.

Transmitted from the Bureau of Ethnology, Maj. J. W. Powell, director:

Pottery transmitted by Gen. G. W. Bailey, Waterville, Minn. (38314); received through W. H. Holmes, arrow and spear points, teeth of Mammoth and Mastodon, from Indian Territory (38587); 15 Wasco sally bags from Mrs. R. S. Shackelford, The Dalles, Oreg. (38638); Tlinkit whalebone war and ceremonial club from southeastern Alaska obtained by Lieut. G. T. Emmons, U. S. N. (38645); baskets, parlesh cases, and small figures obtained by Lieut. C. E. Babcock, U. S. A., from the Cœur d'Alene Indians, representing man, woman, and child (38643); rabbit-skin robe, 2 baskets, and a rattle from the Mission Indians of southern California, collected by Miss C. G. Du Bois (38644); received through Hon. J. N. Ruffin, United States consul, Asuncion, Paraguay, Mato Grosso Guarine Indians feather costume (38646); collection of baskets from Katzina, Havasupai, Thompson River, and Klikitat Indians (38647); 70 mound relics from Honduras, purchased from Mr. Spencer Franklin, Raleigh, N. C. (38649); 4 crania of North American Indians from Arizona (38758); received through G. Kirkwood King, Darlington, S. C., 2 discoidal stones (39054); 225 specimens of stone, 349 specimens of pottery, and 24 miscellaneous objects from Mexico, collected by Mr. E. A. Matthews (39096); received through Dr. Roland Steiner, Grovetown, Ga., stone implements, etc., from various sites in Georgia (39097); 744 flint and other implements collected by Mr. S. V. Prondlit in different sections of the United States, and obtained by purchase from Robert Prondlit (39233). (See under Kafes, Dr. J. W.)

SMITHSONIAN INSTITUTION—Continued.

Transmitted from the National Zoological Park, Dr. Frank Baker, superintendent:

Snake (38429); python (38434); 2 Bull snakes (38435); 2 specimens of *Vulpes lagopus*; specimen of *Pteropus medius*; specimen of *Cebus*; specimen of *Rangifer terre noræ*; specimen of *Aechmion glama*; specimen of *Macacus eymologus*, and a specimen of *Tata norciniactum* (38526); snake (38734); marine turtle (38834); 19 mammals (39282); 3 specimens of *Nyctinomus* from Pecos, Tex. (39284); Rock python, *Python molurus* (39373); specimen of *Testudo tabulata* (39374); specimen of *Alees americanus* (39375); specimen of *Cariacus columbianus* (39376); specimen of *Spilotes coarctus cooperii* (39377); specimen of *Craic carunculata* (39378); porcupine (*Echizon dorsatus*); Hutia, *Capromys pilorides*; Mongoose, *Herpestes mungo*; buffalo (*Bison americanus*); American antelope, *Antilocapra americana* (39457); fruit bat, *Pteropus medius* (39458); coot (39476); skull and 2 feet of *Hyaena striata*; pigeon (*Columba nicobarica*), and skull of monkey (*Papio hamadryda*) (39559).

SNODGRASS, R. E. (See under Leland Stanford Junior University.)

SNYDER, A. W., Three Rivers, Mich.: Nest of Baltimore oriole, *Icterus galbula*. 39257.

SODERMAN, GUS., Newport, R. I.: Skeleton of a Bottlenose whale, *Ziphius cavirostris*. 39035.

SORNBORGER, J. D., Cambridge, Mass.: Plants from Labrador. Purchase. 39113.

SPATH, L. (See under Agriculture, Department of.)

SPELLER, FRANK N., Bureau of Mines, Toronto, Canada: Specimens of corundum, pyrrhotite, sphalerite, and graphite from Canada. 38772.

SPENCE, R. S. (See under Interior Department, U. S. Geological Survey.)

SPENCER, DR. A. C., Washington, D. C.: Three fossils from Cuba. 38799.

- SPENCER, L. B., New York City: Larval form of Conger eel, *Leptocephalus conger* (38957); specimens of *Nacerdes melanura* Linnæus (39325).
- SPRINGER, Miss ADA, East Las Vegas, N. Mex.: Fossil plant, *Chura springera*, from Arroyo Pecos, Las Vegas, N. Mex. 39027.
- STANEART, C. J., Oberlin, Ia.: Giant water bug, *Benacus griseus* Say. 38304.
- STANFIELD, ARTHUR E., Salem, Iowa: Received through Harry Pidgeon. Eleven specimens of Mountain sheep and 4 photographs. 38471.
- STANGL, Dr. PAUL, hospital steward, U. S. A., Bay, Laguna Province, P. I.: Insects, lizard, and a reptile. (38191, 38361.)
- STANTON, T. W., U. S. Geological Survey: Land shell from Texas. 39111.
- STEARNS, Dr. R. E. C., Los Angeles, Cal.: Specimens of *Anodonta californiensis* from Los Angeles County (38430); 2 species of land and fresh-water shells and 2 beetles from Los Angeles (38684); land and fresh-water shells and mollusks from California (39246).
- STEARNS, W. A., Atlanta, Ga.: Land, fresh-water, and marine shells (38508); fossils and shells (39477).
- STEELE, E. S., Washington, D. C.: Two hundred and fifty plants from the Blue Ridge Mountains, Virginia. Purchase. 38903.
- STEELE, Dr. W. H., Rockingham, N. C.: Calcareous concretion from the mouth of a mule. 39175.
- STEERE, Prof. J. B., Ann Arbor, Mich.: Boar's head (purchase) (38933); corals, crustaceans, echinoderms, insects, and shells from the Philippine Islands (purchase) (39067); model of Jamamadi birch-bark canoe, platform for the same, and a paddle (gift) (39512).
- STEFANESCU, C. O., Bucharest, Roumania: Cast of a part of the lower jaw of *Dinotherium gigantissimum*. 39005.
- STEIN, ROBERT, U. S. Geological Survey: Collection of natural history specimens and ethnological objects from Greenland and Ellesmere Land (38630); kayak and paddle, lance rack and shears, toy sledge, pair of snowshoes, harpoon and lance head, harpoon handle, and a
- STEIN, ROBERT—Continued.
skull (38798); larva of *Papilio troilus* L. (39561).
- STEIN, T. M., Lancaster, Ohio: Flint-lock gun, powderhorn, bullet pouch, and a bone measure. Purchase. 39335.
- STEINER, Dr. ROLAND. (See under Smithsonian Institution, Bureau of Ethnology.)
- STEJNEGER, Dr. LEONHARD, U. S. National Museum: Birds, mammals, reptiles, batrachians, insects, mollusks, crustaceans, and worms from Europe. 38717.
- STERLING, E. B. (See under Agriculture, Department of, and C. L. Shear.)
- STERRETT, D. B., Columbian University, Washington, D. C.: Limonite from Pierce Mill road, near Springfield. 38471.
- STUART, C. A., U. S. National Museum: Shinplaster (ten dollars) issued by the State of Georgia, June 16, 1816. 39045.
- STEVENS, A. F., Pond, Ark.: New species of trilobite. 38749.
- STEVENS, W. X., Washington, D. C.: Cornet with early style of rotary valve. Purchase. 39076.
- STILWELL, L. W., Deadwood, S. Dak.: Twenty-two specimens of Jurassic fossils from near the Black Hills of South Dakota. 38928.
- STOCKWELL, H. E., Coronado, Cal.: Crab (*Blepharipoda occidentalis* Rand). 38399.
- STOKES, SUSAN G., Salt Lake City, Utah: Four hundred and fifty-five plants from Nevada, Utah, and California. 38886.
- STRAUS, OSCAR S., New York City: Turkish water bottle. 39191.
- STUART, WILLIAM, Lafayette, Ind.: Two plants. 38247.
- STUDDS, GEORGE, Alexandria, Va.: Abnormal hen's egg. 38373.
- STURTZ, B., Bonn, Prussia: Casts of prehistoric human remains. Purchase. 39021.
- SUTTON, HARRY, Townville, Pa.: Mole cricket, *Gryllotalpa columbix* Scudder. 38336.
- SWARTSEL, J. F., Admire, Kans.: Meteorite from Admire. Purchase. 38629.
- SWEENEY, T. W., U. S. National Museum: One-and-a-half dollar bill of the Louis-

- SWEENEY, T. W.—Continued.
ville, Cincinnati and Charleston Railroad Company, issued October 1, 1840; 75-cent bill issued by the State of South Carolina, February 1, 1863, and a \$5 bill of the "Soldiers Wayside Home," issued May 1, 1864 (38905); silver watch (39207); programme of the ceremonies of the unveiling of the Rochambeau statue, May 24, 1902 (39567).
- SWINDLER, B. F., Salt Lake City, Utah. Received through V. E. Heikes: Native tellurium from Delamar Mines, Delamar, Nev. 38656.
- TAYLOR, CHARLES B., Kingston, Jamaica: Bats and frogs from Jamaica. (38811, 39051, 39462.)
- TAYLOR, F. L., Lawyers, Va.: Abnormal hen's egg. 38448.
- TENNIES, Miss EDITH, West Salamanca, N. Y.: Cecropia moth, *Attacus cecropia* L. 39549.
- TERRY, C. A. (See under Nernst Lamp Company.)
- THIBELTON-DYER, Sir W. T. (See under Kew, England, Royal Botanic Gardens.)
- THOMAS, OLDFIELD, British Museum (Natural History), Cromwell Road, London, England: Skin and skull of *Microtus*. 38457.
- THOMSON, G. M., Dunedin, New Zealand: Ten species of crustaceans. 38349.
- TIFFANY & Co., New York City: Exhibit illustrating different stages in the manufacture of the Dewey medal. 38504.
- TITTS, Prof. E. G. S., Urbana, Ill.: Twenty specimens of Hymenoptera. 38847.
- TODD, AURELIUS G., El Cristo, Cuba.: Tailless whip scorpion, *Admetus palmatus*. 38374.
- TOKYO, JAPAN, IMPERIAL UNIVERSITY. Received through Prof. C. Ishikawa: Skeleton of giant salamander. Exchange. 39440.
- TOLLIN, OSCAR, Marco, Fla.: Lepidoptera (gift) (39267); 2 porpoise skeletons (purchase) (39112).
- TOMS, R. N., Browns Station, N. Y.: Spider (*Epeira insularis*). 38548.
- TOPPING, D. LE ROY, Washington, D. C.: Sixty specimens of violets from Canada and the District of Columbia. 38210.
- TOWNSEND, C. H. T., & C. M. BARBER, El Paso, Tex.: Two black-tail deer, *Odocoileus caninus* (purchase) (39204); 6 terrapins from Mexico (gift) (39582).
- TRACY, Prof. S. M., Biloxi, Miss.: Plants from Florida and Texas (gift) (38248, 38829, 39580); 445 plants collected in the Gulf States (purchase) (39312).
- TRASK, Mrs. BLANCHE, Avalon, Cal.: Plants from California. Gift and purchase. (39364, 39542).
- TREASURY DEPARTMENT, U. S. Life-Saving Service. Received through Jerome G. Kiah, superintendent, Harbor Beach, Mich., and Horace L. Piper, acting general superintendent, Treasury Department: Copper specimens found on the western side of Keweenaw Point. 39379.
- TRELEASE, Prof. W. T. (See under Hariman, E. H.)
- TROSCHEL, A., Chicago, Ill.: Eighty-five specimens of Lepidoptera. Exchange. 39108.
- TRUE, Dr. F. W., U. S. National Museum: Specimens of Schizopods taken from the stomach of a Newfoundland whale, *Balaenoptera musculus* L. 39262.
- TRUE, Dr. F. W., and Dr. D. W. PRENTISS: Sulphur-bottom whale (histological and embryological specimens) from Balena, Newfoundland. 38491.
- TUCKER, Mrs. FELICIA M., New Rochelle, N. Y.: The Franklin printing press. Purchase. 38701.
- TURNER, R. Y., Auburn, Me.: Specimen of pegmatite. Purchase. 38340.
- TWEEDY, FRANK, Washington, D. C.: Five hundred and fifty-four plants from northern Colorado. Exchange. 38843.
- UDDEN, J. A., Rock Island, Ill.: Series of small *Seminula* from the St. Louis formation at Pella, Iowa. 38456.
- UHLER, G. H. S., Philadelphia, Pa.: Badge of Meade Post, G. A. R., and badge of the Thirty-third Encampment G. A. R. 39183.
- UHLIG, E. C., New York City: Two sand fulgurites from South Vineland, N. J. 39141.
- ULRICH, E. O., U. S. Geological Survey: About 5,000 specimens (100 species) of fossil Ostracoda, including types and figured specimens of each. Purchase. 38973.

- UNDERWOOD, L. M. (See under Agriculture, Department of.)
- UNION STATION RESTAURANT, Jacksonville, Fla. Received through L. E. Warren: Specimen of *Belostoma americanum* Leidy. 38832.
- UNITED STATES NATIONAL MUSEUM: Ten cystids, 3 crinoids, and 30 specimens of *Camaracrinus* from the Helderbergian formation of West Virginia, purchased from collectors and quarrymen by Charles Schuchert for the Museum. 38766. The following models were made in the Anthropological Laboratories: Two plaster casts of a coiled baked clay figurine dredged off Sandy Hook (38760); 2 banner-stones from Polk County, Mo., and northeast Texas (39024); 2 models of "whizzer" or "bull roarers," used by the Navaho Indians (39189); 2 "bull roarers" and 2 bone whistles (39280); 3 *unique* or "onion" flutes and 2 tambourines *à corde* (39552); 2 bone whistles (39574).
- UNIVERSITY OF UPSALA. (See under Upsala, Sweden.)
- UPHAM, E. P., U. S. National Museum: Radely-chipped pieces of quartzite and quartz arrow points from Piney Branch. Exchange. 38604.
- UPSALA, SWEDEN, UNIVERSITY OF UPSALA. Received through Dr. Einar Lönnberg: Three species of Scandinavian and North Atlantic holothurians. Exchange. 38777.
- URBINA, DR. MANUAL. (See under Mexico, Mexico, Museo Nacional.)
- URICH, F. W., Port-of-Spain, Trinidad. Received through Department of Agriculture: Thirteen specimens of *Ramigia latipes* and 2 specimens of *Brachyomus tuberculatus*. 38796.
- VALENTINE, FRANK B., Ridgeley, Va.: Three chipped-stone implements. 39319.
- VANN, LIVINGSTON, Washington, D. C.: Scales of a Gar-pike, *Lepidosteus osseus*, from Florida. 38241.
- VELIE, DR. J. W., St. Joseph, Mich.: Skin of a Lizard cuckoo, *Sauvothera merlini*, from Cuba (38202); crabs, ophiuran, and an eel (*Mystriophis interlineatus*), from the western coast of Florida (38619).
- VERRILL, Prof. A. E., New Haven, Conn.: Two Isopods. 38705.
- VERY, C. F., New Albany, Ind.: Thirty-one arrow points. 38904.
- VIENNA, AUSTRIA, K. K. NATURHISTORISCHEN HOEFMUSEUM: Two hundred plants from Europe. Exchange. 38212.
- WAGNER, Prof. GEORGE, University of Michigan, Ann Arbor, Mich.: Four scorpions. 38703.
- WAITE, M. B. (See under Maxon, W. R.)
- WALCOTT, Hon. C. D., Director, U. S. Geological Survey: About 200 specimens of Genesee fossils from Seneca Lake, New York. 38532.
- WALKER, Dr. F. V., Bluffton, S. C.: Case worm. 38980.
- WALKER, Rear-Admiral J. J., U. S. N. (See under Isthmian Canal Commission.)
- WALLACE, A. H., San Dimas, Durango, Mexico, and Tucson, Ariz.: Specimen of Pedipalpi, and Mexican pedipalp. (38593, 39244.)
- WALLINGSFORD, W. W., U. S. National Museum: Red silk badge issued by the World's Columbian Exposition, August 31, 1893, on Imperial Ottoman Day (39185); Weather Bureau map with black mourning border, the date of the death of President McKinley (39199); badge of the "Old Guard," a veteran organization of Washington soldiers of the civil war (39407).
- WALPOLE, F. A. (See under Agriculture, Department of.)
- WAR DEPARTMENT: Relics from the Greely Arctic Expedition (38890); received through Department of the Interior, hat worn by Abraham Lincoln at the time of his assassination, April 15, 1865, and the chair in which he was seated at the time of his assassination (38912). Deposit.
- WARD, H. A., Wyoming, N. Y.: Pieces of 2 meteorites, Shalka (Bengal, India); and Cereseto (Piedmont, Italy). Exchange. 38338.
- WARD, Prof. LESTER F., U. S. Geological Survey: Two hundred plants collected in Arizona (38180); 30 plants from California (39338).

- WARD, ROWLAND, London, England: Specimen of *Lithocranius*. Purchase. 38265.
- WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N. Y.: Four meteorites (exchange) (38970); meteorite from Brenham, Kiowa County, Kans. (purchase) (39526); 4 rabbit skins and skeleton of *Pika* (purchase) (39527).
- WARMSLEY, Capt. W. C., U. S. V., Norwich, Conn.: Ethnological objects from the Philippine Islands; shells and corals from the coast of the China Sea. 38230.
- WARREN, J. B. (See under Elgin National Watch Company.)
- WARREN, L. E. (See under Union Station Restaurant.)
- WATERS, C. E., Baltimore, Md.: Specimen of *Asplenium cheuoides* (38250); 8 specimens of ferns from Maryland and Connecticut (38403).
- WEBB, J. S., Disputanta, Va.: Female specimen of Rhinoceros beetle, *Dynastes tityus* Linnaeus (38189); specimen of Pileated woodpecker, *Crochilus pileatus* (38660); hawk (39012).
- WEBB, M. H., Mandarin, Fla.: Sphinx moth, *Philampelus paudorus* Hübner. 39480.
- WEBBER, W. V., Maryhattiana, Ark.: Chert fragment with the figure "10" written upon it. 39195.
- WEBSTER, Rev. W. H., Wauiku, New Zealand: Unionide from New Zealand (38214); specimens of *Diplodon*, a genus of fresh-water mussels, from New Zealand (39372).
- WEED, W. H. (See under Fish Commission U. S.; Interior Department, and U. S. Geological Survey.)
- WELLCOME, HENRY S. (See under Smithsonian Institution.)
- WELLER, J. P., Washington, D. C.: Copper hammer used for keying up brasses on parallel rods of locomotives during the year 1855. 38476.
- WELLER, STUART. (See under Interior Department, U. S. Geological Survey.)
- WEST, W. E., Baltimore, Md.: Skeleton of a large specimen of Leather-back turtle, *Dermochelys coriacea*. 39431.
- WHEELER, HARRY E., Guntersville, Ala.: Two birds' eggs and a nest. 39402.
- WHITE, Dr. C. A., Washington, D. C.: Warming-pan first used in Massachusetts in 1823, and originally owned by Mrs. Nancy Corey White; specimen of fossil coral. 39135.
- WHITE, DAVID. (See under Britts, Dr. J. H., Interior Department, U. S. Geological Survey.)
- WHITE, J. J., Rockledge, Fla.: Unionide and unionis from Florida and different sections of the United States. (38583, 39370.)
- WHITE, Dr. JAMES T., U. S. S. *Navicak*, Revenue-Cutter Service, St. Michael, Alaska: Fresh-water shells from Dall River; also frogs and insects. 38580.
- WHITE, L. W., Washington, D. C.: Immature specimen of Wheelbug, *Prionidus cristatus* Linnaeus. 38272.
- WHITED, KIRK, Wenatchee, Wash. Received through Department of Agriculture: Ninety-six plants from Washington State. (38495, 38592.)
- WHITMAN, W. G., Gloucester, Mass.: Beetle, *Coptocycla guttata* Oliv. 39436.
- WILCOMB, C. P., Golden Gate Park Museum, San Francisco, Cal.: "Grasshopper" basket made by the Wut-chum-na Indians, Yokut tribe (Mari-posaw family). Exchange. 39098.
- WILCOX, E. N. (See under Agriculture, Department of.)
- WILEMAN, A. E., Hakodati, Japan: Twenty cocoons of *Plegramma westwoodi*. 38484.
- WILKERSON, Miss MABEL, Butler, N. Y.: Specimen of Walking-stick, *Diapheromera femorata* Say. 38539.
- WILKINS, L., Washington, D. C.: Aphids taken from artichokes. 38540.
- WILLIAMS, Mrs. B. S., Yankton, S. Dak.: Long-sting, *Megarhynssa atrata* Fabr. 39501.
- WILLIAMS, Major C. A., U. S. A., Jolo, P. I.: Four plants. 39171.
- WILLIAMS, R. S. (See under Agriculture, Department of.)
- WILLIAMS, R. W., jr., Tallahassee, Fla.: Albino sparrow. 38913.
- WILLIAMS, T. E. (See under Yeates, J. J.)
- WILLIAMSBURGH SCIENTIFIC SOCIETY, Brooklyn, N. Y. Received through Prof. Louis Kirsch, president: Five

- WILLIAMSBURGH SCIENTIFIC SOCIETY—
Continued.
specimens of white, cut, and polished topaz. 38262.
- WILLIAMSON, E. B., Bluffton, Ind.: Four birds' eggs from Tennessee (38930); 31 specimens of dragon flies (26 species), including cotypes, male and female, of *Gomphus hybridus* Williamson (38966); miscellaneous insects (39198). (See under Kennedy, Clarence.)
- WILLIAMSON, L. A., Bluffton, Ind.: Specimens of *Cambarus diogenes*. 39081.
- WILLITS, AMOS. (See under Agriculture, Department of.)
- WILSON, Prof. C. B., State Normal School, Westfield, Mass.: Argulidae. Exchange. 39550. (See under Fish Commission, U. S.)
- WINES, R. E., Warrenton, Va.: Young Great Blue heron, *Ardea herodias*. 39538.
- WINTEMBERG, W. J., Washington, Ontario, Canada: Plaster cast of a ceremonial object. 38550.
- WINTER, M. A., Washington, D. C.: Seven postage stamps from South Africa and Mexico. 38499.
- WOLTZ, CHARLES, U. S. National Museum: Muskrat (*Fiber zibethicus*). 39360.
- WOLTZ, C. A. D., Silver Springs, Md.: Mole, *Scalops aquaticus*. 38823.
- WOLTZ, GEORGE, U. S. National Museum: Muzzle-loading pistol made at Middletown, Conn., in 1849. Exchange. 38193.
- WOOD, JAMES A., Washington Barracks, Washington, D. C.: String of beads made from "Job's tears," *Coix lacrymaria*; hat pin of pearl shell with amber-glass center and a bunch of pearl-shell buttons. 38976.
- WOOD, J. B., Washington, D. C.: Fifteen Filipino hats collected by Capt. Thomas W. Darrah, U. S. A. Purchase. 38595.
- WOOD, J. MEDLEY. (See under Durban, Natal, Africa, Botanical Gardens.)
- WOODDELL, GEORGE P., Seven Oaks, Fla. Received through Department of Agriculture: Plant from Florida. 38668.
- WOODMAN, Dr. I. N., Morrisville, Pa.: Embryonic specimen of opossum. 38567.
- WOODRUFF, Dr. CHARLES E., U. S. A., Fort Riley, Kans.: Stone celt. 38631.
- WOODSON, CHARLES W., Rustburg, Va. Received through Dr. Charles M. Blackford, jr.: Sample of asbestos from Campbell County, Va. 39529.
- WOOLSON, G. A., Pittsford Mills, Vt.: Ten specimens of ferns from Vermont. 39384.
- WOOLWORTH, Mrs. C. A., Youngstown, N. Y.: Fern from the Bahama Islands. 39341.
- WOOTON, E. O., Mesilla Park, N. Mex.: One hundred and eighty-seven plants from Mexico (purchase) (38883); 2 Mexican plants, *Ribes nelsoni* (gift) (39059).
- WRENN, A. C. (See under Navy Department, Bureau of Equipment.)
- WRIGHT, A. A. (See under Clark, Rev. Cyrus A.)
- WRIGHT, ELIZABETH M., Tate, Ga.: Larva of a species of lace-wing fly belonging to the family Hemerobiidae. 38236.
- WURTS, A. J. (See under Nernst Lamp Company.)
- YALE, CHARLES, Louisiana, Mo.: Sixteen specimens of Lower Carboniferous crinoids and blastoids (38742); 8 crinoids and a brachiopod (38887).
- YALE UNIVERSITY, New Haven, Conn. (See under Smithsonian Institution.)
- YEATES, J. J., Birmingham, Ala. Received through T. E. Williams: Tooth of a large shark (*Carcharodon megalodon*). 38637.
- YOUNG, W. F., Paris, Ky.: Arrow-points, spear-heads, stone hatchets, and other archaeological objects. 39020.
- YUNGE, GUILLERMO. (See under Santiago, Chile, National Society of Mines.)
- ZELEDON, JOSÉ C., San José, Costa Rica, Central America: Cast from a crab-shaped vase made of stone (38427); specimen of *Acanthomera championi* Osten Sacken (39524).
- ZIMMERMAN, R. (See under Gilg, Dr. E.)

APPENDIX III.

DISTRIBUTION OF SPECIMENS.

AMERICA.

NORTH AMERICA.

CANADA.

Ontario.

Dundurn Museum, Hamilton: Marine invertebrates (279 specimens, Series VII, set 25). Gift. (D. 15035.)

Fowler, James, Kingston: Plants (155 specimens); plants (32 specimens). Exchange. (D. 15586, 15707.)

UNITED STATES.

California.

Fosdick, E. H., Los Angeles: Lepidolite (1 specimen). Gift. (D. 15085.)

Jordan, Dr. D. S., Stanford University: Ten cotypes of *Notropis lermæ*. Gift. Fishes (6 specimens). Lent for study. (D. 15374, 15383.)

Gilbert, Dr. C. H., Stanford University: *Leptocephalus* (2 specimens); fishes (3 specimens). Lent for study. (D. 14819, 15291.)

Hyde, James M., San Francisco: Geological material (215 specimens). Exchange. (D. 15654.)

Leland Stanford Junior University, Stanford University: Fishes (315 specimens) from southern Negros, Philippine Islands. Lent for study. (D. 14841.)

Setchell, Prof. W. A., Berkeley: Algae (574 specimens). Lent for study. (D. 15238.)

University of Southern California, Los Angeles: Marine invertebrates (288 specimens, Series VII, set 60). Gift. (D. 15434.)

Wilcomb, C. P., San Francisco: Indian baskets (5 specimens). Exchange. (D. 15458.)

Colorado.

Colorado Museum of Natural History, Denver: Marine invertebrates (282 specimens, Series VII, set 57). Gift. (D. 15423.)

Cragin, Prof. F. W., Colorado Springs: Fossils (2 specimens). Exchange. (D. 14792.)

Gillette, Prof. C. P., Fort Collins: Lepidoptera (75 specimens). Exchange. (D. 15669.)

Lee, Harry A., Denver: Rocks (126 specimens). Exchange. (D. 15419.)

Patton, H. B., Golden: Minerals (45 specimens and 2 lots). Exchange. (D. 15634.)

Connecticut.

Beecher, Dr. Charles E., New Haven: Fossils (42 specimens). Lent for study. (D. 15440.)

Evans, A. W., New Haven: Plants (125 specimens). Lent for study. Mosses (6 specimens). Exchange. (D. 15065, 15279, 15451.)

High School, Lakeville: Marine invertebrates (267 specimens, Series VII, set 5). Gift. (D. 14974.)

Loper, Prof. S. Ward, Middletown: Geological material (4 specimens). Exchange. (D. 15155.)

Pirsson, Prof. L. V., New Haven: Granite (18 specimens). Exchange. (D. 15496.)

State Normal School, New Britain: Marine invertebrates (285 specimens, Series VII, set 51). Gift. (D. 15345.)

Yale Forest School, New Haven: Rocks (11 specimens, Series II, set 4). Gift. (D. 15615.)

District of Columbia.

- Beckwith, Paul, Washington: Campaign; Filipino weapons (4 specimens). Exchange. (D. 15294, 15545.)
- Gilbert, Mrs. J. Loring, Washington: Wasco bag. Exchange. (D. 15441.)
- Holm, Theo., Brookland: Plants (48 specimens). Exchange. (D. 15391.)
- Howell, E. E., Washington: Fossils (21 specimens); minerals (16 trays of specimens); Casa Grande meteorite (1 specimen); geological material (901 pounds); geological material (361 specimens). Exchange. (D. 14935, 15036, 15236, 15348, 15722.)
- Kober, Dr. George M., Washington: Pueblo pottery (3 specimens). Exchange. (D. 14998.)
- Maynard, George C., Washington: Winchester carbine. Exchange. (D. 14875.)
- Mendenhall, W. C., Washington: Rocks (3 specimens). Lent for study. (D. 15237.)
- Roberts, Hon. E. W., Washington: Baskets (2 specimens); bottle covered with basket work; water bottle. Exchange. (D. 15693.)
- Tweedy, Frank, Washington: Plants (185 specimens). Exchange. (D. 15475.)
- Upham, E. P., Washington: Pueblo pottery vase. Exchange. (D. 15031.)
- Walcott, Dr. C. D., Washington: Cephalopods (4 type specimens). Lent for study. (D. 15106.)
- Western High School, Washington: Plants (180 specimens). Gift. (D. 15391.)
- Woltz, George, Washington: Remington navy revolver. Exchange. (D. 14815.)

Florida.

- Curtiss, A. H., Jacksonville: Plants (2 specimens). Lent for study. (D. 15190.)
- Rolls, P. H., Miami: Plants (183 specimens). Exchange. (D. 15630.)

Georgia.

- Mercer University, Macon: Fossils (532 specimens); rocks (105 specimens). Exchange. (D. 15310.)

Georgia—Continued.

- Morris Brown College, Atlanta: Marine invertebrates (267 specimens, Series VII, set 68). Gift. (D. 15560.)
- Wesleyan Female College, Macon: Marine invertebrates (276 specimens, Series VII, set 34). Gift. (D. 15071.)

Idaho.

- Leiberg, John B., Athol: Plant. Exchange. (D. 15483.)

Illinois.

- Ferriss, James H., Joliet: Shells (73 specimens). Exchange. (D. 15231.)
- Field Columbian Museum, Chicago: Mammals (48 specimens); plants (68 specimens); fish. Lent for study. Mammals (2 skins); ethnological material (27 specimens); plants (506 specimens); fishes (2 specimens). Exchange. (D. 15318, 15461, 15474, 15497, 15518, 15556, 15596, 15698.)
- Hancock, Dr. Joseph F., Chicago: Insects (332 specimens). Lent for study. (D. 15471.)
- Hatfield, Henry Rand, Chicago: Photographs (9) of the Belmont Forge. Exchange. (D. 14778.)
- High School, Delavan: Marine invertebrates (273 specimens, Series VII, set 15). Gift. (D. 15176.)
- High School, Hopedale: Marine invertebrates (276 specimens, Series VII, set 18). Gift. (D. 15177.)
- High School, McLean: Marine invertebrates (285 specimens, Series VII, set 58). Gift. (D. 15417.)
- High School, Mount Sterling: Marine invertebrates (282 specimens, Series VII, set 55). Gift. (D. 15385.)
- High School, Pekin: Marine invertebrates (282 specimens, Series VII, set 62). Gift. (D. 15436.)
- High School, Tremont: Marine invertebrates (282 specimens, Series VII, set 56). Gift. (D. 15386.)
- High School, Pana: Marine invertebrates (276 specimens, Series VII, set 27). Gift. (D. 15069.)
- Hunting, Miss Olive, Normal: Specimens of peat, lignite, and cannel coal. Lent for study. (D. 14970.)

Illinois—Continued

- Knox College, Galesburg: Paleozoic fossils (157 specimens). Gift. (D. 15113.)
- Meek, Dr. Seth E., Chicago: Fish. Lent for study. (D. 15354.)
- Public schools, Havana: Marine invertebrates (270 specimens, Series VII, set 6). Gift. (D. 15285.)
- Public schools, Nokomis: Marine invertebrates (270 specimens, Series VII, set 14). Gift. (D. 15058.)
- Troschel, A., Chicago: Lepidoptera (61 specimens). Exchange. (D. 15464.)
- Turner, A. H., Chicago: *Pecten magellanicus* (6 specimens). Lent for study. (D. 15072.)

Indiana.

- Case, C. E., Brookville: Pottery (12 specimens). Exchange. (D. 15514.)
- District schools, Marion: Marine invertebrates (270 specimens, Series VII, set 46); fishes (119 specimens, duplicate set). Gift. (D. 15360.)
- Ethington, Ernest L., Terre Haute: Marine invertebrates (19 specimens). Lent for study. (D. 15447.)
- Manchester College, Manchester: Marine invertebrates (276 specimens, Series VII, set 26). Gift. (D. 15087.)
- Mitchell High School, Mitchell: Marine invertebrates (276 specimens, Series VII, set 38). Gift. (D. 15118.)
- Public School, Upland: Marine invertebrates (285 specimens, Series VII, set 52). Gift. (D. 15341.)

Indian Territory.

- Harper, Dr. R. H., Afton: Pueblo pottery (6 specimens); Indian pottery (4 specimens). Exchange. (D. 14976, 15173.)

Iowa.

- High School, Manson: Marine invertebrates (276 specimens, Series VII, set 37). Gift. (D. 15088.)
- Historical Department of Iowa, Des Moines: Ten models of houses, groups, and pueblos, tapa cloth, Filipino hat and bolo, mammals (43 mounted specimens); birds (145 specimens). Gift. (D. 15353, 15527.)

Iowa—Continued.

- Holway, E. W. D., Decorah: Plant. Exchange. (D. 15412.)
- Jewell Lutheran College, Jewell: Fishes (89 specimens, duplicate set). Gift. (D. 15582.)
- King, Dr. E. H., Muscatine: Shells (31 specimens). Exchange. (D. 14842.)
- Kuntze, Dr. Otto, Iowa City: Geological material (41 specimens). Exchange. (D. 14949.)
- Nutting, Dr. C. C., Iowa City: Hydroids (314 specimens). Lent for study. (D. 14770.)
- Pammel, L. H., Ames: Plants (30 sheets). Lent for study. (D. 15359.)

Kansas.

- Harworth, Prof. Erasmus, Lawrence: Geological material (8 specimens). Exchange. (D. 15089.)
- High School, Council Grove: Marine invertebrates (270 specimens, Series VII, set 42). Gift. (D. 15289.)

Kentucky.

- Kentucky Wesleyan College, Winchester: Marine invertebrates (267 specimens, Series VII, set 2). Gift. (D. 14927.)

Louisiana.

- Frierson, Lorraine S., Frierson: Shells (10 specimens). Lent for study. (D. 14930.)

Maine.

- Morton, F. S., Portland: Foraminifera (10 vials). Lent for study. (D. 15557.)
- University of Maine, Orono: Rocks (11 specimens, Series II, set 5). Gift. (D. 15683.)

Maryland.

- Duerden, Prof. J. E., Baltimore: Paleozoic corals (34 slides); corals (721 specimens). Lent for study. (D. 15637.)

Massachusetts.

- Bangs, Outram, Boston: Birds' skins (3 specimens). Exchange. Birds (38 specimens). Lent for study. (D. 15339, 15595.)
- Brewster, William, Cambridge: Birds' skins (39 specimens); birds' skins (47 specimens). Lent for study. (D. 15325, 15370.)

Massachusetts—Continued.

- Clarke, Prof. S. F., Williamstown: *Rhizonema carnea* (2 specimens). Lent for study. (D. 15372.)
- Cummings, Miss Clara E., Wellestey: Plants (72 specimens). Exchange. Plants (26 specimens). Lent for study. (D. 15150, 15167, 15450.)
- Dean, Walter, Boston: Plants (4 specimens). Exchange. (D. 15585.)
- Fernald, Prof. C. H., Amherst: Moths (76 specimens). Lent for study. (D. 15011.)
- Gray Herbarium, Boston: Plants (285 specimens). Lent for study. (D. 15045, 15107, 15219, 15327, 15394, 15503.)
- Howe, Reginald Heber, Brookline: Sparrows (23 specimens); birds' skins (31 specimens). Lent for study. (D. 14965, 15376.)
- Johnson, Herbert P., West Roxbury: *Nereis culveri* (2 specimens). Exchange. (D. 15431.)
- Robinson, Dr. B. L., Boston: Plants (26 specimens). Lent for study. (D. 14994.)
- Sargent, Prof. C. S., Jamaica Plains: Plants (7 specimens). Exchange. (D. 15449.)
- Warren School, Everet: Marine invertebrates (283 specimens, Series VII, set 63). Gift. (D. 15470.)
- Williams College, Williamstown: Fossils (415 specimens). Exchange. (D. 15309.)
- Wood, Miss Elvira, Boston: Fossils (50 specimens). Lent for study. (D. 15377.)
- Michigan.*
- Clark, Prof. H. L., Olivet: Reptiles (4 specimens). Lent for study. (D. 15664.)
- Cole, Prof. Leon J., Ann Arbor: *Pycnogonida* (58 specimens). Lent for study. (D. 15129.)
- Stearns, Frederick, Detroit: Inverted double reed musical instrument. Exchange. (D. 14910.)
- Union City School, Union City: Marine invertebrates (273 specimens, Series VII, set 70). Gift. (D. 15600.)
- Wheeler, Prof. C. F., Agricultural College: Plants (27 specimens). Lent for study. (D. 15119.)

Minnesota.

- Bethlehem Academy, Faribault: Fishes (68 specimens). Gift. (D. 14915.)
- Gustavus Adolphus College, St. Peter: Marine invertebrates (276 specimens, Series VII, set 1). Gift. (D. 15283.)
- Heatwole, Hon. Joel P., Northfield: Indian baskets (15 specimens), also bead work; pottery (25 specimens). Exchange. (D. 15424, 15668.)
- High School, Ely: Marine invertebrates (261 specimens, Series VII, set 69). Gift. (D. 15607.)
- High School, Farmington: Marine invertebrates (264 specimens, Series VII, set 8). Gift. (D. 14931.)
- Holzinger, Prof. J. M., Winona: Mosses (4 specimens); plants (19 specimens). Exchange. (D. 15149, 15452.)

Missouri.

- Conception College, Conception: Marine invertebrates (270 specimens, Series VII, set 3). Gift. (D. 15197.)
- University of Missouri, Columbus: Rocks (11 specimens). Exchange. (D. 15247.)
- Yale, Charles, Louisiana: Trilobites (2 specimens). Exchange. (D. 15125.)

Montana.

- Montana Agricultural Experiment Station, Bozeman: Marine invertebrates (279 specimens, Series VII, set 41). Gift. (D. 15275.)
- State Normal School, Dillon: Marine invertebrates (276 specimens, Series VII, set 28). Gift. (D. 15046.)

Nebraska.

- City Schools, Blair: Marine invertebrates (285 specimens, Series VII, set 54). Gift. (D. 15355.)

New Hampshire.

- Eaton, A. A., Seabrook: Plants (197 specimens); plants (14 specimens). Lent for study. (D. 15271, 15650.)

New Jersey.

- Miss Beard's School, Orange: Marine invertebrates (273 specimens, Series VII, set 19). Gift. (D. 15034.)
- Best, G. N., Rosemont: Plants (89 specimens). Lent for study. (D. 15134.)
- Brown, Mrs. J. Crosby, Orange: Musical bow and cane bow; model of double inverted reed lyra; musical instruments (7 models); three bull

New Jersey—Continued.

Brown, Mrs. J. Crosby, Orange—C't'd. roarers and a bone whistle: musical instruments (2 copies). Exchange. Musical instruments (31 photographs). Lent for study. (D. 14763, 14807, 14812, 14936, 15322, 15578, 15735.)

High School, Trenton: Marine invertebrates (273 specimens, Series VII, set 17). Gift. (D. 15116.)

Smith, Prof. John B., New Brunswick: Moths (100 specimens). Lent for study. (D. 15196.)

New Mexico.

Cokerell, Prof. T. D. A., East Las Vegas: Mollusks in alcohol (54 specimens). Lent for study. (D. 15690.)

New York.

American Museum of Natural History, New York City: Two skins and skulls of Texas cottontail rabbits. Gift. Skins and skulls of Alaskan red squirrels (69 specimens). Lent for study. (D. 15444, 15632.)

Baird, W. R., New York City: Polished serpentine. Exchange. (D. 15251.)

Benedict, Dr. A. L., Buffalo: Plaster casts of American Indians (10 specimens). Lent for study. (D. 14823.)

Britton, Mrs. N. L., New York City: Plants (76 specimens). Lent for study. (D. 15651.)

Harris, Mrs. Carolyn W., Brooklyn: Plants (54 specimens). Exchange. (D. 15473.)

Cornell University, Ithaca: Plants (83 specimens). Exchange. (D. 15723.)

Dwight, Dr. Jonathan, jr., New York City: Duck (1 skin). Lent for study. (D. 15297.)

Earle, Prof. F. S., New York City: Plants (23 specimens). Lent for study. (D. 15222.)

Eastern District High School, Brooklyn: Marine invertebrates (273 specimens, Series VII, set 67). Gift. (D. 15544.)

Felt, Dr. E. P., Albany: Insects (118 specimens). Lent for study. (D. 15217.)

Fuertes, L. A., Ithaca: Birdskin. Lent for study. (D. 15210.)

Gidley, J. W., New York City: Fossils (15 specimens). Lent for study. (D. 15513.)

New York—Continued.

Gilbert, B. D., Clayville: Plant. Exchange. (D. 15216.)

Goldberg, Julius C., New York City: Specimen of peat and lignite coal. For study. (D. 15062.)

Grammar School No. 2, Brooklyn: Marine invertebrates (276 specimens, Series VII, set 40). Gift. (D. 15286.)

Grout, A. J., Brooklyn: Plants (50 specimens). Exchange. (D. 15657.)

Hay, Dr. O. P., New York City: Fossil turtles (7 specimens). Lent for study. (D. 14799.)

Joutel, L. H., New York City: Beetles (11 specimens). Lent for study. (D. 15203.)

Kales, Dr. John W., Franklinville: Stone hatchets (2 specimens). Exchange. (D. 15192.)

Kenka College, Penn Yan: Marine invertebrates (273 specimens, Series VII, set 16). Gift. (D. 15014.)

New York Botanical Garden, Bronx Park: Plants (266 specimens). Lent for study. Plants (32 specimens); plants (12 living specimens). Exchange. (D. 15571, 15588, 15599, 15670, 15697, 15701, 15704, 15721, 15733.)

Osborn, Prof. H. F., New York City: Vertebrate paleontological material (8 specimens). Lent for study. (D. 15647.)

Rydberg, Dr. P. A., New York City: Plants (108 specimens). Lent for study. (D. 14867, 15269.)

Schellbach, Louis, jr., Brooklyn: Ores, minerals, and rocks (138 specimens). Exchange. (D. 15008.)

Smith, Mrs. Annie M., Brooklyn: Plants (40 specimens). Exchange. (D. 15472.)

St. Agatha School, New York City: Marine invertebrates (276 specimens, Series VII, set 24). Gift. (D. 15052.)

Underwood, Prof. L. M., New York City: Plants (60 specimens). Lent for study. (D. 15262, 15324, 15532.)

Ward's Natural History Establishment, Rochester: Geological material (221 specimens); geological material (553 pounds). Exchange. (D. 15258, 15384.)

New York—Continued.

Wilder, Prof. B. G., Ithaca: Tadpoles (4 specimens). Lent for study. (D. 15328.)

North Carolina.

Biltmore Herbarium, Biltmore: Plants (229 specimens). Lent for study. (D. 15093, 15415.)

North Dakota.

Fargo High School, Fargo: Marine invertebrates (273 specimens, Series VII, set 32). Gift. (D. 15112.)

Osburn, Prof. Raymond, Fargo: Dragon flies (68 specimens). Exchange. (D. 15428.)

School for the Deaf of North Dakota, Devils Lake: Marine invertebrates (270 specimens, Series VII, set 13). Gift. (D. 15095.)

Ohio.

Asherman, George, Cincinnati: Fossils (17 specimens). Exchange. (D. 15204.)

Freidberg, Dr. Albert H., Cincinnati: Femora of orang and gorilla (2 specimens); femur of gibbon. Lent for study. (D. 15260, 15533.)

High School, Ravenna: Marine invertebrates (273 specimens, Series VII, set 31). Gift. (D. 15070.)

Mills, W. C., Columbus: Mammals (8 specimens). Lent for study. (D. 15067.)

Wright, Prof. A. A., Oberlin: Microscopical slides (23). Lent for study. (D. 15020.)

Oklahoma.

High School, Lawton: Marine invertebrates (279 specimens, Series VII, set 47). Gift. (D. 15308.)

Northwestern High School, Alva: Marine invertebrates (288 specimens, Series VII, set 59). Gift. (D. 15418.)

Pennsylvania.

Academy of Natural Sciences, Philadelphia: Bats (6 specimens); skins and skulls of Malayan mammals (17 specimens). Exchange. (D. 15445, 15446.)

Boys' High School, Reading: Marine invertebrates (276 specimens, Series VII, set 35). Gift. (D. 15108.)

Bradley, J. Chester, Philadelphia: Parasitic wasps (140 specimens). Lent for study. (D. 15303.)

Pennsylvania—Continued.

Carnegie Museum, Pittsburg: Fossils (148 specimens). Exchange. (D. 15114.)

Foote Mineral Company, Philadelphia: Minerals (collection); ores, minerals, and rocks (1,668 pounds and 234 specimens); geological material (259 specimens) and geological material (1,184 pounds). Exchange. (D. 14963, 15001, 15356.)

Girls' High School, Reading: Marine invertebrates (270 specimens, Series VII, set 10). Gift. (D. 15007.)

Hatcher, J. B., Pittsburg: Skeleton and skull of Hyena. Lent for study. (D. 15658.)

Holland, Dr. W. J., Pittsburg: Moths (138 specimens). Lent for study. (D. 15292.)

Linton, Prof. Edwin, Washington: *Leptocephalus* (1 specimen). Lent for study. (D. 14820.)

Public Schools, Chester: Marine invertebrates (279 specimens, Series VII, set 43). Gift. (D. 15223.)

Public Schools, Vandergrift: Marine invertebrates (270 specimens, Series VII, set 7). Gift. (D. 15248.)

Public Schools, Watsonstown: Marine invertebrates (276 specimens, Series VII, set 22). Gift. (D. 15039.)

Rehn, J. A. G., Philadelphia: Bats (7 specimens). Lent for study. (D. 14980.)

Rhoads, S. N., Philadelphia: *Neotoma magister* (cotypes); martens and marten skulls (41 specimens). Lent for study. (D. 15316, 15406, 15570, 15622.)

State Normal School, Bloomsburg: Marine invertebrates (282 specimens, Series VII, set 48). Gift. (D. 15311.)

State Normal School, Edinboro: Marine invertebrates (273 specimens, Series VII, set 9); rocks (11 specimens, Series II). Gift. (D. 15290.)

Stone, Witmer, Philadelphia: Mammals (7 specimens). Lent for study. (D. 15290.)

Susquehanna River University, Selinsgrove: Marine invertebrates (285 specimens, Series VII, set 53). Gift. (D. 15342.)

Pennsylvania--Continued.

- Wagner Free Institute of Sciences, Philadelphia: Sponges (23 duplicate specimens). Exchange. (D. 14768.)
 Waynesburg College, Waynesburg: Marine invertebrates (279 specimens, Series VII, set 29). Gift. (D. 15053.)
 Wharton Combined School, Philadelphia: Marine invertebrates (270 specimens, Series VII, set 11). Gift. (D. 15115.)

Rhode Island.

- Mearns, Dr. E. A., Newport: Plants (4 specimens). Lent for study. (D. 15086.)
 Packard, Dr. A. S., Providence: Moths (9 specimens). Lent for study. (D. 15361.)

South Carolina.

- Converse College, Spartanburg: Marine invertebrates (276 specimens, Series VII, set 36). Gift. (D. 15060.)
 Limestone College, Daffney: Marine invertebrates (273 specimens, Series VII, set 30). Gift. (D. 15055.)
 Thornwell College for Orphans, Clinton: Mounted mammals (9 specimens); mounted birds (92 specimens). Gift. (D. 15516.)

Tennessee.

- Martin College for Young Ladies, Pulaski: Marine invertebrates (279 specimens, Series VII, set 20). Gift. (D. 15117.)
 Morristown Normal College, Morristown: Marine invertebrates (264 specimens, Series VII, set 71). Gift. (D. 15702.)
 Winchester College, Winchester: Marine invertebrates (279 specimens, Series VII, set 23). Gift. (D. 15198.)

Texas.

- Baylor University, Waco: Fossils (437 specimens). Exchange. (D. 14795.)
 San Antonio Female College, San Antonio: Marine invertebrates (279 specimens, Series VII, set 39). Gift. (D. 15274.)

Utah.

- Agricultural College, Logan: Marine invertebrates (285 specimens, Series VII, set 61). Gift. (D. 15435.)
 Chamberlin, Prof. Ralph V., Salt Lake City: Myriapods (2 specimens). Lent for study. (D. 15179.)

Virginia.

- Botetourt Normal College, Botetourt: Marine invertebrates (276 specimens, Series VII, set 64). Gift. (D. 15478.)
 Bridgewater College, Bridgewater: Rocks (11 specimens, Series II, set 2). Gift. (F. 15531.)
 Shoemaker College, Gate City: Marine invertebrates (273 specimens, Series VII, set 33). Gift. (D. 15056.)

West Virginia.

- State Normal School, Glenville: Marine invertebrates (270 specimens, Series VII, set 44). Gift. (D. 15287.)
 State Normal School, West Liberty: Marine invertebrates (270 specimens, Series VII, set 66); rocks (11 specimens, Series II, set 3). Gift. (D. 15539.)

Wisconsin.

- Free Public Library, Appleton: Marine invertebrates (273 specimens, Series VII, set 65); rocks (11 specimens, Series II, set 1). Gift. (D. 15515.)
 High School, Hartford: Marine invertebrates (282 specimens, Series VII, set 50). Gift. (D. 15344.)
 High School, Plymouth: Marine invertebrates (270 specimens, Series VII, set 45). Gift. (D. 15288.)
 High School, Sheboygan: Marine invertebrates (270 specimens, Series VII, set 4). Gift. (D. 15284.)
 High School, West Bend: Marine invertebrates (285 specimens, Series VII, set 49). Gift. (D. 15343.)
 Hobbs, Prof. W. H., Madison: Meteorites (2 specimens). Exchange. (D. 15685.)
 Public Museum, Milwaukee: Stone axes (2 plaster casts). Gift. (D. 15511.)
 Sacred Heart Academy, Madison: Marine invertebrates (279 specimens, Series VII, set 21). Gift. (D. 15059.)
 State Normal School, Stevens Point: Marine invertebrates (270 specimens, Series VII, set 12). Gift. (D. 15013.)

HAWAIIAN ISLANDS.

- Brigham, Dr. William T., Honolulu: Cast of Tapa beater. Exchange. (D. 15682.)

SOUTH AMERICA.

BRAZIL.

- Derby, Orville A., São Paulo: Set of unmounted photographs of scenes in Brazil. Exchange. (D. 14837.)
- Von Thering, Dr. H., São Paulo: Birds' skins (14 specimens). Exchange. (D. 14853.)

WEST INDIES.

BARBADOS.

- Brown, Lewis B., Bridgetown: Shells (106 specimens). Exchange. (D. 15666.)

CUBA.

- Museum of Academy of Sciences, Habana: Porto Rican and other fishes (223 specimens). Gift. (D. 14793.)

EUROPE.

AUSTRIA.

- Heimerl, Dr. Anton, Vienna: Plants (499 specimens). Lent for study. (D. 15038.)
- Von Lorenz, Dr. H., Vienna: *Rytina* bones (2 casts). Exchange. (D. 15240.)
- Wohlgemuth, Carl, Bozen (Tyrol): Ethnological material (11 specimens). Exchange. (D. 15468.)

BELGIUM.

- Mahillon, M. Victor, Brussels: Model of double inverted lyra recd. Exchange. (D. 14934.)

DENMARK.

- Warming, Dr. E., Copenhagen: Plants (2 specimens). Lent for study. (D. 15361.)

FRANCE.

- André, Ernest, Gray (Haute Saône): Hymenoptera (11 species). Exchange. Hymenoptera (7 species). Lent for study. (D. 15662.)
- Contiere, Dr. H., Paris: Alpheidæ (298 specimens). Lent for study. (D. 15187.)
- Gandoger, M., Arnas (Rhône): Plants (333 specimens). Exchange. (D. 15225.)

Lachenand, Georges, Limoges: Plants (74 specimens). Exchange. (D. 15553.)

Martin, M. René, Le Blanc (Indre): Dragonflies (10 specimens); Odonata (86 specimens). Exchange. (D. 15272, 15520.)

Meunier, Dr. Stanislas, Paris: Meteorites. Exchange. (D. 14929, 15350.)

Patouillard, M. N., Paris: Plants (2 specimens). Lent for study. (D. 14973.)

GERMANY.

Bohm, Dr. John, Berlin: Plaster cast of fossil. Exchange. (D. 15166.)

Engler, Dr. A., Berlin: Plants (275 specimens); plants (314 specimens). Lent for study. (D. 15245, 15323.)

Frobenius, Dr. L., Berlin: North American bows (16 specimens). Exchange. (D. 15023.)

Kinkelin, Prof. Dr. F., Frankfurt-on-Main: Fossil plants (138 specimens). Exchange. (D. 15104.)

Rosenstock, Dr. Edward, Gotha, Thuringia: Plants (83 specimens). Exchange. (D. 15026.)

Royal Museum of Natural History, Berlin: Phyllopod crustaceans (90 + specimens). Gift. (D. 15407.)

Royal Zoological Museum, Dresden: Three ribs of *Rytina*. Exchange. (D. 15226.)

Schellwien, Dr. E., Königsberg: Fossils (97 specimens). Exchange. (D. 14786.)

Schirmer, Herr C., Berlin: Diptera (246 specimens). Exchange. (D. 15661.)

GREAT BRITAIN.

England.

Bloomer, H. H., Birmingham: Shells (3 specimens). Lent for study. (D. 15505.)

Galpin, F. W., Harlow: Musical instruments (21 specimens). Exchange. (D. 15151, 15506.)

Haddon, Prof. A. C., Cambridge: Pottery (44 fragments). Exchange. (D. 15304.)

Hampson, Sir George, London: Lepidoptera (1 specimen). Exchange. Lepidoptera (12 specimens). Lent for study. (D. 15680.)

England—Continued.

- Jameson, Prof. H. Lyster, Derby: *Meleagrina fimbriata* Cpr. (1 specimen). For anatomical work. (D. 15410.)
- Lovett, Edward, Croydon: Ethnological material (49 specimens). Exchange. (D. 14997.)
- Moss, William, Ashton-under-Lyne: Shells (35 specimens). Exchange. (D. 15674.)
- Museum of the Pharmaceutical Society of Great Britain: Plants (2 specimens). Gift. (D. 15373.)
- Priest, B. W., Norfolk: Unassorted foraminifera (17 vials). Exchange. (D. 15090.)
- Royal Gardens, Kew: Plants (11 specimens). Exchange. Plants (30 specimens). Lent for study. (D. 15409.)
- Sharpe, Dr. R. B., South Kensington: Bird-skin. Exchange. (D. 15517.)
- Sidebottom, H., West Stockport: Foraminifera (8 vials). For study. (D. 15711.)
- Sowerby and Fulton, London: Shells (234 specimens). Exchange. (D. 15241.)
- Thomas, Oldfield, London: Mammal skin with skull. Lent for study. (D. 14946.)
- University Museum of Zoology, Cambridge: Birds' skins (3 specimens). Exchange. (D. 15504.)
- HOLLAND.
- Finsch, Dr. Otto, Leiden: Birds' skins (3 specimens). Exchange. (D. 14950.)
- Jentink, Dr. F. A., Leiden: East Indian rat skins (2 specimens). Lent for study. (D. 15408.)
- Leiden Museum, Leiden: Five photographs of casts of reptiles, fishes, and invertebrates. Exchange. (D. 15656.)
- ITALY.
- Bezzi, Prof. M., Sondrio: Diptera (691 specimens). Exchange. (D. 15429.)
- PORTUGAL.
- Choffat, Prof. Paul, Lisbon: Fossils (25 specimens). Exchange. (D. 15263.)
- SWEDEN.
- Ekman, Sven, Upsala: Marine invertebrates (20 specimens). Exchange. (D. 15048.)
- Zoological Institute of the University, Upsala: Fishes (9 specimens); marine invertebrate (1 specimen). Exchange. (D. 15199.)
- SWITZERLAND.
- Von Fellenberg, Dr. E., Berne: Meteorites (2 specimens). Exchange. (D. 14971.)
- Micheli, M. Marc, Geneva: Plants (2 fragments). Exchange. (D. 15426.)
- OCEANIA.
- AUSTRALIA.
- New South Wales.*
- Sydney Botanic Gardens, Sydney: Plants (140 specimens). Lent for study. (D. 15097.)

APPENDIX IV.

BIBLIOGRAPHY.

PUBLICATIONS OF THE MUSEUM.

PROCEEDINGS.

Smithsonian Institution. | United States National Museum. | — | Proceedings | of the | United States National Museum. | — | Volume XXIII. | — | Published under the direction of the Smithsonian Institution. | — | Washington: | Government Printing Office. | 1901. |

svo, pp. 1-XV, 1-952, pls. 1-44.

BULLETIN.

The Birds | of | North and Middle America: | A Descriptive Catalogue | of the | Higher Groups, Genera, Species, and Subspecies of Birds | known to occur in North America, from the | Arctic Lands to the Isthmus of Panama. | the West Indies and other Islands | of the

Caribbean Sea, and the | Galapagos Archipelago. | By Robert Ridgway. | Curator, Division of Birds. | — | Part I. | Family Fringillidae—The Finches. | — | Washington: | Government Printing Office. | 1901. |

Bulletin 50, Part 1, svo, pp. 1-XXX, 1-715, pls. 1-XX.

A List | of | The Publications | of the | United States National Museum | (1875-1900) | Including the Annual Reports, Proceedings, Bulletins, | Special Bulletins, and Circulars. | With Index to Titles. | By | Randolph I. Geare, | Chief, Division of Correspondence and Documents. | — | Washington: | Government Printing Office. | 1902. |

Bulletin 51, svo, pp. 1-VII, 1-168.

PAPERS PUBLISHED IN SEPARATE FORM.

FROM THE REPORT FOR 1900.

Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1900. By Richard Rathbun. pp. 1-152, 9 pls.

Report on the Department of Anthropology for the year 1899-1900. By William H. Holmes. pp. 21-29.

Report on the Department of Biology for the year 1899-1900. By Frederick W. True. pp. 31-44.

Report on the Department of Geology for the year 1899-1900. By George P. Merrill. pp. 45-57, 9 pls.

Anthropological studies in California. By W. H. Holmes. pp. 155-187, 50 pls.

Aboriginal American harpoons: A study in ethnic distribution and invention. By Otis T. Mason. pp. 189-304, frontispiece, 19 pls., 92 figs.

A sketch of the history of ceramic art in China, with a catalogue of the Hoppisley collection of Chinese porcelains. By Alfred E. Hoppisley. pp. 305-416, 21 pls.

Contributions to the history of musical scales. By Charles K. Wead. pp. 417-462, 10 pls., 8 figs.

A collection of Hopi ceremonial pigments. By Walter Hough. pp. 463-471.

Descriptive catalogue of the collections of gems in the U. S. National Museum. By Wirt Tassin. pp. 473-670, 9 pls., 26 figs.

Descriptive catalogue of the meteorite collection in the U. S. National Museum to January 1, 1902. By Wirt Tassin. pp. 671-698, 4 pls.

FROM VOLUME 23, PROCEEDINGS OF THE U. S. NATIONAL MUSEUM.

- No. 1233. A review of the Lancelets, Hagfishes, and Lampreys of Japan, with a description of two new species. By David S. Jordan and John O. Snyder. pp. 725-734, 1 pl.
- No. 1235. List of fishes collected in 1883 and 1885 by Pierre Louis Jony and preserved in the U. S. National Museum, with descriptions of six new species. By David S. Jordan and John O. Snyder. pp. 739-769, 8 pls.
- No. 1236. Four new symmetrical hermit crabs (Pagurids) from the West Indian region. By James E. Benedict. pp. 771-778, 7 figs.
- No. 1237. Synopsis of the Lucinacea and of the American species. By William H. Dall. pp. 779-833, 4 pls.
- No. 1238. On a slug of the genus *Veronicella* from Tahiti. By T. D. A. Cockerell. pp. 835-836.
- No. 1239. A review of the Apodal fishes or eels of Japan, with descriptions of nineteen new species. By David S. Jordan and John O. Snyder. pp. 837-890, 22 figs.
- No. 1240. A review of the Cardinal fishes of Japan. By David S. Jordan and John O. Snyder. pp. 891-913, 2 pls., 10 figs.

FROM VOLUME 24, PROCEEDINGS OF THE U. S. NATIONAL MUSEUM.

- No. 1241. A review of the Hypostomide and Lophobranchiate fishes of Japan. By David S. Jordan and John O. Snyder. pp. 1-20, 12 pls.
- No. 1242. List of the Myriapod family Lithobiidae of Salt Lake County, Utah, with descriptions of 5 new species. By Ralph V. Chamberlin. pp. 21-25.
- No. 1243. New Diptera from Southern Africa. By D. W. Coquillett. pp. 27-32.
- No. 1244. A review of the Gobioid fishes of Japan, with descriptions of 21 new species. By David S. Jordan and John O. Snyder. pp. 33-132, 33 figs.
- No. 1245. A Flightless Auk, *Mareca californiensis*, from the Miocene of California. By Frederic A. Lucas. pp. 133-134, 3 figs.
- No. 1246. An annotated list of mammals collected in the vicinity of La Guaira, Venezuela. By Wirt Robinson and Marcens W. Lyon, jr. pp. 135-162.
- No. 1247. An annotated list of birds collected in the vicinity of La Guaira, Venezuela. By Wirt Robinson and Charles W. Richmond. pp. 163-178.
- No. 1248. An annotated list of batrachians and reptiles collected in the vicinity of La Guaira, Venezuela, with descriptions of 2 new species of snakes. By Leonhard Stejneger. pp. 179-192, 33 figs.
- No. 1249. On a stony meteorite which fell near Felix, Perry County, Ala., May 15, 1900. By George P. Merrill. pp. 193-198, 2 pls.
- No. 1250. A review of the Atherine fishes of Japan. By David S. Jordan and Edwin C. Starks. pp. 198-206, 4 figs.
- No. 1251. The Cacomitl Cat of the Rio Grande Valley. By Edgar A. Mearns. pp. 207-210.
- No. 1252. A new species of bullfrog from Florida and the Gulf coast. By Leonhard Stejneger. pp. 211-215.

- No. 1253. Some spiders and other arachnida from Porto Rico. By Nathan Banks. pp. 217-227. 1 pl.
- No. 1254. A review of the Gymnodont fishes of Japan. By David S. Jordan and John O. Snyder. pp. 229-264, 8 figs.
- No. 1255. Two new species of algae of the genus *Bathotrephis*, from the Upper Silurian of Indiana. By David White. pp. 265-270, 3 pls.
- No. 1256. The fossil fresh-water shells of the Colorado Desert, their distribution, environment, and variation. By Robert E. C. Stearns. pp. 271-299, 6 pls., 9 figs.
- No. 1257. *Chondrodonta*, a new genus of Ostreiform mollusks from the Cretaceous, with descriptions of the genotype and a new species. By Timothy W. Stanton. pp. 301-307, 2 pls.
- No. 1258. Catalogue of a collection of Humming birds from Ecuador and Colombia. By Harry C. Oberholser. pp. 309-342.
- No. 1259. A review of the Discobolous fishes of Japan. By David S. Jordan and John O. Snyder. pp. 343-351, 2 figs.
- No. 1260. A review of the Japanese species of Surf-fishes or Embiotocidae. By David S. Jordan and Michitaro Sindo. pp. 353-359, 2 figs.
- No. 1261. A review of the Pediculate fishes or Anglers of Japan. By David S. Jordan and Michitaro Sindo. pp. 361-381, 7 figs.
- No. 1262. Descriptions of new American butterflies. By William Schaus. pp. 383-460.
- No. 1263. A review of the Trachinoid fishes and their supposed allies found in the waters of Japan. By David S. Jordan and John O. Snyder. pp. 461-497, 7 figs.
- No. 1264. Illustrations and descriptions of new, unfigured, or imperfectly known shells, chiefly American, in the U. S. National Museum. By W. H. Dall. pp. 499-566, 14 pls.
- No. 1265. A review of the Salmonoid fishes of Japan. By David S. Jordan and John O. Snyder. pp. 567-593, 5 figs.
- No. 1266. A review of the Labroid fishes and related forms found in the waters of Japan. By David S. Jordan and John O. Snyder. pp. 595-662, 10 figs.
- No. 1267. List of generic terms proposed for birds during the years 1890 to 1900, inclusive, to which are added names omitted by Waterhouse in his "Index Generum Avium." By Charles W. Richmond. pp. 663-729.
- No. 1268. A review of the American moths of the genus *Depressaria* Haworth, with descriptions of new species. By August Buseck. pp. 731-749.
- No. 1269. The mammals of the Andaman and Nicobar islands. By Gerrit S. Miller, jr. pp. 751-795, 2 pls.
- No. 1270. *Henicops dolichopus*, a new Chilopod from Utah. By Ralph V. Chamberlin. pp. 797-800.
- No. 1271. A review of the larks of the genus *Otocoris*. By Harry C. Oberholser. pp. 801-884, 7 pls.
- No. 1272. Descriptions of new Decapod crustaceans from the west coast of North America. By Mary J. Rathbun. pp. 885-905.
- No. 1273. A newly found meteorite from Admire, Lyon County, Kans. By George P. Merrill. pp. 907-913, 7 pls.
- No. 1274. Descriptions of three new birds from the southern United States. By Edgar A. Mearns. pp. 915-926.

FROM BULLETIN 39.

- Part X. Directions for preparing study specimens of small mammals. Second edition, revised, with abstracts in German, French, and Spanish. By Gerrit S. Miller, jr. pp. [1]-[25], 3 figs.
- Part P. Directions for collectors of American basketry. By Otis T. Mason. pp. [1]-[31], 44 figs.

CIRCULAR 51.

Circular to accompany collections illustrating rock-weathering and soil formation which have been prepared by the Department of Geology, U. S. National Museum, under direction of Dr. George P. Merrill, Head Curator. pp. 1-3.

PAPERS BY OFFICERS OF THE NATIONAL MUSEUM AND OTHERS,
BASED UPON MUSEUM MATERIAL.

- AGASSIZ, ALEXANDER, and MURRAY, JOHN. Reports on the Scientific Results of the Expedition to the Tropical Pacific in charge of Alexander Agassiz, by the U. S. Fish Commission steamer *Albatross*, from August, 1899, to March, 1900, Commander Jefferson F. Moser, U. S. N., commanding. I. Preliminary report. Together with a list of the stations occupied by the *Albatross*. By Alexander Agassiz. Remarks on the Bottom Deposits. By Sir John Murray, K. C. B.
- Mem. Mus. Comp. Zool. Harv. Coll.*, xxvi, No. 1, Jan., 1902, pp. 1-114, 21 pls., 1 text fig.
- Includes a narrative of the voyage, with list of positions held by the *Albatross*, a comparison of the hauls made in the Pacific by the *Challenger* and *Albatross*, and notes on the bottom deposits and surface organisms collected by the *Challenger*.
- AGASSIZ, ALEXANDER, and MAYER, ALFRED GOLDSBOROUGH. Reports on the Scientific Results of the Expedition to the Tropical Pacific in charge of Alexander Agassiz, by the U. S. Fish Commission steamer *Albatross*, from August, 1899, to March, 1900, Commander Jefferson F. Moser, U. S. N., commanding. III. Medusae.
- Mem. Mus. Comp. Zool. Harv. Coll.*, xxvi, No. 3, Jan., 1902, pp. 139-176, 13 pls., and a chart of the route.
- Forty-two species of Medusae were obtained, of which 21 are new to science. They are distributed among the Hydromedusae, Siphonophorae, and Ctenophorae.
- AMERICAN ORNITHOLOGISTS' UNION (Committee on Nomenclature). Tenth Supplement to the American Ornithologists' Union Check-list of North American Birds.
- Auk*, xviii, No. 3, July, 1901, pp. 295-320.
- Gives a list of changes in the A. O. U. check-list adopted by the committee at a session held in the Division of Birds, Apr. 10-18, 1901. Sixty-one additions and changes were accepted, and 37 other cases were considered. (Based largely on Museum material.)
- ASHMEAD, WILLIAM H. Hymenoptera Parasitica.
- Fauna Hawaiensis*, I, III, Aug., 1901, pp. 277-364, pls. 8, 9.
- Records and describes 128 parasitic Hymenoptera from the Hawaiian Islands. Ten genera and 87 species are described as new.
- Descriptions of five new parasitic Hymenoptera.
- Bull. N. Y. State Mus.*, No. 47, Sept., 1901, pp. 586-589.
- This article is included in "Aquatic insects in the Adirondaeks," by James G. Needham and Cornelius Betten.
- Describes *Telenomus longicornis*, *Brachystrophus quadricraps*, *Rhizarcha astigma*, *Aphidius nigripes*, and *Atractodes scpdontis*.
- A new Pammegischia.
- Ent. News.*, XII, No. 9, Nov., 1901, pp. 277-278.
- Describes *Pammegischia xiphodria*.
- New species of Evaniidae.
- Canadian Ent.*, xxxiii, No. 11, Nov., 1901, pp. 300-304.
- Describes 10 new species and recognizes *Evania unicolor* Say as a valid species; it was previously made a synonym of *Evania appendigaster* Linné, by Cresson and Schletterer.

ASHMEAD, WILLIAM H. A new Bumblebee from Colorado.

Ent. News, XIII, No. 2, Feb., 1902, p. 50.

Describes *Bombus titusi*.

— A new *Bruchophagus* from Mexico.

Psyche, IX, No. 311, Mar., 1902, p. 324.

Describes *Bruchophagus herrerae*. Type in the National Museum.

— Classification of the fossorial, predaceous, and parasitic wasps, or the superfamily Vespoidea. (Paper No. 4.)

Canadian Ent., XXXIV, No. 4, Apr., 1902, pp. 79-88.

Treats of the subfamily Aporinae, which it divided into two tribes, I. Anoplini, and II. Aporini. In the first tribe 26 genera are tabulated, 16 being new; in the second tribe 6 genera are tabulated, 4 being new.

— Papers from the Harriman Alaska Expedition. XXVIII, Hymenoptera.

Proc. Wash. Acad. Sci., IV, May 29, 1902, pls. IX-XI. pp. 117-274.

Records 335 species of Hymenoptera from Alaska. Two genera and 201 species are described as new.

— A new *Catolaccus* on *Sitotroga cerealella* Oliv.

Psyche, IX, No. 313, May, 1902, p. 315.

Describes *Catolaccus cerealella*.

— A new genus of Diapriids from Texas.

Biol. Bull., III, Nos. 1 and 2, May and June, 1902, p. 15.

Describes *Adeltopria longii*, new genus and species.

— Classification of the fossorial, predaceous, and parasitic wasps, or the superfamily Vespoidea. (Paper No. 5.)

Canadian Ent., XXXIV, No. 6, 1902, pp. 131-137.

Treats of the subfamilies Planicepinae, Notocephalinae, and Ceropalinae. In the Planicepinae two tribes have been recognized, the Planicepini and the Homonotini, the first with 3, the second with 8 genera, two genera being new. Two tribes are recognized in the Notocephalinae, one being based upon the rare genus *Chirodamus* Haliday. Only two genera are known in the Ceropalinae and one of these, *Ageniozenus*, is new.

BANGS, OUTRAM. A new *Phaethornis* from the Santa Marta region of Colombia.

Proc. New England Zoological Club, II, July 31, 1901, pp. 63-65.

Phaethornis longirostris susurrus (p. 64) is described as new, and critical notes are offered on nearly allied forms.

BANGS, OUTRAM. On a collection of birds from the Liu Kin Islands.

Bull. Mus. Comp. Zool., Harv. Coll., XXXVI, No. 8, July, 1901, pp. 255-269.

An annotated list of 56 species in the Museum of Comparative Zoology, of which the following are new: *Sterna bergii barcolis* (p. 256), *Anous pulbus* (p. 258), *Sphenocercus mediorhinus* (p. 261), *Terpsiphona iller* (p. 261), *Zenothoppigia avestoni* (p. 265) and *Parus stuegeri* (p. 267).

— On a collection of birds made by W. W. Brown, jr., at David and Divala, Chiriqui.

Auk, XVIII, No. 4, Oct., 1901, pp. 355-370.

A list of 175 species, with technical remarks. The following are named for the first time: *Odotophorus castipatus* (p. 356), *Campophilus guatemalensis barcans* (p. 360), *Mionectes assimilis dysecolus* (p. 362), *Pipra mentalis ignifera* (p. 363), *Crematocera crepera* (p. 365), and *Automolus cerasclus* (p. 367).

— Description of a new woodpecker from Chiriqui.

Proc. New England Zoological Club, II, Dec. 30, 1901, pp. 99-100.

Veniliornis neglectus (p. 99) is described.

— On a second collection of birds made in Chiriqui, by W. W. Brown, jr.

Proc. New England Zoological Club, III, Jan. 30, 1902, pp. 15-70.

An account of 261 species, collected mainly on the volcano of Chiriqui. *Phaethornis guy coruscus* (p. 26), *Campylopterus hemileucurus mollitus* (p. 28), *Dendrocopos villosus celtinus* (p. 33), *Myiopajis placens acicola* (p. 35), *Stelgidopteryx amabilis* (p. 37), *Geothlypis trichas* (p. 42), *Sclerurus mexicanus pullos* (p. 45), *Sittasomus levis* (p. 46), *Colaptes auratus* (p. 50), *Troglodytes beauri* (p. 53), *Henicorhina collina* (p. 55), *Microcerculus aculeatus* (p. 56), *Chlorospingus norvicius* (p. 67) are new. Critical remarks on various other species are offered.

BANKS, NATHAN. Synopses of North American invertebrates. XVI. The Phalangida.

Am. Naturalist, XXXV, No. 116, Aug., 1901, pp. 669-679, figs. 1-6.

A synoptic treatment of all the species, 62 in number, found in the United States.

— Some spiders and other Arachnida from Porto Rico.

Proc. U. S. Nat. Mus., XXIV, No. 1253, Oct. 4, 1901, pp. 217-227, pl. XV.

A list of 54 species, 4 of which are described as new.

- BANKS, NATHAN.** The Eastern species of Psychoda.
Canadian Ent., xxxiii, No. 10, Oct., 1901, pp. 273-275.
A synoptic table of the species and description of three new forms.
- Papers from the Hopkins-Stanford Galapagos Expedition, 1898-99. Entomological Results (5): Thysanura and Termitidae.
Proc. Wash. Acad. Sci., III, Nov. 29, 1901, pp. 541-546, figs. 47-57.
Descriptions of three new Thysanura, and two new Termitidae.
- Some Arachnida from New Mexico.
Proc. Acad. Nat. Sci. Phila., LIII, pt. III, Nov., 1901, pp. 568-597, pl. xxxiii.
An annotated list of 148 species, 19 of which are described as new.
- Notes on entomology.
Science (new series), xiv, No. 364, Dec. 20, 1901, pp. 977-979.
Brief reviews of various entomological articles.
- [Neuropteroid insects.]
Psyche, IX, No. 308, Dec., 1901, pp. 286-287.
Included in Some Insects of the Hudsonian Zone in New Mexico—vi, by Prof. T. D. A. Cockerell. Descriptions of 2 new species.
- A list of Neuropteroid insects from Mexico.
Trans. Am. Ent. Soc., xxvii, No. 4, Dec., 1901, pp. 361-371, pl. xii.
A list of 50 species, with descriptions of 17 new species and 3 new genera.
- Notes on some spiders of Walckenaer, Koch, and others.
Journ. N. Y. Ent. Soc., ix, No. 4, Dec., 1901, pp. 182-189.
Notes on the identity of various species described by these authors.
- A new genus of Myrmeleoniidae.
Canadian Ent., xxxiii, No. 12, Dec., 1901, pp. 329-330.
Description of *Cryptoleon*, type *Myrmeleon conspersus*, Rambur.
- Some spiders and mites from the Bermuda Islands.
Trans. Conn. Acad. Arts and Sci., xi, Jan., 1902, pp. 267-275, figs. 1-3.
An annotated list of 31 species, 3 of which are described as new.
- Monographie der Termiten Afrikas.
Science (new series), xv, No. 373, Feb. 21, 1902, p. 307.
Review of Sjöstedt's work by that title.
- BANKS, NATHAN.** Papers from the Hopkins-Stanford Galapagos Expedition, 1898-99, VII. Entomological Results (6): Arachnida. Pt. 1.
Proc. Wash. Acad. Sci., iv, Mar. 27, 1902, pp. 49-70, pls. 1-3.
A list of 48 species, with descriptions of 25 new ones and a discussion of the distribution of the species.
- A new species of *Brachynemurus*.
Ent. News, XIII, No. 3, Mar., 1902, p. 86.
Description of *B. cockerelli* from New Mexico.
- Notes and descriptions of Perlidae.
Canadian Ent., xxxiv, No. 5, May, 1902, pp. 123-125.
Descriptions of 5 new species and notes on 4 others.
- Principal insects liable to be distributed on nursery stock.
Bull. Div. Ent. U. S. Dept. Agric. (new series), No. 34, June, 1902, pp. 1-46, figs. 1-43.
A descriptive catalogue of the principal injurious insects that may be spread on nursery stock.
- BARTSCH, PAUL.** Tenants of Uncle Sam.
Osprey, v, No. 6, 1901, pp. 88-91, figs. 1-3.
This article treats of the summer birds residing in the lower part of the National Zoological Park at Washington, and is accompanied by a map of the region and a picture of an Oven bird's and Blue-Gray Gnatcatcher's nest.
- The trend of the popular ornithological magazine.
Osprey, v, No. 6, 1901, p. 94.
This paper calls attention to the change which has taken place in the reading matter put forth by these magazines during the past twenty years.
- Review of Reginald Heber Howe's and Glover Morrill Allen's Birds of Massachusetts.
Osprey, v, No. 6, 1901, p. 96.
- Camping on the old camp grounds.
Osprey, v, No. 7, July, 1901, pp. 97-100, figs. 1-2, and v, No. 8, Aug., 1901, pp. 119-121, figs. 1-3.
This article describes a camping trip at Dollar Island, Des Moines County, Iowa, and discusses the birds observed in that vicinity on the 29th and 30th of August, 1898. Five half-tone pictures accompany the sketch. One, a view of Dollar Island; another, a view up the Mississippi from Dollar Island, while the three remaining represent the Tufted Tit, Carolina Wren, and the Hooded Warbler.
- Review of Bradford Torrey's Everyday Birds.
Osprey, v, No. 7, July, 1901, p. 112.

BARTSCH, PAUL. Osprey notes.

Osprey, v, No. 7, July, 1901, p. 128.

This paper contrasts the habits of the inland fishhawk with those observed on the lower Potomac, i. e., the coastal birds.

— Another instance of the Spotted sandpiper (*Actitis macularia*) carrying its young.

Osprey, v, No. 9, Sept., 1901, pp. 143-144.

This records the transporting of a young in the parent's bill to a place of safety.

— An outwitted Kingbird.

Osprey, v, No. 10, Oct., 1901, p. 159.

This note relates how a Cicada, by the aid of its peculiar sound, managed to startle a pursuing Kingbird, and was thus enabled to reach a place of safety.

— Review of Gilbert T. Pearson's *Stories of Bird Life*.

Osprey, v, Nos. 11-12, Nov. and Dec., 1901, pp. 175-176.

— Nest of the Broad-winged hawk.

Osprey, vi, No. 2, Feb., 1902, p. 21.

A plate showing a nest with its complement of two eggs of the Broad-winged hawk, photographed by the author.

— Review of Francis Herrick's *Home Life of Wild Birds*. A new method in the study and photography of birds.

Osprey, vi, No. 2, Feb., 1902, pp. 35-36.

— The Trio at Home.

Osprey, vi, No. 3, Mar., 1902, p. 36.

A plate showing a nest and three full-fledged young of the yellow-throated Vireo, from a photo taken by the author.

— Board and lodging for birds.

Osprey, vi, No. 3, Mar., 1902, p. 48.

— The Thick-billed redwing. A new bird record for Iowa.

Osprey, vi, No. 3, Mar., 1902, p. 49.

This note cites three specimens of *Agelaius phoeniceus fortis* Ridgw. which were collected at Skunk River, 10 miles south of Burlington, Iowa, and one from Henderson County, Ill., and a fifth from Mayfield, Ky., all five of which are in the author's collection.

— Review of Ernest Seton-Thompson's bird portraits, with descriptive text by Ralph Hoffman.

Osprey, vi, No. 3, Mar., 1902, p. 54.

— Review of Audubon Bird Charts, published by the Prang Educational Company.

Osprey, vi, No. 3, Mar., 1902, p. 54.

— Review of the Proceedings of the Nebraska Ornithological Union for 1901.

Osprey, vi, No. 3, Mar., 1902, p. 55.

BARTSCH, PAUL. A new *Rissoina* from California.

Nautilus, xvi, No. 1, May, 1902, p. 1.

Rissoina bakeri is described from the west coast of America. The type is in the U. S. National Museum collection and comes from San Pedro, Cal. Other specimens have been examined from Whites Point and Pacific Beach, Cal., and San Martin Island, Lower California. The specimen is named in honor of Dr. Fred Baker, of San Diego, Cal.

— A trip to the Dismal Swamp.

Osprey, v, No. 3, pp. 33-37, 1 figs.; v, No. 4, pp. 55-56, 6 figs.; v, No. 5, pp. 65-69, 2 figs., 1902.

This article is intended to give the reader an idea of the region and its avifauna. The sketch is based upon notes made on two visits to the swamp. Some of the specimens referred to are now in the National Museum collection. The article concludes with a list of the birds of the region.

— Review of the Bittern, Petrel, and American Ornithology.

Osprey, v, No. 3, 1902, p. 43.

This note reviews three new minor ornithological publications which have made their appearance with the new year.

— Review of *The Woodpeckers* by Fannie Hardy Eckstrom.

Osprey, v, 1902, No. 3, p. 47.

(See also under W. H. DALL.)

BEAN, BARTON A. A rare Whale shark.

Science (new series), xv, No. 374, Feb. 28, 1902, p. 353.

Notice of the occurrence of an 18-foot whale shark, *Rhincodon*, on the east coast of Florida.

— The Conger eel.

Science (new series), xv, No. 383, May 2, 1902, p. 715.

Notice of the *Leptocephalus* form of Conger eel, captured at Gravesend Bay, New York.

— Steelhead salmon in Lake Michigan.

Forest and Stream, LVIII, No. 22, May 31, 1902, p. 430, 1 fig.

Notice of the capture of a steelhead salmon, *Salmo gairdneri*, in Lake Michigan, near Menominee, Mich., and forwarded to the Museum by Mr. R. J. Sawyer.

BENEDICT, JAMES E. Four new symmetrical Hermit crabs (Pagurids) from the West India region.

Proc. U. S. Nat. Mus., XXIII, No. 1236, July 1, 1901, pp. 771-778, text figs. 1-7.

The species described are *Cancallus ornatus*, *C. spongicola*, *Pylocheles partitus*, *Mictopagurus gilli*; the type specimens were all collected by the U. S. Fish Commission steamer *Albatross*.

BENEDICT, JAMES E. The Anomuran collections made by the *Fish Hawk* expedition to Porto Rico.

Bull. U. S. Fish Com. for 1900, 11, Oct. 2, 1901, pp. 129-148, pls. III-VI.

Fifty-four species are described, 10 of which are new. Three of the new species and several of the old ones, though found in the West Indian region, are not known to inhabit Porto Rico. The name *Pagurias* is suggested for *Pagurus*.

BIGELOW, ROBERT PAYNE. The Stomatopoda of Porto Rico.

Bull. U. S. Fish Com. for 1900, 11, Oct. 2, 1901, pp. 149-160, text figs. 1-13.

Only 5 species of Stomatopoda were represented in the collections made by the *Fish Hawk*, viz. *Gonodactylus arstedii*, *Pseudosquilla ciliata*, *Squilla internedia*, *Lysissquilla plumata*, and *L. maiaguezensis*, the last two being new.

BIGELOW, MAURICE A. The Cirripedia collected near Porto Rico by the *Fish Hawk* expedition in 1898-99.

Bull. U. S. Fish Com. for 1900, 11, Oct. 2, 1901, pp. 177-180.

Four species were taken, 2 of which belong to the family Lepadidae and 2 to the family Balanidae. Two of the species are indeterminate, but all represent well-known genera.

BREWSTER, WILLIAM. An undescribed form of the Black duck (*Anas obscura*).

Auk, XIX, No. 2, April, 1902, pp. 183-188.

Anas obscura rubripes (p. 184) is described as new, and its relationship with *A. obscura* is discussed at length.

BUSCK, AUGUST. [Microlepidoptera.]

Psyche, IX, No. 307, Nov., 1901, p. 272.

Included in Some Insects of the Hudsonian Zone in New Mexico.—v, by T. D. A. Cockereil. Lists 5 species.

— A review of the American moths of the genus *Depressaria*, Haworth, with descriptions of new species.

Proc. U. S. Nat. Mus., XXIV, No. 1268, May 12, 1902, pp. 731-749.

Review, synonymy, and synoptic table of 39 American species. Six new species are described.

CAUDELL, ANDREW N. Some insects from the summit of Pikes Peak, found on snow.

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Apr. 28, 1902), pp. 74-82.

An account of a collection of insects made on two small snow fields one afternoon during the summer of 1901. The species, 78 in number and determined by various specialists, are listed. They comprise 15 Diptera, 11 Hymenoptera, 6 Lepidoptera, 20 Coleoptera, 2 Orthoptera, 23 Hemiptera, and a single species of Neuroptera.

CAUDELL, ANDREW N. The Deicticenean genus *Eremopedes*.

Canadian Ent., XXXIV, No. 4, Apr. 1902, pp. 98-101.

Description of the genus and its 3 species, with tables for separating the latter. One of these species, *Eremopedes balli*, is here described as new.

CHAMBERLIN, RALPH V. List of the Myriapod family Lithobiidae of Salt Lake County, Utah, with descriptions of 5 new species.

Proc. U. S. Nat. Mus., XXIV, No. 1242, Sept. 27, 1901, pp. 21-25.

Gives a list, with descriptions, of 9 species, with an analytical key for their determination. Five of these species are new.

— *Henicops dolichopus*, a new chilopod from Utah.

Proc. U. S. Nat. Mus., XXIV, No. 1270, May 24, 1902, pp. 797-800.

A description of this new species, with a table for separating it from *Henicops fulvicornis* of Meinert.

CHAPMAN, FRANK M. Descriptions of six apparently new birds from Peru.

Bull. Am. Mus. Nat. Hist., XIV, Sept. 12, 1901, pp. 225-228.

Chlorochrysis fulgentissima (p. 225), *Malaethraupis castaneiceps* (p. 225), *Euphonia xanthogastra brunceifrons* (p. 226), *Chlorospingus flavigularis parvirostris* (p. 227), *Ochthoeca keaysi* (p. 227), and *Terenura xanthonota* (p. 228) are new.

CHITTENDEN, FRANK H. The fall Army worm and Variegated cutworm.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 29, Oct. 2, 1901, pp. 1-64, figs. 1-11.

Detailed accounts of *Laphygma frugiperda* S. and A. and *Peridroma saucia* Hübner, with special reference to serious injuries by these species, the former in 1899 and the latter in 1900.

— The Green clover worm.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 30, Oct. 2, 1901, pp. 44-50, fig. 26.

A complete account of *Plathypena scabra* Fabricius as known to date, with original illustration of egg, larva, and moth.

— Insects and the weather during the season of 1900.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 30, Oct. 2, 1901, pp. 63-75.

— Injurious moths attracted to lights in autumn.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 30, Oct. 2, 1901, pp. 85-86.

A list of species captured at night in Washington, D. C., in September 1900 with notes.

CHITTENDEN, FRANK H. Injury to rustic cedar fences and summerhouses by borers.

Bull. Dir. Ent., U. S. Dept. Agric. (new series), No. 30, Oct. 2, 1901, pp. 91-92.

Injury in 1900 and 1901 in Pennsylvania and District of Columbia by *Callidum janthinum*, *Hylotrupes lignens*, and *Atimia confusa*.

— The Red spider.

Proc. 17th Ann. Conv. Soc. Am. Florists, Dec., 1901, pp. 89-90.

A short popular article on *Tetranychus bimaculatus*.

— *Thrips* injurious in greenhouses.

Weekly Florist's Review, Apr. 17, 1902, pp. 738-740, 2 figs.

A popular economic article on Physopoda, and special reference to *Thrips tabaci*, *T. tritici*, *Heliothrips haemorrhoidalis*, and *H. costri*, with methods of control.

— Some insects injurious to vegetable crops.

Bull. Dir. Ent., U. S. Dept. Agric. (new series), No. 33, June, 1902, pp. 1-117, figs. 1-30.

General accounts of *Trichobaris trinotata*, *Loptoglossus oppositus*, *Psila rose*, *Ligyris gibbosus*, *Laphygma ceciga*, *Entomosectis atonitidis*, *Pionca rimosalis*, *Plusia brassica*, *P. praeclonialis*, *P. simplex*, *Phylotritia bipustulata*, *Phorbia fusciceps*, *Eudamus proteus*, *Somasia nigricana*, *Ogdocoonta cinercola*, and shorter accounts of *Loxostege similalis*, *L. sticticatis*, *Helluta undalis*, *Scaptomyza flavicola*, *S. adusta*, *S. graninum*, *Agromyza diminuta*, *Ceutorhynchus rapae*, *C. quadridens*, *Peniphagus* sp., *Polistes* as cabbageworm destroyers, *Phorbia brassica*, *Pieris rapae*, *Plutella cruci rarum*, *Margantia histrionica*, *Aphis brassicae*, *Uraucetes* (*Thecta*) *melinus*, *Ceratonia trifurcata*, *Monophtota nubilella*, *Diabrotica atripennis*, *Spermoiphagus pectoralis*, *Bruchus pisorum*, *Heliothis armiger*, *Hyphantria cunea*, *Halticus uhleri*, *Acanthocercus gabator*, *Alydus eurinus*, *A. pilosulus*, *Diodrocephala versuta*, *D. coccinea*, *Stictoccephala festina*, *Aphis runcicis*, *Monocrepidius vespertinus*, *Systema blanda*, *S. frontalis*, *S. hudsonias*, *Chalcocena denticulata*, *C. pulicaria*, *Disomyza xanthomelana*, and *Epitrix fuscata*.

CLARK, HUBERT LYMAN. The Echinoderms of Porto Rico.

Bull. U. S. Fish Com. for 1900, II, Oct. 4, 1901, pp. 231-263, pls. XIV-XVII.

Over 1,000 specimens and 86 species of Echinoderms were taken by the *Fish Hawk*. They are distributed among the various groups as follows: Crinoidea, 3 species; Asteroidea, 11 species; Ophiuroidea, 49 species, of which 7 are new; Echinoidea, 13 species; Holothurioidea, 10 species, of which 1 is new. After the descriptions, tables of distribution are added.

CLARK, HUBERT LYMAN. An extraordinary animal.

Zool. Anz., XXV, No. 675, June 30, 1902, pp. 509-511, 1 text figure.

Description of a curious animal dredged by the U. S. Fish Commission steamer *Albatross* in 1,588 fathoms off Queen Charlotte Islands. It is probably an echinoderm, but whether an echinoid or a holothurian it seems impossible to decide. The writer thinks it is a holothurian related to *Sperolluria*, but the spines and "digestive tube" are very much like those of an echinoid.

COCKERELL, T. D. A. On a slug of the genus *Verrucicella* from Tahiti.

Proc. U. S. Nat. Mus., XXIII, No. 1238, Aug. 15, 1901, pp. 835-836.

Verrucicella aqassizii Cockerell is described as new.

COE, WESLEY R. The Nemerteans of Porto Rico.

Bull. U. S. Fish Com. for 1900, II, Oct. 8, 1901, pp. 223-229.

Only 8 species of Nemerteans are known to occur in Porto Rico; 3 are species already known, 3 are new, while 2 are indeterminate. The new species belong to the genera *Tenuosoma*, *Micrura*, and *Cerebratulus*.

COQUILLETT, DANIEL W. Description of *Apoccephalus*, new genus, and *A. pergandei*, new species.

Proc. Ent. Soc. Wash., IV, No. 4 (author's extras published July 2, 1901), p. 501, figs. 20, 21.

Included in "The ant-decapitating fly," by Theodore Pergande. Describes this new genus and species and gives 2 text figures illustrating the same.

— New Diptera from Southern Africa.

Proc. U. S. Nat. Mus., XXIV, No. 1243, Sept. 27, 1901, pp. 27-32.

Describes 1 new genus and 8 new species received from Mr. C. P. Lomdsbury, Government Entomologist of Cape Colony.

— A new Anthomyid injurious to lupines.

Ent. News, XII, No. 7, Sept., 1901, pp. 206-207.

Describes a new species of *Phorbia*.

— Types of Anthomyid genera.

Journ. N. Y. Ent. Soc., IX, No. 3, Sept., 1901, pp. 134-146.

Gives an historical account of the North American and European genera, with mention of the type species and synonymy of the greater number of them.

— Three new species of Culicidae.

Canadian Ent., XXXIII, No. 9, Sept., 1901, pp. 258-260.

Describes *Psorophora howardii*, *Culex curvii*, and *Aedes smithii*, 3 new mosquitoes.

COQUILLET, DANIEL W. [Original descriptions of new Diptera.]

Bull. N. Y. State Museum, No. 47, Sept., 1901, pp. 585-586.

Included in Aquatic insects in the Adirondacks, by James G. Needham and Cornelius Betten. Describes 2 new genera and 2 new species.

— Papers from the Hopkins-Stanford Galapagos Expedition, 1898-99. II. Entomological Results (2): Diptera.

Proc. Wash. Acad. Sci., III, Nov. 7, 1901, pp. 371-379.

Gives a resumé of published notices of Diptera collected on the Galapagos Islands, and lists 35 species, distributed in 26 genera, collected on these islands by the Hopkins-Stanford Expedition; gives the known distribution of each species, and describes 1 genus and 9 species as new.

— Three new species of nematoceros Diptera.

Ent. News, XIII, No. 3, Mar., 1902, pp. 84-85.

Describes 3 new species of long-horned Diptera.

— [Diptera.]

Proc. Ent. Soc. Wash., V, No. 1, Apr. 28, 1902, p. 76.

Included in Some insects from the summit of Pikes Peak, found on snow, by A. N. Caudell. Reports on 10 species, giving the known distribution of each.

— [Diptera.]

Psyche, IX, No. 313, May, 1902, pp. 316-347.

Included in Some insects of the Hudsonian Zone in New Mexico, VIII, by T. D. A. Cockerell. Lists 31 species.

COOK, ORATOR F. Revolutionary inferences from the Diplopoda.

Proc. Ent. Soc. Wash., V, No. 1 (author's extras published Mar. 28, 1902), pp. 14-20.

The Diplopoda are discussed as an example of kinetic evolution, a progressive modification without natural selection and without diversification of habits.

— The earwig's forceps and the phylogeny of insects.

Proc. Ent. Soc. Wash., V, No. 1 (author's extras published Apr. 28, 1902), pp. 84-92.

The use of the earwig's forceps is found to be the unfolding of the wings of the insect before flight, not the closing of them on alighting, as in the Staphylinid beetles. Winged insects with complete metamorphosis are held to be more primitive, and the analogy of *Dyseritina* as a larval carwig with *Projapyx* as the larva of *Japyx* is pointed out. The cockroaches are less primitive than the May flies, Odonata, and other insects with aquatic larvæ, and the derivation of the wings of insects from larval gills seems prob-

COOK, ORATOR F.—Continued.

able. The homology of the stylets of *Projapyx* with those of *Scalopendrella*, as suggested by Silvestri, indicates that the Diplopoda may prove to be a larviform offshoot from the insect phylum instead of an ancestral type, as commonly supposed.

COVILLE, FREDERICK V. Papers from the Harriman Alaska expedition, XXIV. The willows of Alaska.

Proc. Wash. Acad. Sci., III, Aug. 23, 1901, pp. 297-302, pls. XXXIII-XLII.

— Papers from the Harriman Alaska expedition, XXVI. *Harrimanella*, a new genus of heathers.

Proc. Wash. Acad. Sci., III, Dec. 6, 1901, pp. 569-576, figs. 62-66.

— *Ribes aureum* and *Ribes lentum*.

Proc. Biol. Soc. Wash., XV, Mar. 5, 1902, pp. 23-29.

CURRIE, ROLLA PATTESON. Papers from the Harriman Alaska expedition. XXII, Entomological Results (14): The Odonata.

Proc. Wash. Acad. Sci., III, July 13, 1901, pp. 217-223.

Eight species of dragonflies, collected by Prof. Trevor Kincaid on the Harriman expedition, are here listed with critical notes. Four additional species, not collected on this expedition, but previously recorded from Alaska, are appended.

— Papers from the Hopkins-Stanford Galapagos expedition, 1898-99. III, Entomological Results (3): Odonata.

Proc. Wash. Acad. Sci., III, Nov. 7, 1901, pp. 381-389, text figs. 29-34.

Gives a list of the published references to Galapagos dragonflies and records 7 species collected by Mr. R. E. Snodgrass. The male of *Tramea darwini* Kirby is here described for the first time, as well as two new species, *Eschna galapagoensis* and *Cannacria fumipennis*.

DALL, WILLIAM HEALEY. Synopsis of the Lucinacea and of the American species.

Proc. U. S. Nat. Mus., XXIII, No. 1237, Aug. 22, 1901, pp. 779-883, pls. XXXIX-XLII.

This work contains a synopsis with characters of the families Thyasiridae, Diploidontidae, Lucinidae, Corbidae, and Cyrenellidae, which make up the Lucinacea, their genera, subgenera, and sections; a thorough revision of the nomenclature of the groups and of the American species. The following groups are described as new:

Eutopia Dall, section of *Myrtrea* Turton, with *Lucina sagrinata* Dall as type. The genus *Phacoides* Blainville is reinstated; with section *PleuroLucina* Dall, type *Lucina leucocyma*

DALL, WILLIAM HEALEY—Continued.

Dall; subgenus *Lucinisea* Dall, type *Lucina nassula* Conrad; subgenus *Lucinoma* Dall, type *Lucina filosa* Stimpson; subgenus *Callucina* Dall, type *Lucina radians* Conrad; section *Epilucina* Dall, type *Lucina californica* Conrad; subgenus *Parvilucina* Dall, type *Lucina tenuisculpta* Carpenter; section *Bellucina* Dall, type *Lucina pisum* Reeve; *Diraricella* von Martens, with sections *Pompholigina* Dall, type *Lucina gibba* Gray; *Boarlotia* Dall, type *Lucina boarloti* Cossmann; and *Vaticinaria* Dall, type *Cryptodon muscleyi* E. A. Smith. The new species and names are as follows: *Thyasira cecarata*, Gulf of California; *T. tomiana* Chile; *T. magellana*, Patagonia; *Ariopsis ciridis*, Alaska; *Diplodonta borelli*, variety *Montica*, Alaska; *Codakia colpoica*, Gulf of California; *C. cubana*, Cuba; *C. portoricensis*, Porto Rico; *C. mexicana*, west Mexico; *C. galapugana*, Galapagos Islands; *C. chiquita*, Lower California; *Phacoides* (*Callucina*) *bermudensis*, Bermuda; *P.* (*Parvilucina*) *erabella*, Florida; *P.* (*Bellucina*) *amiantus*, North Carolina; *P.* (*Parvilucina*) *lamprus*, Lower California; *P.* (*Lucinisea*) *antballi*, variety *centrifugus*, Gulf of California; *P.* (*Lucinoma*) *hercules*, Gulf of California; *P.* (*Parvilucina*) *appraematus*, Gulf of California; *Diraricella perparula*, Acapulco. The following species heretofore unfigured are illustrated: *Thyasirabisecta* Conrad; *T. conia* Dall and Stimpson; *Ariopsis sericatus* Carpenter; *Lucina plumea* Dall and Stimpson; *Phacoides* (*Lucinoma*) *filosus* Stimpson; *P.* (*L.*) *annulatus* Reeve; *P.* (*Callucina*) *radians* Conrad; *P.* (*Pleurolocina*) *undatus* Carpenter; *P.* (*Herc*) *richthofeni* Gabb; *P.* (*Parvilucina*) *lingualis* Carpenter; *P.* (*Parvilucina*) *tenaisculpta* Carpenter; *P.* (*Bellucina*) *cancellaris* Philippi; *Cyrenoida foridana* Dall; and *Phacoides* (*Pseudomiltha*) *negativaris* Dall.

A gigantic fossil *Lucina*.

Nautilus, xv, No. 4, Aug., 1901, pp. 10-42.

Lucina megaris is described as new from the Clairemont limestones of the Eocene of Jamaica, West Indies, the internal casts measuring 235 mm. in length and weighing 7 pounds. The largest species previously known measured 80 mm. in length.

History of the Smithsonian Institution.

Nation, lxxiii, No. 1902, Dec. 12, 1901, p. 456, and lxxiv, No. 1907, Jan. 16, 1902, p. 52.

A review of the two volumes of documentary history of the Institution, prepared by Mr. Rhees.

The discovery and exploration of Alaska.

Harriman Alaska Expedition, Alaska, II, pp. 185-204. New York: Doubleday, Page & Co. 1901.

A summary of the history of discovery and exploration of the territory now known as

DALL, WILLIAM HEALEY—Continued.

Alaska, from 1750 to 1867. Portraits of Baranoff, Veniaminoff, Wrangell, and Kennicott are supplied from extremely rare originals.

The structure of Diamond Head, Oahu.

Am. Geologist, xxvii, No. 6, 1901, pp. 386-387.

A brief summary of the facts observed at this locality by the writer in 1899, tending to establish the slow growth, with intermittent periods of rest and submergence, of the lower outer portion of the tuff cone at Diamond Head.

On the true nature of *Taniosoma*, *Science* (new series), No. 366, Jan. 3, 1902, pp. 5-7.

A résumé of the literature on this problematical genus, and a brief account of newly discovered specimens proving it to belong to the Balanidae.

The Alaskan boundary.

Nation, lxxiv, No. 1909, Jan. 30, 1902, p. 92.

A refutation of certain errors and recapitulation of sundry facts bearing on the question of the location of this line and the proposition to submit it to arbitration.

A new species of *Volucomitra*.

Nautilus, xv, No. 9, Jan., 1902, pp. 102-103.

Volucomitra alaskana from Bering Sea is described as new.

Lamarck, the founder of evolution.

Popular Science Monthly, Jan., 1902, ix, No. 3, pp. 263-264.

A review and summary of the work of the same title by A. S. Packard, jr., professor of zoology in Brown University.

Alpheus Hyatt.

Popular Science Monthly, Feb., 1902, ix, No. 1, pp. 439-441.

An obituary notice, with portrait.

Illustrations and descriptions of new, unfigured, or imperfectly known shells, chiefly American, in the U. S. National Museum.

Proc. U. S. Nat. Mus., xxiv, No. 1264, Mar. 31, 1902, pp. 499-566, pls. xxxvii-xl.

This comprises (1) the illustration of species unfigured, imperfectly illustrated, or new in the National Museum; (2) the descriptions of a number of new forms from the collection, and (3) the revision of several groups of northern gastropods, particularly those of the subfamily *Chrysodominae* and the genera *Trophon* and *Boreotrophon*.

The following names of genera or subgenera or sections are proposed as new:

Agriopoma, *Antiplanex*, *Antistropus*, *Austrotrophon*, *Microglyphis*, *Plicifusus*, and *Toldouita*.

DALL, WILLIAM HEALEY—Continued.

The following new species are described:

Conus simpsoni, *Daphnella eugrammata*, *Aetona breviculus*, *Toldonia purplea*, *Pleurotoma (Antiplanex) pinnat*, *P. (A.) staltwa*, *P. (A.) santarosana*, *Pleurotoma callipecta*, *Tritonofusus (Plicifusus) herculei*, *Volutopsius trophonius*, *Antistrepus magellanicus*, *Trophon plectus*, *Borotrophon meclaini*, *B. kamohakauus*, *B. smithii*, *B. peregrinus*, *B. beringi*, *B. puvifusus*, *B. triphorus*, *B. alaskanus*, *B. mazatlanicus*, *B. panamensis*, *B. aratouensis*, *B. cucymatus*, *B. rotundatus*, *Trophon pinnatus*, *Typhis martyria*, *Solarilla carlotta*, *Gamsa panamensis*, *Lepidopleurus usogonus*, *L. halistreptus*, *L. luridus*, *L. fardolani*, *Ichnochiton stevensii*, *I. sacrosus*, *Cerrella mecus*, *Limopsis panamensis*, *Cetoconcha senha*, *Terebratalia hemphilli*, and *Cranid putagonica*.

The following species, described elsewhere but not illustrated, are now figured:

Nanina (Maerochlamys) diadema Dall, *Vitrea raderi* Dall, *Punctum eadolphii* Dall, *Zonitoides (Pseudohyalina) pugtensis* Dall, *Ashmunella rhysea* Dall, *Ashmunella pseudodonta* Dall, *Ashmunella ashmuni* Dall, *Holospira (Haplostemma) hamiltoni* Dall, *Ceres nelsoni* Dall, *Siphonaria lineolata* Orbigny, *Siphonaria alternata* Say, *Cylindrina verrillii* Dall, *Retusa mayoi* Dall, *Unbravatum (Hyalopatinus) rushii* Dall, *Terebra texana* Dall, *Terebra (Sabula) floridana* Dall, *Terebra (Aeus) rushii* Dall, *Admete microsopica* Dall, *Aurinia dubia* Broderip, *Muriceida philippiana* Dall, *Muriceida (Pseudomuriceida) multangula* Philippi, *Muriceida ostracum* Conrad, *Ladrus cayohuesonicus* Sowerby, *Scala nitidella* Dall, *Scala scipio* Dall, *Scala (Amica) mitchelli* Dall, *Scala (Cirsotrema) cochlea* Sowerby, *Scala (Acrilla) retifera* Dall, *Pecten (Plagiactenium) gibbus* variety *ampliostratus* Dall, *Lima (Ctenoides) albivora* Dall, *Philobrya atlantica* Dall, *Crenella pectinula* Gould, *Crenella faba* Müller, *Arca (Fossularca) adamsi* Smith, variety *conradiana* Dall, *Arca (Cucullaria) sagrinata* Dall, *Astarte globula* Dall, *Chama lactuca* Dall, *Meretrix (Agriopoma) teassiana* Dall, *Meretrix (Transcannella) conradiana* Dall, *Meretrix simpsoni* Dall, *Maetra richmondii* Dall, *Mactrelle theringi* Dall, *Asthenotherus hemphilli* Dall, *Pandora (Kennerleyia) bushiana* Dall, *Pandora (Clidiophora) trilucata* Say, *Pandora (Clidiophora) gouldiana* Dall, *Argonauta carypa* Dall, *Pleurotoma (Antiplanex) perversa* Gabb, *Pleurotoma (Antiplanex) vinosa* Dall, *Pleurotoma circinata* Dall, *Brillia emprosia* Dall, *Cancellaria middendorffiana* Dall, *Scaphella steansii* Dall, *Fusus? (Roperia) roperi* Dall, *Buccinum angulosum* Gray, and forms *simpsoni* Gould, *urnnale*, and *subcostatum* Dall, *Buccinum percrassum* Dall, *Buccinum plectrum* Stimpson, *Buccinum eastanum* Dall and variety *tricarinatum* Dall, *Buccinum tenellum* Dall, *Buccinum picturatum* Dall, *Chryso-domus tabulatus* Baird, *Tritonofusus hallii* Dall, *Tritonofusus (Plicifusus) brunneus* Dall, *Tritonofusus (Plicifusus) viricus* Dall, *Tritonofusus (Plicifusus) rectirostris* Carpenter, *Tritonofusus (Plicifusus) spitzbergensis* Reeve, *Tritonofusus*

DALL, WILLIAM HEALEY—Continued.

(*Plicifusus*) *rosicus* Dall, *Tritonofusus (Plicifusus) murtensi* Krause, *Volutopsius beringi* variety *kobelli* Dall, *Volutopsius eastanum* Mörch, *Volutopsius attenuatus* Dall, *Volutopsius regularis* Dall, *Beringius crebricostatus* Dall, *Beringius kennicottii* Dall, *Liomesus nux* Dall, *Liomesus canalieulatus* Dall, *Astyris aurantiaca* Dall, *Murex (Pteropurpura) carpenteri* Dall, *Murex (Pteropurpura) petri* Dall, *Pedicularia californica* Newcomb, *Anaplocanus borealis* Dall, *Litorina alcutica* Dall, *Litorina akana* Dall, *Amuroopsis purpurea* Dall, *Calliostoma variegatum* Carpenter, *Calliostoma turbinum* Dall, *Calliostoma iridium* Dall, *Gibbula canfieldi* Dall, *Margarites vorticiferus* Dall, *Zeidora flabellum* Dall, *Sabemarginula yatesii* Dall, *Leda hamata* Carpenter, *Pecten randolphi* Dall, *Pecten davidsoni* Dall, *Venus kennicottii* Dall, *Panopea globosa* Dall, *Panomya ampla* Dall, *Terebratalia hemphilli* Dall.

— Note on the names *Elachista* and *Pleurotomaria*.

Nautilus, xv, No. 11, Mar. 1902, p. 127.

Alabina is substituted for *Elachista*, which is preoccupied.

— Botanical nomenclature.

Science (new series), xv, No. 384, May 9, 1902, p. 749.

A short contribution to a discussion incited by Dr. O. F. Cook, on the difficulties connected with attaining a stable nomenclature.

— On the definition of some modern sciences.

Popular Science Monthly, June, 1902, ix, No. 8, pp. 99-102.

Introductory address on the occasion of a symposium at the Philosophical Society of Washington, Mar. 15, 1902.

— Notes on the giant *Limas*.

Nautilus, xvi, No. 2, June, 1902, pp. 15-17.

A brief review of the species of *Lima* of the section *Arca* H. and A. Adams. *L. exarata* Fabricius and *L. goliath* Sowerby are recognized as good species, and *L. patagonica* from the west coast of Patagonia, and *L. agassizii*, from the Gulf of Panama, are described as new.

DALL, WILLIAM HEALEY, and BARTSCH, PAUL. A new Californian *Bittium*.

Nautilus, xv, No. 5, Sept., 1901, p. 58.

Bittium (Elachista) californica is described as new from California. It occurs both recent and as a post-pliocene fossil. The type which is in the U. S. National Museum collection is from the post-pliocene deposits of Dead Mans Island, of San Pedro, Cal.

DALL, WILLIAM HEALEY, and SIMPSON, CHARLES TORREY. The Mollusca of Porto Rico.

Bull. U. S. Fish Com., 1900 (Nov., 1901), pp. 351-564, pls. 53-58.

This paper, of the nature of a monograph on the mollusk-fauna of Porto Rico, begins by

DALL, WILLIAM HEALEY, and SIMPSON, CHARLES TORREY—Continued.

a discussion of the literature relating to that fauna, and the relations of the land and marine faunas to those of adjacent regions. This is followed by an enumeration of the species known, together with a brief description of each, as well as a fuller description of those supposed to be new. In all the fauna contains 653 species, of which 42 are new. The enumeration is followed by a check list of the species, a list of the U. S. Fish Commission dredging stations, plates with explanations, and an index. A few old species characteristic of the island are figured, and also the newly described forms, excepting one or two belated species. The species described as new are as follows:

Thysa cervina, *Pleurobranchus lacteus*, *Terebra juanica*, *Drillia actinoeyela*, *D. gundlachi*, *D. ponciana*, *D. meloniana*, *D. interpleura*, *Mangilia ussara*, *M. (Glyphostoma) aquadillana*, *Oliva caribbaensis*, *Olivella rotunda*, *Margiella eudae*, *Tritonidea tincta* variety *bermudensis*, *Nassaria melabrannica*, *Phos oryglyptus*, *Caumbella calliglypta*, *C. perpicta*, *Scala calita*, *Eurima patula*, *Niso portoricensis*, *Turbonilla portoricensis*, *T. insularis*, *Cerithiopsis pupa*, *Omalaxis cquisila*, *Rissoa epima*, *R. portoricana*, *Megalomastoma croceum* variety *curtum*, *Caeculina portoricensis*, *Ischnochiton liozonis*, *Pecten mayaguezensis*, *Saxicavella sagrinata*, *Sphenia antillensis*, *Tellina persica*, *Macoma pseudomera*, *Meretricia arcta*, *Meretricia (Tranternella) culbrana*, *Circes (Gouldia) insularis*, *Cardium serratum* variety *multilicatum*, *Prolocardia tincta*, *Thyasira conia*, *Luvinia phenax*, *Myrtca pristiphora*, *Phacoides trisulcatus* Conrad variety *blaudus*, *Diplodonta nolata*, *Giliodoris mollis* Bergh, ms. is noted as new. The sections *Philippina* for *Lyonsia beana* Orbigny, and *Elochista* Dall for *Bittium cerithioides* are proposed as new.

DOANE, R. W. Descriptions of new Tipulidae.

Journ. N. Y. Ent. Soc., IX, No. 3, Sept., 1901, pp. 97-127.

Describes 54 species as new.

DYAR, HARRISON G. Larva of *Eucheira socialis* Westw.

Proc. Ent. Soc. Wash., IV, No. 4, July 16, 1901, p. 420.

Description of the larva of this interesting social species.

— On the specific differences between *Alypia octomaculata* Fab. and *A. langtonii* Coup.

Proc. Ent. Soc. Wash., IV, No. 4, July 16, 1901, pp. 495-496.

— Further about the types of *Aeronycta*.

Canadian Ent., XXXIII, No. 7, July, 1901, pp. 194-192

Reply to remarks on this subject by Prof. J. B. Smith.

DYAR, HARRISON G. Life histories of North American Geometridae, XXXII-XXXIII.

Psyche, IX, No. 303, July, 1901, pp. 226-227; No. 304, Aug., 1901, pp. 239-240; No. 305, Sept., 1901, pp. 250-251; No. 306, Oct., 1901, pp. 262-263; No. 307, Nov., 1901, pp. 273-274; No. 308, Dec., 1901, pp. 287-288; No. 309, Jan., 1902, pp. 298-299; No. 310, Feb., 1902, pp. 310-311; No. 312, Apr., 1902, p. 336; No. 313, May, 1902, pp. 344-345.

— Concerning larval descriptions.

Canadian Ent., XXXIII, No. 11, Nov., 1901, pp. 315-316.

Criticism of article by W. E. Hinds.

— Descriptions of the larvae of three mosquitoes.

Journ. N. Y. Ent. Soc., IX, No. 4, Dec., 1901, pp. 177-179, pl. X, figs. 1-3.

Describes the larvae of *Aedes smithii* Coquillett, *Culex territans* Walker, and *Culex confinis* Lynch.

— The life history of *Uranotania saphirina* O. S.

Journ. N. Y. Ent. Soc., IX, No. 4, Dec., 1901, pp. 179-182, pl. XI, figs. 1-4.

— The U. S. National Museum.

Canadian Ent., XXXIV, No. 2, Feb., 1902, p. 36.

Census of specimens of Lepidoptera in the collection.

— A review of the species of *Haploa*.

Proc. Ent. Soc. Wash., V, No. 1 (author's extras published Mar. 28, 1902), pp. 6-9.

Many of the described species are found to be merely synonyms or varieties. Five species, *Haploa clymene* Brown, *H. colona* Huebner, *H. lecontei* Boisduval, *H. confusa* Lyman, and *H. contigua* Walker, are retained as valid.

— To what species should the name *Aeronycta hamamelis* Guenee be applied?

Proc. Ent. Soc. Wash., V, No. 1 (author's extras published Mar. 28, 1902), pp. 13-14.

The author concludes that this name should not be applied to the oak-feeding species, as has been done by Grote, but to the species which Grote calls *subochrea* and which feeds exclusively upon witch hazel.

— Description of the larva of *Triplocris smithsonianus* Clemens.

Proc. Ent. Soc. Wash., V, No. 1 (author's extras published Mar. 28, 1902), p. 33.

— A new form of *Chisioampa* from Colorado.

Proc. Ent. Soc. Wash., V, No. 1 (author's extras published Mar. 28, 1902), pp. 38-39.

DYAR, HARRISON G. Synoptic table of the North American species of *Chionobas*.

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Mar. 28, 1902), p. 42.

— A lepidopterous larva on a leaf-hopper. (*Epipyrops barberiana* n. sp.)

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Mar. 28, 1902), pp. 43-45.

— The larva of *Carana cretata*.

Journ. N. Y. Ent. Soc., x, No. 1, Mar., 1902, p. 54.

Description of that larva and of the cocoon.

— Notes on mosquitoes on Long Island, New York.

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Apr. 28, 1902), pp. 45-51.

Refers to the occurrence of nine species, with notes on the larvæ of some.

— Illustrations of the early stages of some Diptera.

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Apr. 28, 1902), pp. 56-59, pl. 1, figs. 1-8.

Figures and describes the larvæ and pupæ of five species.

— The collection of Lepidoptera in the National Museum.

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Apr. 28, 1902), pp. 61-71.

Describes the history and present condition of this collection.

— [Lepidoptera.]

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Apr. 28, 1902), pp. 77-78.

Included in Some insects from the summit of Pike's Peak, found on snow, by A. N. Caudell. Records five species. *Caccia n. gundana* Dyar and *C. argyrosipila* Walker, var. *viridana* Dyar, are described as new.

— Description of a new Noctuid.

Canadian Ent., xxxiv, No. 4, Apr., 1902, p. 105.

Describes *Aleptina inca* Dyar, new genus and species.

— [Descriptions of three larvæ.]

Proc. U. S. Nat. Mus., xxiv, No. 1268, May 12, 1902, pp. 731-749.

Included in "A review of the American Moths of the genus *Depressaria*, Haworth, with descriptions of new species," by August Busck.

— [Lepidoptera.]

Psyche, ix, No. 313, May, 1902, p. 347.

Included in Some insects of the Hudsonian Zone in New Mexico, viii, by T. D. A. Cockerell.

DYAR, HARRISON G. *Fenaria sevorsa* and *Eusemia sabulosa*.

Canadian Ent., xxxiv, No. 5, May, 1902, p. 122.

Correction of synonymy.

— The *Psychophora* mix-up.

Ent. News, xiii, No. 6, June, 1902, pp. 191-192.

Preliminary note on the genus *Psychophora* Curtis.

— A generic subdivision of the genus *Plusia*.

Journ. N. Y. Ent. Soc., x, No. 2, June, 1902, pp. 79-82.

DUERDEN J. E. Report on the Actinians of Porto Rico.

Bull. U. S. Fish Com. for 1900, ii, Apr. 7, 1902, pp. 321-374, pls. A and I-XII.

Discusses the great changes which the classification of the Actinaria is undergoing. Describes 13 species, of which 1, *Eumodosoma spherulata*, is new, and another, *Cerianthus* sp.?, is doubtfully so.

EIGENMANN, CARL H. Description of a new cave salamander, *Speleperes stejneri*, from the caves of southwestern Missouri.

Trans. Am. Microscopical Soc., xxii, 1901, pp. 189-192, 2 pls.

FLINT, JAMES M. The Foraminifera of Porto Rico.

Bull. U. S. Fish Com., 1900, ii, Mar. 28, 1902, pp. 413-416.

Describes Foraminifera in general terms; gives lists of species collected, arranged according to the families and stations represented. Thirty-six species were taken by the *Fish Hawk*, all in quite shallow water.

FOLSOM, JUSTUS WATSON. Papers from the Harriman Alaska expedition. xxxvii.—Apterygota.

Proc. Wash. Acad. Sci., iv, Mar. 27, 1902, pp. 87-116, pls. iv-viii.

Lists and characterizes 14 forms of Collembola and Thysanura collected by Prof. Trevor Kincaid. Of this number, 6 species are described as new.

GEARE, RANDOLPH I. A List | of | the Publications | of the | United States National Museum | (1875-1900) | Including the Annual Reports, Proceedings, Bulletins, | Special Bulletins, and Circulars, | With Index to Titles. | By | Randolph I. Geare, | Chief, Division

GEARE, RANDOLPH I.—Continued.

of Correspondence and Documents. |
— Washington: | Government
Printing Office. | 1902. |

Bull. U. S. Nat. Mus., 51, 8vo, pp. 1-VII,
1-168.

HARGITT, CHARLES W., and ROGERS,
CHARLES G. The Aleyonaria of Porto
Rico.

Bull. U. S. Fish Com., 1900, II, Dec. 12,
1901, pp. 265-287, pls. 1-IV, text figs. A-K.

A synoptic table of all the orders, sections,
and families of the Aleyonaria are given,
with descriptions of the Porto Rican genera
and species. Two genera and 5 species are
new.

HAY, W. P. Two new subterranean
crustaceans from the United States.

Proc. Biol. Soc. Wash., XIV, Sept. 25, 1901,
pp. 179-180.

The forms described are a shrimp, *Palæmon-
ius gauteri*, from Mammoth Cave, Kentucky,
and an isopod, *Crepidotea richardsonæ*, from
Nickajack Cave, Tennessee; the former repre-
sents a new genus. Both are pale in color
and blind.

— On the proper application of the
name *Cambarus carolinus* Erichson.

Proc. Biol. Soc. Wash., XV, Mar. 5, 1902,
p. 38.

By examination of a photograph and draw-
ings of the type of *Cambarus carolinus* Erich-
son, Professor Hay determines that it is the
same as *C. dubius* Faxon, and that the name
C. hagenianus Faxon must be substituted for
C. carolinus Hagen, not Erichson.

HEIDEMANN, OTTO. Papers from the
Hopkins-Stanford Galapagos expedi-
tion, 1898-99. I. Entomological Re-
sults (1): Hemiptera.

Proc. Wash. Acad. Sci., III, Aug. 23, 1901,
pp. 363-370.

This paper contains a list of Hemiptera-
Heteroptera and a few Homoptera collected
by Mr. R. E. Snodgrass. Of the determined
21 species, 2 are described as new: *Ghilian-
ella galapagensis* and *Saldia rubromaculata*.
The others are mostly well known.

— Notes on *Belonochilus numenius*
Say.

Proc. Ent. Soc. Wash., V, No. 1 (author's
extras published March 28, 1902), pp.
11-12.

An account is given of the finding of nu-
merous specimens of this species in all stages
of development on shade trees (*Platanus occi-
dentalis*) near Brightwood, D. C., June 10.
The insect was formerly considered quite
rare. The author also gives his observations
showing that the fall brood hibernates in the
larval stage on the ball-shaped fruit, or heads,
of the sycamore trees.

HEIDEMANN, OTTO. [Hemiptera.]

Proc. Ent. Soc. Wash., V, No. 1, Apr. 21,
1902, pp. 80-82.

Included in Some insects from the sum-
mit of Pikes Peak, found on snow, by A. N.
Candell.

This list of 22 species of well-known hemip-
terous insects contains some original matter.

HILL, ROBERT T. (See under T. WAY-
LAND VAUGHAN.)

HIPPISLEY, ALFRED E. A sketch of
the history of ceramic art in China,
with a catalogue of the Hippisley col-
lection of Chinese porcelains.

Rep. Smithsonian Inst. (U. S. Nat. Mus.),
1900 (1902), pp. 305-416, pls. 1-21.

HOLMES, WILLIAM H. Use of textiles
in pottery making and embellishment.

Am. Anthropologist (new series), III, July-
Sept., 1901, pp. 307-403. Three plates.

— Aboriginal copper mines of Isle
Royal, Lake Superior.

Am. Anthropologist (new series), III, Oct.-
Dec., 1901, pp. 684-695. Two plates.

— Flint implements and fossil re-
mains from a sulphur spring at Afton,
Ind. T.

Am. Anthropologist (new series), IV, Jan.-
Mar., 1902, pp. 108-129. Two plates.

— Report on the Department of An-
thropology for the year 1899-1900.

Rep. Smithsonian Inst. (U. S. Nat. Mus.),
1900 (1902), pp. 21-29.

— Anthropological studies in Cali-
fornia.

Rep. Smithsonian Inst. (U. S. Nat. Mus.),
1900 (1902), pp. 155-187, pls. 1-50.

HOPKINS, A. D. A new genus of Scoly-
tids from Florida.

Proc. Ent. Soc. Wash., V, No. 1 (author's
extras published March 28, 1902), pp.
34-38, fig. 2.

Describes *Erineophilus schwarzi*, new genus
and species, from material in the National
Museum. This genus represents a distinct
group, here named Erineophilides, coming
between Bradford's groups Scolytides and
Hexacoides.

HOUGH, WALTER. A collection of Hopi
ceremonial pigments.

Rep. Smithsonian Inst. (U. S. Nat. Mus.),
1900 (1902), pp. 463-471.

This paper is based on materials received
from Dr. Washington Matthews, and gives
native names, derivation, preparation, and
uses of pigments by the Hopi, with copious
notes and an introduction to the catalogue.

HOWARD, LELAND O. The Insect Book.

A popular account of the bees, wasps, ants, grasshoppers, flies, and other North American insects exclusive of the butterflies, moths, and beetles, with full life histories, tables, and bibliographies. By Leland O. Howard, Ph. D. Chief of the Division of Entomology, U. S. Department of Agriculture | New York | Doubleday, Page & Company | 1901.

Royal 8 vo., July 16, 1901, pp. 1-XXVII and 1-429, 16 colored plates, 32 plain plates, and 264 text figs.

— Mosquitoes as transmitters of disease.

Am. Monthly Review of Reviews, XXIV, No. 2, Aug., 1901, pp. 192-195.

A popular review of recent work.

— The carriage of disease by flies.

Bull. Div. Ent. U. S. Dept. Agric. (new series), No. 30, Aug., 1901, pp. 39-45, 6 figs.

A short account of the different flies which may be instrumental in the carriage of typhoid fever and other intestinal diseases.

— On the habits of *Entilia sinuata*.

Bull. Div. Ent. U. S. Dept. Agric. (new series), No. 30, Aug., 1901, pp. 75-78.

A brief review of previously published notices and accounts of observations made upon this insect as it occurs upon the leaves of sunflower in the Cats-kill Mountains.

— General notes, and notes from correspondence.

Bull. Div. Ent. U. S. Dept. Agric. (new series), No. 30, Aug., 1901, pp. 82-98.

All unsigned notes.

— Insects as carriers and spreaders of disease.

Yearbook of the U. S. Dept. Agric., 1901 (author's extras published June 1, 1902), pp. 177-179, figs. 5-20.

A general treatment of the subject, with specific accounts of mosquitoes and malaria, flies and typhoid fever, mosquitoes and yellow fever.

— Experimental work with fungus diseases of grasshoppers.

Yearbook of the U. S. Dept. Agric., 1901 (author's extras published June 1, 1902), pp. 459-470, figs. 40-42.

An account of grasshopper diseases, with a record of experimental work carried on during the summer of 1901, with a *Mucor* and with a *Sporotrichum*.

— Recent mosquito notes.

Washington Medical Annals, 1, No. 2, May, 1902, pp. 184-185.

The New Jersey work; Dr. Dyar's notes; Professor Garman's bulletin; dengue and mosquitoes; geographical distribution.

HOWARD, LELAND O. The seventeen-year locust.

Youth's Companion, June 5, 1902, pp. 288-289, 5 figs.

A popular account of the life history of *Cicada septendecim*.

— Hydrocyanic-acid gas against household insects.

Circ. Div. Ent. U. S. Dept. Agric. (second series), No. 46, June 10, 1902, pp. 1-4.

An account of the use of hydrocyanic-acid gas against insects of the household, with full directions.

— How insects affect health in rural districts.

Farmers' Bull. U. S. Dept. Agric., No. 155, June 10, 1902, pp. 1-20, figs. 1-16.

HOWE, REGINALD HEBER, JR. A new subspecies of *Passerculus sandwichensis*.

Contrib. North Am. Orn., 1, Oct. 14, 1901, 7p. 1-2.

Passerculus sandwichensis labradorius (p. 1) is here described.

JORDAN, DAVID STARR, and SINDO, MICHITARO. A review of the Japanese species of Surf-fishes or Embiotocidae.

Proc. U. S. Nat. Mus., XXIV, No. 1260, Feb. 26, 1902, pp. 353-359, figs. 1, 2.

The two species of surf-fishes or viviparous perches known to inhabit Japan are here recorded. They are *Neoditrema ransonneti* and *Ditrema temminckii*.

— A review of the Pedicellate fishes or Anglers of Japan.

Proc. U. S. Nat. Mus., XXIV, No. 1261, Feb. 26, 1902, pp. 361-381, figs. 1-7.

Eleven species of pedicellate fishes (Anglers) are recorded as occurring in Japanese waters. *Lophomus litulon*, *Antennarius scriptissimus*, *A. Sanguifluus*, *A. nax*, and *Malthopsis tiarella* are described as new.

JORDAN, DAVID STARR, and SNYDER, JOHN OTTERBEIN. List of fishes collected in 1883 and 1885 by Pierre Louis Jony and preserved in the U. S. National Museum, with descriptions of six new species.

Proc. U. S. Nat. Mus., XXIII, No. 1235, July 2, 1901, pp. 739-769, pls. XXXI-XXXVIII.

A list of 83 species of fishes collected in Japan. The following species are described as new: *Louiscus jonyi*, *Apogon unicolor*, *Pomacentrus rathbuni*, *Aboma tsushima*, *Chasmias misakius*, and *Watasica sivicola*.

— A review of the Lancelets, Hagfishes, and Lampreys of Japan, with a description of two new species.

Proc. U. S. Nat. Mus., XXIII, No. 1233, July 6, 1901, pp. 725-734, pl. XXX.

An account of the Leptocephali and Marsipobranchii, lancelets, hagfishes, and lamp-

JORDAN, DAVID STARR, and SNYDER,
JOHN OTTERBEIN—Continued.

preys known to inhabit the waters of Japan; based on material collected by the writers during the summer of 1900. Two species are described as new, *Branchiostoma nakagawae* and *Myzine garmani*.

— A review of the Apodal fishes or Eels of Japan, with descriptions of nineteen new species.

Proc. U. S. Nat. Mus., xxiii, No. 1239, Aug. 28, 1901, pp. 837-890, figs. 1-22.

An account of the species of eel-like fishes known to inhabit the waters of Japan. The following species are described as new: *Synophobranchus iracundis*, *Synophobranchus jakuski*, *Leptocephalus erbenannus*, *L. kiusiuanus*, *L. usstromi*, *L. riukiuanus*, *Microdonophis crabo*, *Ophichthus asakuse*, *O. tsuchida*, *Etmasia liekeana*, *Uropterygius akiuawae*, *Echidna kishinouyei*, *Xyrias verrucosus*, *Leptocephalus retroflectus*, *Chlopsis ferasifer*, *Muraenichthys ostoni*, *M. hattai*, *M. aoki* *Sphagrobanchus mouri*, *Pisodonophis zophistius*—twenty in all, the title being incorrect.

— A review of the Gobioid fishes of Japan, with descriptions of twenty-one new species.

Proc. U. S. Nat. Mus., xxiv, No. 1244, Sept. 25, 1901, pp. 33-132, figs. 1-33.

Fifty-seven species of gobioid fishes are here recorded from the waters of Japan, 21 of which are described as new, namely: *Vireosa hanae*, *Asterropteryx abar*, *Hazeus otakii*, *Gobius pacificus*, *Ctenogobius abei*, *C. hydropterus*, *C. campbelli*, *C. virgatulus*, *Chlora mororuna*, *C. sarchinisi*, *Pterogobius daioi*, *P. zavalles*, *P. zonoleucus*, *Suruga fudicicola*, *Saginata russala*, *Chaeturichthys sciistius*, *Tridentiger bucco*, *Astrabe lactisilla*, *Chariger rosaniger*, *Eutendichthys gilli*, and *Trypauchen wakae*.

— A review of the Hypostomide and Lophobranchiate fishes of Japan.

Proc. U. S. Nat. Mus., xxiv, No. 1241, Sept. 27, 1901, pp. 1-20, pls. 1-XII.

This paper includes the families Pegasidae, Solenostomidae, and Syngnathidae. It is based upon collections made by the writers in the summer of 1900 and collections of the U. S. Fish Commission steamer *Albatross*. The following species are described as new: *Zalises unittengu*, *Corythoichthys isigaktus*, *Vozia wakanoura*, *Vrocampus rikuzenius*, *Hippocampus kelloggii*, *H. aterrimus*, *H. sindonis*.

— A review of the Cardinal fishes of Japan.

Proc. U. S. Nat. Mus., xxiii, No. 1240, Oct. 12, 1901, pp. 891-913, pls. XLIII, XLIV, text figs. 1-10.

Seventeen species of fishes belonging to the family Apogonidae are here noticed. The following are described as new: *Apogon dederleinii*, *A. kienensis*, and *Teleostipus gilberti*.

JORDAN, DAVID STARR, and SNYDER,
JOHN OTTERBEIN. A review of the
Gymnodont fishes of Japan.

Proc. U. S. Nat. Mus., xxiv, No. 1251, Nov. 30, 1901, pp. 229-261, figs. 1-8.

An account of Japanese fishes included in the families Tetraodontidae, Tropiclichthyidae, Diodontidae, Triodontidae, and Molidae. *Sphionoides abbotti*, *S. caesurus*, and *S. borealis* are described as new.

— A review of the Discobolous fishes of Japan.

Proc. U. S. Nat. Mus., xxiv, No. 1259, Feb. 10, 1902, pp. 343-351, figs. 1, 2.

This paper records four species of lump-suckers found in Japan. *Lebathodesmawae* and *Crystallus matsushinae* are described as new.

— A review of the Salmonoid fishes of Japan.

Proc. U. S. Nat. Mus., xxiv, No. 1265, Mar. 25, 1902, pp. 567-593, figs. 1-5.

Sixteen species of salmonoid fishes are here noticed. The families Salmonidae, Argentiniidae, and Salangidae are represented. *Aequistina kugoshima* and *Salang ariakusis* are described as new.

— A review of the Trachinoid fishes and their supposed allies found in the waters of Japan.

Proc. U. S. Nat. Mus., xxiv, No. 1263, Mar. 28, 1902, pp. 161-197, figs. 1-7.

Twenty-six species of trachinoid fishes are credited herein to Japan. The following genera are included: *Parapercis*, *Neopercis*, *Bembrops*, *Pteroparou*, *Uranoscapus*, *Ichtyoscapus*, *Gnathagnus*, *Ariscapus*, *Champsodon*, *Trichodon*, *Arctoscapus*, *Sillago*, *Latilus*, *Cichlops*, *Gnathypops*, and *Stalix*.

The following new species are described: *Parapercis ommatula*, *Pteroparou colaus*, *P. verrucundum*, *Ariscapus ibaricus*, *Gnathypops hopkinsi*, *G. evermanni*, and *Stalix histrio*.

— A review of the Labroid fishes and related forms found in the waters of Japan.

Proc. U. S. Nat. Mus., xxiv, No. 1266, May 2, 1902, pp. 595-602, figs. 1-10.

Forty-five species of labroid fishes, and related forms, are here noticed. The genera *Amphiprion*, *Chromis*, *Pomacentrus*, *Chrysiptera*, *Glyphisodon*, *Chacops*, *Lepidoplous*, *Verrucoscapus*, *Scuticossyphus*, *Dugymeria*, *Pseudolabrus*, *Anampses*, *Stethojulis*, *Hemigymnus*, *Gnatharia*, *Halichares*, *Coris*, *Julis*, *Cheilod*, *Gnathosoma*, *Gomphosus*, *Cirrhilabrus*, *Chilinus*, *Iniistius*, *Calotomus*, and *Scarus*, are included in this review. *Stethojulis psarus*, *S. trilinea*, *S. troschali*, and *Halichares trimaculatus* are described as new.

JORDAN, DAVID STARR, and STARKS, EDWIN CHAPIN. A review of the Atherine fishes of Japan.

Proc. U. S. Nat. Mus., XXIV, No. 1250, Oct. 4, 1901, pp. 199-206, figs. 1-4.

An account of the species of silversides, *Atherinidae*, found in Japanese waters. Based upon collections made in 1900 by Messrs. Jordan and Snyder. *Atherina woodwardi*, *A. tsuruga*, *Atherion clymus*, and *Iso flos-maris* are described as new.

KNOWLTON, FRANK H. A fossil nut pine from Idaho.

Torreya, I, No. 10, Oct., 1901, pp. 113-114, 3 figs. in text.

A new species of nut pine, *Pinus ludgrenii*, the first cone of this type of pine to be described in a fossil state from this country, is characterized and illustrated. It was found in the Pliocene lake beds of Snake River Valley, near Bernards Ferry, Idaho.

— Description of a new fossil species of *Chara*.

Torreya, II, No. 5, May, 1902, pp. 71-72, 1 fig.

The specimen described, to which the name *Chara springeri* is given, was collected by Miss Ada Springer from the Pleistocene beds at Arroyo Pecos, Las Vegas, N. Mex.

LUCAS, FREDERIC A. Paleontological notes; vertebrates from the Trias of Arizona.

Science (new series), XIV, No. 349, Sept. 6, 1901, p. 376.

Giving a summary of the results of explorations made for the Museum by Mr. Barnum Brown, and noting the occurrence of *Heterodontosuchus*, *Palaocetus*, and *Episcopusaurus*, as well as the discovery of a large labyrinthodont.

— A flightless auk, *Mancalla californiensis*, from the Miocene of California.

Proc. U. S. Nat. Mus., XXIV, No. 1245, Sept. 27, 1901, pp. 133-134, figs. 1-3.

Mancalla californiensis is the earliest known member of the Alcidae and is described as a new genus and species.

— Animals of the past.

12 mo., McClure, Phillips & Co., New York, Nov. 25, 1901, pp. 1-xx, 1-258, 16 pls. 26 text figs.

Includes many references to specimens in the U. S. National Museum, and to restorations of *Hesperornis*, *Triceratops*, and *Ceratosauros*, based on material in the Museum.

— The restoration of extinct animals.

Rep. Smithsonian Inst. 1900 (1901), pp. 479-492, pls. I-VII.

Gives a sketch of the various attempts at the restoration of extinct animals, the methods followed, and includes a description of the restoration of *Triceratops*.

LUCAS, FREDERIC A. Constructing an extinct monster from fossil remains.

Sci. Am., Jan. 18, 1902, p. 43, 3 figs.

Describes the manner in which the model of the skeleton of *Triceratops* was made for the Pan-American Exposition.

— Paleontological notes: North American Elephantids.

Science (new series), xv, No. 379, Apr. 4, 1902, pp. 554-555.

Notes on the species of mastodons and elephants. The validity of Leidy's *Elephas imperator* is recognized.

LYON, MARCUS W., JR. Description of a new Phyllostome bat from the Isthmus of Panama.

Proc. Biol. Soc. Wash., xv, Apr. 25, 1902, pp. 83-84.

Urodormia convecum, sp. nov.

— Description of a new bat from Colombia.

Proc. Biol. Soc. Wash., xv, June 20, 1902, pp. 151-152.

Vampyrops umbratus, sp. nov., is described. Based on material in the Museum of Comparative Zoology, Cambridge, Mass.

MARLATT, C. L. Some insecticide experiments.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 30, July 25, 1901, pp. 33-39, 2 pls.

Details experiments in the summer of 1900 with (1) crude and refined petroleum; (2) lime, sulphur, and salt wash; (3) Bordeaux mixture and kerosene emulsion; (4) kerosene-lime emulsion; (5) whitewash; (6) formaldehyde gas.

— Remarks on some recent work on Coccida.

Proc. Ent. Soc. Wash., IV, No. 4, July 16, 1901, pp. 383-386. (Author's extras published May 3, 1901.)

The author calls attention to the great amount of literature on Coccida now filling entomological and other journals and points out the fact that many new species are based on trivial characters. He enumerates and discusses trivial characters which have been so used, and discusses the value of characters of scale-covering and of structural features of the insect itself which are subject to considerable variation within specific limits.

— A preliminary report on the San José scale in Japan.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 31, Dec. 3, 1901, pp. 41-47.

Describes the extent of the survey made in Japan and the nature of the problem and the conditions under which the scale exists on the different islands, and brings the evidence together showing that the scale has been re-

MARLATT, C. L.—Continued.

cently introduced into Japan from America, and is not an indigenous species.

— A new nomenclature for the broods of the periodical Cicada. (Reprint.)

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 45, May 1, 1902, pp. 1-8.

(Reprinted from *Bull. Div. Ent., U. S. Dept. Agric.* (new series), No. 18.)

— How to control the San José scale.

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 42, May 17, 1902, pp. 1-6.

— The silverfish (*Lepisma saccharina* Linn.).

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 49, June 2, 1902, 4 pp., 2 figs.

(Revised from *Bull. Div. Ent., U. S. Dept. Agric.* (new series), No. 4.)

— The White ant (*Termes flavipes* Koll.).

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 50, June 2, 1902, 7 pp., 3 figs.

(Revised from *Bull. Div. Ent., U. S. Dept. Agric.* (new series), No. 4.)

— The Bedbug (*Cimex lectularius* Linn.).

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 47, June, 1902, 8 pp., fig. 3.

(Revised from *Bull. Div. Ent., U. S. Dept. Agric.*, No. 4.)

— The House centipede (*Scutigera forceps* Raf.).

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 48, June, 1902, pp. 1-4, 2 figs.

(Revised from *Bull. Div. Ent., U. S. Dept. Agric.* (new series), No. 4.)

MASON, OTIS TUFTON. Directions for collectors of American basketry.

Bull. U. S. Nat. Mus., No. 39, Part P, Apr. 1, 1902, pp. [1]-[31], figs. 1-44.

The great demand for instructions in naming the different types of American basketry made it necessary to publish this pamphlet in advance of a larger work devoted to the entire subject. The processes involved in American basketry are braiding, checker weaving, wicker weaving, twilled weaving, wrapped weaving (in which the weft is wrapped once around each warp strand in passing), twined weaving of various kinds, coiling, overlaying, imbricating, false embroidery, and the development of the border.

— Aboriginal American harpoons; A study in ethnic distribution.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1900 (1902), pp. 189-304, frontispiece, pls. 1-19, figs. 1-92.

This paper forms one chapter in a series of illustrated publications to be devoted to aboriginal American zootechny, or arts asso-

MASON, OTIS TUFTON—Continued.

ciated with the animal kingdom. The harpoon is a piercing, retrieving weapon on a shaft, and is divided into two great classes, barbed harpoons and toggle harpoons. In this paper the evolution of each class is shown by means of technical drawings, and their distribution throughout the two continents, North and South America, explained.

MAXON, WILLIAM R. Notes on American ferns: IV.

Fern Bull., IX, 1901, pp. 59-61.

Discusses the supposed occurrence of the hart's tongue fern (*Phyllitis scolopendrium*) at Post Oak Springs, Tenn., comments on the occasional epiphytic habit of *Polypodium falcatum*, and establishes the new combination *Athyrium acrostichoideis* (Sw.) Maxon for the plant hitherto known as *Asplenium acrostichoideis*.

— An interesting Japanese Polypody.

Fern Bull., X, 1902, pp. 42-43.

Elevates *Polypodium vulgare japonicum* Fr. & Sav. to specific rank under the name *Polypodium japonicum* (Fr. & Sav.) Maxon.

— A singular form of the Christmas fern.

Plant World, v, 1902, p. 73, pl. XI.

Describes and figures an unusual form of *Dryopteris acrostichoideis*.

— Notes on American ferns: V.

Fern Bull., X, 1902, pp. 46-47.

Reinstates the name *Asplenium resiliens* Kunze for the ebony spleenwort, heretofore known as *Asplenium parvulum* Mart. and Gal., discusses the ranges of *Phegopteris phegopteris* and *Marsilea uncinata* and the origin of the specific name of *Phegopteris robertiana*.

— (See also under CHARLES LOUIS POLLARD.)

MAYER, ALFRED GOLDSBOROUGH. (See under ALEXANDER AGASSIZ.)

MAYNARD, GEORGE C. The gun collection in the National Museum.

Sporting Goods Dealer, St. Louis, Mo., vol. 5, No. 4, Jan., 1902, pp. 10-15, 48 figs.

MEARNS, EDGAR A. An addition to the avifauna of the United States.

Proc. Biol. Soc. Wash., XIV, Sept. 25, 1901, pp. 177-178.

Petrochelidon melanogaster (Swainson) is recorded from Arizona.

— The Cacomitl eat of the Rio Grande Valley.

Proc. U. S. Nat. Mus., XXIV, No. 1251, Oct. 4, 1901, pp. 207-210.

MEARNS, EDGAR A. Description of a hybrid between the Barn and Cliff swallows.

Auk, XIX, No. 1, Jan., 1902, pp. 73-74.

A female hybrid between the Barn and Cliff swallows is here described.

— Two subspecies which should be added to the check-list of North American birds.

Auk, XIX, No. 1, Jan., 1902, pp. 70-72.

Minus polyglottos leucopterus (Vigors) and *Tyrannus tyrannus exactor* Bangs are re-described, and critical notes are added to emphasize the difference between these forms and the typical species.

— An addition to the avifauna of the United States.

Auk, XIX, No. 1, Jan., 1902, p. 87.

Vireo norboracensis micrus Nelson is recorded from Texas.

— Description of a new swallow from the western United States.

Proc. Biol. Soc. Wash., xv, Mar. 5, 1902, pp. 31-32.

Tachycineta lepida (p. 31) is described as new.

— The Cactus wrens of the United States.

Auk, XIX, No. 2, Apr., 1902, pp. 141-145.

The following forms are recognized from the United States: *Helodytes brunneicapillus anthonyi* (new subspecies, p. 143), *H. brunneicapillus affinis*, *H. brunneicapillus bryanti*, and *H. brunneicapillus couesi*. All are described and their differences pointed out in a key.

— Descriptions of three new birds from the southern United States.

Proc. U. S. Nat. Mus., XXIV, No. 1274, June 2, 1902, pp. 915-926.

Coturniculus savannarum floridanus (p. 915), *Progne subis floridana* (p. 918), and *Sitta carolinensis nelsoni* (p. 923), are described as new.

MERRILL, GEORGE P. The Department of Geology in the U. S. National Museum.

Am. Geologist, vol. 27, August, 1901, pp. 107-123, with 5 full-page plates.

— A stony meteorite which fell near Felix, Perry County, Ala., May 15, 1900.

Proc. U. S. Nat. Mus., XXIV, No. 1249, Oct. 7, 1901, pp. 193-198, pls. XIII, XIV.

Describes the meteorite as a chondritic tuff, composed essentially of olivine and enstatite and containing an interstitial, colorless, and undetermined mineral of secondary origin.

— Circular to accompany collections illustrating rock weathering and soil

MERRILL, GEORGE P.—Continued.

formation which have been prepared by the Department of Geology, U. S. National Museum, under direction of Dr. George P. Merrill, Head Curator.

Circ. U. S. Nat. Mus., No. 51, 1901, pp. 1-3.

— Rutile mining in Virginia.

Eng. and Min. Journ., vol. 74, Mar. 8, 1902, p. 351.

— A newly found meteorite from Admire, Lyon County, Kans.

Proc. U. S. Nat. Mus., XXIV, No. 1273, May 31, 1902, pp. 907-913, pls. L-LVI.

The meteorite is described as a pallasite belonging to Brezina's Rokicky group, and the second of its kind known. The condition of the metallic constituents is thought to suggest their origin by reduction from a chloride or sulphide.

— Report on the Department of Geology for the year 1899-1900.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1900 (1902), pp. 45-57, pls. 1-9.

MILLER, GERRIT S., Jr. Review of Elliot's Synopsis of the mammals of North America and the adjacent Seas.

Science (new series), XIV, July 5, 1901, pp. 25-27.

— Descriptions of three new Asiatic shrews.

Proc. Biol. Soc. Wash., XIV, Aug. 9, 1901, pp. 157-159.

New: *Crociodura itensis* (p. 157), *Crociodura shantungensis* (p. 158), and *Sorex macropygmaurus* (p. 158). Based in part on material from the British Museum.

— A new name for *Mus obscurus* Miller.

Proc. Biol. Soc. Wash., XIV, Sept. 25, 1901, p. 178.

New name suggested: *Mus pullus*.

— Directions for preparing study specimens of small mammals. Second edition, revised, with abstracts in German, French, and Spanish.

Bull. U. S. Nat. Mus., No. 39, Part X, Dec. 27, 1901, pp. [1]-[25], figs. 1-3.

— The large yellow pond lilies of the northeastern United States.

Proc. Biol. Soc. Wash., xv, Feb. 18, 1902, pp. 11-13, pl. II, fig. 1.

Nymphula variegata Engelmann distinguished from *N. advena* Aiton.

— A fully adult specimen of *Ophibolus rhombomaculatus*.

Proc. Biol. Soc. Wash., xv, Mar. 5, 1902, p. 36.

- MILLER, GERRIT S., JR. The technical names of two Dogbanes from the District of Columbia.
Proc. Biol. Soc. Wash., xv, Mar. 5, 1902, pp. 35-36.
- The technical name of the Virginia deer.
Proc. Biol. Soc. Wash., xv, Mar. 5, 1902, p. 39.
- In the author's opinion it should be *Odocoileus americanus*.
- A new pig from Sumatra.
Proc. Biol. Soc. Wash., xv, Mar. 5, 1902, pp. 51-52.
Sus ol, sp. nov.
- A new rabbit from southern Texas.
Proc. Biol. Soc. Wash., xv, Apr. 25, 1902, pp. 81-82.
Lepus simplicicollis, sp. nov.
- The mammals of the Andaman and Nicobar islands.
Proc. U. S. Nat. Mus., xxiv, No. 1269, May 29, 1902, pp. 751-795, pls. xli, xlii, one text fig.
New: *Sus nicobariensis* (p. 755), *Mus stoicus* (p. 759), *Mus luciturnus* (p. 762), *Mus flebilis* (p. 762), *Mus pulliventer* (p. 765), *Mus atratus* (p. 767), *Mus burrus* (p. 768), *Mus burrus* (p. 770), *Mus burrescens* (p. 771), *Tupaia nicobarica surda* (p. 774), *Crocidura nicobarica* (p. 776), *Crocidura andamanensis* (p. 777), *Pipistrellus canorte* (p. 779), *Hipposideros nicobaricus* (p. 781), *Pteropus faunulus* (p. 785), *Macacus umbrosus* (p. 789).
- Mammals collected by Dr. W. L. Abbott in the region of the Indragiri River, Sumatra.
Proc. Acad. Nat. Sci. Phila. 1902 (June 11), pp. 143-159.
New: *Tragulus pretiosus* (p. 144), *Tragulus nigricollis* (p. 145), *Ratufa palliata* (p. 147), *Ratufa notabilis* (p. 150), *Sciurus melanops* (p. 151), *Nannosciurus pulcher* (p. 153), *Mus frenens* (p. 154), *Mus firmus* (p. 155), *Arctogalidia simplex* (p. 156), *Tupaia phœna* (p. 157).
- Note on the *Chilonycteris darwini fulvus* of Thomas.
Proc. Biol. Soc. Wash., xv, June 20, 1902, p. 155.
Distinct from *Dermanotus darwini*.
- Note on the *Vespertilio incantus* of J. A. Allen.
Proc. Biol. Soc. Wash., xv, June 20, 1902, p. 155.
Distinct from *Myotis velifer*.
- Two new Malayan Mouse deer.
Proc. Biol. Soc. Wash., xv, Aug. 6, 1902, pp. 173-175.
Tragulus rarus and *T. borneiatus*.
- MILLER, GERRIT S., JR. Two new American bats.
Proc. Acad. Nat. Sci. Phila. 1902, Sept. 12, pp. 389-412.
Antrozous minor (p. 389), *Pipistrellus mexicanus* (p. 390), *Dasyplescus floridanus* (p. 392), *Nyctinomops* (p. 393), *Nyctinomops guatemalensis* (p. 393), *Molossus nigricans* (p. 395), *M. pretiosus* (p. 396), *Nyctinomops antillarum* (p. 398), *Natalus major* (p. 398), *N. mexicanus* (p. 399), *Chilonycteris portoricensis* (p. 400), *C. mexicana* (p. 401), *Mormoops tumidiceps* (p. 403), *Dermanura rara* (p. 401), *D. phacotis* (p. 405), *Vampyrus fuscus* (p. 405), *Stenoderma lucifer* (p. 407), *Brachyphylla nana* (p. 409), *Monophyllus cubanus* (p. 410), *M. lucifer* (p. 411).
- MILLER, GERRIT S., JR., and REHN, JAMES A. G. Systematic results of the study of North American land mammals to the close of the year 1900.
Proc. Boston Soc. Nat. Hist., xxx, Dec. 27, 1901, pp. 1-352.
- MOORE, H. F. Report on Porto Rican Isopoda.
Bull. U. S. Fish Com. for 1900, II, Oct. 2, 1901, pp. 161-176, pls. 7-11.
The Isopoda number 17 species, 8 of which were undescribed; two new genera are also described. All the forms are littoral or shoal-water species.
- MOORE, J. PERCY. Descriptions of two new leeches from Porto Rico.
Bull. U. S. Fish Com. for 1900, II, Oct. 4, 1901, pp. 211-222, pls. XII and XIII.
The two forms *Hirudinaria blanchardi* and *Diplobdella antillarum* represent new genera as well as new species. The latter has been found also at Panama.
- MURRAY, JOHN. (See under ALEXANDER AGASSIZ.)
- NELSON, E. W. Descriptions of a new genus and 11 new species and subspecies of birds from Mexico.
Proc. Biol. Soc. Wash., xiv, Sept. 25, 1901, pp. 169-175.
Nyctyrax (p. 171, type *Cuprimulgas guatemalensis* Hartert) is a new genus, and *Ceryleus salteri goblmanni* (p. 169), *Bubo virginianus mayensis* (p. 170), *Cerx chapmani* (p. 170), *Nyctidromus albicollis guatemalensis* (p. 171), *Attila mexicanus* (p. 172), *Myiopygus guatemalensis* (p. 172), *Pachyrhamphus major ilcensis* (p. 173), *Icterus cucullatus dupreus* (p. 173), *Icterus cucullatus cozumelae* (p. 173), *Stelgidopteryx ridgwayi* (p. 174), *Teoglyptes panthersis* (p. 174), and *Merula plebeia differens* (p. 175) are described as new species and subspecies.

OBERHOLSER, HARRY C. Seven new birds from Paraguay.

Proc. Biol. Soc. Wash., XIV, Dec. 12, 1901, pp. 187-188.

Short diagnoses of the following new birds are here given: *Anabazenops acritus* (p. 187), *Leptopogon amaurocephalus testatus* (p. 187), *Arremon callistus* (p. 188), *Cyanococcyz stercorarius* (p. 188), *Thamophilus ochrus* (p. 188), *Basileuterus leucoblepharus calus* (p. 188), and *Picolaptes tenuirostris apothetus* (p. 188).

— Catalogue of a collection of hummingbirds from Ecuador and Colombia.

Proc. U. S. Nat. Mus., XXIV, No. 1258, Jan. 18, 1902, pp. 309-342.

A catalogue of the Hamilton-Goodfellow collection of hummingbirds, numbering 1,136 specimens, principally from Ecuador. One hundred and nine forms are recognized, of which the following are new: *Topaza pella pampyroptera* (p. 321), *Boissonneaua flavescens tinocolora* (p. 329), *Heliangelus ecoris sodestronii* (p. 334), *Zodalia thaumasta* (p. 338), and *Heliathric barroti alincinus* (from Guatemala, p. 339). Critical notes are given under various species, and some changes of nomenclature are introduced.

— A synopsis of the genus commonly called *Anorthura*.

Auk, XIX, No. 2, Apr., 1902, pp. 175-181.

The name *Anorthura* is found to be synonymous with *Trogodytes*, and the genus of Wrens usually called *Anorthura* is renamed *Olbiorchilus*. A synopsis of the species of this genus and of *Elachura* is given.

— A review of the larks of the genus *Otocoris*.

Proc. U. S. Nat. Mus., XXIV, No. 1271, June 9, 1902, pp. 801-884, pls. XLIII-XLIX.

A descriptive account of the horned larks, of which 36 forms are here recognized. Maps showing the geographical distribution of the various numbers of the genus, and plates showing the character of the country inhabited by some of the American forms accompany the paper. The following forms are new: *Otocoris alpestris arcticola* (p. 816), *O. a. cuthymia* (p. 817), *O. a. diaphora* (p. 829), *O. a. actia* (p. 845), *O. a. amnophila* (p. 849), *O. a. aphrasia* (p. 860), *O. a. leucansiptila* (p. 864), *O. longirostris perissa* (p. 869), *O. l. argulata* (p. 871), and *O. penicillata orcodrana* (p. 876).

OSGOOD, WILFRED H. Birds of the Queen Charlotte Islands.

North Am. Fauna, No. 21, Sept. 26, 1901, pp. 38-50.

Notes on 98 species, of which 3 are new, viz: *Nyctala acadica scotaxa* (p. 43), *Dryobates picoides* (p. 44), and *Cyanocitta stelleri carlotte* (p.

OSGOOD, WILFRED H.—Continued.

46). *Sphyrapicus ruber flaviventris* (Vieillot, 1807) is introduced as a northern form of the Redbreasted Sapsucker.

— Birds of the Cook Inlet region.

North Am. Fauna, No. 21, Sept. 26, 1901, pp. 72-81.

Notes on 78 species, with technical remarks on some of them.

PALMER, WILLIAM, and RILEY, J. H. Descriptions of three new birds from Cuba and the Bahamas.

Proc. Biol. Soc. Wash., xv, Mar. 5, 1902, pp. 33-34.

Zenaidura macroura bella and *Columbigallina passerina afulrida* are described from Cuba, and *Riccordia acneoviridis* from Abaco, Bahamas.

PERGANDE, THEODORE. The Ant-decapitating fly.

Proc. Ent. Soc. Wash., IV, No. 4 (author's extras published July 2, 1901), pp. 497-502, figs. 20, 21.

The author makes the discovery that the large carpenter ant (*Camponotus pennsylvanicus* De Geer) is parasitized by a peculiar little fly belonging to the family Phoridae. It is described in this paper by Mr. Coquillett as *Apocephalus pergandei*, new genus and species.

POLLARD, CHARLES LOUIS. The families of flowering plants.

Plant World, Supplement to vols. IV-V, 1901-1902, pp. 141-226.

A popular account of the plant families.

— Plant agencies in the formation of the Florida Keys.

Plant World, v, Jan., 1902, pp. 8-10.

— New American species of *Chamaecrista*.

Proc. Biol. Soc. Wash., xv, Feb. 18, 1902, pp. 19-21.

Describes as new, *Chamaecrista mirabilis*, *C. bellula*, *C. brachiata*, *C. littoralis*, and *C. tracyi*.

— A new violet from New Jersey.

Torreya, II, Feb., 1902, p. 27.

Describes *Viola angellae* as new.

POLLARD, CHARLES LOUIS, and MAXON, WILLIAM R. Some new and additional records on the flora of West Virginia.

Proc. Biol. Soc. Wash., XIV, Aug. 9, 1901, pp. 161-163.

Twenty-eight species are listed as new to the State, and four are given additional records.

RATHBUN, MARY J. The Brachyura and Macrura of Porto Rico.

Bull. U. S. Fish Com. for 1900, II, Sept. 26, 1901, pp. 1-127 and 129*-137*, pls. 1 and 2 (colored), text figs. 1-24.

This report covers not only the material procured by the steamer *Fish Hawk* in 1899, but all other data accessible to the writer. The tribes, families, genera, and species represented are described, and artificial keys given for their determination. The list includes 162 species of Brachyura and 59 of Macrura: one genus and 14 species of Brachyura, and one genus and 13 species of Macrura are described as new.

— Description of *Zanthopsis cretacea*, in John C. Branner's Geology of the Northeast Coast of Brazil.

Bull. Geol. Soc. Am., XIII, 1901 (Feb., 1902), pp. 43-44, pl. 5.

Zanthopsis cretacea is the first species of the genus described from the Cretaceous, various species having been known hitherto from the Eocene. The type specimens were associated with remains of a fish and a Cephalopod, which are undoubtedly Cretaceous. The types are deposited in the U. S. National Museum.

— Descriptions of new Decapod crustaceans from the west coast of North America.

Proc. U. S. Nat. Mus., XXIV, No. 1272, May 23, 1902, pp. 885-905.

Fifty-two species and 3 subspecies are described from the Pacific coast, ranging from Alaska southward to San Diego, Cal. The specimens were collected largely by the U. S. Fish Commission steamer *Albatross*. The species will be more fully described and figured in a report on the Decapoda of the Harriman expedition.

— Papers from the Hopkins-Stanford Galapagos expedition, 1898-99. VIII. Brachyura and Macrura.

Proc. Wash. Acad. Sci., IV, June 20, 1902, pp. 275-292, pl. XII, 4 text figs.

Of the 33 species of Brachyura and Macrura 9 are new to science, one representing a new genus; of the remaining species over half are new to the Galapagan fauna. The types are in the National Museum. Part of the material is the property of the Leland Stanford Junior University.

— Description des nouvelles espèces de *Parathelphusa* appartenant au Muséum de Paris.

Bull. Mus. Hist. Nat., Paris, 1902, No. 3, pp. 184-187. (Separates received in Washington June 30.)

The material forms part of the large collection of fresh-water crabs of the Paris Museum. Nine species are described of the genus *Pot-*

RATHBUN, MARY J.—Continued.

mon., subgenus *Parathelphusa*, the greater part obtained in Cochin China and Siam.

RATHBUN, RICHARD. Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1900.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1900 (1902), pp. 1-152, pls. 1-9.

REHN, JAMES A. G. (See under GERTRIT S. MILLER, JR.)

RICHARDSON, HARRIET. Papers from the Hopkins-Stanford Galapagos expedition, 1898-99. VI. The Isopods.

Proc. Wash. Acad. Sci., III, Nov. 29, 1901, pp. 565-568.

Of the 4 species found, 2 are new, *Tanais stanfordi* and *Egathoa cecisa*; the other 2, *Meinertia gaudichaudii* and *Ligia exotica*, are for the first time recorded from the localities cited.

— The marine and terrestrial Isopods of the Bermudas, with descriptions of new genera and species.

Trans. Conn. Acad. Sci., XI, Jan., 1902, pp. 277-310, pls. XXXVII-XI.

The work is divided into two parts, viz: 1. The Marine Isopods of the Bermudas, with descriptions of 13 new species and 3 new genera. 2. The Terrestrial Isopoda of the Bermudas, with a description of a new genus of Armadillididae. The material described was collected by Prof. A. E. Verrill and parties, and by Dr. G. Brown Goode. The typespecimens are in the Peabody Museum of Yale University, but some of the material has been sent to the U. S. National Museum.

RICHMOND, CHARLES W. *Aquila Chrysatos*.

Auk, XIX, No. 1, Jan., 1902, p. 79.

A reference to the earliest use of the name.

— Note on the name *Colinus*.

Auk, XIX, No. 1, Jan., 1902, p. 79.

A reference to the earliest use of the name (Goldfuss, 1820).

— *Strix lapponica*.

Auk, XIX, No. 1, Jan., 1902, p. 79.

Note showing Thunberg (1798) to be the author of the name *Strix lapponica*.

— *Vestioides* v. *Eriocnemis*.

Auk, XIX, No. 1, Jan., 1902, p. 83.

Note showing *Vestioides* to be the proper name for the genus of humming birds generally known as *Eriocnemis*.

— Note on "*Delatratia heurici*."

Auk, XIX, No. 1, Jan., 1902, p. 83.

Note showing that the Humming bird called "*Delatratia heurici*" should properly be called *Lampornis amethystinus*, and is the type of the genus *Lampornis*.

RICHMOND, CHARLES W. The correct name for the Canadian Pine grosbeak.

Auk, XIX, No. 1, Jan., 1902, p. 85.

Loxia leucura Müller, 1776, applies to this form, which should be called *Pinicola enucleator leucura* (Müller).

— *Tiaris* instead of *Euthesia*.

Auk, XIX, No. 1, Jan., 1902, p. 87.

Tiaris should replace *Euthesia* as the name of a genus of small finches.

— *Toxostoma* v. *Harporhynchus*.

Auk, XIX, No. 1, Jan., 1902, p. 89.

Toxostoma is shown to have precedence over *Harporhynchus*.

— Necessary generic changes in nomenclature.

Auk, XIX, No. 1, Jan., 1902, p. 92.

Notes on eight cases where currently used generic terms should be replaced by earlier ones.

— Note on the name *Rhopocichla*.

Proc. Biol. Soc. Wash., xv, Mar. 5, 1902, p. 35.

Rhopocichla of Allen (1891) is shown to be preoccupied by Oates (1889), and is here renamed *Rhopornis*.

— List of generic terms proposed for birds during the years 1890 to 1900, inclusive, to which are added names omitted by Waterhouse in his *Index Generum Avium*.

Proc. U. S. Nat. Mus., xxiv, No. 1267, Mar. 25, 1902, pp. 663-729.

A list of generic names bestowed on fossil and living birds during the years 1890-1900 is here given, including about 200 terms omitted by Mr. Waterhouse in his *Index Generum Avium*. A reference to the place of publication of each name is given, with an indication of its type and systematic position. About 675 names are thus treated.

— *Icoereus* should replace *Hesperocichla*.

Proc. Biol. Soc. Wash., xv, Apr. 25, 1902, p. 85.

Note showing that *Icoereus* (Bonaparte, 1851) should supersede *Hesperocichla* (Baird, 1864) for the Varied thrush.

— Two preoccupied avian genera.

Proc. Biol. Soc. Wash., xv, Apr. 25, 1902, p. 85.

Aptus and *Anthoscenus* are proposed in place of *Aphobus* and *Floricola*, respectively, both of the latter names being preoccupied.

— An early name for the northern form of *Sphyrapicus ruber*.

Proc. Biol. Soc. Wash., xv, Apr. 25, 1902, p. 89.

Sphyrapicus ruber nolkensis (Suckow, 1800) is shown to be the earliest name for the Northern Red-breasted Sapsucker.

RICHMOND, CHARLES W. The proper name for the Arctic Horned owl.

Proc. Biol. Soc. Wash., xv, Apr. 25, 1902, p. 86.

Bubo virginianus subarcticus (Hoey) is noted as the correct name for this form.

— *Parus inornatus griseus* renamed.

Proc. Biol. Soc. Wash., xv, June 20, 1902, p. 155.

Parus inornatus ridgwayi is proposed in place of *P. inornatus griseus*, there being an earlier *Parus griseus*.

— Descriptions of two new birds from Trong, lower Siam.

Proc. Biol. Soc. Wash., xv, June 25, 1902, pp. 157-158.

Stachyris chrysops (p. 157) and *Oreocinclu horsfieldi affinis* (p. 158) are described as new.

— Description of a new subspecies of *Stenopsis cayennensis* from Curaçao.

Proc. Biol. Soc. Wash., xv, June 25, 1902, pp. 159-160.

Stenopsis cayennensis insularis is here described.

— (See also under WIRT ROBINSON.)

RIDGWAY, ROBERT. The Birds of | North and Middle America: | A Descriptive Catalogue | of the | Higher Groups, Genera, Species, and Subspecies of Birds | known to occur in North America, from the | Arctic Lands to the Isthmus of Panama, | the West Indies and other islands | of the Caribbean Sea, and the | Galapagos Archipelago. | By | Robert Ridgway, | Curator, Division of Birds. | — | Part I. | Family Fringillidae—The Finches. | Washington: | Government Printing Office. | 1901. |

Bull. U. S. Nat. Mus., 50, Part 1, 1901, 8 vo., pp. 1-xxx, 1-715, pls. 1-xx.

This is the first part of a general treatise on the birds of America north of the Panama Railroad, but including the Galapagos Islands. It embraces the family Fringillidae, or Finches, of which 391 species are here recognized as coming within the limits of the work. Each species is fully described, its geographical distribution is given in detail, and an ample synonymy is appended. Twenty plates, representing the characters of the 69 genera treated, accompany the volume. The first 37 pages of the work deal with the classification of birds, with keys to the family of Oscines, or songbirds, and to the genera of Fringillidae as represented within the geographical limits stated above. *Carpodacus mexicanus sonoriensis* (p. 135), *Saltator magnoides medianus* (p. 664), and *Geospiza harterti* (p. 507) are described as new.

RIDGWAY, ROBERT. Descriptions of three new birds of the families Mniotiltidae and Corvidae.

Auk, XIX, No. 1, Jan., 1902, pp. 69-70.

Compsothlypis pitagami speciosa (p. 69), *Dendroica rigoris abacensis* (p. 69), and *Aphelocoma leucan* (p. 70) are described as new.

RILEY, J. H. Stephens's Whip-poor-will. *Antrostomus macromystax* (Wagler).

Osprey, v, July, 1901, p. 101.

Short accounts of the habits and descriptions of the eggs. The author records his belief in the specific rank of the bird.

— Notes on the habits of the Broad-winged hawk (*Buteo platypterus*) in the vicinity of Washington, D. C.

Osprey, VI (new series), I, Feb., 1902, pp. 21-23, 1 plate.

Records six sets of eggs from the region in question. An illustration of the nest is given.

— Note on the name of Audubon's Shearwater.

Auk, XIX, Apr., 1902, p. 195.

Puffinus chermiateri Lesson, 1839, to replace *Puffinus auduboni* Finsch, 1872.

Change adopted by A. O. U. Committee on Nomenclature (compare Eleventh Supplement to A. O. U. Check-List. *Auk*, XIX, July, 1902, p. 316).

(See also under WILLIAM PALMER.)

ROBINSON, WIRT, and LYON, MARCUS W., JR. An annotated list of mammals collected in the vicinity of La Guaira Venezuela.

Proc. U. S. Nat. Mus., XXIV, No. 1246, Oct. 3, 1901, pp. 135-162.

New: *Oryzomys medius* (p. 142), *Lophostoma venezuela* (p. 154).

ROBINSON, WIRT, and RICHMOND, CHARLES W. An annotated list of birds collected in the vicinity of La Guaira, Venezuela.

Proc. U. S. Nat. Mus., XXIV, No. 1217, Oct. 3, 1901, pp. 163-178.

A list of 83 species, with biographical and critical notes. *Microcecalus pectoralis* (p. 178) is described as a new species.

ROGERS, CHARLES G. (See under CHARLES W. HARGITT.)

SANDERSON, E. DWIGHT. Notes upon the structure and classification of chrysomeiid larvae.

Proc. Ent. Soc. Wash., v, No. 1 (author's extras published Mar. 28, 1902), pp. 24-30, fig. 1.

From a study of the larvae of the Chrysomeiidae the author concludes that this group

SANDERSON, E. DWIGHT—Continued. should be considered as a superfamily, composed of five distinct families, the Cassididae, Cryptocephalidae, Hispididae, Donacidae, and Chrysomeiidae. The larval characters of these families and of the tribes into which they are subdivided are described and a table is given to show the classification.

SCHAUS, WILLIAM. Descriptions of new American butterflies.

Proc. U. S. Nat. Mus., XXIV, No. 1262, Mar. 1, 1902, pp. 383-400.

Descriptions of 216 new species from the author's collection, which is deposited in the U. S. National Museum. One of these is made the type of a new genus.

SCHUCHERT, CHARLES. (See under E. O. ULRICH.)

SCHWARZ, EUGENE A. A season's experience with figs and fig insects in California.

Proc. Ent. Soc. Wash., IV, No. 4, July 2, 1901, pp. 502-507.

The male fig-trove, in the seeds of which the *Blastophaga* develops, has only two crops each year. The *Blastophaga* proved to have four annual generations at Fresno, of which one develops in the spring and three in the fall crop. A part of the last generation hibernates, but the winter generation is in no way distinct from those insects that hatch late in the fall. The influence of climate on the development of the *Blastophaga* is very great, for at Niles, Cal., only two generations were observed in the year 1900.

SIMPSON, CHARLES T. (See under WILLIAM H. DALL.)

SINDO, MICHITARO. (See under DAVID STARR JORDAN.)

SNYDER, JOHN OTTERBEIN. (See under DAVID STARR JORDAN.)

SPENCER, ARTHUR C. (See under T. WAYLAND VAUGHAN.)

STANTON, TIMOTHY W. *Chondrodonta*, a new genus of ostreiform mollusks from the Cretaceous, with descriptions of the genotype and a new species.

Proc. U. S. Nat. Mus., XXIV, No. 1257, Dec. 30, 1901, pp. 301-307, pls. XXV, XXVI.

The genus *Chondrodonta*, n. gen., and *C. consoni* (Hill), and *C. glabra*, n. sp., are defined. *Ostrea joannae*, from Portugal, is also referred to the new genus.

STARKS, EDWIN CHAPIN. (See under DAVID STARR JORDAN.)

STEARNS, ROBERT E. C. The fossil freshwater shells of the Colorado Desert, their distribution, environment, and variation.

Proc. U. S. Nat. Mus., XXIV, No. 1256, Dec. 28, 1901, pp. 271-299, pls. XIX-XXIV, figs. 1-9.

STEJNEGER, LEONHARD. On the herpetology of Porto Rico.

Tageblatt d. V. Internat. Zool.-Congress., Berlin, No. 8, Aug. 26, 1901, p. 28.

Abstract of the introduction to a greater work.

— An annotated list of batrachians and reptiles collected in the vicinity of La Guaira, Venezuela, with descriptions of two new species of snakes.

Proc. U. S. Nat. Mus., XXIV, No. 1248, Oct. 3, 1901, pp. 179-192, figs. 1-53.

Described as new species: *Phrynonax tyoni*, type No. 27826, U.S.N.M., and *Pseudoboa robinsoni*, type No. 22532, U.S.N.M.

— A new species of bullfrog from Florida and the Gulf Coast.

Proc. U. S. Nat. Mus., XXIV, No. 1252, Oct. 4, 1901, pp. 211-215.

Described as new species: *Rana gryllio*, type No. 27443, U.S.N.M.

— Diagnoses of eight new batrachians and reptiles from the Riu Kiu Archipelago, Japan.

Proc. Biol. Soc. Wash., XIV, 1901, pp. 189-191.

New species as follows: *Microhybla okinawensis*, *Rana narina*, *Rana uanigui*, *Buergeria ijima*, *Buergeria ishikawae*, *Emmecees kishinouyei*, *Calamaria pfefferi*, *Disteira orientalis*.

— A new opisthoglyph snake from Formosa.

Proc. Biol. Soc. Wash., XV, 1902, pp. 15-17.

Describes as new species: *Boiga kraepelini*, type No. 1565, Hamburg Mus. Nat. Hist.

— *Ptychozoon kuhli*, a new name for *P. homalocephalum*.

Proc. Biol. Soc. Wash., XV, 1902, p. 37.

— *Gerrhonotus caruleus* versus *Gerrhonotus burnetti*.

Proc. Biol. Soc. Wash., XV, 1902, p. 37.

An examination of the type in Berlin shows that the former name takes precedence.

— The generic name *Coccytes* untenable.

Proc. Biol. Soc. Wash., XV, 1902, p. 37.

Shows that *Coccytes* of Gloger must give way to the older *Clamator* of Kaup.

TASSIN, WIRT. Descriptive catalogue of the meteorite collection in the U. S. National Museum to January 1, 1902.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1900 (1902), pp. 671-698, pls. 1-4.

— Descriptive catalogue of the collections of gems in the U. S. National Museum.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1900 (1902), pp. 473-670, pls. 1-9, text figs. 1-26.

TREADWELL, AARON L. The Polychaetous annelids of Porto Rico.

Bull. U. S. Fish Com., 1900, II, Oct. 4, 1901, pp. 181-210, 78 text figs.

Of the 85 species described, 32 are new, belonging to the genera *Syllis*, *Castalia*, *Polynoe*, *Stenelais*, *Panthalis*, *Eulopsis*, *Phyllodox*, *Eudalia*, *Nereis*, *Amphinome*, *Emmece*, *Lumbriconereis*, *Lysidice*, *Glycera*, *Goniada*, *Aricia*, *Aricidea*, *Anthusloma*, *Cirratulus*, *Telepus*, *Dasybranchus*, *Stylaroides*, *Dasychone*, *Eupomatus*, and *Hernella*.

TRUE, FREDERICK W. Report on the Department of Biology for the year 1899-1900.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1900 (1902), pp. 31-44.

ULRICH, E. O., and SCHUCHERT, CHARLES. Paleozoic seas and barriers in eastern North America.

Bull. N. Y. State Mus., No. 52, 1902, pp. 633-663.

This paper defines the seas, barriers, and land masses for eastern North America during Paleozoic time. The results attained are based on geologic structure and the differences of the faunas as preserved in the rocks, especially along the outcroppings of the Appalachian Mountain area from Newfoundland to Alabama. Based partly on Museum material.

VAUGHAN, T. WAYLAND. Review of two recent papers on Bahaman corals.

Science, XIV, No. 352 (new series), Sept. 27, 1901, pp. 497-498.

The papers reviewed were published by Professor Whitfield in the *Bulletin of the American Museum of Natural History*. In one he ascribes to the genus *Ctenophyllia* a form which Mr. Vaughan regards as a variation of *Meandrina labyrinthica*; in the other he describes as a new species a form belonging, according to Mr. Vaughan, to *Diploria labyrinthiformis* (Linnaeus).

— The stony corals of the Porto Rican waters.

Bull. U. S. Fish Com., 1900, II, Dec. 12, 1901, pp. 289-320, pls. I-XXXVIII.

VAUGHAN, T. WAYLAND—Continued.

Twenty-six species are described and nearly all are elaborately figured, the plates being mostly reproductions of photographs. One new species, *Cyathoceras portoricensis*, and one new variety, *Astrangia solitaria?* var. *portoricensis*, are included.

— The copper mines of Santa Clara province, Cuba.

Eng. and Mining Journ., LXII, No. 25, Dec. 21, 1901, pp. 814-816.

Contains a brief account of the topographic and geologic features of the province of Santa Clara, and a more detailed description of the old copper mines and prospects near Santa Clara City and in the vicinity of Manicaragua.

— Notes on Cuban fossil mammals.

Science (new series), xv, No. 369, Jan. 24, 1902, pp. 148-149.

A brief résumé of our knowledge of so-called fossil mammals said to have been found in Cuba. It attempts to show that the remains of Hippopotamus, Equus, and Mastodon were not indigenous to the island, and the original locality of the bones of Megalocnus is not positively known. They may not be Cuban.

— Earliest Tertiary coral reefs in the Antilles and United States.

Science (new series), xv, No. 378, Mar. 28, 1902, pp. 506-507.

This is an abstract of a paper read before the Geological Society of Washington, Feb. 26, 1902.

Outlines the first appearance of coral reefs in the Tertiary formations of the regions indicated in the title and their development in subsequent geologic time.

— Bitumen in Cuba.

Eng. and Mining Journ., LXXXIII, No. 10, Mar. 8, 1902, pp. 314-317.

A general account of the occurrences of asphalt and petroleum in Cuba, giving data obtained by personal investigation and a résumé of the literature bearing on the subject.

— Some recent changes in the nomenclature of corals.

Proc. Biol. Soc. Wash., xv, March 22, 1902, pp. 53-58.

A discussion of changes in the nomenclature of Mr. Vaughan's The stony corals of the Porto Rican waters, proposed by Professor Verrill. Professor Verrill favors the following changes:

1. *Acropora* Oken instead of *Isopora* Studer.
2. *Macandra* Oken instead of *Platygyra* Ehr., *Mauicina* Ehr. and *Diploria* M. Edw.
3. *Macandra cerebrum* Ell. & Sol. instead of *Macandra viridis* (Le Sueur).
4. *Orbicella annularis* (Ell. & Sol.) instead of *O. acropora* (Linn.).

VAUGHAN, T. WAYLAND—Continued.

5. *Porites polygona* Link instead of *Porites porites* Pallas. Mr. Vaughan agrees with Professor Verrill in instances 1, 2, and 4, but in instances 3 and 5 he adheres to the nomenclature used in his report on the Porto Rican corals.

VAUGHAN, T. WAYLAND, and HILL, ROBERT T., Austin, Tex.

Geological Atlas of the United States, V. 8, Geological Survey, Folio No. 76, Apr. 2, 1902.

Geologic maps with descriptive text of the Austin, Tex., quadrangle.

VAUGHAN, T. WAYLAND, and SPENCER, ARTHUR C. The geography of Cuba.

Bull. Am. Geograph. Soc., xxxiv, No. 2, Apr., 1902, pp. 105-116.

A succinct account of the general physiographic features of Cuba.

WEAD, CHARLES K. Contributions to the history of musical scales.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1900 (1902), pp. 117-162, pls. 1-10, figs. 1-8.

WHITE, DAVID. The Canadian species of the genus *Whittleseyia* and their systematic relations.

Ottawa Naturalist, xv, July 1901, pp. 98-110, pl. 7.

In this paper 3 new species—*Whittleseyia desiderata* White, *Whittleseyia brevifolia* White, and *Whittleseyia dawsoniana* White—are described and illustrated, and their source and age discussed. The conclusion reached as to the age of the beds is that they are referable to the upper part of the Pottsville. The relations and systematic position of the species are also considered. They are found to be more closely allied to the group of broader proportions, in general characteristic of the Upper Pottsville, than to the linear group which prevails in the lower portions of the Pottsville of the Appalachian province. Systematically they are regarded by the author as referable to the Ginkgoales, the *Whittleseyia*, in the judgment of the writer, being the oldest representatives of the Ginkgoales stock yet discovered.

— Two new species of algae of the genus *Euthotrephis*, from the Upper Silurian of Indiana.

Proc. U. S. Nat. Mus., xxiv, No. 1255, Nov. 30, 1901, pp. 265-270, pls. XVI-XVIII.

Two new species, *Euthotrephis divaricata* and *Euthotrephis newlini*, from the Eurypterid beds at Kokomo, Ind., are described as exhibiting a matted filamentary texture comparable to that of the genus *Codium* among

WHITE, DAVID—Continued.

living Algae. *Buthotrephis newlini* is said to be closely related to *Buthotrephis lesquereurii* Grote and Pitt. For the *Buthotrephis divaricata* the name *B. speciosa* has since been substituted (Proc. Biol. Soc. Wash., XV, Apr. 25, 1902, p. 86), the former name having been pre-occupied. The suggestion is made that other relations of these algaoid forms will perhaps be discovered in the collections among the organisms generally, though doubtfully, ranged with the Graptolites.

WILSON, H. V. The sponges collected in Porto Rico in 1899 by the U. S. Fish Commission steamer *Fish Hawk*.

Bull. U. S. Fish Com., 1900, II, Mar. 28, 1902, pp. 375-411, text figs. 1-30.

Among the 45 species described there are 11 new species and 5 new varieties. Directions are given for the preparation of sponges for study, and a list of definitions of systematic terms used in the report.

WILSON, THOMAS. La haute ancienneté de l'homme dans l'Amerique du Nord.

L'Anthropologie (Paris, France), XII, Nos. 3-4, Mai-Août, 1901, pp. 297-339, figs. 1-31.

WILSON, THOMAS—Continued.

Communication to the Congrès International d'Anthropologie et d'Archéologie Préhistoriques, XII Session, Paris, 1900.

Compte Rendu de la Douzième Session, Paris, 1900. (Masson et Cie, Éditeurs, 120 Boulevard St. Germain, Paris, 1902), pp. 149-191, figs. 1-31.

Arrow wounds.

Am. Anthropologist (new series), III, July-Sept., 1901, pp. 513-531, 3 plates, 13 figs.

A short sketch of the subject of the infliction of wounds by arrows and spears, from prehistoric times to the present day. Based on prehistoric human remains in the U. S. National Museum and on modern specimens in the Army Medical Museum.

Classification des pointes de flèches, des pointes des lances et des couteaux en pierre.

Compte Rendu de la Douzième Session de la Congrès International d'Anthropologie et d'Archéologie Préhistoriques, Paris, 1900. (Masson et Cie, Éditeurs, 120 Boulevard St. Germain, Paris, 1902), pp. 298-321, figs. 1-15.

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APPENDIX V.

REPORT ON THE EXHIBIT OF THE NATIONAL MUSEUM AT THE SOUTH CAROLINA, INTERSTATE AND WEST INDIAN EXPOSITION, CHARLESTON, 1901-2

By FREDERICK W. TRUE,

Head Curator, Department of Biology, in charge.

The South Carolina, Interstate and West Indian Exposition, held at Charleston, South Carolina, opened December 1, 1901, and closed May 31, 1902. The object of this exposition, as shown in its prospectus, was "to inaugurate new industries and commerce in the South; to open up new foreign markets, particularly in the West Indies; to begin the twentieth century of the Christian era with an exhibition of the arts of peace; to develop the American culture of silk and tea; to promote the Southern manufactures of cotton and iron; to establish new steamship lines from Charleston, the central seaport of the great Southeast; to show the world the resources and attractions of the territory along the Southern seaboard and the advantages of Charleston as a connecting link between the producers of the Southeastern States and the Mississippi Valley on one side and the markets of the world on the other."

In the sundry civil bill making provision for the expenses of the Government for the fiscal year ending June 30, 1902, an item was inserted for a Government exhibit at Charleston. This item was subsequently rejected, and as the Exposition would open before the matter could again be brought to the attention of Congress the director-general appealed to the President to order an exhibit sent to Charleston with the understanding that the exposition company would meet all expenses.

The President was favorably inclined toward this request, and by his direction the Secretaries of the Executive Departments instructed the proper officials to select from the exhibits made at the Buffalo Exposition, and send to Charleston, such objects as would be appropriate for display in the latter place. The Secretary of the Smithsonian Institution also received a request from the director-general that some part of the exhibits of the Institution and National Museum at the Buffalo Exposition be sent to Charleston at the expense of the exposition company, which request, after due consideration of all the circumstances, was granted.

In his first message to Congress President Roosevelt mentioned the matter of a Government exhibit at Charleston, as follows:

"The people of Charleston, with great energy and civic spirit, are carrying on an exposition which will continue throughout most of the present session of Congress. I heartily commend this exposition to the good will of the people. It deserves all the encouragement that can be given it. The managers of the Charleston Exposition have requested the Cabinet officers to place thereat the Government exhibits which have been at Buffalo, promising to pay the necessary expenses. I have taken the responsibility of directing that this be done, for I feel that it is due to Charleston to help her in her praiseworthy effort. In my opinion the management should not be required to pay all these expenses. I earnestly recommend that the Congress appropriate at once the small sum necessary for this purpose."

The space allotted to the Government exhibits was in the semicircular colonnades connecting the large central building known as the Cotton Palace with two other buildings—the Palace of Commerce and the South Carolina Building. These colonnades were originally designed to be open on the sides, but in order to properly house the Government collections they were enclosed and furnished with windows and skylights. A very good exhibition space was thus obtained at a moderate

expense. The portion of this space assigned to the Smithsonian Institution and National Museum was on the west side of the grounds, between the Cotton Palace and the Palace of Commerce. Including a small building called an "exhedra," it comprised 5,682 square feet. The whole of the curved arcade, comprising 4,727 feet, was occupied by the Museum.

After consultation with the officers of the Institution and Museum, a number of objects in the Buffalo exhibit which were too large for the space at Charleston, or were otherwise unsuitable, were ordered sent to Washington, and the remainder, comprising about two-thirds of the original exhibit, were packed separately and forwarded to South Carolina. A number of preparators and mechanics were detailed from Washington to install the exhibit. This work was completed January 13, 1902, at which time the doors were thrown open to the public.

As the collections displayed by the Museum at Charleston were the same as those shown at Buffalo, it is unnecessary to enumerate them here. A full description will be found in the Report for 1901 (pp. 177-231).

The principal omissions at Charleston were the larger mammals, a part of the birds, reptiles, and fishes, the larger ethnological groups and the models of aboriginal dwellings, the skeleton of *Hesperornis*, the collection of native elements, etc.

The largest object exhibited was the skeleton of the huge extinct reptile, *Triceratops*. This stood in a central position, and, on account of the excellent lighting, showed to even better advantage than at Buffalo. Around it were grouped the other geological exhibits, occupying eight cases and comprising minerals, cave deposits, and invertebrate fossils. On the two sides of the central space were the exhibits of the departments of Anthropology and Biology.

The principal exhibit of the Department of Anthropology consisted of six large groups, in separate cases, representing native American peoples. These were supplemented by collections representing the products of different arts of the native Americans, such as basketry and pottery, and native hunting and fishing implements, fire-making devices, etc. The group cases were placed against the west wall in a single row, and opposite them were the smaller cases, nine in number, arranged so as to form alcoves.

The exhibit of the Department of Biology, which was at the opposite end of the space, had as its principal feature a case 40 feet long, containing mammals. This was placed against the west wall, and opposite and at the extreme end of the space were the smaller cases, arranged like those of the Department of Anthropology, in the form of alcoves, and containing characteristic American fishes, reptiles, batrachians, and birds.

The collection remained on exhibition until May 31, 1902, when the exposition closed. At this time preparators were again sent from the Museum to repack the collections, which work was completed June 16, 1902.

On January 21, 1902, Congress appropriated \$90,000 to reimburse the exposition company for expenditures made in behalf of the Government exhibit. This appropriation was not disbursed under the direction of a Government board or of the individual representatives of the several departments and bureaus, but by the Treasury Department directly to the exposition company. This arrangement worked somewhat disadvantageously, in so far as the Government exhibits were concerned, as it was necessary for the exposition company to actually pay out money from its own funds before reimbursement could be made by the Treasury. On June 12, 1902, the affairs of the exposition company passed into the hands of a receiver, and no payments could be made until the court acted in the matter. As the president of the exposition company declined to continue paying Government expenses from his private purse, and the court was unable to pass upon the case at once, a considerable time elapsed during which no bills were settled. It is to be hoped that in similar cases in the future provision will be made for disbursement under the direction of a Government board.

APPENDIX VI.

REPORT OF DELEGATE TO THE FIFTH INTERNATIONAL ZOOLOGICAL CONGRESS, BERLIN, AUGUST 12-16, 1901.

Prof. S. P. LANGLEY,
Secretary, Smithsonian Institution.

DEAR SIR: I have the honor to submit herewith a brief account of my visit to the Fifth International Zoological Congress at Berlin, to which, on July 15, 1901, you appointed me a delegate to represent the Smithsonian Institution and the United States National Museum.

The congress was opened on August 12 and lasted until August 16, when the delegates and members adjourned to attend the reception given in their honor by the High Senate of Hamburg. The 17th was spent in Hamburg inspecting the zoological collections there, and on August 18 and 19 most of the members visited the Marine Biological Station on Heligoland. Having urgent business at the Hamburg Naturhistorisches Museum, I remained there instead of going to Heligoland.

The congress was in every respect a success. Not only was the attendance (about 750 members) greater than at any previous congress, but the standard of the scientific papers and discussions was unexcelled. I need only refer to the lectures by Prof. G. B. Grassi (Rome) on the malaria problem from a zoological standpoint, Prof. Yves Delage (Paris) on the theories of fecundation, Professor Bütschli (Heidelberg) on vitalism and mechanism, and Professor Branco (Berlin) on fossil remains of man.

One of the main factors of this success was the unexampled interest in the congress displayed by the German Government. A large sum of money was placed at the disposition of the local committee by the Government, and the German Crown Prince, as the high protector of the congress, was only prevented from opening the congress in person by the death of his grandmother, the dowager Empress Friedrich, a few days previous. The congress was lavishly entertained by the cities of Berlin and Hamburg, as well as by the Zoological Society of Berlin. But the most extraordinary proof of the public interest in the congress was probably the fact that the entire "Reichstagsgebäude," the magnificent house of the German Parliament, was placed at the disposition of the Congress for its meetings, lectures, etc. Thus all the general sessions were held in the great "Plenarsitzungssaal" of the Parliament. The Emperor himself, though prevented from receiving the members officially on account of the death of his mother, took occasion to greet them informally.

The more special object of my joining the congress was to take part in the deliberations and decisions of the committee on zoological nomenclature, of which I had been elected a member at the congress in Cambridge in 1898. The work of the committee, which met before the congress opened and continued for some time after its close, occupied so much of the time of the members that the meetings of the sections had to be neglected. I was thus prevented from reading a paper on the Herpetology of Porto Rico, which had been announced, but was able to act as one of the vice-presidents at the second general session. The work in this committee on nomenclature was, on the whole, eminently satisfactory from the standpoint of American

zoologists, though it was found impossible to lay a draft for a complete code for the congress at its Berlin meeting. It is hoped that this will be accomplished at the next congress, which is to be held in Berne, Switzerland, in 1904.

Very respectfully,

LEONHARD STEINEGER,

Curator, Division of Reptiles and Batrachians.

WASHINGTON, D. C., *September 30, 1902.*