PART I.

REPORT

UPON THE

CONDITION AND PROGRESS OF THE U. S. NATIONAL MUSEUM DURING THE YEAR ENDING JUNE 30, 1901.

BY

RICHARD RATHBUN,

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

REPORT

UPON

THE CONDITION AND PROGRESS OF THE U. S. NATIONAL MUSEUM DURING THE YEAR ENDING JUNE 30, 1901.

BY

RICHARD RATHBUN,

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

GENERAL CONSIDERATIONS.

Through the munificence of James Smithson, an Englishman, the United States came into possession in 1838 of about half a million dollars, to be used "for the increase and diffusion of knowledge among men." The wise counsels that prevailed in interpreting the provisions of this bequest, a large one for that time, led to the employment of a portion of the fund for founding a museum for the nation, universal in its scope and usefulness.

The authority for carrying out this purpose was embodied in the Congressional act of 1846 establishing the Smithsonian Institution, which directed that there be delivered to it, whenever suitable arrangements could 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." Provision was also made for the growth of the collections by exchange, donation, or otherwise, and for the arrangement and classification of the specimens in a manner best to facilitate their examination and study. The first Board of Regents, upon which devolved the task of effecting a definite plan of organization for the Institution, expressed its concurrence in this feature in the following resolution, passed in January, 1847:

Resolved, That it is the intention of the act of Congress, 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.

Thus were taken the initial steps that have resulted in the building up of the National Museum of to-day, the largest branch of the Smithsonian Institution, and already endowed with resources which in extent, variety, and richness are surpassed, if at all, by only a very few of the older museums of the world. The actual nucleus of the Museum, however, was formed a few years earlier by a society first known as the National Institution and afterwards as the National Institute, organized for the avowed purpose of directing the Smithson bequest and of engaging in 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, among the former having been the important United States Exploring Expedition around the world, from 1838 to 1842. The museum of the society, which occupied rooms in the Patent Office building, came virtually to be recognized as the proper place for the deposit and care of all Government collections held in Washington. Another important service rendered by the society, as pointed out by Dr. Goode, was in the direction of educating public opinion "to consider the establishment of such an institution worthy of the attention of the Government of the United States." Failing, however, to secure the public recognition at which it aimed, the National Institute became inactive as early as 1846, though it was not until 1861 that it finally passed out of existence. The Government collections in its possession, which were among those covered by the fundamental act of 1846, remained practically in the custody of the Commissioner of Patents up to 1858, when they were turned over to the Smithsonian Institution. Other material directly under the control of the National Institute was retained at the Patent Office until 1862, and a portion of the historical collection until 1883.

At the time of the foundation of the Institution 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 left by Smithson was ample to meet the needs of the multifarious operations then proposed. These included, besides the custody of the national and other collections confided to its care, whereby the Museum was made an integral part of the Institution, the accumulation and maintenance of a large library, the conduct of scientific investigations, and the dissemination of useful knowledge, for all of which purposes the construction of an adequate building was primarily required and immediately determined upon. In the absence of any stated limitations as to the time when the transfer of the Government collections should take place, the date for accepting the obligation rested with the Regents, who, while confronted with the mandatory language of the law, were still forced to recognize the inadequacy

of the fund at their disposal for the support of so large an undertaking. The cost of the extensive and elaborate building, designed mainly for the accommodation of the Museum and Library, would have drawn heavily upon the principal of the fund, had not a policy of delay prevailed, nine years being allowed to elapse between the laying of the corner stone, in 1846, and the completion of the structure. This delay gave opportunity for influencing a change of sentiment, so that when, in 1857, the necessary arrangement became possible, Congress was prepared to vote means for building cases, for transferring the specimens from the Patent Office, and, to a certain extent, for the care and preservation of the collections. So inadequate, however, were the sums granted that for many years the slender income of the Institution was heavily drawn upon to insure the maintenance of what was then called the Smithsonian Museum, and justly enough, since the building was paid for out of the Smithson fund, and considerable portions of the collections were and still are the actual property of the Institution, through exploration, gift, and purchase, and a number of the officials in charge of the collections were employed at its expense.

While the collections in the custody of the National Institute remained at the Patent Office, as before stated, until 1858, material for a museum was in the meantime being accumulated at the Smithsonian Institution. The first scientific collection to come into its possession, 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. This collection was unfortunately destroyed by fire in 1865. The personal bent of Professor Baird, who became an assistant secretary of the Institution in 1850, was toward the collection of natural-history specimens for purposes of study. With the approval of Secretary Henry he put into operation plans for accomplishing this object, which, fostered and encouraged, were soon yielding 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 commercial organizations as the Hudson's Bay Company and the Western Union Telegraph Company were enlisted in the cause 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 United States Fish Commission, and the support given to scientific collecting by many other bureaus of the Government.

The title "National Museum," first recognized by Congress in 1875, came into general use through the display of the Government collections at the Centennial Exhibition at Philadelphia in 1876. This was

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 Washington, as well as new methods of installing and exhibiting museum materials, differing radically from the older cabinets of college or local museums which prevailed up to that time. After its close the material brought back belonging to the Government, together with the extensive gifts made to the United States by private persons and foreign governments, forced the erection of a separate building, which brought the name "National Museum" into greater prominence. Since that time Congress has in the main 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 all the scientific bureaus at Washington, cooperate, both through men and material, in enlarging and caring for the national collections.

With the primary object of preserving the collections in anthropology, biology, and geology obtained by the national surveys, every effort is being made, through exchange, donation, purchase, and the encouragement of exploration, to so increase its possessions that the Museum of the Government may in time contain the fullest possible representation of all branches of science and the arts capable of being illustrated in a material way. The specimens 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 popular 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 throughout the country. 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 sort of bureau of information in respect to all subjects with which it is concerned even in the remotest degree, 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 fund 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 survey, 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 United States Geological Survey, the United States 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, and at Omaha in 1898. 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. Now, at the close of 1901, it amounts to nearly 5,000,000.

While these figures convey no impression of the bulk of the collections, when it is considered that in 1885 all of the space in both buildings was completely filled, and in fact was 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 conduct 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.

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 workrooms.

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 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 exposition, 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 so 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 eighteenth volume, consists, besides the administrative part, mainly of semipopular 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-two complete volumes have been issued and of the Bulletins fifty numbers.

PRESENT CONDITIONS AND NEEDS.

Attention has repeatedly been called to the inadequacy of the present accommodations for the national collections. The Smithsonian building had become fully occupied some twenty-five years ago, when the large contributions to the Government from exhibitors at the

Philadelphia Centennial Exhibition led to the erection of the Museum building, completed in 1881. By 1885 this structure was also filled, and though numerous efforts have since been made to secure more ample quarters, all have met with failure. In 1888, 1890, and 1892, the Senate voted $500,000 for a new building, and in 1896, $250,000, but none of these measures was even considered in the House of Representatives.

There has been no abatement in the number of collections received annually, but, in fact, a general increase from year to year, and a severe task has thus devolved upon the Museum authorities in arranging for their disposition. New specimens have constantly been added to the exhibition halls and storage rooms until both are overcrowded to the extent that in the one the objects, as a rule, can not be properly viewed by visitors, and in the other their classification has become impossible, and they are for the most part practically inaccessible for study. But so extensive have been the accessions that only a part could be disposed of in this manner, and it became necessary, several years ago, to resort to outside storage, which is now provided for in an old wooden shed upon the Mall and in several rented buildings. None of these buildings is of fireproof construction, though they contain collections of great value and in large part not replaceable. They also lack facilities for the classification and arrangement of the specimens, which are packed away in shipping boxes and, for the time, serve no purpose of any kind.

The collections made by the Government surveys, of which the Museum is the legal custodian, can continue to be received and housed, as additional storage buildings may be leased, if necessary, though the further provision of the law to make them at all times available for study and examination can no longer be carried out. The same applies to specimens obtained by purchase or exchange and to such donations as are given without condition. The Museum is, in fact, being resolved into a mere storehouse of material which comes to it mainly without solicitation, and its larger purpose, while never lost sight of, is becoming more and more difficult to maintain. Its reserve or record collections in every branch should be so systematically arranged that any specimens desired for study could immediately be found; the public exhibition should comprise the entire range of Museum subjects, and be installed effectively and without crowding, and there should be ample and well-appointed working quarters, in which all the activities of the establishment could be conveniently carried on.

With the conditions as they now are, it is not to be wondered at that the National Museum lacks that character of support which has done so much for many other museums. Its donations are generally small and relatively unimportant. The possessors of large and valuable

collections will not present them where they can not be at once displayed or well arranged. Such inducements can now rarely be offered here, but many of the larger museums elsewhere owe their principal growth to generous gifts from wealthy patrons of science and the arts. Specific mention could be made of several large collections which their owners would have preferred to place at the national capital, but which have been given to or deposited in other museums, because in Washington they would have to be packed away for an indefinite period, at great risk of injury and destruction.

The amount of floor space occupied by the national collections is very much smaller than would appear to the casual visitor. The two main buildings contain, in fact, only 195,486 square feet, to which the outside buildings, mostly rented, add 43,203 square feet, making a total of 238,689 square feet. The latter are partly occupied by workshops, but are mainly used for the gross storage of specimens, and in no case for exhibition or for the arrangement in classified order of the reserve series.

In London the subjects represented by the United States National Museum are distributed among several museums, such as the British Museum, leaving out the Library, the Victoria and Albert Museum, and the Museum of Practical Geology, which now have an aggregate of 989,388 square feet of floor space, soon to be increased by 400,000 to 500,000 square feet in the new addition to the Victoria and Albert Museum. In Berlin seven of the national museums relating to natural history and the industrial arts possess some 575,000 square feet of area, and the new National History Museum of Vienna has over 350,000 square feet alone. In our own country, the American Museum of Natural History in New York City, which, when completed, will cover a ground area of over 5½ acres, already has 356,800 square feet of floor space available.

A study of the conditions in Washington has shown that to properly arrange the national collections and provide for the growth of perhaps fifteen or twenty years would require additional floor space to the extent of something like 400,000 or 500,000 square feet. If this were obtained through the construction of a new building having that amount of room, it would still be necessary to utilize both of the present buildings, and this seems the preferable course to pursue.

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, 1901, was $263,540, that for the previous year having been $238,540. The principal changes as compared with 1900 were an increase of $10,000 for

preservation of collections, an increase of $9,000 for repairs to buildings, and a separate appropriation of $10,000 for the purchase of specimens. The appropriation for furniture and fixtures included $2,500 for furnishing a lecture hall, and that for heating, lighting, and electrical service $3,500 for beginning the installation of an electric-lighting system.

The expenditures from the appropriations for 1900–1901 amounted to $246,824.67 up to the close of the year, leaving a balance of $16,715.33 to meet outstanding liabilities. During the same year $11,026.06 were disbursed from the balance of $11,400.81 of the appropriations for 1899–1900 on hand June 30, 1900.

The following tables show the expenditures during the year 1900–1901 under each item of the appropriations for the past two years:

Appropriations and expenditures for the fiscal year ending June 30, 1901.

Object.	Amounts appropriated.	Amounts expended.	Balances on hand June 30, 1901.
Preservation of collections	$180,000.00	$173,492.08	$6,507.92
Furniture and fixtures (including $2,500 for furnishing a lecture room)	17,500.00	15,403.77	2,096.23
Heating, lighting, and electrical service, and installation of electric-lighting system	17,500.00	15,611.91	1,888.09
Books	2,000.00	1,141.96	858.04
Postage	500.00	500.00	
Building repairs	15,000.00	14,115.07	884.93
Rent of workshops	1,040.00	4,039.92	.08
Purchase of specimens	10,000.00	6,941.44	3,058.56
Printing and binding	17,000.00	15,578.52	1,421.48
Total	263,540.00	246,824.67	16,715.33

Disbursements during 1901 from the unexpended balances of appropriations for the fiscal year ending June 30, 1900.

Object.	Balances June 30, 1900.	Amounts expended.	Balances June 30, 1901.
Preservation of collections	$9,133.82	$8,802.43	$331.39
Furniture and fixtures	575.21	563.39	11.85
Heating and lighting	561.96	561.94	.02
Books	878.72	848.08	30.64
Building repairs	251.07	250.22	.85
Total	11,400.81	11,026.06	374.75

From the appropriations for the year ending June 30, 1899, disbursements were made under the item for the purchase of books to the amount of $17.25, leaving a balance of $7.83; and under the item for the erection of galleries to the amount of $205.12, leaving a balance of 67 cents. Other balances remaining from the appropriations for the same year, which revert to the surplus fund of the Treasury, are

as follows: Preservation of collections, $1.53; furniture and fixtures, $1.35; heating and lighting, 1 cent; building repairs, 91 cents; rent of workshops, $110.08.

Appropriations for the year ending June 30, 1902.

Preservation of collections	$180,000
Furniture and fixtures	20,000
Heating, lighting, and electrical service, including $5,000 for continuing the installation of an electric-lighting system	23,000
Purchase and installation of new heating boilers	12,500
Purchase of specimens	10,000
Books, pamphlets, and periodicals	2,000
Postage	500
Repairs to buildings	15,000
Construction of two galleries	5,000
Rent of workshops and storage quarters	4,400
Printing and binding	17,000
Total	289,400

BUILDINGS.

The principal alterations and repairs to buildings comprised the fitting up of a lecture hall, the strengthening of the roof of the Museum building, the substitution of terrazzo pavement for the last of the old wooden floors in the same building, and the starting of a comprehensive system of electric wiring for the exhibition halls and offices of the Museum building.

The old lecture hall, first established in the north west range and subsequently occupying the west north range, was a few years ago literally crowded out of existence through the encroachment of collections. By the transfer of certain materials and workrooms to outside buildings it has been possible during the past year to restore this important feature, and with the small sum specifically appropriated by Congress the east north range, at the left of the main entrance, has been adapted to the purpose. The walls and ceiling were tastefully painted in shades of green and the windows provided with shutters for darkening the room when the stereopticon is used. The platform, seats, lantern stage, and other furnishings are of the simplest character, and are also removable to permit of installing collections for exhibition at any time. The four large Flemish tapestries depicting scenes in the life of Alexander the Great, deposited in the Museum by Gen. P. H. Sheridan in 1886, are now hung in this room, and it is proposed to add other objects, requiring only wall space for their installation, to complete its decoration.

A number of years ago a small electric plant, including a dynamo and gas engine, was installed to meet the requirements of that time for lighting the storerooms, workrooms, offices, and dark passages.

Proving inadequate for the growing needs of the Museum, it has become necessary to arrange for taking current from one of the electric companies and for enlarging and extending the system of wiring. Under authority of Congress the new installation has been planned on a scale ample for also lighting the exhibition halls in the Museum building, thus providing the possibility for opening them at night, should the requisite means be provided. The work was carried on during the last year under an initial appropriation of $3,500, since supplemented by one of $5,000, which should insure its completion before the close of 1902.

The roof of the Museum building, never entirely satisfactory and developing many weak points during recent years, has been repaired and strengthened, under the advice of a competent engineer, to the extent that its character warrants, and it is hoped that it can be made to answer for a few years longer.

Taking advantage of the necessity for replacing the steam boilers in the Museum building, which are now worn out beyond repair, and for the renewal of which an appropriation of $12,500 was made at the last session of Congress, plans were completed before the end of the year for an entire revision of the heating system. It is proposed to install in the Museum building a battery of two boilers of sufficient power to heat both buildings, as well as the adjacent Museum shops, for which heretofore additional boilers in the Smithsonian building and a furnace in the stable building have been required. By this means it is expected to obtain a better service with greater economy of fuel and labor.

ADDITIONS TO THE COLLECTIONS.

The additions to the collections during the year, received in 1,470 separate lots or accessions, amounted to 178,987 specimens, or about 27,000 less than the previous year. The total number of specimens in the possession of the Museum, as indicated by the records, has thereby been increased to 4,994,672, though the actual number is much greater, for the reason that, while thousands of very small objects are often contained in a single package, it has been customary to estimate the contents of such packages at a small nominal figure.

The decrease in the receipts as compared with 1900 was confined to a few divisions. In most divisions there was an increase, and in some the increase was very marked. The scientific value of the additions was, moreover, especially noteworthy.

The most extensive and important accessions as a whole were derived, as usual, from the bureaus of the Government which are engaged in scientific explorations, chiefly the Geological Survey, the Fish Commission, the Bureau of American Ethnology, and the Bio-

logical Survey, the Division of Entomology and the Division of Plants of the Department of Agriculture. The receipts from private establishments and from individuals, by donation and exchange, were also large and of great value, and through the deposit of objects by their owners many interesting features have been added to the exhibition series. Field investigations by members of the Museum staff, which might be made an important means of building up the collections in directions not otherwise covered, have, from lack of funds, only been possible on a very limited scale. In fact, except for the opportunities occasionally afforded to join with the field parties from other bureaus, the Museum assistants could seldom engage in work of this character. During last year, however, as elsewhere explained, they participated in several such expeditions, which were exceedingly fruitful in results.

While the prominent museums throughout the world have generally the means of adding largely to their collections by purchase, this method of acquiring specimens has always been a very minor resource of the National Museum. For the past year Congress has appropriated $10,000 for this purpose, and though this sum is altogether too small to be effective, the amounts previously available were even much less. Disbursements are almost entirely limited to the purchase of objects not previously represented, and many important desiderata are thus supplied from year to year, but the requirements in this regard can never be at all adequately satisfied without a considerable increase in the size of the appropriation.

Reference will be made in this connection to only a few of the more important accessions of the year, the subject being fully covered in the reports of the head curators and in Appendix II.

In the Department of Anthropology the total number of specimens received was 31,155, of which 26,644 specimens, or about 85 per cent, belonged to prehistoric archæology and were mainly derived from two sources. The largest accession, consisting of over 18,000 stone implements from an ancient village site in Columbia County, Ga., was purchased of the collector, Dr. Roland Steiner. The second in size, comprising over 7,000 similar implements and other objects principally from Maryland, the generous gift of Mr. J. D. McGuire, constitutes the most important collection ever made in the Chesapeake region by a single individual. Two other noteworthy additions in the same line were collections of flint implements and rejectage of manufacture, one secured by the head curator, Mr. W. H. Holmes, during an investigation of an ancient quarry site in Union County, Ill., the other, presented by Mr. H. W. Seton-Karr, of London, England, illustrating the quarrying and stone shaping arts of the primitive Egyptians.

While the number of specimens added in the Division of Ethnology

was relatively much smaller, several of the accessions were of unusual interest. Micronesia, Polynesia, and Melanesia were represented by a collection of native implements, costumes, etc., made by Mr. C. H. Townsend and Dr. H. F. Moore, naturalists on the U. S. Fish Commission steamer *Albatross* during the extended cruise of that steamer in 1899–1900. Material illustrating the Panamary and other Indian tribes of the Upper Purus River and the Bororo Indians of Matto-Grosso, Brazil, was received as the result of explorations by Prof. J. B. Steere, of Ann Arbor, Mich., and from the Rev. William A. Cook, the latter through the favor of Dr. Orville A. Derby, of São Paulo, Brazil. By exchange with the Field Columbian Museum the department came into possession of a share of the great collection made by Dr. Emil Hassler in connection with his important investigations among the various tribes inhabiting the region of the Upper Paraguay River in South America and exhibited by him at the World's Columbian Exposition of 1893. The remaining accessions in ethnology and archæology, as will be seen by reference to the list, relate to countries all over the world and to many parts of the United States. The Division of History has also been greatly enriched through several donations.

In the Department of Biology the additions numbered 115,767 specimens, of which 78,767 were zoological and 37,000 botanical. The Division of Insects shows the greatest increase in zoology, 37,000 specimens, followed by Marine Invertebrates with 11,889, Mollusks with 10,500, Mammals with 7,976, and Birds with 6,478.

One of the most noteworthy accessions was a large amount of valuable material resulting from recent explorations in the East Indies by Dr. W. L. Abbott, including mammals, birds, reptiles, insects, mollusks, and other groups of marine invertebrates, of which a large proportion of the species represented are probably new to science. The generosity shown by Dr. Abbott in continuing to make the National Museum the depository for the many treasures secured during his extended labors in the little-known regions of the Eastern Tropics is exceedingly gratifying. About 300 mammals, 600 birds, and many birds' eggs and reptiles were the outcome of Dr. E. A. Mearns's work in Florida, while the expedition to Venezuela of Capt. Wirt Robinson, U. S. Army, and Dr. M. W. Lyon, jr., was productive of a large collection of mammals, birds, reptiles, insects, etc., including a valuable series of bats. The extensive collection of mammals made in Southern Europe by Mr. Dane Coolidge comprises what is probably the best series of Italian rodents now contained in any museum in the world. From a collecting trip to Madison County, New York, Mr. G. S. Miller, jr., brought back about 200 mammals.

Among the acquisitions in ornithology were many rare and valuable specimens. The most important single accession was the private collection of Mr. Robert Ridgway, containing about 1,100 North and Central American birds, many in the first plumage and all exceedingly perfect preparations. The most valuable additions to the collection of birds' eggs were received as gifts from Dr. William L. Ralph, who is in charge of the section, but some rarities were also contributed by the Biological Survey of the Department of Agriculture.

The expedition made to the Amazon River, Brazil, by Prof. J. B. Steere, on behalf of the Pan-American Exposition, furnished a large series of characteristic reptiles and fishes. Other noteworthy additions of reptiles were a collection from the Polynesian Islands made by the Fish Commission steamer *Albatross*, and another from St. Kitts, West Indies, presented by Mr. W. H. Alexander, United States weather observer. Among fishes the important accessions were the types of new species and other specimens obtained about Porto Rico by the Fish Commission steamer *Fish Hawk* in 1899, the types of Hawaiian fishes collected by Dr. O. P. Jenkins, of Leland Stanford Junior University, and Mr. T. D. Wood, and a series of Japanese fishes presented by the same university.

Especially prominent among the additions to the Division of Mollusks was a donation from Dr. W. Eastlake, of Tokyo, Japan, comprising about 500 species of Oriental shells, which have heretofore been poorly represented in the National Museum. Over 200 species and 3,000 specimens were received from the collecting trip made to Haiti and Jamaica by Mr. J. B. Henderson, jr., and Mr. C. T. Simpson. Other noteworthy accessions were 225 species of Naiades from South and Central America, and a large series of Australian shells.

In the Division of Insects the number of accessions reached 297, and the important ones among them are so many that they can scarcely be summarized in this connection. Of greatest value was the collection of European Lepidoptera brought together by the late Dr. O. Hofmann and obtained by purchase. It comprises 15,626 specimens and is especially rich in the smaller moths.

The Division of Marine Invertebrates received six important collections from the Fish Commission, namely: The ophiurans of the *Albatross* cruise to the Galapagos Islands and the west coast of Central and South America in 1891, and described by Drs. Lütken and Mortensen; the crustaceans from dredgings and shore collecting on the coast of Japan by the steamer *Albatross* and Dr. H. F. Moore in 1900; the corals from the South Sea expedition of the steamer *Albatross* in 1899–1900, and from Porto Rican waters collected by the steamer *Fish Hawk* in 1899; a large collection of crayfishes from West Virginia; and

the crustaceans and echinoderms collected by the Princeton University Arctic Expedition of 1899. Other accessions which may be mentioned are the types of the Oligochete worms collected by the E. W. Harriman Alaskan Expedition of 1899, a fine series of the marine and freshwater crustaceans of Hawaii, presented by Mr. H. W. Henshaw; and the specimens of ocean bottom obtained by the U. S. S. *Nero* in its surveys for cable routes in the Pacific Ocean.

In botany the most prominent accession was the collection of 10,000 specimens of lichens, from various parts of the world, which had belonged to the late Henry Willey, of New Bedford, Massachusetts, a well-known specialist in the group, and which was purchased from his estate. Next in importance by reason of their size were a collection of 5,400 plants made in Oregon by Mr. E. P. Seldon and transferred by the Department of Agriculture, and 1,600 specimens collected in Alabama, Georgia, and Tennessee by Mr. Charles L. Pollard and Mr. William R. Maxon, of the Museum.

In the Department of Geology by far the greater bulk of the accessions was received from the U. S. Geological Survey, the more important contributions from this source comprising a type series of 386 specimens of asphalt and associated rocks from various parts of the United States; a large number of rocks and ores from the Ten Mile district, and Silverton, Pikes Peak, and Cripple Creek quadrangles of Colorado; 375 specimens of Pre-Cambrian marine invertebrate fossils, including material figured and described by Dr. Charles D. Walcott; 2,370 fossils, mainly brachiopods, from the Cambrian, 2,425 from the Ordovician of southern Nevada and near El Paso, Texas, and 114 Silurian and 1,550 Devonian fossils from the Helderbergian and Oriskanian beds of Indian Territory, and the higher Devonian of Colorado and New Mexico. Other noteworthy additions were extensive and valuable collections of Cambrian fossils made by and under the direction of Dr. Walcott in Nova Scotia, Newfoundland, Russia, Norway, and Sweden; the private collection of Mr. F. A. Randall, of Warren, Pennsylvania, comprising upward of 3,600 specimens of Upper Devonian and Lower Carboniferous fossil plants; a remarkably fine slab of the floating crinoid, *Uintacrinus socialis*, the gift of Mr. Frank Springer; a skeleton of the gigantic toothed bird, *Hesperornis regalis*, one of the most complete in existence, and of especial value as throwing new light upon the structure of this somewhat anomalous form; a complete but composite skeleton of the New Zealand *Emeus crassus;* a fairly complete skeleton of an adult female mastodon, unearthed at Church, Michigan; an exceptionally fine nugget of native platinum, weighing 444 grams, from the Nijni-Tagilsk district in the Russian Urals and some fine clusters of distorted crystals of native silver, in dendritic and fern-like forms, from the Lake Superior district.

The statistics of accessions for the past and previous years are given in the following tables:

Number of specimens received in 1900–1901, and total number in the several divisions on June 30, 1901.

Division.	Received in 1900–1901.	Total.
Anthropology:		
Ethnology	2,887	459,182
Historic Archæology	98	2,087
Prehistoric Archæology	26,644	334,601
Technology	195	30,979
Graphic Arts	7	7,390
Medicine	.....	6,800
Religious	3	2,370
History and Biography	1,181	39,267
Somatology	77	2,393
Ceramics	44	4,171
Photography	3	1,784
Music	16	1,441
Biology:		
Mammals	7,976	39,806
Birds	6,478	126,431
Birds' Eggs	899	63,667
Reptiles and Batrachians	1,752	41,988
Fishes	2,000	154,501
Mollusks	10,500	759,390
Insects	37,000	1,370,370
Marine Invertebrates	11,889	517,231
Helminthology	[a]138	[a]5,091
Comparative Anatomy	135	15,768
Plants	37,000	473,462
Forestry	.....	749
Geology:		
Physical and Chemical Geology	2,637	83,330
Mineralogy	116	35,266
Invertebrate Paleontology	28,577	115,153
Vertebrate Paleontology	160	
Paleobotany	575	
Total	178,987	4,994,672

[a] Number of catalogue entries.

NOTE.—It is obviously impossible to make an actual count of the specimens in many of the collections, notably those of the lower invertebrates, where single bottles often contain hundreds of specimens.

The number of entries made in the catalogues of the several divisions was 53,573. In Appendix II will be found a complete list of the accessions of the year.

Accessions received annually since 1880.

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

EXPLORATIONS.

The limited appropriations given the Museum have never permitted more than a very small amount of field work by the members of its staff, and their efforts in this respect have necessarily been restricted to expeditions undertaken with the object of securing additions to the collections or of further elucidating the materials already in its possession. Most of these explorations have in fact only been rendered possible through cooperation with other scientific bureaus of the Government or with private establishments and individuals. The extent of the field work during the past year was, however, above the average, and its results were of exceeding value.

Mr. W. H. Holmes, under the auspices of the Bureau of American Ethnology, and in company with Dr. W. A. Phillips, of the Field Columbian Museum, made a detailed examination of the extensive and important flint quarries in the vicinity of Mill Creek, Union County, Illinois, where prehistoric implements occur in great abundance. In June, 1901, ethnological investigations were begun in the pueblo country by Dr. Walter Hough, in conjunction with Mr. Peter G. Gates, of Pasadena, California, and chiefly at the latter's expense. The work was to be continued during the entire summer. In preparation primarily for the anthropological exhibit at the Pan-American Exposition, partly at the expense of the Exposition and partly at that of

the Museum, collecting trips were made to Sonora, Mexico, by Mr. W J McGee, of the Bureau of Ethnology; to the Philippine Islands by Col. F. F. Hilder, of the same Bureau; to the Indian tribes on the Upper Purus River, Brazil, by Prof. J. B. Steere, of Ann Arbor, Michigan; to the Bororo Indians, a Tupian tribe dwelling near the headwaters of the Paraguay River, Brazil, by the Rev. William A. Cook, and to British Columbia and Alaska by Lieut. G. T. Emmons, U. S. Navy. Dr. Roland Steiner, of Georgia, continued his investigations of the quarries, workshops, and village sites of his own neighborhood, near and at the mouth of Shoulderbone Creek and on Little Kiokee River, and the large collection made there during the year is now deposited in the Museum.

Through the courtesy of the U. S. Fish Commissioner, Mr. W. H. Ashmead was detailed in the spring of 1901 to accompany an expedition to the Hawaiian Islands, where at the close of the year he was engaged in making extensive entomological collections. Dr. J. E. Benedict was also permitted to join the Fish Commission steamer *Fish Hawk* during an exploration of the fishing banks in the Gulf of Mexico opposite Anclote River, Florida, for the purpose of making preparations of marine invertebrates.

During November and December, 1900, Mr. J. B. Henderson, jr., of Washington, to whom the Museum is indebted for many previous favors, made in the interest of the Division of Mollusks and entirely at his own expense an important collecting trip to the islands of Haiti and Jamaica, lasting about six weeks. He was accompanied by Mr. C. T. Simpson. During the summer of 1900 Mr. M. W. Lyon, jr., participated with Capt. Wirt Robinson, U. S. Army, in an expedition to Venezuela, with the principal object of securing specimens of the mammals and birds of that region, though attention was also given to other groups of animals. For collecting mammals, Mr. Dane Coolidge, by special arrangement, visited Italy, Sicily, and southern France, and Mr. Gerrit S. Miller, jr., spent some time in the neighborhood of Peterboro, New York. Fishes were collected at Key West, Florida, by Mr. Barton A. Bean and Mr. William H. King. The expedition to Cuba for the Pan-American Exposition, begun by Messrs. Palmer and Riley in 1900 and referred to in the last report, was completed early in the year.

The only important botanical field work was conducted in the States of Georgia, Alabama, and Tennessee by Mr. C. L. Pollard and Mr. W. R. Maxon.

Under the Department of Geology, Mr. Frederic A. Lucas and Mr. Alban Stewart visited several localities where mastodon bones had been reported, with the object of securing a skeleton for the Pan-American Exposition. A single fairly preserved one was obtained in a locality in southern Michigan. Mr. Charles Schuchert spent consid-

erable time in collecting fossils in Canada, in the vicinity of Buffalo, New York, in Maryland, and in eastern Pennsylvania, his inquiries being specially directed toward fixing more definitely the line separating the Silurian and Devonian systems in America. Examinations of the Cambrian fossiliferous deposits of Newfoundland, Nova Scotia, Russia, and Sweden were conducted in the interest of the Museum by Dr. Charles D. Walcott, Director of the U. S. Geological Survey, and under his direction by Mr. S. Ward Loper and Mr. M. Schmalensee.

Collecting outfits have been furnished to the following persons who have offered to collect material for the Museum: Commander Frederic Singer, U. S. Navy, light-house inspector, Key West, Florida; Dr. S. P. Craver, Montevideo, Uruguay; Mr. R. T. Young, Boulder, Colorado; Mr. Selwyn Branch, Roseau, Dominica, British West Indies; Dr. E. A. Mearns, U. S. Army, Newport, Rhode Island; Mr. Leon J. Guthrie, United States weather observer, Willemstad, Curaçao; Prof. J. B. Steere, Ann Arbor, Michigan; Mr. Percy W. Shufeldt, Washington, District of Columbia; Mr. Frank E. Read, Newport News, Virginia; Mr. Howard W. North, Culver, Indiana; the Baldwin-Ziegler Polar Expedition; Mr. C. B. Adams, Macon, Georgia; Mr. William C. Peterson, Canaveral, Florida; Mr. M. L. Robb, Manila, Philippine Islands.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

Ten thousand and sixty-five specimens have been sent out as gifts to educational establishments and in the conduct of exchanges, and 9,683 specimens have been lent for study. The gifts, which have been comparatively few, as little material has been available for the purpose during the year, consisted mainly of marine invertebrates and casts of prehistoric implements. A new series of marine invertebrates and a series illustrating rock weathering and soil formation are in course of preparation.

Appendix III contains a detailed statement of all the distributions. The number of lots sent to each State and foreign country are enumerated in the list below:

State or country.	No.	State or country.	No.
Alabama	1	Iowa	5
Arkansas	1	Kansas	2
California	12	Kentucky	2
Colorado	4	Louisiana	2
Connecticut	11	Maine	2
Delaware	3	Maryland	3
District of Columbia	28	Massachusetts	39
Georgia	1	Michigan	2
Idaho	1	Minnesota	3
Illinois	1	Missouri	7
Indiana	5	Nebraska	1

State or country.	No.	State or country.	No.
New Hampshire	4	Foreign countries—Continued.	
New Jersey	5	Canada	7
New Mexico	4	Denmark	3
New York	51	England	7
North Carolina	3	France	7
Ohio	3	Germany	5
Pennsylvania	21	Holland	2
Rhode Island	4	India	1
Tennessee	6	Ireland	1
Texas	1	Jamaica	1
Utah	1	Mexico	3
Washington	2	New Zealand	1
Wisconsin	11	Norway	1
Wyoming	1	Spain	1
Foreign countries:		Sweden	1
Austria	3	Switzerland	1
Belgium	4	Uruguay	1

Among the more important exchange returns from foreign establishments were the following: Ethnological objects from the Museé de St. Germain, Seine-et-Oise, France; specimens of *Pseudothelphusa fossor*, from the Zoologisches Institute, Kiel, Germany; fossil plants from the Museum Senckenbergianum, Frankfort-on-the-Main, Germany; ethnological objects from British New Guinea and East Africa, from the Royal Zoological and Anthropological-Ethnographical Museum, Dresden, Germany; Diptera from the Museum für Naturkunde, Berlin, Germany; fossil corals from the Royal Geological Museum, Leiden, Holland; bats from the Zoological Museum, Turin, Italy; birds' skins from the Zoological Museum, University of Upsala, Sweden; mammals from the Museé Zoologique de l'Academie Imperiale des Sciences, St. Petersburg, Russia; plants from the Royal Botanical Gardens, Sibpur, India; plants from the Botanic Gardens, Sydney, New South Wales; marine, fresh-water, and land shells from the Australian Museum, Sydney, New South Wales; bats from the National Museum, Montevideo, Uruguay; rocks from the Instituto-Geologico, Mexico, Mexico; plants from the Geological Survey of Canada, Ottawa, Canada.

The following material was obtained through exchange with individuals abroad: Fronds of cultivated varieties of ferns from Mr. C. T. Druery, London, England; specimens of Hemiptera from Mr. W. Kirkaldy, Wimbledon, England; a set of Maundy money, A. D. 1900, the last issued by Queen Victoria, from Mr. Edward Lovett, Croydon, England; foraminifera from the West Indies and Ireland from Mr. B. W. Priest, Bank House, Keepham, Norfolk, England; specimens of exotic Matillidæ and Formicidæ from Mr. Ernest André, Gray (Haute Saône), France; European ferns from Mr. Edward Rosenstock,

Gotha, Germany; caboniferous brachiopods from Dr. E. Schellwien, Königsberg, Prussia; complete costume of a Tyrolean peasant and other articles from Mr. Carl Wohlgemuth, Bozen, Tyrol, Austria; fragment of meteorite from Dr. F. Berwerth, Vienna, Austria; exotic coleoptera from Mr. G. van Roon, Rotterdam, Holland; mammal skins and skulls from Mr. Paul Narbel, Cour, Lausanne, Switzerland; specimens of *Carabus müllori* from Dr. I. Comabella, Barcelona, Spain; minerals from Prof. W. C. Brogger, Christiania, Norway; plants from Mr. C. Conzatti, Oaxaca, Mexico; birds' skins from Mr. Eugene Conbeaux, Saskatchewan, Northwest Territory, Canada.

RESEARCHES.

Research work by members of the Museum staff is necessarily subordinated to the care of the collections and the development of its educational features as exemplified in the exhibition halls, leaving them comparatively little time for original investigations. Notwithstanding this fact, however, they have contributed extensively each year toward the advancement of science, as will be seen by reference to the Proceedings, Bulletins, and Annual Reports of the Museum, in which their productions are mainly published. The services of scientific men not connected with the Museum have also been availed of in working up and reporting upon special groups of objects, but as such assistance can rarely be paid for, the results accomplished through this means have been relatively inconsiderable. There is frequent demand for the use of specimens in conducting researches at the various scientific establishments throughout the country, and such requests are always complied with so far as possible. It is insisted, however, that the examinations be made in Washington when practicable, and type specimens or choice objects are only allowed to be taken from the city in exceptional cases and when their safety can be absolutely assured. In its present crowded condition the Museum has very scanty accommodations for visiting students who desire to work upon its collections, though a year never passes without a number being given such facilities as exist, and the addition of commodious laboratories would serve an important purpose in the advancement of research as well as of scientific education in general.

In the Department of Anthropology the head curator, Mr. Holmes, has completed a report based on his own ethnological and archæological observations in the far West during several years past; he has also nearly finished the manuscript and illustrations for a large work on the ancient pottery of the United States, begun some time ago, and has commenced an exhaustive report on the industries of mining and quarrying among the native tribes. The Curator of Ethnology, Prof. O. T. Mason, has continued his investigations on the basketry tech-

nique of the American Indians, publishing one short paper on the subject. He has also completed a study on American aboriginal harpoons, and has given much time to the ethnology of the Philippine Islands, in this connection having arranged and labeled, primarily for the Pan-American Exposition, the large Philippine collection brought back by the late Col. F. F. Hilder. The range of studies conducted by the Curator of Prehistoric Archæology, Dr. Thomas Wilson, may be indicated by the papers published or presented by him during the year, which were as follows: "Prehistoric archæology in America," "A classification of arrow points, spearheads and knives of prehistoric times," "Jade in America," "Criminology," and "Prehistoric trepanation." Dr. Wilson has also made an extensive examination of prehistoric tools and implements in furtherance of the inquiry as to whether prehistoric man was ambidextrous or not.

In Biology the number of investigations under way was especially large. The first volume of Mr. Robert Ridgway's exhaustive work on the birds of North and Central America, mentioned in the last report, was put in type, and the manuscript of the second volume was nearly completed. Some new genera and species of tanagers and orioles were also described by Mr. Ridgway. The preparation of a card catalogue of the genera and species of recent and fossil birds was continued, and three papers on the nomenclature of birds were published by Dr. Charles W. Richmond. The work of completing Bendire's Life Histories of North American Birds, of which two parts were issued a few years ago as Special Bulletins No. 1 and 3, has been taken up by Dr. W. L. Ralph, Honorary Curator of the Section of Birds' Eggs. The researches on mammals by Mr. G. S. Miller, jr., have resulted in twenty published papers, mainly descriptive of new species in the East Indian collection of Dr. W. L. Abbott, and of new European, African, and South American forms. Among them, however, were a revision of the red-back mice of Europe, and a key to the land mammals of eastern North America. Mr. M. W. Lyon, jr., completed a study of the osteology of the Jerboas and jumping mice. The investigations of Dr. L. Stejneger related mainly to the reptiles of Japan, Porto Rico, and Cuba, on which he has papers in course of preparation, the illustrations being already made. Dr. Stejneger also reported on the reptiles collected in Venezuela by Messrs. Robinson and Lyon, and published two papers on the group of birds known as Wheatears. Flightless birds and the osteology of the tile fish and its allies were among the subjects investigated by Mr. F. A. Lucas.

The publications of Mr. William H. Dall comprised synopses of the molluscan families Tellinidæ, Cardiidæ, and Lucinacea, eleven shorter papers on mollusks, and a report, in conjunction with Mr. Charles T. Simpson, on the mollusks collected in Porto Rican waters by the Fish Commission steamer *Fish Hawk* in 1899. Mr. Simpson continued his

studies on the Naiades, which he is engaged in monographing, and completed three short papers on these fresh-water mussels. The Pacific Pyramidellidæ were the principal subject of the investigations of Mr. Paul Bartsch.

Besides his studies on the crustacean family Galatheidæ, begun some time ago, Dr. James E. Benedict reported on the Anomouran crustaceans of the Fish Commission expedition of 1899 to Porto Rico and published papers descriptive of four new species of the symmetrical Paguridæ, and of the hermit crab *Pagurus bernhardus* and its allies. The work completed by Miss M. J. Rathbun included a synopsis of the Grapsoid crabs of North America, a report on the Decapod and Stomatopod crustaceans collected by the Branner-Agassiz expedition to Brazil, keys to the various groups of North American crabs, a report on the Brachyuran and Macruran crustaceans collected by the Leland Stanford Junior University expedition of 1898–99 to the Galapagos Islands, and a report on the crustaceans of the same groups collected in Porto Rican waters by the Fish Commission expedition of 1899. In reporting upon the Decapod crustaceans obtained by the Harriman Alaskan expedition of 1899, Miss Rathbun has undertaken to prepare a complete review of the Decapods of the west coast of North America based upon all the material from that region now in the Museum. Miss Harriet Richardson, collaborator in the Division of Marine Invertebrates, has reported on the Isopod crustaceans of the Stanford University and the Branner-Agassiz expeditions above mentioned, and has published a key to the Isopods of the east coast of North America.

Of the insects collected on the Harriman Alaskan expedition of 1899, many of the groups were worked up by assistants in the Division of Insects of the Museum, as follows: The Diptera by Mr. Coquillett, the Coleoptera and Psyllidæ by Mr. Schwarz, the Hymenoptera by Mr. Ashmead, the Lepidoptera by Dr. Dyar (with the assistance of several specialists), the Arachnida and Neuroptera by Mr. Banks, the Myriapoda by Professor Cook, and the Odonata by Mr. Currie. Of material collected at the Galapagos Islands by Mr. R. E. Snodgrass, Mr. Banks has reported upon the Arachnida, Mr. Ashmead upon the Hymenoptera, Mr. Coquillett upon the Diptera, Dr. Dyar upon the Lepidoptera, Mr. Currie upon the Odonata, and Mr. Heidemann, of the Department of Agriculture, upon the Hemiptera. Besides the above, Mr. Ashmead has conducted studies upon the Ichneumonoidea and Bombidæ in the general collection, has completed a report upon the Hymenoptera Parasitica of the Hawaiian Islands, and has continued his researches upon exotic material from Africa, Siam, Japan, Australia, and New Zealand. Mr. Currie has continued work upon the Myrmeleonidæ, and is preparing a synonymical card catalogue of the North American Neuropteroid insects. Much progress has also been made on catalogues

of Lepidoptera by Dr. Dyar, and of Hymenoptera by Mr. Ashmead. Mr. Caudell has published a synopsis of the hemipterous genus *Sinea* and has identified considerable material in the group Orthoptera. The total number of papers by members of the staff of the Division of Insects issued during the year amounted to 78.

The publications from the Division of Plants included five papers by Mr. F. V. Coville, a monograph of the North American Umbelliferæ by Mr. J. N. Rose, in conjunction with Prof. John Coulter, a description of a new *Helianthus* and a series of popular articles on the families of flowering plants by Mr. C. L. Pollard, and a list of the ferns of North America and eight other papers relating to them by Mr. William R. Maxon. Investigations in progress in the same division comprised researches on the flora of Mexico by Mr. Rose, who has in preparation an extensive work on that subject; studies of the violets by Mr. Pollard, and studies of the ferns and their allies by Mr. Maxon.

Under arrangements with specialists connected with other establishments, the collections in several zoological groups were being worked up for the National Museum, as follows: The sertularian and campanularian 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, Conn., and Prof. Hubert Lyman 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, Mass.; the recent corals by Mr. T. Wayland Vaughan, of the U. S. Geological Survey, and the crayfishes by Prof. W. P. Hay, of Howard University, Washington, District of Columbia.

In the Department of Geology the head curator, Dr. Merrill, investigated a series of nepheline-melilite rocks collected by Prof. C. H. Hitchcock in Oahu, Hawaii, and completed a study of the stony meteorite which fell in Felix, Alabama, in 1900. His publications include a paper in conjunction with Dr. H. N. Stokes on a stony meteorite which fell at Allegan, Michigan, in 1899, and a meteorite from Mart, Texas, and a "Guide to the study of the collections in the section of applied geology of the National Museum," printed in the Appendix to the Annual Report for 1899. Mr. Tassin's researches related to the analysis of a damourite from California and the dehydration of the metallic hydrates, with special reference to the hydration of ferric and ferrous sulphates and the dehydration of the resultant hydrates and basic salts. He also completed a handbook on the gem collection of the Museum. Mr. Schuchert has continued his preparation of a monograph on the American fossil starfishes and his studies relative to the zones separating the Upper Silurian and Lower Devonian faunas in America, and he also published a paper on the Helderbergian fossils

occurring near Montreal, Canada. Mr. Lucas has begun upon the text for the volume on Stegosaurs projected by the late Prof. O. C. Marsh, and has given some attention to the study of the mastodons of North America. The following papers by him have also been published: "The lachrymal bone in Pinnipeds;" "The characters and relations of Gallinuloides, a fossil gallinaceous bird from the Green River Shales of Wyoming;" "Description of the skull of *Lepidosteus atrox*;" "A new rhinoceros, *Trigonias osborni*, from the Miocene of South Dakota;" "The pelvic girdle of Zeuglodon, *Basilosaurus cetoides* (Owen);" "A new fossil cyprinoid, *Leuciscus turneri*, from the Miocene of Nevada," and "A new dinosaur, *Stegosaurus marshi*, from the Lower Cretaceous of South Dakota."

The collections in the Museum are constantly referred to by the scientific assistants of the Department of Agriculture, the United States Fish Commission, and the Geological Survey. Among persons otherwise connected who have visited the Museum during the past year for the purpose of study the following may be mentioned: Mr. Ernest Thompson Seton, the well-known artist and writer on natural history subjects, spent some time in an examination of the specimens of American deer, in connection with a contemplated work on the large game of the country. Dr. E. A. Mearns, U. S. Army, continued for a short period his work on the zoology of the Mexican boundary survey, studying the American cats, and also giving some attention to the pocket and white-footed mice. Mr. Outram Bangs, of Boston, brought a large series of birds from Panama, and Mr. Frank M. Chapman, of the American Museum of Natural History, some Peruvian birds, for identification with the aid of Museum specimens. The committee on nomenclature of the American Ornithologists' Union made use, as heretofore, of the excellent facilities afforded by the Division of Birds in determining the status of various newly described species and subspecies of birds.

The collections of the Division of Mollusks were consulted by Prof. L. C. Glenn and Mr. A. P. Martin, of the Maryland geological survey, in connection with their work on the Maryland Tertiary formations, and by Mr. F. N. Balch, of Boston, for the identification of certain arctic shells. In the Division of Insects, investigations were conducted by Dr. A. Fenyes, Prof. W. L. Tower, of Harvard University, Miss M. M. Enteman, of Chicago University, Prof. J. B. Smith, of Rutgers College, Mr. J. A. G. Rehn, of the Philadelphia Academy of Natural Sciences, and Sir Gilbert Carter, of Nassau, Bahamas.

Among those who made use of the botanical collections were Prof. E. L. Greene, of the Catholic University, and Mr. E. L. Morris, of the Western High School, Washington, District of Columbia; Mr. Stewardson Brown and Mr. Joseph Crawford, of the Philadelphia Academy of Natural Sciences; Dr. N. L. Britton, of the New York

Botanical Garden; Prof. E. S. Burgess, of the New York Normal College, and Dr. R. H. True, of Harvard University.

In his work upon the fossil Titanotheres for the United States Geological Survey, Prof. Henry F. Osborn, of the American Museum of Natural History, has utilized the extensive series of remains of this reptilian group contained in the Marsh collection recently transferred to the Museum by the Geological Survey.

In the Department of Anthropology investigations were carried on by Hon. A. D. Tompkins, of the Industrial Commission, relative to the African races, in connection with studies upon the negro population of the Southern States, and by Miss Woolson, of Columbia University, New York, regarding primitive weaving.

The number of loans made to specialists to aid them in researches was quite large. In the field of anthropology much material relating to primitive games was sent to Mr. Stewart Culin, director of the Museum of Science and Art of the University of Pennsylvania; various articles bearing upon Asiatic contact with the west coast of America were supplied to Dr. Franz Boas, of the American Museum of Natural History, New York; and a series of spindle whorls was lent to Mrs. H. Newell Wardle, of the Academy of Natural Sciences, Philadelphia. Among smaller sendings were a Cufic tombstone to Mrs. Alexander McD. Lee, of Frederick, Maryland, and a relief map of Palestine in New Testament times to Mr. F. Burgi, of Rochester, New York.

The principal loans of zoological material were as follows: Twenty-eight specimens of Hutia rats (*Capromys*) to Mr. F. M. Chapman, of the American Museum of Natural History; 35 bats to Mr. James A. G. Rehn, of the Philadelphia Academy of Natural Sciences; 185 skins of chickadees, nuthatches, and creepers to Mr. Francis J. Birtwell, of Albuquerque, New Mexico; 28 skins of *Aegialites* to Dr. Jonathan Dwight, jr., of the American Museum of Natural History; 68 skins of Macrochamphus to Mr. Reginald H. Howe, of Brookline, Massachusetts; several specimens of the Chimaera, *Hariotta raleighana*, to Mr. Samuel Garman, of the Museum of Comparative Zoology; the entire collection of New England Amphipod crustaceans to Prof. S. J. Holmes, of the University of Chicago, for use in preparing a report for the U. S. Fish Commission; specimens of Nemerteans from the Pacific coast to Dr. Wesley R. Coe, of Yale University; samples of foraminifera to Prof. B. W. Priest, of Keepham, England; insects of the group Rhynchota to Prof. E. D. Ball, State Agricultural College of Colorado; specimens of Diptera and Hemiptera to Sir George Hampson, of the British Museum of Natural History; a collection of fleas to Prof. C. F. Baker, of St. Louis, Missouri; insects of various groups to Prof. E. S. G. Titus, of the Colorado State Agricultural College, Prof. J. B. Smith, of Rutgers College, New Jersey, Prof. J. S. Hine, of the Ohio State University, Miss M. M. Entenman, of the University of Chicago,

Prof. E. B. Williamson, of Vanderbilt University, Tennessee, and Mr. H. C. Toll, of Pasadena, California; skeletons of birds to Dr. R. W. Shufeldt; Leptocephalus forms of fishes and other material to Prof. C. H. Eigenmann, of Indiana University; a cotype of *Bufo argillaceus* to Dr. Albert Günther, of the British Museum of Natural History; and salamanders of the genus *Spelerpes* to Prof. W. S. Blatchley, of Indianapolis, Indiana.

From the Division of Plants specimens were lent to Mr. B. L. Robinson and Mr. M. N. Fernald, of the Gray Herbarium, Cambridge, Massachusetts; Dr. J. K. Small, Mr. P. A. Rydberg, and Prof. L. M. Underwood, of the New York Botanical Garden; Prof. William Trelease, of the Missouri Botanical Garden, St. Louis; Mr. George E. Davenport, Medford, Massachusetts; Mr. A. A. Eaton, Seabrook, New Hampshire; Mr. A. A. Heller, Lancaster, Pa.; Dr. Charles Mohr, Asheville, North Carolina, and Prof. E. L. Greene, of the Catholic University, Washington, District of Columbia.

The sendings from the Department of Geology included specimens of rocks from the Galapagos Islands to Prof. Alexander Agassiz, of the Museum of Comparative Zoology; sections of rocks from Alaska to Mr. Charles Palache, of Harvard University; volcanic rocks to Mr. H. A. Robinson, of the Peabody Museum of Yale University; 300 specimens of rocks to the Division of Soils of the Department of Agriculture; a series of minerals to the United States Geological Survey, to be used in chemical and physical investigations; Oriskany fossils to Dr. J. M. Clarke, of the New York State Museum, Albany; Carboniferous and Triassic fossils to Prof. James Perrin Smith, of Leland Stanford Junior University, and material relating to the fossil chelonia and fossil horse to Dr. O. P. Hay and Mr. J. W. Gidley, of the American Museum of Natural History.

PROGRESS IN THE INSTALLATION OF THE EXHIBITION COLLECTIONS.

The exhibition halls of the Department of Anthropology are now so completely filled, or rather so overcrowded, as to prevent any further additions except of small objects or as older parts of the collection may be removed to storage. This condition prevails in practically every branch of the department, and is especially embarrassing in respect to that class of objects, of which many are received from time to time, that must be at once provided for in the display cases to insure their safety. The work of the year upon the exhibition series has, therefore, been confined mainly to the rearrangement of material, to the substitution of new and better prepared specimens for less desirable ones, and to perfecting the system of labeling. Owing to the lack

of laboratory space, it has, moreover, been necessary to close the galleries in one court and from time to time to shut off temporarily from public use other parts of the exhibition halls.

The crowding which probably strikes the visitor as most objectionable occurs in the Section of American History, which occupies the hall first entered from the main doorway. While the collections here installed were entirely rearranged during the year and only await the addition of printed labels to put the section in as satisfactory a condition as the circumstances permit, it has been necessary to place the cases so close together as to leave exceedingly narrow passageways between them. A large number of very important historical objects are unfortunately still in storage, and the further development of the collection is hindered by the fact that persons having desirable material which they would gladly donate or loan, will only do so on the assurance that their contributions will be immediately displayed. The use of the wall cases along the sides of this hall would afford some relief, but these are now filled with the very valuable collection of musical instruments, for which no other place is available. The Museum has also a large and noteworthy collection of coins and medals, of which only a small fraction is now on exhibition, and which should soon be made accessible to the public.

The exhibits prepared by the department for the Pan-American Exposition, consisting chiefly of large ethnographical groups of lay figures, will, upon their return to the Museum at the close of the exposition, necessitate the clearing out of at least one of the halls for their reception or the dismantling and storage of the groups, which would be almost equivalent to their destruction.

While the halls assigned to the Department of Biology are mainly filled, some to overflowing, in a few instances the completion of the displays has been delayed awaiting the results of further experiments.

The south east range in the Museum building, allotted to the reptiles and fishes, was repainted and furnished with a new floor of terrazzo pavement. Upright cases have been arranged along the walls for the fishes, and floor cases with sloping tops in the middle space for the reptiles and batrachians. The exhibit consists, at present of casts of North American species, with a small alcoholic series of deep-sea fishes, accompanied by colored figures, which it is intended to supplement by collections of South American and Old World species in some preservative fluid. No entirely satisfactory method of representing these groups to the public has yet been found. Painted casts can never be made to look like the animals as they appear in life, and no method of retaining the life colors in specimens preserved in liquids has been discovered. The painting of actual specimens has been tried

in certain European museums with some success, and experiments are now under way here with a view to utilizing this method or devising some other which shall render a display of the lower vertebrates more presentable.

Some progress has been made toward perfecting the collection of game birds, fishes, and large mammal heads now temporarily displayed in the lower stairway hall at the main entrance to the Smithsonian building, the walls of which have been repainted in appropriate colors. It is contemplated to replace the individual mountings, at least among birds, by groups of specimens with accessories representing the species in their native surroundings, and several such groups have already been completed.

The finely mounted specimens of large mammals, prepared for the Pan-American Exposition, will ultimately be added to the collections of this group in the South Museum hall. The only work done directly for this hall was the relabeling of the American carnivora. The exhibition of insects, to which a hall in the Smithsonian building was recently assigned, is still only partially and imperfectly installed, owing to the fact that the working up of certain proposed improvements in the manner of mounting and arranging the specimens has not been completed. It is expected, however, to settle upon some definite plan during the present year, after which little delay should ensue in placing this group in a thoroughly presentable condition.

One of the most interesting installations of the year, so nearly completed as to permit of its being thrown open to the public, was that in the so-called "Children's Room," which occupies the main floor in the south tower of the Smithsonian building. This novel feature is fully described in the Report of the Secretary, and also in that of the Head Curator of Biology, on page 63 of this volume. It was instituted by the Secretary for the benefit of the very young people, their entertainment rather than instruction, as an attractive means of inculcating a love for nature. The room, a small one, is richly painted and decorated in a prevailing tint of green, and has a white mosaic floor with celtic border. The cases, which follow the walls, are framed with light-colored wood, but consist mainly of large panes of plate glass, and are so low that even a small child can see the contents of the upper shelves. The subjects represented are mainly zoological: familiar American birds, common European birds, large birds of prey, interesting water birds, curious birds, brilliantly colored birds, illustrations of protective mimicry among birds and insects, and curious shells, corals, sponges, etc. There are also some minerals and fossils, two aquaria with living fishes, and a number of bird pictures on the walls. The labels are all in simple language and printed in large type. Much remains to be done before the exhibit can be regarded as entirely

complete, but even in its present shape it justifies the ambition of its originator, as testified by its countless number of little visitors.

All of the exhibition halls in geology are open to the public, and, except in the sections of paleobotony and vertebrate paleontology, the collections are well arranged and to a large extent quite fully labeled. With the receipt of new material many changes in and additions to these exhibits will naturally be made from time to time. The sections in arrears are those which have been most recently established and in which, moreover, much preparatory work is necessary.

The cases in the west south range, containing the volcanic, geyser, hot spring, and rock-weathering series, have been repainted and the exhibits rearranged. About two-thirds of the building stone collection in the southwest court has been thoroughly overhauled and cleaned.

Owing to the employment of the preparators in connection with the Pan-American Exposition little progress was made toward increasing the exhibition of vertebrate fossils, though the skeleton of a Plesiosaur and a large and fine skeleton of a Triceratops, received with the Marsh collection, were installed. It is proposed to work out and mount, as rapidly as possible, other specimens from this interesting series of large extinct vertebrates. Of invertebrate fossils specimens to the number of over 3,000 were added to the display series.

Work is in progress on a geological section across the United States from the Atlantic to the Pacific ocean, which is to be made a feature of one of the exhibition halls. It is being drawn on a horizontal scale of 2 miles and a vertical scale of 4,000 feet to the inch.

As practically all the available exhibition space assigned to the Department is now occupied, further development under existing conditions must be mainly along the lines already laid down. The section of practical geology could be strengthened by building up certain special exhibits showing the occurrence and association of the ores of some of the more interesting mining regions, and in the event of the construction of a new building with sufficient space provided for the purpose this section can readily be expanded into a thoroughly comprehensive department of practical geology, for which there has long been an urgent demand.

The growth of the meteorite collection will make it necessary to relegate many specimens to the drawer series in order to accommodate some of the more important recent acquisitions and give a more attractive setting to the exhibit as a whole.

VISITORS.

The number of visitors to the Museum building during the year was 216,556, and to the Smithsonian building 151,563. The attend-

ance during each month of the past year, and during each year since 1880, is shown in the following tables:

Number of visitors during the fiscal year 1900–1901.

Year and month.	Museum building.	Smithsonian building.
1900.		
July	12,019	8,509
August	17,402	10,665
September	16,602	10,943
October	18,322	10,620
November	12,849	10,270
December	16,673	13,278
1901.		
January	11,756	7,965
February	12,901	10,516
March	48,280	38,538
April	23,784	15,950
May	13,840	7,978
June	12,128	6,331
Total	216,556	151,563
Approximate daily average on a basis of 313 days in the year	692	484

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	152,744
1883	202,188	104,823
1884 (half year)	97,661	15,565
1884–85[a]	205,026	105,993
1885–86	174,225	88,960
1886–87	216,562	98,552
1887–88	249,665	102,863
1888–89[a]	374,843	119,618
1889–90	274,324	120,894
1890–91	286,426	111,669
1891–92	269,825	114,817
1892–93[a]	319,930	174,188
1893–94	195,748	103,910
1894–95	201,741	105,658
1895–96	180,505	103,650
1896–97[a]	229,606	115,709
1897–98	177,254	99,273
1898–99	192,471	116,912
1899–1900	225,440	133,147
1900–1901[a]	216,556	151,563
Total	4,607,454	2,400,508

[a] Years of Presidential inaugurations.

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 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 30,000 volumes and pamphlets were distributed during the year, about one-third of these having been sent in compliance with special applications.

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

PUBLICATIONS.

The publications issued during the year comprised the second volume of the Annual Report for 1897, the Annual Reports for 1898 and 1899, volume 22 of the Proceedings, and part 1 of Special Bulletin No. 4, besides reprints in separate form of a large number of papers from the Reports and Proceedings.

Volume II of the Report for 1897 contains a biographical account of Dr. G. Brown Goode, the late assistant secretary of the Smithsonian Institution in charge of the National Museum, together with reprints of several of his more important papers on museums and on the history of scientific progress in America. It is illustrated with portraits of more than 100 men who have been prominent in the scientific advancement of the country. The appendix to the Report for 1898 consists of a single paper, by the late Prof. E. D. Cope, on the crocodilians, lizards, and snakes of North America, comprising 1,100 pages of text, with 37 full-page plates and 347 text figures. The Report for 1899 contains five scientific papers based upon collections in the Museum.

Volume 22 of the Proceedings includes papers numbered from 1179 to 1205, the "Synopsis of the Naiades," by Mr. Charles T. Simpson, being especially worthy of note.

Part 1 of Special Bulletin No. 4 is the first of a series of papers on the American Hydroids, by Prof. C. C. Nutting, professor of zoology in the University of Iowa. It treats of the Plumularidæ, is in quarto form, and contains 34 plates. This volume was issued early in the autumn.

Dr. W. L. Ralph has undertaken to continue the extensive work on the Life Histories of North American Birds, begun some years ago by the late Maj. Charles Bendire, U. S. Army, and of which two volumes have been printed as special bulletins. A circular (No. 50) soliciting new and unpublished information on the subject has been prepared and distributed to correspondents.

With the permission of the Secretary of the Smithsonian Institution, twenty-five papers prepared during the year by members of the Museum staff, and based on Museum material, have been printed in publications other than those of the Museum. The titles of these papers will be found in the Bibliography. The authors were Dr. T. H. Bean, Mr. Charles Schuchert, Mr. Gerrit S. Miller, jr., Mr. J. N. Rose, Mr. Charles L. Pollard, and Mr. W. R. Maxon.

The number of publications, including bound volumes and pamphlets, distributed during the year amounted to about 31,000.

In Appendix IV will be found a list of the publications by the members of the Museum staff. In the table given below these papers are classified by subjects. The number of authors represented is 78.

Subject.	Papers by Museum officers.	Papers by other investigators.	Total.
Administration	2		2
Archæology	3		3
Biography	1		1
Biology	3		3
Birds	10	26	36
Botany	17	2	19
Comparative anatomy	1		1
Ethnology	5		5
Exploration	1		1
Fishes	1	4	5
Fossils	17	7	24
Geography		1	1
Geology	3		3
Insects	90	36	126
Mammals	21		21
Marine invertebrates	6	2	8
Mollusks	15		15
Religions	2		2
Reptiles and batrachians	8		8
Total	206	78	284

LIBRARY.

During the past year the work of the Museum Library has increased in volume, although, unfortunately, no relief could be afforded either in the way of additional space or of assistance. A considerable portion of the new gallery in the west north, and north west ranges will, when completed, be employed for library purposes, and this makes the greatest possible limit of expansion in the present building. The accessions to the library numbered 12,267 books, pamphlets, and periodicals, of which 4,942 were retained out of the Smithsonian deposit. It is the policy of the Smithsonian Institution in library matters to give its first care to the strengthening of the Smithsonian deposit in the Library of Congress, and many sets heretofore retained in the Museum are now being gradually turned over to that Library. This policy will in the future require an increase in the appropriation for books for the Museum, as otherwise its interests must suffer. It should be said, however, that the service of the Library of Congress is more prompt and efficient than ever before, books being sent to the Museum twice a day, and the Librarian and his assistants have cordially cooperated with the Institution and Museum in supplying their needs.

The Library has had during the year four students in cataloguing and library practice generally, and is glad to afford such facilities as its limited space renders possible.

Twenty-five thousand one hundred and forty-one books were lent; 8,986 periodicals were entered; 262 volumes, 147 parts of periodicals, and 536 pamphlets of the Goode library accessioned, and 4,811 cards added to the authors' catalogue.

PHOTOGRAPHY.

The photographic laboratory, under Mr. T. W. Smillie, has produced more than the usual amount of work, which consisted chiefly in photographing important objects in the collections for use in illustrating the publications of the Museum, and the high standard of excellence demanded for this purpose has been fully maintained. The laboratory is also called upon for reproductions of plans and other drawings in connection with the construction and repair work of the Museum, and much other work of a miscellaneous character. An illustrated catalogue in blue print of the very large series of negatives dating back to the first years of the Museum has been nearly completed. The number of negatives made during the year was 902, of silver prints 1,818, of platinum prints 448, of bromide prints 63, and of blue prints 12,144.

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.

EXPOSITIONS.

Pan-American Exposition, Buffalo, N. Y.—This exposition opened on May 1, 1901, and will continue until November 1. The Smithsonian Institution and National Museum are represented on the Government board of management by the head curator of biology, Dr. Frederick W. True, with the chief clerk, Mr. W. V. Cox, acting as chief special agent and also as secretary of the board. An account of the collection exhibited by the Museum will be found in the Appendix of this Report.

The participation by the Museum in the expositions held in different parts of the country at such short intervals during recent years has had both its advantages and disadvantages, the former undoubtedly preponderating. Through the allotments from the special appropriations made for these expositions the Museum has been able to secure, indirectly, many important additions to its collections, material which it might otherwise be long in obtaining; the development of its exhibition or educational features has been greatly stimulated; its existence, its objects, and its needs have been made widely known, and, what is no less a part of the functions of a national institution, the formation and growth of museums elsewhere have been promoted. The disadvantages arise chiefly from the haste necessary in preparing the exhibits, which causes serious interference with the regular work of the Museum. The time available for all preparations seldom exceeds a year or a year and a half. The display must, in greater part at least, consist of novelties either as to the objects themselves or the manner of presenting them, as the large expositions draw their attendance from all parts of the country and a repetition of the same exhibit would interest but few. After the drawing up of the plans, the entire work must be pushed forward with the utmost speed, and toward the close often under high pressure, to insure its completion within the specified limit. The collections must be overhauled for desirable specimens, and new ones must be sought through the agency of field expeditions

and dealers. But, most important, the array of material thus assembled, equal in quantity to the entire contents of a museum of no mean proportions, must be suitably prepared, mounted, labeled, and adjusted to the cases they will occupy before shipment to the objective point. Most of the cases require to be specially constructed, and the boxing and final installation take much time. All the classes of labor thus involved demand experience and training as much for their performance as for their direction, qualifications seldom obtainable in the open market. It therefore follows that nearly all of the technical work of preparing for an exposition falls upon the employees of the Museum, and consumes, while such work is in progress, a very large proportion of their time. It is perhaps needless to say that each member of the staff called into this service has performed his share with zeal and enthusiasm, a sufficient explanation of the uniformly successful results attained by the Museum at all of the expositions in which it has participated.

The exhibit for the Pan-American Exposition is especially characterized by an exceptionally high grade of preparators' work. In anthropology it consists mainly of 12 life-sized lay-figure groups of the type tribes of American aborigines and of 16 dwelling group models; and in biology of mounted specimens of the larger American mammals, birds, reptiles, and fishes, well illustrating the latest advances in taxidermy. Conspicuous features in geology are skeletons and restorations of several of the large fossil vertebrates from the West, besides which are collections of minerals, native elements, invertebrate fossils, etc. Nearly all of this material will be utilized in the exhibition halls of the Museum on its return.

Louisiana Purchase Exposition, St. Louis.—An appropriation of $250,000 was made at the last session of Congress for the erection of a Government building at the Louisiana Purchase Exposition intended to be held in St. Louis in 1904, but no money was then voted for the preparation of an exhibit by the Government.

THE MUSEUM STAFF.

At the beginning of the year the Assistant Secretary was placed in immediate charge of the Museum, the direction of which rests with the Secretary of the Smithsonian Institution, its keeper *ex officio*.

The scientific staff has consisted, besides the three head curators, of 18 curators, 12 assistant curators, 14 custodians, 10 aids, 4 associates, and 2 collaborators, making a total of 63 persons, of whom, however, only about one-half were under salary from the Museum, the remainder serving in a volunteer or honorary capacity, though nearly all of the latter were in the employ of other bureaus of the Government. The principal changes in the staff during the year were as follows:

On September 15, 1900, the Museum lost by death its Honorary

Curator of Graphic Arts, Mr. S. R. Koehler, whose connection with the Institution began in 1887, and who was also for many years the curator of prints in the Boston Museum of Fine Arts.

Dr. W. L. Ralph, Custodian of the Section of Birds' Eggs since the death of Maj. Charles Bendire, U. S. Army, and who has contributed liberally of his time and means toward improving the collections under his charge, has been made the honorary curator of that section. Mr. F. A. Lucas, Curator of Comparative Anatomy, has also been designated Acting Curator of Vertebrate Fossils; Mr. George C. Maynard has been advanced from aid to assistant curator in the Division of Technology. Mr. Peter Fireman has received a temporary appointment as chemical geologist, and Miss Harriet Richardson has been made a collaborator in the Division of Marine Invertebrates.

Mrs. F. Weinheimer, preparator in the Division of Plants, resigned on January 1, 1901, and Mr. Joseph Sessford, long connected with the Museum and for several years past serving as clerk in the Division of Reptiles and Batrachians, died on March 8, 1901.

Dr. Thomas Wilson, Curator of Prehistoric Archæology, visited Paris during the summer of 1900 as the representative of the Museum to the Congress of Anthropology and Prehistoric Archæology and the Congress of Americanists, at both of which he presented papers elsewhere referred to in this report. Before the close of the fiscal year Dr. Leonhard Stejneger was appointed to represent the Museum at the International Congress of Zoology, which was to meet at Berlin, Germany, in August, 1901.

A list of the members of the scientific and administrative staffs will be found in Appendix 1.

NECROLOGY.

Mr. Sylvester R. Koehler, Honorary Curator of the Division of Graphic Arts in the National Museum, died September 15, 1900. Mr. Koehler was born in Leipsic, Germany, in 1837, but came to America when he was 12 years of age. In 1868 he entered, as technical manager, the establishment of L. Prang & Co., Boston, where he mastered the processes used in the graphic arts. Gen. Charles G. Loring, Director of the Boston Museum of Fine Arts, states that the knowledge which Mr. Koehler thus gained "was supplemented by an artistic temperament, which showed itself also in his fondness for music, in his love of verse, and his skill, though a moderate one, with the pencil. Years of study, too, had given him an intimate acquaintance with the history of his art and confirmed his judgment. He was an admirable critic of work, both creative and technical. * * * He not only became the ultimate authority in the land of his adoption, but his knowledge and judgment were held in great esteem in the art centers of Europe."

Mr. Koehler was appointed curator of the print department in the

Boston Museum in 1888. One year earlier, in 1887, he became connected with the U. S. National Museum, in which at that time the collection of graphic arts was first formally organized. From a very small beginning this collection grew rapidly under Mr. Koehler's supervision, and as a result of his well directed and persistent effort it now comprises more than 7,000 specimens. Using his own words, he aimed to "represent art as an industry," and to this end he planned to make the exhibit one which should illustrate all of the methods employed in producing pictures by lines and masses, in black or in colors, by hand or with the aid of machinery. His aim has been realized to such an extent that a great many of these processes are adequately illustrated by the tools and materials used, as well as by examples showing successive stages in the various methods from the date of their inception to the present time.

For many years Mr. Koehler was attached to the scientific staff of the National Museum as curator. After his health failed and he was unable to devote as much time to the work as formerly he was made an honorary curator. The value of his services in building up the graphic arts collection can not be overestimated.

In 1894 he delivered a course of nine lectures in the National Museum on "Old and modern methods of engraving." His most important work was published in 1885 and was entitled "Etching." At the time of his death he had in course of preparation a "History of the art of color printing." He contributed many articles to the magazines of America, England, and Germany. Among a large number of other important works mention should be made of his "Catalogue of an exhibition illustrating the technical methods of the reproductive arts from the fifteenth century to the present time, with special reference to the photo-mechanical processes," and a "Catalogue of the engravings, dry points, and etchings of Albert Dürer."

Mr. Ralph Dupuy Lacoe, whose benefactions have so greatly enriched the national collections, was born in Luzerne County, Pa., November 14, 1824. His father, Anthony Desiré Lacoe, came from his birthplace in the vicinity of Havre, France, to Philadelphia in 1792. From there he removed, in 1798, to the Wyoming Valley, where, at Pittston, he died in 1883, at an age of only four days less than 103 years. The mother of R. D. Lacoe was Emelié Magdaléne Dupuy, daughter of Jean François Dupuy, a native of Bordeaux, and Jane Elizabeth Desiré, a member of a Huguenot family of Nantes. For many years Jean François Dupuy resided in Santo Domingo, where, in 1791, after the success of the negro insurrection, he escaped, with the loss of his valuable estate, to the United States. In 1795 he finally settled in Wilkesbarre, where, in 1812, his daughter married Anthony Lacoe.

The subject of this sketch was the youngest of Anthony Lacoe's five

children. In his earlier years he had no educational advantages other than those furnished by the country common schools, supplemented by the home teaching of his talented mother, whose strength of character and refinement were deeply impressed on the son. Before Ralph Dupuy was of age he taught school one or more terms, having among his pupils Bridget Clary, who, in 1860, became his wife. Mrs. Lacoe died in 1872, and Mr. Lacoe at West Pittston, Pa., on February 5, 1901, in his seventy-seventh year. They had four children, of whom two survive.

In his earlier years Lacoe followed the trade of his father, that of carpenter. About 1850 he engaged with his brothers in cutting ties on his grandfather's farm to supply a railway then in construction. The proceeds of this venture were fortunately invested in anthracite coal lands in the vicinity of his home near Pittston, and this was the beginning of his modest wealth. As the coal industry of the region developed, he conducted a real estate business, later becoming prominent as the head of several industrial enterprises, and as bank president. In 1869 and 1870 he served as burgess of the borough of West Pittston.[a]

Under too great pressure of business responsibility Lacoe's health gave way about 1865, and the efforts toward its recovery resulted, first, in an amateur interest in natural history collecting, and, later, in a deep and steadfast devotion to the promotion of the vegetable and insect departments of paleontology. While seeking health in Florida, he amused himself by collecting the marine algæ and mollusca along the beach. Under the influence of a strong, innate love of nature he found both pleasure and recuperation in the occupation, and on returning to his home in Pennsylvania he soon transferred his interest to the fossil coal plants to be found at the numerous anthracite mines in the region. It was not long before Lacoe was in touch with J. P. Lesley, the State geologist, and Leo Lesquereux, the distinguished paleobotanist, who was then engaged in the study of the paleozoic plants of the State. The warm friendship between Lacoe and Lesquereux continued until the death of the latter, in 1889.

Although Lacoe never fully regained his health, he frequently remarked that he owed years of his life to the out-of-door recreation which he found in collecting. Gradually, as he became more familiar with the undeveloped status of paleobotany and paleoentomology in this country, he engaged in the task of systematically securing paleozoic plants and fossil insects over broader areas and through a greater stratigraphical range, as well as from many foreign type

[a] Further biographical data are given in the excellent memorials by Rev. Horace Edwin Hayden, published in the sixth volume of the Proceedings of the Wyoming Geological and Historical Society, 1901, and in the American Geologist for December, 1901.

localities. He also became interested in the investigations of the floras of the later epochs, and in fossil fishes, crustaceans, and myriapods. His purpose was not merely to accumulate a great collection of fossils. He chose for his task in the service to science to contribute to our knowledge of the plant and animal life of the past by discovering, systematically gathering, and bringing the fossil remains to the hand of the paleontologist. This material, often difficult to obtain and rare, he submitted to the most distinguished specialists in the various departments, and not infrequently he further assisted in the illustration and publication of the results of their investigations. Accordingly, we find most of the specimens in his great collections labeled on the authority of Lesquereux, Dawson; Scudder, Cope, Hall, or Packard.

In 1891 he determined to see his collections safely transferred to a repository where they would be permanently cared for and preserved, while at the same time made available for consultation or study. He first tendered his magnificent collection of paleozoic plants, embracing about 100,000 specimens, with nearly 600 types, to the National Museum. Subsequently he added his collections of plants from the younger epochs, insects (including a great number of types and undescribed species), myriapods, crustaceans, and fishes. The magnitude and importance of these collections have already been referred to in the Reports of the National Museum.[a]

In the departments of paleozoic plants, fossil insects, and fishes the Lacoe collection was not only far more extensive than the previous collections in the Museum, but it also rendered the two sections first named hardly inferior to any in the world. The number and biological range of the types in the Lacoe collection will be shown in the paleontological catalogue now in course of preparation.

The history of Lacoe's gifts to the United States National Museum has already been given by the assistant secretary and the curators, but reference may well be made again to the simple and patriotic terms of the gift—i. e., that it be kept entire, with such additions as might be made to it by exchange or subsequent contributions by the donor; that it be known as the Lacoe collection, and that it be accessible to scientists and students without distinction, under such proper rules and restrictions as may be deemed necessary for the preservation of the specimens from loss or injury. These informal yet wise provisions, attending the most important gift that the Museum has yet received, afford, as Professor Ward has happily said,[b] "just ground for national scientific pride, while the liberal public spirit with which it was given is worthy of imitation by all patrons of science." They are typical of Lacoe's scientific spirit, generosity, and devotion to paleontology.

[a] Report U. S. National Museum, 1892, pp. 186–188; 1886, pp. 71–74.

[b] Idem, p. 188.

In his quiet home life Lacoe was gentle, dignified, and somewhat diffident. He was thoughtful, often serious, yet sympathetic and keenly appreciative of the humorous. He was pure and upright in all his life. He was esteemed by the entire community and beloved by all who were so fortunate as to enjoy his acquaintance.

Though having but a common-school education in his youth, he later made himself well read, particularly in the general sciences. In the literature relating to fossil plants and insects his library has few equals in America. His knowledge of paleozoic plants was expert; yet he was so modest and so lacking the ambition of authorship that he preferred to have the materials of his collections described by others. His own writings are confined to several pamphlets, chiefly of the nature of catalogues.

During the later years of Lacoe's life the purpose to aid in the increase of knowledge by promoting the study of fossil plants and insects became more clearly defined, and found expression in more systematically and wisely directed efforts. In the field of fossil plants he sought to gain material from the paleobotanically less known formations whose fossils should throw greatest light on floras already known. In the insect world, instead of collecting fossils at random, and thus continuing the speculations as to the affinities of the older forms, he had engaged in methodically and extensively collecting insect remains from the later geological formations in order that they might be studied in connection with their survivors among living insects, his idea being that the insects of each successively earlier period should be mutually studied and interpreted in the light of the ascertained characters and relations of the later times, the result of such studies being a more satisfactory elaboration of a genetic and natural classification of both fossil and living types. Arrangements were being made by Lacoe for carrying out these broad and philosophical plans when a brief but fatal illness cut short his great work. The Lacoe collections in the National Museum form a most appropriate and lasting monument to the memory of this noble and patriotic patron of the sciences for which they stand.

Mr. George A. Boardman, for many years a correspondent of the Smithsonian Institution and an intimate friend of Professor Baird, died January 11, 1901, at his home in Calais, Maine, aged 83 years. Mr. Boardman was born in Newburyport, Massachusetts, on February 5, 1818, his ancestors having come to that locality on May 10, 1637, from Yorkshire, England. Removing to Calais, he became extensively engaged in the lumber business, from which he retired with a competence in 1871, the subsequent years of his life being largely devoted to travel and to the more active pursuit of his favorite study, ornithology. From 1871 to about 1887, he spent the winters in Florida, going and returning by way of Washington, and usually stopping, sometimes for

a week or more, in order to study the collections of the National Museum, where he formed the acquaintance of the scientific staff and preparators, to whom he was always a welcome visitor on account of his genial, friendly manner, and interest in their occupations.

Mr. Boardman's interest in ornithology was mainly from the point of view of a sportsman and lover of nature. He did little in the way of collecting except to bring together a very complete and valuable series of the birds of Calais and vicinity, consisting of specimens chiefly mounted by himself, which is to be placed in one of the provincial government buildings at Fredericton, New Brunswick. His principal contribution to ornithological literature is his "Catalogue of the birds found in the vicinity of Calais, Me., and about the islands at the mouth of the Bay of Fundy," published in the Proceedings of the Boston Society of Natural History (1862); but he also wrote many minor articles on natural history for the American Naturalist, Forest and Stream, and other periodicals of like character. His relations to the Smithsonian Institution were rather as a correspondent and friend of Professor Baird than as an extensive contributor to its collections, though many interesting and valuable specimens were received from him at various times.

REPORTS OF HEAD CURATORS.

REPORT ON THE DEPARTMENT OF ANTHROPOLOGY FOR THE YEAR 1900–1901.

By William H. Holmes,

Head Curator.

The year has been one of unusual activity, the volume of business transacted by the Department far exceeding that of any previous year. This condition is due in part to the fact that exhibits were collected and prepared for the Pan-American Exposition at Buffalo. More than half the force of the Department were engaged upon this work almost exclusively for a period of six months. A detailed account of the exhibits displayed at Buffalo is appended to this report.

The accessions for the year are more numerous than usual and of exceptional scientific value. Of those deserving special notice, received by the Department and assigned to the various divisions and sections, the following may be mentioned:

COLLECTED FOR THE MUSEUM.

Ethnological material from Polynesia, Micronesia, Melanesia, etc., collected for the Museum by Mr. C. H. Townsend and Dr. H. F. Moore, naturalists on the U. S. Fish Commission steamer *Albatross* during the expedition of 1899–1900 to the Tropical Pacific, under the direction of Alexander Agassiz. This is a second installment of the collection made by these gentlemen, the larger part having been received during the previous year. The total number of specimens obtained is 330.

Ethnological material from the Panamary Indians and other tribes of the upper Purus River, in Brazil, collected by Prof. J. B. Steere, of Ann Arbor, Michigan.

Implements and rejectamenta of manufacture from an ancient flint quarry in Union County, Illinois, collected by W. H. Holmes, head curator; 455 specimens.

Ethnological material from the Bororo Indians of Matto-Grosso, in Brazil; collected by Rev. William A. Cook, through the courtesy of Dr. Orville A. Derby, director of the geographical and geological survey of the province of São Paulo, Brazil; 123 specimens.

Ethnological and archeological specimens obtained from the Mission Indians of southern California; collected by Mr. Horatio N. Rust, South Pasadena, California; 136 specimens.

Ethnological collections from the Indian tribes of British Columbia and Alaska; collected by Lieut. George T. Emmons, U. S. Navy; 157 specimens.

GIFTS TO THE MUSEUM.

Collection of prehistoric stone implements and other relics, principally from Maryland, presented by Dr. J. D. McGuire, of Ellicott City, Maryland; 7,211 specimens. This collection comprises a great body of interesting and valuable material, and is the most important one ever made by a single collector within the Chesapeake region, being of exceptional scientific value.

Ethnological objects from the East Indies and the Malay peninsula; gift of Dr. W. L. Abbott; 21 specimens.

Ethnological objects from the Philippine Islands, gift of Gen. James M. Bell, U. S. Volunteers; 35 specimens.

Ethnological and archeological collections from the Pueblo Indians, the Alaskan Eskimo, and from Mexico; gift of E. W. Nelson; 39 specimens.

Collection of flint implements and rejectamenta of manufacture from ancient flint quarries in Egypt; gift of H. W. Seton-Karr, London, England; 281 specimens. This is a most important collection, illustrating the quarrying and stone-shaping arts of the primitive Egyptians.

Collection of stone implements from Owego, Tioga County, New York; gift of A. F. Barrott; 250 specimens.

Swords, pistols, medals, spurs, and shoulder straps presented to Gen. George W. Morgan, U. S. Army, for services during the Mexican and the Civil Wars; gift of Mrs. Morgan.

Lock and key to the Emperor's gate of the "Forbidden City," Pekin, China; gift of Rev. W. T. Hobart.

Sword, hat, commissions, and other memorials of Gen. Thomas Swords, U. S. Army, who served during the Mexican and the Civil War; presented to the Smithsonian Institution by Mrs. E. H. Cotheal.

Maunday money, the last issued during the reign of Queen Victoria; gift of Edward Lovett.

A collection of 62 coins, medals, and tokens, ancient and modern; gift of E. J. Sears.

Two direct photographs in natural colors; made and presented by Prof. G. Lippman. One represents the solar spectrum, and the other a group of fruit and richly colored vases.

Twenty-nine photographs relating to the solar eclipse, 17 of which were presented by Prof. William Libbey, of Princeton University, and 12 by the Smithsonian Eclipse Expedition of 1900.

Facsimile reproductions of ancient Mexican codices,- as follows: Tonalamatl der Aubin'schen Sammlung; Codex Telleriano Remensis; Codex Vaticanus 3773; Codex Vaticanus 2738 (del Rios); Codex Borgia; Codex Bologna; gift of the Duc de Loubat. These reproductions are of the greatest value to students of aboriginal American culture.

A Siemens galvanometer, presented by Mr. H. B. Ledyard, president of the Michigan Central Railroad Company. This type of galvanometer, made by Siemens Brothers, of London, was introduced into this country about 1870, and for ten years or more was generally used for testing telegraph lines and for other electrical work.

A number of historical telegraph instruments and insulators; gift of J. H. Bunnell & Co., New York City.

A collection of typical bare and insulated aluminum electrical conductors; gift of the Pittsburg Reduction Works, Pittsburg, Pennsylvania.

Examples of the submarine telegraph cables laid between the main coast of Massachusetts and Nantucket Island in 1856 and 1858, and other typical cables; gift of George C. Maynard; three specimens.

A bronze bust of Charles H. Haswell, the first engineer in chief of the U. S. Navy; executed by U. S. J. Dunbar, and presented to the Museum by Commander George W. Baird, U. S. Navy, on behalf of the subscribers.

A gramophone of the latest type, with accessories, showing the method by which the sound is recorded on a zinc plate, transferred to a hard rubber plate, and reproduced by the gramophone; gift of Emil Berliner, Washington, District of Columbia.

One cylinder, three cross heads, and four eccentric rods belonging to the locomotive Stourbridge Lion; gift of Mr. G. T. Slade, general manager of the Erie and Wyoming Valley Railroad Company, Dunmore, Pennsylvania.

A number of military and sporting guns of the latest patterns; gift of the Remington Arms Company, Ilion, New York.

PURCHASED BY THE MUSEUM.

Stone implements from an ancient village site, Big Kiokee Creek, Columbia County, Georgia; collected by Dr. Roland Steiner, Grovetown, Georgia; 18,907 specimens.

Collection of small arms, etc., from Mr. William C. Dodge, Washington, District of Columbia; 52 specimens.

Passenger cart formerly used in royal processions in Korea; from Mr. H. P. Hulbert, Seoul, Korea.

Babylonian seals and inscribed earthenware bowls, acquired from Rev. Gabriel Oussani, Bagdad, Turkey. Many of these seals are rare and of much interest to orientalists, and the inscribed bowls are

of importance to the student of religious views and practices, revealing, as they do, a peculiar phase in the development of religious ideas under various heterogeneous influences.

Leaf-shaped flint implements from a mound in Scott County, Illinois; from Mr. C. E. Clifton, Washington, District of Columbia; 143 specimens.

Stone implements, pottery, etc., from southern Jamaica, West Indies; collected by Mr. Robert C. MacCormack, Salt River, Jamaica; 319 specimens.

Leaf-shaped flint implements from a cache, plowed up in Jackson County, Indiana; from Mr. L. W. Stillwell, Deadwood, South Dakota; 30 specimens.

Antiquities from the islands of St. Kitts, St. Bartholomews, Nevis, and Santa Lucia, West Indies; from Dr. C. W. Branch, St. Kitts; 330 specimens.

Archeological collection from the northwest coast of America; from Lieut. George T. Emmons, U. S. Navy; 248 specimens.

Ethnological material from Indian tribes of the Great Plains; collected by Capt. Paul B. Carter; 114 specimens.

Stone implements, etc., from California, Alaska, Hawaii, Fiji, etc.; obtained from Mr. Nathan Joseph, San Francisco, California; 43 specimens.

Ethnological objects, consisting of porcelain, lacquer, metal work, embroideries, etc., from China, Japan, and Korea; obtained from Miss M. A. Shufeldt; 177 specimens.

Portraits of American Indians (oil colors), by Mr. J. H. Sharp, Cincinnati, Ohio; 11 specimens.

Ethnological objects from the Bella Coola Indians, British Columbia; obtained from Mr. I. Fouquer, Crookston, Minnesota; 130 specimens.

OBTAINED THROUGH EXCHANGE.

Collections from various tribes of the Upper Paraguay River, viz, the Omiris, Kechuas, Chamacoco Brabos, Chamacoco Mansos, Lenguas, Cuximanapanas, Guanas, Corvados, Angaytes, Matacos, Sanapanas, Caiuguas, Tupis, Cadocas, Apiacas, Guatos, Guaranis, Payaguas, Parecis, Tobas, Chavantes, and Coroados; collected by Dr. Emil Hassler and procured in exchange from the Field Columbian Museum; 417 specimens. This is part of the great collection exhibited by Dr. Hassler at the World's Columbian Exposition in 1893.

Two altars in combined Gothic, Renaissance, and Rococo style, valuable and interesting from an archeological and art-historic point of view. They are also important from the fact that they will form a suitable center for the proposed exhibit of ecclesiastical art in the Museum.

The specimens received during the year have been catalogued and cared for in the usual way, but the available spaces are already so fully occupied that new material can not be placed on view save by storing the earlier collections. The Department has not been able to add to its case room, and storage facilities remain, as before, entirely inadequate. Owing to the lack of laboratory space one or more of the halls have been closed throughout the year as workrooms, and no little confusion has resulted from this and the disturbance due to the selection, mounting, labeling, and boxing of exhibits for the Pan-American Exposition.

The work of labeling the Museum exhibits has been continued, and very considerable advances have been made in the direction of printing, framing, and placing case labels in various halls.

The following details with regard to progress made in preserving and installing the collections of the Department are introduced from the reports of the heads of divisions and sections:

Prof. Otis T. Mason, curator of the Division of Ethnology, says that—

No hall or collection has been installed in the division during the fiscal year 1901. Most of the time of my assistants has been taken up with the preparation of exhibits for the Pan-American Exposition. For the preservation and installation of specimens in my custody the space and resources are well-nigh exhausted, and I hail with pleasure the announcement that new galleries are to be erected to relieve the situation.

The continued ill health of my clerk made it necessary to employ expert help temporarily. I was fortunate in securing the services of Miss Harriet G. Fracker, whose long connection with the Intercontinental Railway Commission fitted her for the difficult task of preparing labels and of reading proof in Spanish, French, and German.

Dr. Hough, assistant curator of this division, spent a good portion of the year in getting together materials for the Pan-American Exposition and in cataloguing accessions, and in May proceeded to New Mexico and Arizona for the purpose of conducting explorations in conjunction with Mr. Peter G. Gates.

The following-named halls are used for exhibition:

(*a*) The west north range is devoted to North American tribes. Twice the area here provided is required to show adequately the industrial life of our tribes. We are rich in material of this sort and it should be displayed.

(*b*) The north west range. The Eskimo collections occupy about one-half of the range, and might well take the entire space. After the return of the Pan-American material this whole collection should be reinstalled. The southeastern Alaskan collection occupies only the north end of the range, a space entirely inadequate to its exhibition. The entire range should be either Eskimo or Indian.

(*c*) The northwest court is given up entirely to the tribes of the arid region of southwestern United States. The rich pottery collection here crowds out other considerations. It would require four times the space to install properly the collections from this area.

(*d*) The northwest gallery is devoted to basketry on two sides, to the Republic of Mexico on the north side, while the whole of Central and South America are crowded into the cases on the south side. I do not know what I am going to do with the

large collections coming in from that region. Ten thousand feet of floor space would not be too much at once for the installation of this fine material.

(*e*) The Indo-Pacific collections are displayed on the north gallery of the west hall. The cases are now crowded and yet not all of the precious Wilkes exploring expedition specimens are installed. What are we to do when the vast Philippine collections arrive in November?

But the worst conditions, perhaps, exist in the west hall. As you enter it from the rotunda you have the spoils of ancient classic art—Hamite, Semite, and Aryan—in two alcoves. The rest of the space is devoted to modern Europe, Asia, and Africa, a subject demanding 30,000 square feet, if not more.

Incidentally connected with the ethnological exhibits are many technical series in which a single art or device is traced through its ethnic distribution and its historic elaboration.

The study series of ethnology are to be found:

(*a*) In the tower rooms of the west balcony, which are inaccessible, crowded, and dirty.

(*b*) In the drawers on the west balcony, where the specimens are quite accessible and in good condition.

(*c*) In table and other cases all about the building, which is not satisfactory, as the temptation to use this space for storage or stowage is very great.

(*d*) Hidden away behind the pottery in pueblo court and piled up behind the graphic arts exhibit.

Again, there is no place in which to study the specimens, excepting our own public offices, where the student is subject to all sorts of interruptions, and I trust that measures can be taken at once toward providing a laboratory of ethnology, where those who desire to make wide comparisons of things may have opportunity to spread them out.

Dr. Cyrus Adler, assistant curator, Division of Historic Archeology, reports as follows:

Some changes and additions have been made in the Section of Biblical and Palestinian Antiquities. Casts are being made of the collection of oriental seals and the inscribed magic bowls are being photographed preparatory to a study of their significance.

The collection is installed in the two alcoves west of the rotunda in the following manner:

North alcove, Biblical and Palestinian antiquities (manuscripts and editions of the Bible, musical instruments, mineralogical and botanical specimens, dress, ornaments, and utensils of the East), in a wall case; monuments found in Palestine (Moabite stone, Siloam inscription, Temple stone), Assyrian statues and slabs, on the floor, the walls, and screens.

The south alcove holds the collection of Egyptian antiquities (mummies, mummy cases, and other funerary paraphernalia, statues, busts, reliefs, ornaments, etc.) in a wall case, on the floor, and on screens; the mosaic from Carthage; the statues from north Syria, and Hittite casts; the Persepolitan casts.

On the top of the wall cases of both alcoves the larger casts of Greek and Roman mythologic subjects have a place.

As custodian of Historic Religious Ceremonials, Dr. Adler writes:

The two antique German altars recently acquired were restored and renovated, with the addition of tables to both and a tabernacle to one of them. The larger one was installed on the center balcony of west hall, facing the rotunda. Some changes and additions were also made in the sections of the Jewish religion and Brahmanism, and additional labels were prepared.

The collections on exhibition are installed in the south gallery of the west hall, in the following order, beginning at the entrance from the rotunda: Jewish religion in two arch cases and three wing cases; Mohammedanism in one arch case and two bay cases; Greco-Roman religion in one arch case and three wing cases; Brahmanism in one arch case and one Kensington case; Buddhism in two arch cases, four wing cases, and one special case; Shintoism in one wing case; objects of other east Asiatic religions in one wing case and one Kensington case; a collection of amulets in one Kensington case.

The entire collection of objects of Christian ceremonial, as well as a number of objects belonging to other religions, are, on account of lack of space, for the present in storage boxes.

A Bibliography of Assyriology from the beginning to 1900, inclusive, has been commenced by Dr. Adler, and in the Division of Religions the work on the Benguiat collection of objects of Jewish ceremonial, with 36 plates, has been completed and published.

Mr. A. H. Clark, custodian of the Section of American History, reports as follows:

The collections of this section have all been rearranged and put in order so that they are now in satisfactory condition except as to labels.

Typewritten labels accompany nearly every object exhibited. A large number of valuable objects are in storage for want of exhibition room, and it is important that the side cases now devoted to musical instruments be given up to objects of history.

There are large collections of medals and coins now of little public use for study or for exhibition through lack of proper facilities for their arrangement and some step should soon be taken to make these valuable collections available.

The portrait collection, now practically in storage, could be made accessible at little expense by the erection of a gallery in the north tower office, as already recommended.

The collections of this section are now catalogued, and it is believed that the condition of the specimens is in every way as satisfactory as could possibly be expected. Much credit is due to my assistant, Mr. Paul Beckwith, for his labors in this section.

Dr. Thomas Wilson, curator of the Division of Prehistoric Archæology, makes the following report:

The usual routine course in the reception, marking, and display of specimens was pursued during the year. For details relating to these topics reference should be made to my reports for the two preceding years.

We have continued our work in the rearrangement of specific displays, endeavoring to bring together objects which there belong. The system adopted, of a geographical subdivision, coupled with the immense mass of objects which we have, renders this labor almost continuous. The objects are delivered to us en masse and have to be segregated; this, with the same labor continued and applied to the 200,000 specimens under our care, makes a task which can never be fully completed.

The objects on exhibition are becoming crowded, and with almost every accession there must be a rearrangement to afford room for these new arrivals.

Special investigations conducted during the year by members of the Department staff may be briefly summarized as follows:

The head curator has, as in preceding years, devoted most of his time and energies to the work of the Department, transacting routine business, perfecting its methods and facilities in caring for and installing collections. He has found time to complete a report on ethnolog-

ical and general archeological observations made in the far West during previous years. This will appear in the Annual Report of the Museum for 1901. In addition, he has spent much time in completing the manuscript and illustrations for a large work on ancient pottery of the United States, begun some years ago, and has entered upon the work of preparing a full report on the great industries of mining and quarrying among the native tribes.

As already mentioned, a large part of the year has been taken up with the preparation of an exhibit for the Pan-American Exposition. This work consisted of the construction of life-sized lay figure groups of type tribes of our aborigines, comprising some 60 figures of men, women, and children. The designing of the groups and the supervision of the work fell almost wholly to the lot of the head curator. The same may be said of the preparation of 16 dwelling group models described in connection with full accounts of the lay figure groups in the appendix to this report.

Professor Mason, curator of the Division of Ethnology, has published in The Anthropologist a paper on American basketry technic and made investigations for enlarging this study for a monograph on the subject. He had given much time to the ethnology of the Philippine Islands, so as to be prepared for any questions that might arise, and has, in association with the head curator, compiled a paper embodying detailed instructions to collectors in the Philippines. He translated for the Secretary, who has published them in his report, the papers of Blumentritt and Virchow on this subject, and assisted, as a member of the United States Board on Geographic Names, to fix the nomenclature of the islands.

Professor Mason has also completed a study on American aboriginal harpoons and has read the proof of the result, which will appear as a paper in the Museum report for 1900.

On the return of Col. F. F. Hilder from the Philippines, Professor Mason undertook the task of cataloguing the large collection made, and the elaborate labels used on the collection at the Pan-American Exposition were all prepared by him. During the winter much of Professor Mason's time was taken up in preparing labels for the extensive ethnological exhibit made by the Department of Anthropology at this exposition.

Dr. Thomas Wilson, Curator of the Division of Prehistoric Archeology, was invited by the Secretary of the Smithsonian Institution, at the beginning of the present fiscal year, to attend a series of international congresses to be held at Paris, France, during the exposition of 1900, and sailed for that country on the Netherlands steamer *Maasdam* on August 4, arriving at Boulogne-sur-Mer on the 13th. He attended the Congress of Anthropology and Prehistoric Archeology, before which he presented two papers: "Prehistoric archeology in America"

and "A classification of arrowpoints, spearheads, and knives of prehistoric times." He was present at the Congress of Ethnology, and was presiding officer during one day. At the Congress of Americanists he presented a paper on "Jade in America." These various communications were translated into French, and left, with the necessary illustrations, in custody of the proper committees for publication.

On his return from Paris he prepared a summary of the reports of proceedings of the International Congresses of Anthropology and Prehistoric Archeology and of the Congress of Americanists, which were sent to Prof. J. H. Gore, commissioner, to be transmitted by him in his formulation of the reports of Mr. Ferdinand Peck, United States commissioner to the Paris Exposition of 1900.

Dr. Wilson has completed a translation into French of his paper on "The antiquity of the red race in America," which appeared in the U. S. National Museum Report for 1895, and this translation has been published in L'Anthropologie for the current year (p. 41), under the title of "L'Antiquité des peaux-rouges en Amerique."

A paper on "Criminology" was read by him before the American Association for the Advancement of Science at its forty-ninth meeting, in New York, June, 1900, and has been published in the proceedings of that association for 1900.

His investigations into prehistoric trepanation have been continued, and his paper on that subject has been completed and presented for publication by the Museum.

He was engaged during the year, at the request of Mr. H. R. Bishop, of New York City, in the preparation of a paper on "Jade," which is now completed and will shortly be ready for publication.

Dr. Wilson has been interested in determining, so far as possible, the truth of the allegation that prehistoric man was ambidextrous. He has obtained from the Carlisle and Hampton schools reports as to the proportion of right and left handedness among the tribes there represented. In continuation of this subject he has made a considerable examination of such prehistoric tools and implements as are contained in the Division of Prehistoric Archeology, with a view of determining the proportion each way. Nearly all of these tools were adapted to either hand; but the hatchets or gouges made of the fulgur shell and used with a handle which had been inserted afford a basis for comparison, and the study of these has been nearly completed.

Explorations conducted for the purpose of enriching the collections of the Museum have been made by members of the Museum staff and other experienced collectors. The head curator visited the vicinity of Mill Creek, Union County, Illinois, to join Dr. W. A. Phillips, of the Field Columbian Museum, in the examination of the very extensive and important flint quarries at that place. A large collection of implements and of quarry shop rejectamenta of numerous varieties was

secured. Dr. Walter Hough began work in connection with Mr. Peter G. Gates in the Pueblo country, in June, and by the end of the fiscal year had reported very flattering progress. Prof. J. B. Steere, of Ann Arbor, Michigan, made collections on the Upper Purus River, in Brazil. William A. Cook forwarded many valuable objects from the Bororó, a Tupian tribe dwelling near the headwaters of the Paraguay, in Brazil. Lieut. G. T. Emmons, U. S. Navy, secured much valuable material from British Columbia and Alaska; and of special interest and importance is the outfit for a Chilcat family, now utilized in one of the Pan-American Exposition lay-figure groups.

Two expeditions sent out by the Government board of the Pan-American Exposition secured most valuable accessions, now displayed at Buffalo. These expeditions were conducted, one by Dr. W J McGee, in Sonora, Mexico, and the other by Col. F. F. Hilder, in the Philippines.

Dr. Roland Steiner, though not officially attached to the Museum, continued his investigations and searches into quarries, workshops, and village sites of his own neighborhood near and at the mouth of Shoulderbone Creek and on Little Kiokee River, Georgia, and has collected many thousands of specimens of prehistoric artifacts, all of which are now deposited in this Museum.

Seven papers on anthropological subjects have been furnished during the year by members of the staff of this department. Two are by the head curator, Mr. W. H. Holmes. One of these relates to the obsidian mines of Hidalgo, Mexico, while the other is a review of the evidence relating to early man in California, as furnished by the auriferous gravels.

The curator of ethnology, Prof. Otis T. Mason, prepared a paper entitled "Traps of the Amerinds," which was published in the Proceedings of the American Association for the Advancement of Science; also one relating to the pointed canoes of the Kootenai River in Washington and those used on the Amur, and a third, describing a primitive heddle frame for weaving narrow fabrics, in use among the Indians of the Mississippi Valley and the Pueblo region, and also throughout the Eastern States and in Europe.

The full titles of all these papers will be found in the bibliography (Appendix IV), arranged under the names of their respective authors.

Facilities for the study of museum collections have been afforded a number of students. Much material relating to primitive games has been forwarded to Dr. Stewart Culin, of the Museum of Science and Art, in Philadelphia; and various articles bearing upon Asiatic contact with the west coast of America have been placed at the disposal of Dr. Franz Boas, of the American Museum of Natural History, New York.

It has given curators of the Department much pleasure to aid post-graduate students, journalists, teachers with their classes, public lecturers, and specialists in all branches of anthropology. The collections have been made available to the fullest extent to all students.

The following objects from the marine architecture collection were lent for exhibition at the Pan-American Exposition: The original Francis life-saving car, to the U. S. Life-Saving Service, and seven boat models to the U. S. Fish Commission.

The specimens of earliest electrical apparatus belonging to the American Institute of Electrical Engineers and to Miss Sarah J. Farmer, and deposited in the Museum, were forwarded, at the request of the owners, to Mr. Francis E. Drake for exhibition at the Paris Exposition. They have been returned, but many of the objects are in such a badly damaged condition as to be entirely unsuited for further exhibition.

A series of spindle whorls was lent to Miss H. Newall Wardle, Academy of Natural Sciences, of Philadelphia, Pa., at the request of Dr. Dixon, for purposes of study.

The demand for collections for exposition display has been unusually great, and objects aggregating in value many thousands of dollars are now installed in the Government building at Buffalo. The wear and tear upon many of these specimens is serious, and it may seem wise in future for the Museum authorities to take steps toward counteracting the deterioration that comes from exposure, use, and the vicissitudes of shipment and reshipment.

REPORT ON THE DEPARTMENT OF BIOLOGY FOR THE YEAR 1900–1901.

By Frederick W. True,
Head Curator.

The past year has been remarkable for the amount of scientific work accomplished, and has been especially marked by the completion of preparations for participation in the Pan-American Exposition and the installation of the Children's Room under the immediate direction of the Secretary. The additions to the collections have been numerous and as a whole compare favorably in scientific value with those of any recent year.

THE EXHIBITION COLLECTIONS.

In those years in which the Museum participates in a large exposition or world's fair, as has been the case this year, improvements in the regular exhibition series advance slowly, for the reason that the preparators and mechanics are necessarily diverted from their regular duties. Although large numbers of interesting objects were prepared for the Pan-American Exposition, they can not, of course, be incorporated in the regular exhibition series until after the close of the exposition. The benefit of the work accomplished during the year covered by this report will not, therefore, be felt until the ensuing year.

For reasons which will be explained elsewhere, the exhibit prepared for Buffalo consists entirely of American vertebrates. It includes many large, characteristic American animals, such as the Kodiak bear, Glacier bear, Alaska moose, white sheep, musk ox, West Indian seal, condor, rhea, bald eagle, boa constrictor, alligator snapper, Galapagos turtle, various large fishes, etc. These are all of the highest grade as regards taxidermy and for the most part unrepresented in the regular exhibition series. They will add materially to the effectiveness of the exhibition halls when returned from Buffalo.

One of the most important operations of the year, as already stated, was the installation of collections in the Children's Room in the Smithsonian building. This room was assigned by the Secretary of the Institution for a collection which should be in every respect suited to the comprehension of children. The room was entirely refitted under competent architectural advice and is now the handsomest room in

the Museum. The windows were reconstructed so as to give the maximum amount of light, by inserting plate glass in the wall without the intervention of sashes. The walls were painted a pleasing color and the ceiling decorated in an elaborate manner with frescoes representing a bower of vines, with birds perched at the various openings. The floor was relaid in marble mosaic. The cases are of maple, finished as light as possible and made low enough for a child to see on the top shelves. The shelving is of glass. Two aquariums have been placed in the center of the room, one furnished with a fountain and intended for fresh-water animals, the other for salt-water animals. A large bird cage containing bright-colored birds and songsters is suspended from the ceiling.

The following series of objects selected by the Secretary have been installed in the cases: (1) A series of familiar American birds; (2) common European birds; (3) large birds of prey; (4) interesting water birds; (5) curious birds, such as the crocodile bird, kiwi, etc.; (6) some brilliant-colored birds; (7) curious nests and eggs; (8) a series of specimens with accessories representing protective mimicry, under the caption, "How creatures hide;" (9) remarkable insects; (10) bright-colored shells; (11) other interesting invertebrates; (12) remarkable minerals. In addition, the bower of a bower bird is exhibited and a number of Audubon pictures representing birds in action.

The labels are adapted to the comprehension of children, being in untechnical language throughout. They are printed in large type and contain interesting information regarding the habits of birds, etc. It is confidently anticipated that the airiness and beauty of the room and fittings and the beauty and brilliancy of the exhibits will prove exceedingly attractive to children and hardly less so to older persons.

At the beginning of the year a new terrazzo floor was laid in the southeast range, containing the exhibition series of reptiles, batrachians, and fishes, and the cases were reassorted and arranged with special reference to the lighting and all extraneous objects removed. Toward the close of the year two windows which were formerly obscured by the roof of the restaurant outside were opened again, and the hall, in spite of the rather low ceiling, is now one of the best lighted in the building. The fishes occupy upright cases along the walls, and the reptiles and batrachians a series of floor cases with sloping tops. These latter are not the best that could be designed for this purpose; but as no new ones could be built, it was necessary to make use of them. The exhibit consists of casts of North American species. It is intended to supplement these by collections of South American and Old World species in liquid.

The question of the best form of preparation for an exhibition series of lower vertebrates is one which has occupied a good deal of attention.

Painted casts can never be actual facsimiles of the animals as they appear in life, and for that reason are less valuable than preparations of specimens. The painting of casts in life colors by competent artists involves very large expense. Furthermore, such casts are rather art objects than natural history specimens. On the other hand, there is no known method of retaining life colors in specimens preserved in liquids, and such specimens are therefore less attractive to the public than they should be. In certain European museums a method of painting the actual specimens with pigments which resist the action of the preservative liquids has been employed. This may prove a solution of the difficulty. A number of experiments with this process and also with formalin preparations were made during the year, and it is expected that a conclusion will soon be reached as to the method or methods which can be most profitably employed in the enlargement of the exhibition series. At present it seems probable that for large and medium sized species of North American fishes, batrachians, and reptiles it will be best to continue to make painted casts, ignoring the fact that the colors as represented are more or less diagrammatic; that for exotic species, especially those inhabiting remote parts of the world, and for all very small species, specimens in formalin or alcohol, painted or not, will necessarily be employed.

The exhibit at present consists of 167 fish casts, 73 reptile casts, 11 batrachian casts, 2 large stuffed sharks, an alligator, and a group illustrating the habitat of a species of goby.

Some highly successful experiments have been made in constructing composite preparations of turtles by casting the head, tail, and limbs and fitting them into the natural shell or carapace.

A small series of deep-sea fishes, about 25 or 30 in number, was placed on exhibition. As these fish are almost invariably much mutilated when dragged from the deep sea, they are not well suited for public exhibition. To supplement them a series of colored figures, chiefly from Garman's "Deep-Sea Fishes" and from Goode and Bean's "Oceanic Ichthyology," is exhibited with the specimens, which they serve to explain. In connection with the exhibit for the Pan-American Exposition an enlarged model of one of the luminous deep-sea species was prepared, and a typical series of similar casts will probably be prepared during the coming year.

The walls of the entrance hall of the Smithsonian building were repainted during the year, and a better background obtained for the game birds, fishes, and large mammal heads there exhibited. A plan was perfected for reorganizing the exhibit of game birds and rendering it more effective by replacing single specimens by groups with accessories representing the birds in their native wilds. A series of

twenty groups, each about 2 by 3 feet, are in contemplation, four of which have already been completed.

A large amount of work was done by the taxidermists in remounting old specimens of value in the regular faunal exhibition series of birds, and one taxidermist was continuously engaged in overhauling the collection to keep it from deterioration. This is made necessary on account of the imperfect condition of the cases which are now at least twenty-five years old and far from being dust and vermin proof.

New labels were prepared for the American carnivorous mammals in the large wall case on the east side of the south hall, completed two years ago. It was found necessary to store a large lot of boxes of mounted birds in the west side of the hall behind the detached cases containing the groups of large mammals. As these were very unsightly the back glass of the cases was painted and wooden partitions were set up between them. This is only a temporary provision. Nothing was done directly by way of adding to the series of mounted mammals, on account of the preparations for the Buffalo Exposition, as already explained.

Early in the autumn experiments were begun looking toward the construction of exhibition boxes for insects. It was thought that this seemingly trifling matter could be disposed of in a week or two, but, in fact, to obtain an immaculate surface in the boxes on which the insects could be pinned and which would not warp during changes in the weather proved to be a task of no small magnitude and baffled the ingenuity of the Museum mechanics for many months. Toward the close of the year the desired background was at last obtained by the use of specially prepared cork and blotting paper, and the few boxes filled have proved quite satisfactory. It is expected that the whole exhibition series will be reorganized and transferred to the new boxes during the coming year.

A new series of enlarged models representing the structure of feathers was placed on exhibition in the hall of comparative anatomy during the year, and a part of the other models were transferred to new cases with large glass.

EXPLORATIONS.

In the spring of 1901, by arrangement with the Museum, Mr. Dane Coolidge made extensive collections of mammals in the mainland of Italy and in Sicily and southern France. Mr. G. S. Miller, jr., engaged in collecting operations in the vicinity of Peterboro, New York, in July and August, 1900. An arrangement was made with Dr. E. A. Mearns, U. S. Army, to engage in explorations in central Florida, and especially to visit various type localities for mammals. He was in the field from February to May, 1901, and made large collections, especially along the Kissimee River. Toward the close of the year Mr. W. H. Ashmead

was detailed to make entomological collections in the Hawaiian Islands, taking advantage of the excellent opportunities for transportation, etc., afforded on account of the marine work being carried on from island to island by the U. S. Fish Commission. Further advantage was taken of the operations of the Commission by detailing Dr. J. E. Benedict to accompany the steamer *Fish Hawk*, which was engaged in an investigation of the offshore fishing banks in the Gulf of Mexico opposite Anclote River, Florida. By invitation, Mr. Charles T. Simpson accompanied Mr. J. B. Henderson, jr., in conchological explorations about the islands of Haiti and Jamaica. About six weeks in November and December were spent in this work.

In addition to the collecting parties sent out last year in behalf of the Pan-American Exposition, Prof. J. B. Steere made explorations along the Amazon River, Brazil, in the spring of 1901, and Messrs. Barton A. Bean and William H. King collected fishes at Key West, Florida. Messrs. Palmer and Riley, who visited Cuba on behalf of the Exposition, and Mr. M. W. Lyon, jr., who made collections in Venezuela, returned to the United States in August.

In July, 1900, Messrs. Charles L. Pollard and William R. Maxon made botanical explorations in Alabama, Georgia, and Tennessee, obtaining collections of much interest. In May, 1901, Mr. Pollard visited the mountains of North Carolina and obtained a rich collection of violets, as well as other plants.

ACCESSIONS.

In the majority of divisions of the Department the accessions surpassed those of last year in number and were of equal or greater importance. The increase in mammals was 2,593 specimens, a very large number. Of insects a smaller number was received—37,000, as compared with 85,000 last year—but the value scientifically was not inferior. The accessions of birds' eggs far surpassed those of last year in number and value. The importance of the accessions to the Division of Marine Invertebrates was much greater than last year. On the whole the year may be considered as more than ordinarily prosperous.

Dr. W. L. Abbott continued his extensive natural history explorations in the East Indies, and contributed large collections of mammals, birds, reptiles, mollusks, insects, and marine invertebrates from the Natuna Islands, the Mergui Archipelago, and the coast of Tringanu (Malay Peninsula). About twenty new species of mammals have been detected in these collections, and there are doubtless others, as well as new birds, reptiles, etc. These collections constitute additions of great importance.

While stationed at Newport, Rhode Island, Dr. E. A. Mearns, U. S. Army, made extensive zoological collections in all classes, which he

presented to the Museum. Later, as already stated, arrangements were made with him to collect small mammals from type localities in Florida, especially along the Kissimmee River. He obtained about 300 mammals, some 600 birds, including many in plumages not previously represented in the Museum collections, such as the downy young of the Florida Dusky duck, etc.; also many birds' eggs, including five eggs of the Florida Dusky duck, *Anas fulvigula*, and large numbers of reptiles, among which was a fine series of skulls and skeletons of the soft-shelled turtle, *Platypeltis spinifer*.

Notice was taken in last year's report of an expedition to Venezuela by Capt. Wirt Robinson, U. S. Army, with whom was associated Mr. M. W. Lyon, jr. The collectors succeeded in obtaining a considerable quantity of material, including mammals, birds, reptiles, and insects. The collection was rich in bats and included some beautifully preserved reptiles, among which were two new species of snakes, *Pseudoboa robinsoni* and *Pleurodonaz lyoni*.

In the spring of 1901, Prof. J. B. Steere was authorized to make collections of characteristic reptiles and fish of the Amazon River for exhibition at the Pan-American Exposition. He was successful in this work, and obtained also a fine adult skeleton of the Amazon porpoise, *Inia amazonica*, some interesting wasps' nests, and other objects.

The mammal collection from southern Europe obtained by Mr. Dane Coolidge, already mentioned, included what is probably the best series of Italian rodents now in existence. The collection of mammals made by Mr. G. S. Miller, jr., in Madison County, New York, contains about 200 specimens.

The Museum had the good fortune to obtain from Mrs. E. D. Cope, by purchase, a specimen of the extinct Philip Island parrot, *Nestor productus*. There are now two specimens of this bird in the Museum. Only about twelve specimens are known to be preserved.

In the middle of the year the Museum purchased the private collection of Mr. Robert Ridgway, containing about 1,100 North and Central American birds, including many in the first plumages, and all exceedingly perfect specimens. There were no duplicates in the collections.

The type of a supposed new Mountain Chickadee, *Parus gambeli thayeri*, was presented by the late F. J. Birtwell.

Mr. C. B. Kloss presented a representative series of 56 birds from Singapore Island, Malay Peninsula. Capt. H. C. Benson, U. S. Army, presented an excellent collection of nests and eggs of Philippine birds, accompanied in the majority of cases by specimens of the birds. A pair of the rare Stitch birds of New Zealand was purchased; also six skins of the imperial parrot of Dominica Island, West Indies; and four Birds of Paradise, including the rare *Pteridophora alberti*, a species

with extraordinary plumes. The last mentioned is exhibited in the children's room.

Dr. William L. Ralph continued his generous donation of rare birds' eggs, included among which were eggs of the Everglade kite and Henslow's sparrow. Some small collections of eggs from the western United States and Mexico, received from the Biological Survey, Department of Agriculture, were extremely rich in rarities.

The naturalist of the United States Fish Commission Steamer *Albatross* obtained for the Museum a collection of 55 reptiles from the Polynesian Islands during the recent cruise of the vessel in the South Seas, a welcome addition to the scant collections from that part of the world. Thirty-seven reptiles from the island of St. Kitts, West Indies, were presented by Mr. W. H. Alexander, United States weather observer.

The types of the new species of fish collected by the *Fish Hawk* expedition of 1899, to Porto Rico, were deposited in the Museum by the United States Fish Commission, together with other specimens from that island.

Dr. O. P. Jenkins, of Leland Stanford Junior University, presented the type of Hawaiian fishes collected in the islands by himself and Mr. T. D. Wood. The university also presented a series of Japanese fishes.

Regarding important accessions of mollusks, Mr. William H. Dall, honorary curator, writes as follows:

> Scientifically the most interesting lot of material received was from Dr. W. Eastlake, of Tokyo, Japan (through Mr. H. F. Moore, of the Fish Commission), comprising about 500 species of oriental shells, a department in which we are exceptionally weak and which this donation materially assisted.
>
> Next, perhaps, comes the collection made by Mr. J. B. Henderson, jr., and Mr. Simpson, in Haiti and Jamaica, comprising over 200 species and 3,000 specimens, which have not been fully administered upon, but which will add valuable and needed material to the collection.
>
> A collection of Naiades from South and Central America, sent by Dr. H. von Ihering and comprising some 225 species, has proved especially valuable, filling many gaps.
>
> A collection of Australian shells, sent in exchange by the Australian Museum, is among the more noteworthy additions.
>
> Other accessions worthy of special mention are those from the Malay Peninsula and adjacent islands, sent by Dr. W. L. Abbott; the collections made in Mexico and Yucatan by Mr. E. W. Nelson, of the Department of Agriculture, and a small collection from the vicinity of Pernambuco, Brazil, received from Dr. J. C. Branner.

The accessions of insects are so numerous, amounting to 297, comprising 37,000 specimens, that it is impossible to mention even the more important ones in detail in this place. Preeminent among them, however, was the Hofmann collection of European Lepidoptera. This collection was formed by the late Dr. O. Hofmann, and was purchased by the Museum from Prof. A. R. Grote, of Hildesheim, Germany.

It contains 15,626 specimens, a splendid series of European Lepidoptera, particularly rich in the smaller moths.

Other important accessions may be summarized as follows: From the Philippine Islands, several accessions of insects of all orders, presented by Dr. P. L. Stangl, U. S. Army, and 100 butterflies, presented by Mr. Samuel H. Adams; from Porto Rico, 30 dragon flies, presented by Mr. G. N. Collins, United States Department of Agriculture; from the Hawaiian Islands, 258 Hymenoptera, donated by the committee for investigating the fauna and flora of these islands (through Dr. David Sharpe), 3 lots given by Mr. H. W. Henshaw, together with the large series collected by Mr. William H. Ashmead; from Cuba were received the collections made by Messrs. Palmer and Riley of the Museum; from New Mexico, several lots of insects of all orders, including types of bees, presented by Prof. T. D. A. Cockerell; from Utah, 5 vials containing types of Lithobiidæ, presented by Mr. Ralph V. Chamberlain; from Paraguay, 1,665 butterflies and moths, together with other insects, were purchased; from the Galapagos Islands, 216 Diptera, presented by Mr. Robert E. Snodgrass; from Venezuela, 174 insects, collected by Dr. M. J. Lyon; from South Africa, 63 Diptera, representing 27 species, from C. P. Lounsbury, Government entomologist, Capetown; from the Malay Peninsula and the Natuna Islands, 3 lots of insects, collected by Dr. W. L. Abbott; from Australia, a collection of parasitic Hymenoptera, presented by the department of mines and agriculture, Sydney; from Germany, 545 Diptera and 48 galls of *Hormomyia fagi*, presented by Mr. Theo. Pergande.

In addition should be mentioned the following: Six thousand Mexican diptera from Prof. C. H. T. Townsend; a collection of 396 Diptera, comprising 92 species, received in exchange from the Museum für Naturkunde, Berlin, and 141 Diptera, presented by Mr. C. W. Johnson; 400 moths, presented by Dr. William Barnes; 15 types of Chambers's Tineidæ, presented by the Laville University; 202 moths, presented by Dr. Ottolenghi; 5 types and 1 cotype of species of Noctuidæ, presented by Prof. John B. Smith; 50 moths and 4 types, presented by Dr. James Fletcher; 100 living cocoons of *Monema flavescens* and 100 moths, presented by Mr. A. E. Wileman; a collection of Mutillidæ and Formicidæ received in exchange from Ernest André, esq., Gray, France; 38 Orthoptera, together with some types and cotypes, presented by W. S. Blatchley through the United States Department of Agriculture; 22 rare Hydrocœcia, presented by Mr. Henry Bird; types of Jassidæ, presented by Prof. Herbert Osborn, Ohio State University.

The United States Fish Commission transferred to the Museum six important collections of marine invertebrates, as follows:

(1) The ophiurans of the "Agassiz" cruise of the *Albatross*, 1891, to the Galapagos Islands, west coast of Mexico, etc., and determined by Drs. Lutken and Mortensen.

(2) Japanese Crustacea collected by the *Albatross*, 1900. These comprise specimens dredged in various depths as well as those collected along shore by Dr. H. F. Moore, naturalist of the *Albatross*.

(3) Corals from the *Albatross* South Sea expedition, 1899–1900; to be studied and reported upon by Mr. T. Wayland Vaughan.

(4) Corals collected in Porto Rican waters by the *Fish Hawk*, 1899. Determined by Mr. Vaughan and results to be published in bulletin of the United States Fish Commission.

(5) Large collection of crayfishes collected in West Virginia, 1899, by a field party of the Fish Commission. Determined by Mr. W. P. Hay.

(6) Arctic crustaceans and echinoderms collected by the Princeton University expedition, 1899. These species were named when received.

Other collections of lower invertebrates which should be mentioned in this place are the types of the oligochete worms (Enchytræidæ) collected by the Harriman Alaska expedition and presented through Dr. C. Hart Merriam; the types of *Cambarus gallinus* presented by Prof. Theodore D. A. Cockerell; a collection of marine and freshwater crustaceans from the Hawaiian Islands, presented by Mr. H. W. Henshaw; Philippine corals and sponges, received in exchange from Father José Algué; specimens of ocean bottom obtained in connection with the Pacific cable survey made by the U. S. S. *Nero*, and transmitted by the Hydrographic Office, U. S. Navy.

A very important accession of the year was the Willey lichen herbarium, comprising 10,000 specimens from all parts of the world, constituting the entire private collection of the late Henry Willey, a well-known specialist in this group of plants. The collection was purchased by the Museum from the estate.

Other important accessions of plants, which were chiefly from the Southern United States and Mexico, are as follows: From West Virginia, 468 specimens, collected by Mr. E. L. Morris and received through the United States Fish Commission; from North Carolina, 200 specimens, collected by Mr. C. L. Pollard, of the Museum; from Alabama, Georgia, and Tennessee, 1,600 plants, collected by Messrs. Pollard and Maxon, of the Museum staff; from Louisiana, 144 specimens, presented by Mr. C. R. Ball, United States Department of Agriculture; from Oregon, 5,400 plants, collected by Mr. E. P. Sheldon and received through the United States Department of Agriculture; from Utah, 126 specimens, received in exchange; from Alaska, 174 specimens, presented by Mrs. J. B. Flett, and 248 specimens received in exchange from the New York Botanical Garden; also 100 specimens of arborescent plants, from various localities in the United States, presented by Prof. C. S. Sargent; and 887 specimens from various localities in the United States and Mexico and Central America, received in exchange from the Gray Herbarium.

---

[a] This is the first species of crayfish known from New Mexico.

The following were the principal purchases of plants made during the year: 917 specimens from Georgia, 1,293 specimens from Florida and Mississippi, 670 specimens from Missouri, 295 specimens from New Mexico, 268 specimens from Mexico, and 100 specimens (Algæ) from various localities in the United States.

WORK ON THE STUDY COLLECTIONS.

In the Division of Mammals the work of renovating skins in danger of destruction on account of their greasy condition or otherwise was continued, special attention being paid to the medium-sized skins—monkeys, small carnivores, etc. About 600 specimens were treated during the year.

The collections of small mammals are now in good condition and for the most part well arranged. The collections of large skins, on the other hand, are still to a great extent in bad or even dangerous condition, due to lack of cases, room, and taxidermic assistance. The specimens in cases are overcrowded, and hundreds have remained for several years without cases, exposed to dust and vermin. Still others are in vats containing preservatives, where they have remained for a number of years.

Considerable work has been done during the year in rearranging the large skulls, a commodious storage space having been provided behind the large wall case on the east side of the South Hall.

A considerable number of worthless mammal skins which had accumulated were brought together, passed upon by a committee of inspection, and condemned.

In order to make room for headquarters for the Department, the mammal collections of the Biological Survey, Department of Agriculture, formerly in the south entrance of the Museum building, were transferred to the north balcony. Some 3,000 small mammal skulls belonging to the collection of the Survey were cleaned during the year, a platform was built on the cases containing the collections in the southeast range, and 12 new unit cases were constructed.

In the Division of Birds little work was done on the cabinet collections. The assistant curator was alone, and being fully occupied by the preparations for the Pan-American Exposition and the installation of the children's room, he found little time to devote to other than routine work, such as answering correspondence, recording specimens, attending to accessions, loans, etc. Toward the end of the year, however, 18 new half-unit cases were placed in the West basement, and a beginning made in transferring the birds from the old and imperfect cases previously used and arranging them in systematic order. The collections of birds' eggs are in excellent condition, but the nests are not properly housed, being still in cases not dust proof. The dupli-

cate eggs were overhauled during the year and a considerable amount of worthless material discarded.

In the Division of Reptiles the old trays containing the study collections were replaced at the beginning of the year by a new system of shelving, doubling the storage capacity of the laboratory. The shelves are movable and provided with simple runners, so that they can be raised or lowered with the greatest ease and without loss of time. A rearrangement of the collections could not be undertaken during the year, as the electric lighting of the laboratory was not completed. The clerk of this division, the only assistant of the curator, was ill for a considerable part of the year, and finally died.

The collections of fishes were thoroughly overhauled and provided with new alcohol. Red labels were furnished for the type specimens received during the year, and a considerable part of the regular series relabeled.

One of the principal operations of the Division of Mollusks was a thorough revision of the Lucinacea, the larger portion of which was relabeled in accordance with the revised classification of the group. The new accessions of the year were labeled and distributed to their proper places in the collection.

The sets of lower marine invertebrates prepared for distribution to educational institutions having been exhausted, a new series of 100 sets was prepared during the year. Each set contains about 300 specimens, representing from 85 to 95 species. Ten special sets of duplicate specimens were also made up and distributed to museums and kindred institutions and 12 lots sent out for exchange purposes. Accessions of the year were cared for as soon as received, and the greater part of the crustaceans named, but for the lack of clerical assistance it was impossible to catalogue specimens as fast as received.

The ophiurans received from the Agassiz *Albatross* expedition of 1891, and determined by Drs. Lutken and Mortensen, were catalogued and the duplicates divided into seven sets and distributed to seven of of the principal museums in Europe and America.

In the Division of Insects the work on the general collections is reported upon by Dr. L. O. Howard, honorary curator, as follows:

The collections are probably as well cared for as the room at our disposal, the help available, and the number of insect drawers obtainable will permit.

The Lepidoptera are well arranged in the standard insect drawers, and the large and valuable Hofmann collection of European moths has been incorporated. A card catalogue of species of the entire collection of Lepidoptera has been prepared and greatly facilitates the quick finding of specimens.

The collection of sawflies and part of the ichneumon flies have been transferred to these same drawers and Mr. Schwarz has superintended the transfer of the North American Cerambycidæ to them, the Hubbard and Schwarz collection in this family being at the same time incorporated with the regular museum series. A rearrangement of some of the exotic collections of Coleoptera has also been made.

Dr. Dyar has spent much time in the identification and arrangement of exotic material, being assisted, particularly in the mounting and labeling of new material, by Mr. A. N. Caudell, of the Department of Agriculture, Division of Entomology.

Mr. Coquillett has done much work on the Diptera, Mr. Ashmead on the Hymenoptera, and Mr. Schwarz, as far as his impaired health would permit, on the Coleoptera.

Mr. Currie has worked on the Odonata and Myrmeleonidæ, having named most of the North American insects in these groups and mounted and labeled a good series for the systematic collection. Lack of room, however, has prevented their permanent arrangement, most of the available space and drawers being taken up by the Orthoptera.

The exotic and duplicate Coleoptera and the Arachnida and Myriapoda have been removed to the east-south range gallery. Mr. Banks has rearranged much of the Arachnida and has transferred the vials containing the Marx collection and the regular collection to museum jars filled with alcohol, thus avoiding the danger of the material drying up.

Work has also been done by Professor Cook on the Myriapoda and by Mr. Heidemann on the Hemiptera-Heteroptera.

Mr. F. V. Coville, honorary curator, Division of Plants, furnishes the following report on the progress of work in the herbarium:

In the last annual report a description of the new insect-proof case was given, and reference was made to the installation of 80 of these on the floor of the gallery over the southern range. In accordance with the plan of gradual replacement outlined at that time, 14 of these cases have recently been set up along the west wall of the main balcony, and 30 additional ones will shortly be installed on the exhibition balcony. It has been found that these cases, with their double doors, are well adapted to the bisulphide treatment at any time, and that insect pests, when eradicated, may be kept in control by a liberal use of naphthaline in the cases.

The systematic stamping of the sheets in the herbarium has been temporarily discontinued on account of the insufficiency of our force. All sheets of specimens, however, which are loaned for study to persons outside of the Museum are stamped and recorded before transmission, so that in this way the numbering of the herbarium is slowly progressing.

During the last few months the work of rearranging the herbarium according to the sequence established by Engler and Prantl in "Die Natürlichen Pflanzenfamilien" has progressed satisfactorily, the "Index Generum Phanerogamorum" of De Dalla Torre and Harms being taken as a guide. The ferns and fern allies, gymnosperms and monocotyledons, are now arranged on the modern sequence.

Owing to the resignation of one of our three preparators on January 15, 1901, the work of mounting was greatly delayed, and the services of three temporary preparators were secured by requisitions drawn for the purpose in April of the present year. One has assisted Mr. Maxon in labeling and mounting the lichens of the Willey collection; another has mounted miscellaneous plants, and the third has repaired such sheets in the main herbarium as were found to be impaired by the attacks of insect pests. The total number of specimens mounted during the year, exclusive of the cryptogams, is 18,177. Owing to the fact that many of the latter are mounted on a single sheet it is not possible to make even an approximate estimate of their number, but the collections of mosses and lichens, in particular, have been carefully labeled and all accumulations of material mounted. Our catalogue books show a total of 24,647 mounted sheets that have been stamped and recorded during the year. The great majority of these have been distributed into the general herbarium.

Mr. Roland M. Harper was engaged by contract to determine and label the large collection of plants transmitted by the Fish Commission, to which reference is made in another part of this report.

The alcoholics and rough skeletons belonging in the Division of Comparative Anatomy, which are necessarily kept in one of the annexes at present, were rearranged and put in order during the year, and 1,100 skulls of mammals, many of them of large size, were cleaned and added to the reserve series.

SCIENTIFIC RESEARCHES AND PUBLICATIONS.

The activity of the scientific staff in research was one of the most prominent and gratifying features of the year's work, and the large amount of important results published is shown by the Bibliography (Appendix IV).

The systematic manual of the birds of North and Middle America, by Mr. Robert Ridgway, of which mention was made in last year's report, progressed favorably in spite of serious interruptions, and the first volume was put in type. The second volume is nearly ready for the printer. It is expected that the work will be complete in seven volumes. After careful consideration of all the circumstances in the case, it was decided to recast the measurements of specimens, which had been prepared for the first volume in English inches, into metric measurements, and this system will be followed throughout the work. Mr. Ridgway also prepared a paper on a new species and genera of tanagers and orioles.

Dr. Charles W. Richmond continued work on a card catalogue of genera and species of fossil and recent birds, and also published three papers relating to the nomenclature of birds. The work of completing Bendire's "Life Histories of North American Birds" (Special Bulletins, U. S. National Museum, Nos. 1 and 3) was taken up by Dr. W. L. Ralph, honorary curator of the Section of Birds' Eggs, and in that connection a circular letter was issued to those interested in collecting information. A gratifying number of responses has been received from correspondents and friends of the Institution.

Mr. G. S. Miller, jr., published twenty papers on mammals during the year, chiefly noticing new forms in the East Indian collections of Dr. W. L. Abbott, new European, African, and South American mammals. Included among them, however, were a revision of the Red-backed mice of Europe and a key to the land mammals of eastern North America. Mr. M. W. Lyon, jr., published a study of the osteology of the jerboas and jumping mice.

Papers on the reptiles of Japan and of Porto Rico were nearly completed by Dr. L. Stejneger during the year. A large series of outline illustrations for the former was prepared. Dr. Stejneger also began a study of the reptiles of Cuba, and illustrations for a paper on that subject were prepared. In addition he reported on the reptiles collected by Messrs. Robinson and Lyon in Venezuela and published two papers on the birds known as Wheatears (genus *Saxicola*).

The synopses of the Molluscan families Tellinidæ and Cardiidæ by Mr. William H. Dall, mentioned in the previous report, were published during the year, together with a synopsis of the Lucinacea, the fifth part of a treatise on the Tertiary mollusks of Florida, eleven other shorter papers on mollusks, and several articles of a general character. In conjunction with Mr. Charles T. Simpson he prepared a report on the mollusks collected by the U. S. Fish Commission steamer *Fish Hawk* in Porto Rico. Mr. Simpson also published three papers on river mussels and continued his studies of the naiades with the view of publishing a monograph at some time in the future. Mr. P. Bartsch continued studies on the Pacific Pyramidellidæ, and published various short natural history papers in the "Osprey," of which he is associate editor.

In the Division of Marine Invertebrates, Dr. J. E. Benedict continued his studies of the crustaceans of the family Galatheidæ and prepared a report on the anomuran crustaceans of the Fish Commission expedition of 1899 to Porto Rico and a description of four new species of symmetrical pagurid crustaceans. He also published a paper on the hermit crab, *Pagurus bernhardus*, and its allies.

Miss M. J. Rathbun published a synopsis of the grapsoid crabs of North America and a report on the decapod and stomatopod crustaceans collected during the Branner-Agassiz expedition to Brazil. She has also completed keys to the various groups of North American crabs besides the grapsoids, a report of the brachyuran and macruran crustaceans collected during the Stanford University expedition to the Galapagos Islands in 1898–99; a report on crustaceans of the same groups collected in Porto Rican waters in 1899 by the U. S. Fish Commission steamer *Fish Hawk*. In reporting on the decapod crustaceans collected by the Harriman expedition in 1899, Miss Rathbun has undertaken a review of the Decapoda of the west coast of North America, making in that connection a study of the vast number of Macrura in the Museum collected in years past by the naturalists of the steamer *Albatross* and by Mr. William H. Dall and others.

Miss Harriet Richardson prepared a report on the isopods of the Stanford University expedition and published a report on the isopods of the Branner-Agassiz expedition and a key to the isopods of the east coast of North America.

Regarding scientific researches in the Division of Insects, Dr. L. O. Howard reports as follows:

All the material of the Harriman expedition has been worked up, and reports upon the same are being published in the Proceedings of the Washington Academy of Sciences. Mr. Coquillett reported upon the Diptera, Mr. Kincaid upon the Tenthredinoidea, Sphegoidea, Vespoidea, and metamorphoses of Coleoptera, Mr. Schwarz upon the Coleoptera and Psyllidæ, Mr. Ashmead upon the Hymenoptera as a whole, Dr. Dyar upon the Lepidoptera (descriptions of the new species being furnished by several specialists), Mr. Caudell upon the Orthoptera, Mr. Justus W. Folsom, of

Champaign, Ill., upon the Thysanura, Mr. Heidemann upon the Hemiptera, Mr. Banks upon the Arachnida and neuropteroid insects, Professor Cook upon the Myriapoda, Mr. Pergande upon the Aphididæ and Formicidæ, and Mr. Currie upon the Odonata.

During the year Mr. Coquillett has been at work monographing certain families of the Diptera, while Mr. Ashmead has worked upon the Ichneumonoidea and Bombidæ and has completed his report upon the Hymenoptera Parasitica of the Hawaiian Islands. His work upon exotic material from Africa, Siam, Japan, Australia, and New Zealand has also been continued.

The various specialists connected with the Division of Insects and the Division of Entomology, in the Department of Agriculture, have identified material from the Galapagos Islands collected by Mr. R. E. Snodgrass, and reports upon the same will soon be published as follows: Mr. Banks upon the Arachnida, Mr. Ashmead upon the Hymenoptera, Mr. Coquillett upon the Diptera, Dr. Dyar upon the Lepidoptera, Mr. Currie upon the Odonata, and Mr. Heidemann upon the Hemiptera.

Mr. Currie has continued his work upon the Myrmeleonidæ, and is preparing a synonymical card catalogue of the North American neuropteroid insects which, together with catalogues of the North American insects in other orders, it is proposed to publish for the Museum. Much work has also been done on catalogues of Lepidoptera by Dr. Dyar, and Hymenoptera by Mr. Ashmead.

Mr. Caudell has published a synopsis of the hemipterous genus *Sinea*, and has identified considerable material in the Orthoptera.

The bibliography of the division shows 78 titles of papers on insects by members of the staff published during the year. The honorary curator, Dr. L. O. Howard, also published a popular book on habits and classification of mosquitoes.

Mr. F. A. Lucas prosecuted studies on flightless birds and on the osteology of the Tile-fish and its allies.

In the Division of Plants Mr. F. V. Coville published five botanical papers during the year. Mr. Rose (with Prof. J. M. Coulter) published a monograph of the North American Umbelliferæ, and has continued his studies of the flora of Mexico, with the view of ultimately publishing an extensive work on that subject. Mr. Pollard continued his studies of the violets, and published a description of a new *Helianthus*, and a series of popular articles on the families of flowering plants. Mr. William R. Maxon continued studies of the ferns and their allies and published a list of these plants growing in North America and eight other papers relating to them.

LOAN OF SPECIMENS.

The practice of lending collections to investigators for study continued as in previous years. While it is impossible in this place to notice all these transactions in detail, mention will be made of the more important instances.

Twenty-eight specimens of Hutia rats (*Capromys*) were lent to Mr. F. M. Chapman, of the American Museum of Natural History, who is engaged in a revision of the genus. Thirty-five bats were lent to Mr. James A. G. Rehn, of the Philadelphia Academy of Natural Sciences.

Mr. Francis J. Birtwell, of Albuquerque, New Mexico, received 60 skins of the Mountain Chickadee, *Parus gambeli*, 50 skins of the Nuthatches, *Sitta carolinensis aculeata* and *mexicana*, and 75 skins of various subspecies of Creepers (*Certhia*) for comparison with New Mexican specimens. To Dr. Jonathan Dwight, jr., were sent 28 skins of *Ægialites* to aid him in determining the status of the subspecies *Æ. melodа circumcincta*. Mr. Reginald H. Howe, of Brookline, Massachusetts, received 68 skins of *Macrorhamphus* to assist him in determining the relationships of two recognized forms. Messrs. Birtwell and Howe published papers during the year based partly on the material sent them.

The type of the Chimæra, *Hariotta raleighana*, and two other fishes of the same species were lent to Dr. Samuel Garman, of the Museum of Comparative Zoology, Cambridge, Massachusetts.

Prof. C. C. Nutting, of Iowa University, received the general collection of hydoids of the families Sertularidæ, Campanularidæ, etc., to be used in the second part of his monograph of the American Hydroids, which forms a Special Bulletin of the National Museum.

The general collection of parasitic copepod crustaceans was placed in the hands of Prof. Charles B. Wilson, of the State Normal School, Westfield, Massachusetts, to be worked up for the benefit of the Museum.

Prof. S. J. Holmes, of the University of Michigan, received the Museum collection of amphipod crustaceans from New England, to be used in the preparation of a report for the United States Fish Commission.

To the general collection of pedate holothurians, now in the hands of Prof. Charles L. Edwards, of Trinity College, were added examples of all the named species in the Museum.

Dr. Wesley R. Coe, of the Sheffield Scientific School, obtained the loan of the nemerteans from the Pacific to assist him in preparing a report on the collection of these animals obtained during the recent cruise of the *Albatross* in the South Pacific.

The general collection of Ostracoda was sent to Prof. R. W. Sharpe, of Dubuque, Iowa, for study.

Twelve lots of the Foraminifera, obtained during the various cruises of the United States Fish Commission steamer *Albatross*, were sent to B. W. Priest, esq., Keepham, England.

Prof. E. D. Ball, State Agricultural College, Colorado, who is preparing a monograph of the Rhynchota, obtained from the Museum a loan of 402 specimens of insects of that group.

A collection of fleas for monographic work was sent to Prof. Carl F. Baker, of St. Louis, Missouri. Similar loans were made to Prof. E. S. G. Titus, State Agricultural College, Fort Collins, Colorado (332 bees); Prof. J. B. Smith, Rutgers College (192 butterflies); Prof. J. S. Hine,

Ohio State University (71 Mecoptera); Miss M. M. Enteman, University of Chicago (329 specimens of Hymenoptera); Prof. E. B. Williamson, Vanderbilt University (199 dragon flies, genus *Gomphus*); Mr. J. A. G. Rehn, Philadelphia Academy of Sciences (170 Mexican and Central American Orthoptera); Mr. H. C. Toll, Pasadena, California (400 specimens of beetles).

A number of skeletons of birds were loaned to Dr. R. W. Shufeldt for use in connection with his work on the osteology of North American birds.

A total number of 1,736 specimens of plants were lent to various specialists during the year.

DISTRIBUTION OF DUPLICATES.

The demand for zoological material by educational institutions increases every year, but during the year covered by this report no large amount was distributed, for the reason that the sets made up some years ago were practically exhausted. In the case of marine invertebrates, however, as already noted (see p. 73), one hundred new sets, comprising in all about 30,000 specimens, were prepared. Three sets of invertebrates and three of fishes were distributed, containing in all 1,092 specimens. In addition, 10 small special lots of marine invertebrates were also distributed, together with the duplicate ophiurans of the Agassiz *Albatross* expedition of 1891, as already noted (see p. 73).

LABORATORY USE OF COLLECTIONS BY INVESTIGATORS.

As in previous years, the staff of the Biological Survey, Department of Agriculture, made extensive use of the collections for purposes of comparison, and especially mammals and birds.

Mr. Ernest Thompson-Seton spent some days in examining the collection of American deer in connection with a work on the large game of North America which he has in contemplation. Dr. E. A. Mearns, U. S. Army, resumed for a time his work on the zoology of the Mexican boundary survey, and in that connection studied the specimens of American cats in the collection of the Museum. A large series of the birds of Panama was brought to the Division of Birds by Mr. Outram Bangs, and compared with the Museum collections. The committee of the American Ornithologists' Union on nomenclature spent some time in the Division of Birds, as in previous years, in determining the status of various newly-described species and subspecies of birds.

The ichthyologists of the U. S. Fish Commission consulted the collection of fishes.

Prof. L. C. Glenn and Mr. G. C. Martin, of the Maryland Geological Survey, consulted the collections of mollusks on many occasions

in connection with their work on the Maryland Tertiary. Mr. F. N. Balch, of Boston, compared Arctic shells.

Prof. W. P. Hay, of Howard University, continued studies of the crayfish in the collection, and Mr. T. Wayland Vaughan, U. S. Geological Survey, continued work on the West Indian corals.

In the laboratory of the Division of Insects the following investigators spent more or less time during the year: Dr. A. Fenyes, wife, and niece (on Coleoptera); Prof. W. L. Tower, Harvard University (on Coleoptera, particularly Chrysomelidæ); Miss M. M. Entemann, Chicago University (wasps of the genus *Polistes*); Prof. J. B. Smith, Rutgers College (various collections, especially Lepidoptera); Mr. J. A. G. Rehn, Philadelphia Academy of Natural Sciences (on Orthoptera); Sir Gilbert Carter, of Nassau, Bahamas (on Lepidoptera).

Prof. E. L. Greene, of the Catholic University, and Mr. E. L. Morris, of the Western High School, Washington, were frequent visitors to the herbarium, the former making general comparisons, the latter continuing his studies on the North American Plantaginaceæ.

Mr. Stewardson Brown and Mr. Joseph Crawford, of the Philadelphia Academy of Natural Sciences, made a brief visit to the herbarium to look up some ancient types. Dr. N. L. Britton, of the New York Botanical Garden, has made several trips to Washington to consult the herbarium in connection with his forthcoming manual. Prof. E. S. Burgess, of the New York Normal College, spent a few days here examining our *Aster* material. Dr. R. H. True, of Harvard University, visited the herbarium and studied specimens of the genus *Dicranum*. A number of officials from the Department of Agriculture made frequent use of the herbarium.

PERSONNEL.

The head curator of the department was appointed representative of the Smithsonian Institution and National Museum on the Government Board for the Pan-American Exposition, Buffalo, N. Y.

Miss Harriet Richardson was appointed collaborator in the Divison of Marine Invertebrates, January 11, 1901.

Dr. L. Stejneger was appointed to represent the National Museum at the International Zoological Congress, Berlin, Germany.

Mrs. F. Weinheimer, preparator in the Division of Plants, resigned January 1, 1901.

Mr. Joseph Sessford, clerk in the Division of Reptiles and Batrachians, died March 8, 1901.

Mr. M. W. Lyon, jr., aid, Division of Mammals, was transferred to the U. S. Department of Agriculture on June 1, 1901.

REPORT ON THE DEPARTMENT OF GEOLOGY FOR THE YEAR 1900–1901.

By George P. Merrill,
Head Curator.

The year just passed has been a busy one and has been characterized by several changes which, when considered in the aggregate, are of very great importance, placing the department as a whole in a better condition to care for its collections than ever before.

ACCESSIONS.

The more important accessions of the year, including also some of the material which was purchased for exhibition at the Pan-American Exposition, were as follows:

A beautiful nugget of native platinum weighing 444 grams, from the Nijni Tagilsk district, Russia, purchased of Mr. H. M. Lewis for the Pan-American Exposition.

A type series comprising 386 specimens of asphalt and associated rocks, from various parts of the United States, collected by George H. Eldridge and transmitted through the U. S. Geological Survey.

A beautiful series of native silver and copper specimens from Houghton County, Mich., purchased for the Pan-American Exposition.

About 100 pounds of Georgia corundum in masses and crystals, gift of the International Emery Company, of Chester, Massachusetts.

Rocks and ores received from the United States Geological Survey, including those of the Ten Mile District, and Silverton, Pikes Peak, and Cripple Creek quadrangles of Colorado.

A series of zinc ores and associated minerals from Joplin, Missouri, collected by F. W. Crosby, and asphaltum and radiolarian earth from the Barbados, from C. F. Howe.

A series of iron, zinc, and other ores from various parts of Europe, collected by Dr. Heinrich Ries.

Large specimens of mohawkite and domeykite, with native silver from the Wolverine copper mine, Houghton County, Michigan, gift of Fred Smith.

Three samples of beach gold from Cape Nome, Alaska, purchased.

Six nuggets of platinum, weighing 26½ grams, from Trinity County, California, the gift of the Welsbach Company, through W. E. Barrows, president.

A fine large nodule of Oregon priceite, the gift of W. C. Lake.

Twenty-two specimens of minerals from the trap rocks near Trenton, New Jersey, gift of W. A. Roebling.

Five cut beryls from Topsham, Maine.

Twelve cut turquoise and two cut opals, gift of H. B. Petersen.

Two specimens of pisanite, a mineral new to the collection, received from the United States Geological Survey.

One specimen of reinite, also new to the collection, the gift of T. Kotchibe.

From the United States Geological Survey, 375 specimens of Pre-Cambrian invertebrate fossils, including material figured and described by Dr. Charles D. Walcott in the Bulletin of the Geological Society of America; 2,370 specimens, mainly brachiopods, from the Cambrian; 2,425 Ordovician fossils, being the first collections of considerable value from this horizon, from southern Nevada and near El Paso, Texas; 114 Silurian and 1,550 Devonian specimens, from the Helderbergian and Oriskanian beds of Indian Territory and the higher Devonian of Colorado and New Mexico, a portion of which was described by Mr. G. H. Girty in the Nineteenth Annual Report of the United States Geological Survey, and a very large number of duplicate Miocene and Pliocene mollusca.

In addition to these should be mentioned the collections of Cambrian fossils from Russia, Norway, Sweden, Nova Scotia, and Newfoundland made by Mr. Walcott and his assistants, Messrs. Schmalensee and S. Ward Loper, and extensive Carboniferous, Silurian, and Devonian collections made by Charles Schuchert in New Brunswick, the Gaspé region in Quebec, and in western New York, Maryland, and eastern Pennsylvania.

An excellent series of cephalopod mollusks, purchased from Messrs. Krantz and Sturtz, of Bonn, Prussia.

A fine series of Oriskanian and Helderbergian fossils from near Cumberland, Maryland, obtained by gift and exchange from Messrs. Robert H. Gordon, Frank Hartley, and George W. Perdue.

A remarkably fine slab of the floating crinoid *Uintacrinus socialis*, from the Upper Cretaceous of Logan County, Kansas, gift of Mr. Frank Springer.

The private collection of F. A. Randall, of Warren, Pennsylvania, containing upward of 3,600 specimens of Upper Devonian and Lower Carboniferous fossils, obtained by purchase.

The greater portion of the skeleton of the gigantic toothed diver, *Hesperornis regalis*, from Logan County, Kansas, purchased for the Pan-American Exposition.

A series of Moa bones, obtained by exchange from Capt. F. W. Hutton, of Christ Church, New Zealand.

A nearly complete trough composite skeleton of the New Zealand *Emeus crassus*, obtained by purchase.

A skull of Elotherium and other vertebrate fossils from the Bad Lands of Dakota, gift of Dr. J. R. Walker, of the Pine Ridge Agency.

A fairly complete skeleton of an adult female mastodon, obtained by purchase and excavating, from near Church, Michigan.

One hundred and fifty Carboniferous and Permian fossil plants from Kansas, received in exchange from the University of Kansas, through Mr. E. H. Sellards, of Lawrence, Kansas.

One hundred and seventy-three fossil plants of the Middle and Upper Oligocene, Middle and Upper Miocene, and Upper Pliocene of Germany, received in exchange from the Museum Senckenberg National Scientific Society, of Frankfort, through Dr. F. Kinkelin, of Frankfort-on-Main, Germany.

Thirty-three fossil plants from the Triassic of York County, Pennsylvania, received in exchange from Prof. A. Wanner, superintendent of public instruction, of York, Pennsylvania.

One hundred and twenty-five specimens of fossil plants from Fern Ledges, St. John, New Brunswick—the W. J. Wilson collection—gift of Mr. R. D. Lacoe.

Sixty-eight specimens of Devonian and sub-Carboniferous fossil plants, part of the collection purchased from F. A. Randall, of Warren, Pennsylvania.

The meteorite collection has been increased by purchase and exchange more than during any previous period of like duration within the history of the Museum. The most important accession was a stony meteorite which fell near Felix, Alabama, in May, 1900, and which was obtained for the Museum mainly through the efforts of Mr. Coleman. This stone, weighing 2,049 grams, is of more than ordinary interest and has been made the subject of special study. In addition, there were obtained by purchase a fine slab weighing 4,420 grams of the Sacramento iron; a 38-gram fragment of the Agen stone, which fell in 1814; a 31-gram fragment of the Zavid stone, which fell in August, 1897, and 490 grams of a stony meteorite from Ness County, Kansas. By exchange there were obtained a 3,103-gram piece of the second-find Fayette County stone; a 98-gram piece of the celebrated Carbonaceous Orgueil stone, which fell in 1864; 620 grams of the Bjurbole stone of 1899; 10 grams of the Lancé stone of 1872, and 45 grams of the Misshof stone of 1890.

SOURCES OF NEW MATERIAL.

As in years past, the U. S. Geological Survey has been the principal contributor to the collection, though, as noted above, several valuable specimens have been obtained by purchase and exchange.

In August, 1900, Mr. Frederic A. Lucas, in search of mastodon remains for the Pan-American Exposition, visited several reported finds of bones near Munroe, New York, Kimmswick, Missouri, and Culver, Indiana.

Mr. Stewart, on a similar errand, also visited Kimmswick and various reported finds in adjacent States; but in none of these cases was material sufficiently perfect for restoration secured, though some interesting portions of skeletons were obtained. The latter part of May Mr. Stewart was sent to investigate a reported find of bones near Church, in southern Michigan, and was fortunate enough to secure a very well preserved skeleton of a female *Mastodon americanus*. It is hoped we may be able to mount this for exhibition some time during the coming year.

Mr. Schuchert spent the month of July and the greater part of August in collecting fossils from the Silurian along the Arisaig coast in Nova Scotia, and from the Lower Devonian near Dalhousie, New Brunswick, and the Gaspé region of eastern Quebec, Canada. In September he passed a few days near Cumberland, Maryland, gathering Silurian and Devonian fossils, and after his work of installation at the Pan-American Exposition in early May, a few days were devoted to collecting Silurian fossils in the cement quarries at North Buffalo and about Lewiston and New Bloomfield, in eastern Pennsylvania. During May and June he was again occupied for nearly four weeks collecting Silurian and Devonian fossils in eastern Pennsylvania and about Cumberland, Maryland. These collections, it may be said, were made with a view to the more accurate fixation of the line separating the Silurian from the Devonian systems in America, a problem upon which Mr. Schuchert has been for some time engaged.

In February Mr. J. W. Coleman was sent to Selma, Alabama, where he obtained the Felix meteorite already referred to, and others have been obtained by exchange. Six polished spheres of pegmatite, onyx, marble, serpentine, sphærosiderite, and satin spar have been prepared from material in the reserve series and added to the gem series.

ROUTINE.

In all divisions of the department there were received some 80,000 specimens which required entering in the Museum catalogues, numbering, and, in many instances, the preparation of cards for the card catalogues, and perhaps labels for exhibition purposes as well. In addition there still remains a large amount of old material needing attention. Mrs. Jouy, who has been placed in charge of this line of work, reports that for the Division of Geology and the sections of paleobotany and vertebrate paleontology there have thus been made 7,351 entries in the Museum registers; that between 13,000 and 14,000 catalogue and reference cards, specimen slips, and temporary labels have been prepared, and that 5,383 specimens have been numbered. These numbers are painted in oil on a hard-oil finished background and require four or five figures for each number, involving, all told, therefore, some 25,000 figures.

Mr. Schuchert reports the final installation during the year of 3,278 specimens. In all the divisions there have been prepared and sent to the printer manuscript for 5,626 specimen labels.

The cases in the west-south range containing the volcanic, geyser and hot spring, and rock-weathering series, have been repainted, and the exhibit rearranged. About two-thirds of the building-stone collection in the southwest court has been thoroughly overhauled and cleansed from the dust and dirt that accumulated during the work of the erection of the balconies. The work of labeling the non-metallic series on the balcony of the southwest court has been practically completed.

A large amount of work has been done in the way of cutting, polishing, and otherwise preparing material for exhibition, particularly in the divisions of geology. A 75-pound mass which was cut from the prehistoric Casa Grande meteoric iron has been sawn into slices and cubes, giving thus valuable material for etching, for exhibition, and for exchange.

But little progress has been made in the way of increasing the exhibition series in the section of vertebrate fossils, owing to the employment of the preparators on work for the Pan-American Exposition, to be noted later. A large Plesiosaur skeleton has, however, been placed on exhibition in a special case, as has also a large and fine skull of Triceratops, both of which were received from the Marsh collection.

Dr. Peale, when not occupied with the routine work of his division, has been engaged in the preliminary compilation of a geological section across the United States from the Pacific Ocean to the Atlantic coast. The line upon which this section was made was drawn through those parts of the country where the most geological data were available. The horizontal scale is 2 miles to the inch, as this coincides with a large part of the topographic data available from the records of the United States Geological Survey. The vertical scale of 4,000 feet to the inch was adopted so that the relief might be apparent, especially in those parts of the section where the elevation above sea level is not very great. In order, also, to show the structure of these portions, the section was carried to a line 5,000 feet below sea level. The work of the Geological Survey in California and in the Appalachian region; that of the survey of the fortieth parallel in Nevada, Utah, and Wyoming; of the Hayden survey of Colorado, and that of the Kansas, Missouri, Illinois, Kentucky, and North Carolina State surveys, where the line crosses those States, have been utilized in making this section. The section has been drawn in water color on rough manila paper.

Mr. Newhall, as in years past, has been engaged in the general work of the details of the exhibition and study series of the division of geology.

PAN-AMERICAN EXPOSITION.

The daily routine of the Museum has been greatly retarded by the work of preparing for the Pan-American Exposition at Buffalo. This was begun early in the year, and, although not occupying all of our time and attention, was continued until the opening of the exposition in May. The exhibits prepared by the various divisions of the department consisted of:

A systematic collection of minerals, comprising 735 specimens and occupying five slope-top cases.

Collections illustrating cave deposits, concretionary structures, hot spring and geyser deposits, silicified woods, and the rocks and soils of the Hawaiian Islands, occupying five wall cases.

A small case of native elements.

A systematic collection of invertebrate fossils illustrating the developement and classification of the cephalopod mollusks, comprising 450 specimens, and a synoptic collection of crinoids, comprising some 300 specimens.

A mounted skeleton of the gigantic toothed diver, *Hesperornis regalis*, from the Cretaceous of Kansas.

A life-size restoration of the skeleton of the Cretaceous reptile, *Triceratops prorsus*, from the Cretaceous of Wyoming.

A life-size restoration of the skeleton of the Zeuglodon, from the Tertiary beds of Alabama.

The restoration of the Triceratops was accompanied by a small model and painting of the animal as it was supposed to appear in life, the work of Mr. Charles R. Knight. In addition to these, there were two cases of mammoth remains from Indian Territory and Kimmswick, Missouri, collected for the Museum by Mr. Stewart. It had been hoped to include in the exhibit a mounted skeleton of the extinct mastodon, but a sufficiently perfect one was not found until too late for the exposition.

The installation of these exhibits at Buffalo required the presence there of Messrs. Lucas, Schuchert, Stewart, Tassin, and the head curator himself, for periods of from six to ten days, and naturally the ordinary work of the Museum was greatly interrupted thereby.

PRESENT STATE OF THE COLLECTIONS.

The department, as a whole, was never in better condition than it is to-day. All of the halls are open to the public, and with the exception of the sections of paleobotany and vertebrate paleontology the collections are well arranged and quite completely labeled. A great deal, naturally, remains to be done in the way of substituting new material and rounding out the collections. The sections in arrears are those which have been most recently established, and in which, moreover, a great amount of preparatory work is necessary before the

specimens can be placed upon exhibition. It will be some years before they can expect to compare favorably with those which have been longer in existence.

RESEARCH AND PUBLICATION.

The head curator is engaged in investigations upon a series of nepheline-melilite rocks, collected by C. H. Hitchcock in Oahu, Hawaii, and has completed a study of the stony meteorite which fell in Felix, Alabama, in 1900. He has published during the year, in connection with Dr. H. N. Stokes, a paper on a stony meteorite which fell at Allegan, Michigan, in 1899, and an iron meteorite from Mart, Texas. The Guide to the Study of the Collections in the Section of Applied Geology, which was mentioned in the last report as being in the hands of the Government Printer, has been issued, and comprises pages 157 to 483, inclusive, of the Annual Report for 1899.

The transfer of the laboratory from the second to the third floor of the southwest pavilion not merely gives better space for office purposes on the second floor, but enables us to concentrate the work of the geological and mineralogical divisions and make a considerable saving in time and energy as well as expense for material and apparatus. Should Dr. Fireman continue in the department as chemist, we may hope to see an important improvement, both in the quantity and quality of the work done upon the collections. Mr. Tassin is at present engaged in an analysis of a damourite from California, involving the determination of boron, which, it is thought, may have an important bearing upon the establishment of the formula for this mineral. He is also continuing his work on the dehydration of the metallic hydrates, with especial reference to the hydration of ferric and ferrous sulphates and the dehydration of the resultant hydrates and basic salts. The manuscript of a handbook on the Gem Collection, mentioned in my last report as in process of preparation, has been completed and is in the hands of the Government Printer.

Mr. Schuchert has continued his work on a Monograph of American Fossil Starfishes, and hopes to complete Part I of the same during the coming winter. He has also continued his studies relative to the zones separating the Upper Silurian and Lower Devonian faunas in America, and has published a paper on the Helderbergian fossils near Montreal, Canada, in which he gives a corrected list of the fossils found on St. Helens Island. This shows that two distinct faunas are there found, one, the Helderbergian, older than the agglomerate, and another from blocks in the agglomerate, of Middle Devonian age, the Helderbergian fauna being not mixed with the Silurian nor Middle Devonian fossils, as stated by previous workers.

Mr. Lucas has begun the work of preparing the text for the volume on Stegosaurs projected by the late Prof. O. C. Marsh. He has also given some little time to the study of the mastodons of North America,

and published papers on the Lachrymal Bone in Pinnipeds; on the Characters and Relations of Gallinuloides, a Fossil Gallinaceous Bird from the Green River Shales of Wyoming; a Description of Skull of *Lepidosteus atrox;* on a New Rhinoceros, *Trigonias osborni*, from the Miocene of South Dakota; on The Pelvic Girdle of Zeuglodon, *Basilosaurus cetoides* (Owen); on A New Fossil Cyprinoid, *Leuciscus turneri*, from the Miocene of Nevada, and on A New Dinosaur, *Stegosaurus marshi*, from the Lower Cretaceous of South Dakota.

ASSISTANCE TO INDIVIDUALS AND INSTITUTIONS.

As in previous years, a very considerable amount of material has been lent for study or sent out as exchanges or as direct gifts to schools and colleges. Among the loans mention may be made of the following:

To Alexander Agassiz, Museum of Comparative Zoology of Harvard University, 28 specimens and 4 thin sections of rocks, from the Galapagos Islands.

To Charles Palache, Harvard University, 28 thin sections of Alaskan rocks.

To H. A. Robinson, Peabody Museum of Yale University, 7 specimens of volcanic rock.

To the United States Geological Survey, specimens of minerals for use in chemical and physical investigations.

To Dr. J. M. Clarke, of the States Museum, Albany, New York, 559 specimens of Oriskany fossils, collected by Mr. Schuchert in the Gaspé region.

To Prof. James Perrin Smith, Leland Stanford Junior University, California, 19 Texas ammonoids from the Carboniferous formation and 77 Triassic ammonoids.

To Dr. O. P. Hay and J. W. Gidley, of the American Museum of Natural History, New York City, material for use in the preparation of papers on the chelonia and the horse.

In the way of exchanges material has been sent out as follows:

To Rev. Mark C. Hayford, Cape Coast, West Africa, 22 specimens of rocks and ores.

To Dr. E. Ordonez, City of Mexico, 6 specimens of eruptive rocks.

To H. S. Washington, Locust, New Jersey, 2 specimens of eruptive rocks.

To L. V. Pirsson, Yale University, 15 specimens of eruptive rocks.

To W. C. Brögger, Christiania, Norway, 79 specimens of eruptive rocks.

To H. A. Ward, Rochester, New York, 2 specimens of meteorites.

To F. W. Hutton, curator of Canterbury Museum, New Zealand, a series of Titanotherium bones and 43 specimens of invertebrates.

Gifts of specimens have been made to schools and colleges, etc., as follows:

To the Louisiana Industrial Institute, of Ruston, Louisiana, 32 specimens of rocks, minerals, ores, and fossils.

To the city school, Monroe, Louisiana, 31 specimens of rocks, minerals, ores, and fossils.

To A. V. S. Cochrane, Hudson, New York, 22 specimens of ores and minerals.

To the University of Idaho, Moscow, Idaho, 28 specimens of rocks and 14 thin sections.

To the Wesleyan Female Seminary at Macon, Georgia, 43 specimens of rocks.

To the Division of Soils, Department of Agriculture, a collection of 302 specimens of minerals.

PLANS FOR THE FUTURE.

A generalized geological section across the entire width of the American continent has been attempted, and a preliminary sketch on a horizontal scale of 2 miles to an inch has been prepared, as already noted. This will give, when finished, a section some 125 feet in length, to accompany the historical series now installed in a temporary case on the south wall of the west-south range. It is hoped that another year will enable us to put this section into permanent form, as well as to replace the temporary case with a new one better adapted to the purpose.

As practically all the available exhibition space for the department is now occupied, further development must be mainly along the lines already laid down. It has long been felt that the section of practical geology could be strengthened by building up certain special exhibits showing the occurrence and association of the ores of some few of the more interesting mining regions. At present this has been attempted only for the zinc and lead regions of southwest Missouri. The work is as yet incomplete.

The growth of the meteorite collection has been such that an entire rearrangement is anticipated. Very many of the smaller specimens will be relegated to the drawer series, and in the space thus gained an attempt will be made to give the others a more attractive setting and more comprehensive labels.

In the section of vertebrate paleontology it is desired to mount for exhibition some of the abundant Dinosaur material, particularly the limbs and pelvis of the Triceratops and the entire hind limb of *Morosaurus grandis*, as well as the remarkably fine series of Titanotherium skulls. This, with the work of repairing and properly installing material now in the cases, will alone occupy the attention of our present force of preparators for the entire year.

In the section of invertebrate paleontology Mr. Schuchert reports the J. H. Harris collection of Cincinnati fossils as next to receive attention, the available space for exhibition being so nearly occupied that little more can be done in this direction.

In the section of paleobotany Dr. Peale will begin at once with an entire readjustment of the exhibition series and the work of preparing manuscript of the labels for the same.

From the manner in which the Museum collections have been built up, it follows almost as a matter of course that they are unusually rich in type material or material which has been the subject of special study. It is my hope to be able to present with this report a catalogue of such types, in order that their whereabouts may be more widely known and incidentally to enhance their value. In this connection it may be well to call attention to the large collections of unstudied material which have accumulated, particularly in the section of invertebrate paleontology. I would refer more especially to the fossil insects, bryozoa, hydroids, sponges, etc. It is hoped that before many years some arrangement can be made whereby these collections may be worked up by competent specialists.

PERSONNEL.

Several changes in the personnel of the Department have occurred during the year, and the additional assistance afforded has been of great benefit. Miss Lucy M. Graves was appointed as stenographer to succeed Miss Carrie V. Hurlbut, resigned; Mrs. M. S. F. Jouy was promoted to the position of clerk in charge of the records, and Dr. Peter Fireman was given a temporary appointment as chemical geologist. The employment of Mr. C. N. Cruikshank for the purpose of numbering specimens and attending to other miscellaneous work, and of Messrs. J. W. Coleman and Alban Stewart as skilled laborer and preparator, respectively, should also be mentioned.

CONCLUDING REMARKS.

No one but a specialist can fully realize how trying it is to be obliged to lay aside systematic work on the collections or the consideration of the many interesting problems which constantly present themselves, for the work of preparing for the numerous expositions which have been held during the past dozen or twenty years. It has been estimated that an amount of time equal to three months, or one-fourth of the entire year, was given by the head of each division or section to the work of preparing and installing the exhibit now at Buffalo. While recognizing that such work is to be regarded as an essential part of a curator's duties, nevertheless the amount of it that has devolved upon

the department during the past few years is sufficient to test the patience and endurance of the best.

Considerations such as those lead me to once more express my gratification at the willingness always manifested on the part of the departmental staff and the thoroughness with which any work is done which it is believed will advance the interests of the Museum as a whole, regardless of personal considerations.

Through the death of Mr. R. D. Lacoe, which took place on February 5, 1901, the department has met with a severe loss. It is doubtful if any museum ever had a more disinterested friend than he—one who considered himself last of all, and only asked that his collections might be put where they would be of the greatest possible good in advancing the cause of science.

APPENDIX I.

The Museum Staff.

[June 30, 1901.]

S. P. Langley, Secretary of the Smithsonian Institution, Keeper Ex-Officio.
Richard Rathbun, Assistant Secretary, in charge of the U. S. National Museum.
Frederick W. True, Executive Curator.

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 Archeology:* Paul Haupt, Honorary Curator; Cyrus Adler, Honorary Assistant Curator; I. M. Casanowicz, Aid.

(*c*) *Division of Prehistoric Archeology:* Thomas Wilson, Curator.

(*d*) *Division of Technology* (Mechanical phases): J. E. Watkins, Curator; George C. Maynard, Assistant Curator.

Section of Electricity: G. 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, Assistant 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.

(*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.

DEPARTMENT OF BIOLOGY—Continued.

(*f*) *Division of Insects*—Continued.

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 Algæ: 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; Peter Fireman, Chemical Geologist.

(*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.

Chief Clerk, W. V. Cox.

Chief of Buildings and Superintendence, J. E. Watkins.

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

Photographer, T. W. Smillie.

Registrar, S. C. Brown.

Disbursing Clerk, W. W. Karr.

Property Clerk, W. A. Knowles (Acting).

Librarian, Cyrus Adler.

Assistant Librarian, N. P. Scudder.

Editor, Marcus Benjamin.

APPENDIX II.

List of Accessions.

Abbott, Dr. W. L., Singapore, Straits Settlements: Natural history specimens and ethnological objects from the Mergui Peninsula and localities in the Malay Archipelago, Natunas, Tringanu, and Tioman Island (37007, 37335, 37409). (See under Kloss, C. B.)

Abel, J. C., Lancaster, Pa.: Stone implements and arrow points found on the Conestoga Hills, near Lancaster. 37411.

Adair, I. J., Warren, Ark.: Wheel bug, *Prionidus cristatus*. 36815.

Adams, C. E., San Juan, Porto Rico: Three specimens of blind lizards (*Amphisbæna*). 36803.

Adams, C. F., Kansas City, Mo.: Six specimens of Diptera. 37618.

Adams, Henry. (See under Smithsonian Institution.)

Adams, Samuel H., Department of Agriculture, Washington, D. C.: Received through Dr. L. O. Howard. One hundred butterflies from the Philippine Islands. 37713.

Adler, Dr. Cyrus, Smithsonian Institution: Photograph of a synagogue in Gibraltar. 37373.

Affeld, C. E., Biloxi, Miss.: Plant. 37624.

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

Four crabs from Mexico representing 2 species (36809); received from Dr. L. O. Howard, anklet made from a monkey skin and cocoons of the "Queen Moth," *Argema mimosæ* Boisduval (36991); 61 specimens of dragon flies from North America containing many rare species and constituting a portion of the collection of the late Prof. F. L. Harvey (37059); received through Biological Survey, land and fresh-water shells from Mexico, collected by E. W. Nelson (37096); 6 Hippas from Yucatan, collected by Messrs. E. W. Nelson and E. A. Goldman (37718); geological specimens (37726); 2,082 specimens, representing 1,105 species of Hemiptera-heteroptera (37873); crabs from Yucatan, collected by Messrs. Nelson and Goldman (37915).

Material deposited in the National Herbarium: Specimen of *Styrax plantanifolia*, collected by Charles Hupperty, Austin, Tex. (36772); plant from California, collected by E. R. Emery (36812); 7 plants collected by L. H. Dewey in the United States (36898); 18 plants collected by Lieut. B. H. Dutcher, Fort Grant, Ariz. (36907); 118 plants collected by E. Taylor in Iceland (37031); 5,400 plants collected in Oregon by E. P. Sheldon (37166); 24 plants collected in Alaska by Lieut. J. S. Herron (37191); plant collected by L. H. Dewey (37275); 15 plants from Texas collected by Vernon Bailey (37310); 22 plants from Oregon collected by F. V. Coville (37382); specimen of *Marsilia* from Louisiana (37402); 21 plants collected by Mr. Coville (37398); 8 plants from California collected by J. M. Hutchens and Vernon Bailey (37448); 183 plants collected in Montana by V. K. Chestnut and T. E. Wilcox (37454); 42 plants from Alaska and British Columbia, collected by N. H. Osgood (37472); 78 plants from the Hudson Bay region collected by E. A. Preble (37473); 10 plants from Luzon, Philippine Islands

Agriculture, Department of—Cont'd.
(37573); 11 plants collected in Montana by T. E. Wilcox (37579); 52 plants from the Yellowstone National Park, collected by Elmer D. Merrill (37600); 140 plants collected in Oregon by F. V. Coville (37679); 73 plants from Alaska collected by Arthur J. Collier (37752); 56 plants from Oregon collected by E. I. Applegate (37836); 2 plants from the British Museum, London, England (37870); plant collected in the District of Columbia by Dr. A. K. Fisher (37909); 211 plants collected in Alaska by A. L. Bolton (37960); 22 plants collected by C. C. Georgeson in Alaska (37984); 21 plants collected in Arizona by Gifford Pinchot (37985); plant from New Mexico collected by Prof. T. D. A. Cockerell and W. P. Cockerell (37986); plant from Texas collected by E. N. Plank (37987); 64 plants collected in Canada by E. A. and A. E. Preble (37988); 3 plants collected in North Carolina by W. W. Ashe (38000); plant collected in Oregon by E. I. Applegate (38001); plant collected in New Jersey by Miss A. D. Weeks (38032); specimens of *Negundo* from New Jersey collected by Miss B. Durgen (38033); 3 plants from New York collected by M. L. Overacker (38060); plant from Europe collected by M. J. Ball (38070); 17 plants from Alaska collected by M. F. E. Blaisdell (38071); 2 plants from Wyoming collected by Aven Nelson (38072); 168 plants from Idaho collected by E. D. Merrill (38073); plant from the District of Columbia collected by A. G. Masius (38110); plant from Virginia collected by Harry J. Kirk (38111); plant from Alaska collected by Dr. L. Stejneger (38112); plants from Montana collected by H. B. Ayres (38113).

(See under Anderson, J. R.; Armstrong, George; Barnett, J. M.; Beal, W. J.; Brandegee, T. S.; Cole, Miss E. J.; Collins, G. N.; Finley, J. B.; Fisher, Dr. A. K.; Haberer, Dr. J. V.; Harward, Miss Winnie; Hasse, Dr. H. E.; Hay, W. P.; Herrera, Prof. A. L.; Hindman, Albert; Holzinger, J. M.; Langille, H. D.; Melton, T. A.; Millspaugh, Dr. C. F.; Nolan, W. J.; O'Neill, J. A.; Pitcher, James R.; Preble, A. E.; Preble, E. A.; Sheldon, E. P.; Shrader, F. C.; Steele, W. C.; Sydney, New South Wales, Botanic Gardens; Tracy, S. M.; Trask, Mrs. Blanche; War Department; Wells, H. C.; Whited, Kirk; Wilkinson, E. B.; Wooddell, G. P.; Wooton, E. O.)

Aguilera, José G. (See under Mexico, Mexico, Instituto Geologico de Mexico.)

Akin, Lapha, Sparksville, Ky.: Specimens of scolytid beetles. 38131.

Alabama Biological Survey, Auburn, Ala.: One hundred plants. Exchange. 38144.

Aldrich, Prof. J. M., University of Idaho, Moscow, Idaho: Woodchuck (*Arctomys*). 37804.

Aldrich, Hon. T. H., Birmingham, Ala.: Eight species of Unionidæ from the Southern States (36792); Unionidæ from various localities (37173).

Alexander, R. M., Kansas City, Mo.: Twenty spearheads, 15 arrow points, and a hematite celt. Exchange. 37444.

Alexander, W. H., Basseterre, St. Kitts, British West Indies: Bats, reptiles, insects, and birds, in alcohol, from the West Indies. 38105.

Algué, Father José, Director of the Observatory, Manila, Philippine Islands: Mollusks, corals, and sponge from the Philippine Islands. Exchange. 37445.

Altofar, Mrs. J., Washington, D. C.: Canadian two-dollar note. Purchase. 37261.

American Museum of Natural History, New York City: Ten plaster casts of implements and carvings of stone and bone from British Columbia (36864); received through Dr. Franz Boas, 3 suits of Eskimo clothing (37404). Exchange.

Ami, Dr. H. M. (See under Ottawa, Canada, Geological Survey of.)

Anderson, Edith, Highland, N. C.: Specimen of *Kalmia*. 36978.

Anderson, F. M., Berkeley, Cal.: Twenty-seven specimens (7 species) of Cretaceous (Lower Chico) ammonites from near Phoenix, Ariz. Exchange. 37489.

Anderson, J. R., Victoria, British Columbia: Received through the Department of Agriculture. Plants (36897, 37035.)

André, Ernest, Gray (Haute-Saône), France: One hundred and forty-two specimens of exotic Matillidæ and Formicidæ, representing 75 species. Exchange. 36922.

Andrews, E. F., Washington, Ga.: Stone implement. 37883.

Andrews, Mrs. E. F., Washington, Ga.: Fruit of the Varnish tree, *Sterculia platanifolia*. 36988.

Andrews, W. S., Schenectady, N. Y.: Six skiagraphs of recent shells, prepared by the donor. 37807.

Applegate, E. I. (See under Agriculture, Department of.)

Ardley, E., Redpath Museum, Montreal, Canada: Thirty-two specimens of Lower Helderberg fossils from St. Helens Islands, Montreal, Canada. Purchase. 37446.

Arechavaleta, J. (See under Montevideo, Uruguay, Museo Nacional.)

Armstrong, George, Junction, Tex.: Received through Department of Agriculture. Specimen of *Phaseolus retusus* from Texas. 37117.

Ash, C. E., Jr., Newport, R. I.: Received through Dr. E. A. Mearns. Turtle (*Chrysemys picta*) from Rhode Island. 36716.

Ashe, W. W. (See under Agriculture, Department of.)

Ashmead, W. H., U. S. National Museum: Insects, spiders, myriapods, and shells from the Hawaiian Islands. 38164.

Atkins, Emerson, East Las Vegas, N. Mex.: Six birds' skins from New Mexico. 37356.

Attwater, H. P., Houston, Tex.: Mammals from Texas (38079); Golden-

Attwater, H. P.—Continued.
cheeked warbler, *Dendroica chrysoparia*, from Texas (38123).

Austin, S. W., Independence, Cal.: Eight plants from California. 37535.

Aymé, Louis H., U. S. consul, Guadeloupe, British West Indies: Part of an ancient jar and pieces of pottery. 36912.

Ayres, H. B. (See under Agriculture, Department of.)

Babcock, W. C., Chloride, Ariz.: Specimen of serpentine from Lost Basin, between White Hills and Colorado River. 37634.

Bacon, Mrs. Mary L., San Jose, Cal.: Indian basket. 37495.

Bailey, Vernon, Department of Agriculture: One hundred specimens, 15 species, of land-shells from Texas and California (37379); plants from New Mexico and Texas (37599, 38059). (See under Agriculture, Department of.)

Baird, Commander G. W., U. S. Navy, Washington, D. C.: Bronze bust of Charles H. Haswell, first Engineer in Chief of the U. S. Navy. 37396.

Baker, C. Alice, Deerfield, Mass.: Connecticut River clay stones. 37211.

Baker, C. F., St. Louis, Mo.: Seven hundred and two plants from the Rocky Mountain region (36771); 75 plants from Colombia, South America (37914). Purchase.

Baker, Dr. Fred., San Diego, Cal.: Twenty specimens, 15 species, of marine shells from Lower California. 37588.

Baldridge, Mrs. Maria, Devon Inn, Los Angeles, Cal.: Three shells of *Cypræa nigropunctata* from the Galapagos Islands. 38012.

Ball, C. R., Department of Agriculture: Plants from Louisiana. (36854, 37241, 37742.)

Ball, M. J. (See under Agriculture, Department of).

Ballard, D. F. A., National Military Home, Kans.: Fossil plant representing the species *Neuropteris clarksoni* Lesquereux. 37179.

Bang-Haas, A., and Dr. O. Standinger, Dresden, Germany: Seventy-seven butterflies. Purchase. 37116.

Bangs, Outram, Boston, Mass.: Twenty-four birds' skins from San Miguel Island, Panama (gift) (37155); mammals and birds from Borneo (purchase) (38019).

Bannerman, Francis, New York City: Volcanic magazine carbine (purchase) (36887); 2 cartridge cases picked up on Cuban battlefields (gift) (37298).

Barber, E. A., Philadelphia, Pa.: Ethnological objects from Vermont and Pennsylvania (36883); 9 pieces of Bennington (Vermont) pottery (37187). Purchase.

Barber, H. S., Washington, D. C.: Eight specimens of dragonflies (36947); lizards from Virginia (38037); reptiles from Arizona (38046); living larvæ of Myrmeleonids. 38078.

Barbour, W. C., Sayre, Pa.: Thirty-one specimens of Hepatica from New York and Pennsylvania (exchange) (37214); 100 plants from Pennsylvania (gift) (37593).

Barnaby, C. W., Urga, Mongolia: Two earthenware votive offerings. 36931.

Barncord, J. H., Ridgeley, W. Va.: Three pieces of chipped flint. 37845.

Barndollar, Mrs. J. W. (See under Smithsonian Institution, Bureau of Ethnology.)

Barnes, Dr. William, Decatur, Ill.: Four hundred moths. 37162.

Barnett, J. M., Markleton, Pa.: Received through Department of Agriculture. Plant. 37090.

Barnum, Henry, Lower Brule, S. Dak.: Specimen of Indian tobacco (Chungshasha), obtained from the Sioux Indians of South Dakota. 36886.

Barrott, A. F., Owego, N. Y.: Stone implements and a human skull. 37316.

Barrows, W. E. (See under Welsbach Company.)

Bartsch, Miss Anna. (See under Y. Hirase.)

Bartsch, Paul, U. S. National Museum: Nest and 5 eggs of Rough-winged Swallow, *Stelgidopteryx serripennis*, from Maryland. 38016.

Batchelder, J. F., Portland, Oreg.: Received through Interior Department, U. S. Geological Survey. Two specimens of chalcopyrite with cobalite, from the East Fork of Dixie Creek, near Prairie City, Grant County, Oregon. 37678.

Baum, H., Washington, D. C.: Plant from the Potomac Flats. 37840.

Beal, W. J., Agricultural College, Md.: Received through Department of Agriculture. Three hundred and twenty-six plants. Exchange. 36861.

Bean, B. A., U. S. National Museum. Glass, porcelain vase, platter, Pennsylvania Deutsch slip ware, and a flat-iron. 36933.

Bean, B. A., and King, W. H., U. S. National Museum. Reptiles, insects, and marine invertebrates from Florida. 37693.

Beard, Mrs. Bessie, Hudson, Wis.: Concretionary quartz from the falls of St. Croix River. 37065.

Beck, W. H., Washington, D. C.: Spodumene from Etta Mine, Pennington, S. Dak. 37367.

Beckwith, Paul, U. S. National Museum: Four death tags used during the civil war (3 copper and 1 lead), copper 3 Baiocco, Papal States coin issued 1849 (37144); sword belonging to the late Gen. Nathaniel Lyons, U. S. A. (exchange) (37388); 2 campaign buttons (37387); 6 campaign buttons of Messrs. McKinley and Bryan (37407); papers of the Capital Centennial Celebration, held at Washington city, December 12, 1900 (37425); sand bottle (37480); an impression, in metal, of a seal found near Virginia Beach (37503); 25-cent note of Bland County, Va., C. S. A., issued November 13, 1862 (38020).

Beede, J. W., Effingham, Kans.: Fifteen specimens of triassic fossils from Oklahoma Territory (37585); 4 specimens of *Zygmayeria*, n. sp., from Oklahoma

Beede, J. W.—Continued.

(37295); 90 specimens of *Fusulina* from the Upper Carboniferous of Kansas (37311). (See also under Interior Department, U. S. Geological Survey.)

Bell, Brig. Gen. J. M., U. S. Army, Washington, D. C.: Filipino hat made of hemp fiber by the Bicols of the Camarine provinces. 38141. (See under Smithsonian Institution.)

Benedict, James E., U. S. National Museum: Caterpillars from the Everglades of Florida (37810); invertebrates and fishes from the western coast of Florida (37849); insects from Florida (37850); miscellaneous collection of insects from Miami (37949); invertebrates from the vicinity of Miami (37990).

Benham, J. W., Buffalo, N. Y.: Unfinished basket and material for basket weaving, with two plants from which splints are cut. (38167.)

Benjamin, Mrs. C. G., Washington, D. C.: Basket from North Africa (37237); ornamented carrying band used by the Nez Percé Indians (37238). Exchange.

Bennett and Hudson, Austin, Tex.: Two specimens of Screw worms, representing the species *Lucilia marcellia*. 36895.

Benson, Capt. H. C., U. S. Army, Bayambang, Philippine Islands. Birds' eggs from the Philippine Islands (36847); 16 birds' skins, nests, and eggs from the Philippine Islands (36896); birds' skins and birds' eggs from Bayambang (36976); 14 birds' skins (37313); 9 birds' eggs and 9 birds' skins from the Philippine Islands (38041).

Benton, G. B., Rouzerville, Pa.: Wheel bug, *Prionidus cristatus* L. 36961.

Berlin, Prussia: Museum für Naturkunde. Three hundred and ninety-six specimens of Diptera. Exchange. 37967.

Berliner, Emile, Washington, D. C.: Berliner gramophone. 36816.

Berwerth, Prof. Fred., K. K. Naturhistoriches Hofmuseum, Vienna, Austria: Piece of Lancé (France) meteorite. Exchange. 37831.

Bessey, C. S., Lincoln, Nebr.: One hundred and fifty-nine specimens of violets. Exchange. 36846.

Bethel, E., Denver, Colo.: Plant from Colorado. 37933.

Bibbins, Arthur. (See under Woman's College of Baltimore.)

Biederman, C. R., Goldhill, Oreg.: Lepidoptera and other insects. (36724, 37451, 37814.)

Bigelow, E. F., Stamford, Conn.: Miscellaneous insects found on morning-glories. 37025.

Billings, W. R., Ottawa, Canada: Eleven specimens of English fossil starfishes and 12 specimens of Canadian Lower Silurian starfishes (to be added to the I. H. Harris collection) (36959); 58 specimens of fossils (37119). Exchange.

Billingsley, L., Washington, D. C.: Pistol found at Balls Bluff, Virginia. Purchase. 37695.

Bingham, H. O., Shippensburg, Pa.: Continental note, 9 pence, issued in 1781. Purchase. 38022.

Bird, H., Rye, N. Y.: Specimens of Lepidoptera (36997, 37296).

Birtwell, F. J., Albuquerque, N. Mex.: Type specimen of *Parus gambeli thayeri* from New Mexico. 37659.

Blackman, E. E., Roca, Nebr.: Fragments of ancient Pawnee pottery with cloth impressions, found near Fullerton, Nebr. 37891.

Blair, J. J., Yukon, Okla.: Locustid. 36869.

Blaisdell, M. F. E. (See under Agriculture, Department of.)

Blake, W. W., City of Mexico, Mexico: Stone with Aztec carving of the Goddess of Water, and a foot-shaped vase made of pottery. Purchase. 37365.

Blanchard, William S., Washington, D. C.: Watch holder. 37689.

Blankinship, J. W., Bozeman, Mont.: Four plants from Montana. 36760.

Blatchley, W. S., Indianapolis, Ind.: Thirty-eight specimens of Orthoptera, including types and cotypes described by the donor. 37687.

Boas, Dr. Franz. (See under American Museum of Natural History.)

Bolton, A. L. (See under Agriculture, Department of.)

Botanic Gardens. (See under Sydney, New South Wales.)

Bouldin, P., Jr., Stuart, Va.: Specimens of staurolite from Patrick County, Va. 37374.

Bowdish, B. S., U. S. Army, Mayaguez, Porto Rico: Zoological material from Porto Rico, as follows: Eleven birds' skins (36718); 2 mammals and 4 birds' skins, 3 birds' nests and 6 eggs (36830); mammals and frogs (37196); birds and birds' nests (37415);[a] 3 bats (37526); bat and 2 mice (37544); 2 mammals and a bird less (37720).

Bowers, Master Hubert, Jefferson, Md.: Sphinx moth, *Protoparce celeus* Hübner. 36825.

Bowers, Dr. Stephen, Los Angeles, Cal.: Twenty-nine specimens (4 species) of Upper Cretaceous invertebrate fossils from Orange County, Cal. (37876); 5 specimens (4 species) of Cretaceous invertebrates from Santa Ana Mountains, California (37564).

Bradford, Rear-Admiral R. B. (See under Navy Department.)

Braendle, F. J., Washington, D. C.: Eight specimens of dried mushrooms. 37243.

Bramhall, Col. W. L., Washington, D. C.: Twenty campaign medals of Washington, Lincoln, Douglas, and other prominent men. 37576.

Branch, Dr. C. W. (See under Smithsonian Institution, Bureau of Ethnology.)

Branch, H. Selwyn, St. Lucia, West Indies: Five skins of Imperial Parrot from Dominica (37222); 31 birds' skins and a small snake from St. Lucia (37782); bats from St. Lucia (38132). Purchase.

Brandegee, T. S., San Diego, Cal. Received through Department of Agriculture: Thirty-three plants from Lower California (exchange) (37471); 2 plants from Lower California (gift) (37816).

Brandt, Dr. K. (See under Kiel, Germany, Zoologisches Institut.)

Branner, Dr. J. C., Stanford University, Cal.: Marine shells from the coast of Brazil near Pernambuco (36975); fossil fishes from the Cretaceous of Brazil (37175).

Bratley, J. H., Havasupai Indian School, Supai, Ariz.: Havasupai brush, scratcher, partly finished basket, a roll of white fiber, and a bunch of strips of "Devil's claws." 37995.

Brennan, J. C. (See under Smithsonian Institution, Bureau of Ethnology.)

Brewer, E. A., Shellbank, La.: Twenty birds' eggs from Louisiana. 37911.

Briggs, A. A., East Andover, N. H.: Six plants. 36744.

Brimley, H. H. and C. S., Raleigh, N. C.: Fifteen turtles from Texas and North Carolina (36877); mud turtle (37290); mud turtles from Texas (37291); turtle and 2 garter snakes from North America (37292); 5 cottontail rabbits from Raleigh (37691); 6 rabbits (37756); 4 tree frogs from Mississippi (37874); 6 specimens of *Amphisbaena* from Florida (37879); coon skull (37989); snake (38104). Purchase. (See also under North Carolina State Museum.)

Britts, Dr. J. H., Clinton, Mo.: Ten pieces of Upper Carboniferous limestone containing four specimens of an unknown crinoid. 37935.

Brögger, Prof. W. C., University of Christiania, Christiania, Norway. Received through Interior Department, U. S. Geological Survey: Two specimens of Laurdalite from Norway. Exchange. 37993.

Brooke, Mrs. K. C., Lexington, Va.: Specimens of *Pleurodonte marginella* from Cuba. 36876.

Browder, Thomas E., Olmstead, Ky.: Stone ax. 37171.

[a] Returned.

Brown, E., Washington, D. C.: Twenty-five specimens of *Myxomycetes* from Virginia (37163); 14 specimens of *Myxomycetes* from New York (37150).

Brown, E. J., Lemon City, Fla.: Birds' skins, bats, reptiles, butterflies, and a fish from Lemon City (37022); Sphinx moth (37617); Mole cricket, 2 beetles, and a Crab spider (38121).

Brown, F. A., Savage, Md.: Winnowing fan. 37441.

Brown, H., Yuma, Ariz. Received through Dr. L. O. Howard. Fifty-seven insects from Arizona. 37355.

Brown, Jasper, Norway, Iowa: Three stone arrowheads found near Norway. 37082.

Brown, Mrs. J. Crosby, Orange, N. J.: An alto ophicleide (purchase) (36762); cane flute and a flageolet (exchange) (38138).

Brown, J. C., Pacific Grove, Cal.: Crustaceans (37110, 37047).

Brown, Mrs. N. M., Ashtabula, Ohio: Two hundred and two plants collected by E. A. Goldman. 36856.

Brown, Richard, Hospital Corps, Bacolod, Negros, Philippine Islands: Gecko, *Peropus mutilatus*, from the Philippine Islands. 37606.

Brown, R. A., Saginaw, Mich.: Nest and two eggs of Cerulean warbler, *Dendroica rara*, and two eggs of Cowbird. 37135.

Brown, Rev. William, Northbend, Wash.: Sphinx moth, *Paonias excaecatus* Smith and Abbot. 36721.

Bull, C. P., jr., Ojus, Fla.: *Ophiosaurus ventralis* from Florida. 36971.

Bunnell, J. H. & Co., New York City: Four telegraph instruments and a telegraph insulator. 37530.

Burgess, Andrew, Cotton Mills, Laurens, S. C.: Specimen of corundum. 37431.

Burgi, F., Rochester, N. Y.: Burgi relief map of the Holy Land. 37843.

Burnham, S. H., Vaughns, N. Y.: Plant from New York. 37362.

Burns, W. R. (See under Kline, J. J.)

Bush, Mrs. A. E., San Jose, Cal.: Eighteen species of shells from California (37231); plant (36738).

Bush, B. F., Courtney, Mo.: Six hundred and seventy plants from Texas, Arkansas and Missouri. Purchase. 37708.

Bussing, D. S., Minaville, N. Y.: Two costumes from islands in the Pacific Ocean. Exchange. 37235.

Cahn, Lazard, New York City: Specimen of leucophenicite, from Parker shaft, Franklin, N. J. 37423.

California Academy of Sciences, San Francisco, Cal.: One hundred and thirty plants. 37702.

Call, R. Ellsworth, Museum of Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.: Specimens of *Cacidotea stygia* Packard, from Mammoth Cave, Kentucky. 37064.

Cambridge University, Cambridge, England. Received through Dr. David Sharp. Two hundred and sixty-eight specimens of parasitic Hymenoptera. 37615.

Camerano, Lorenzo (See under Turin, Italy, Zoological Museum of Turin).

Camp, J. H., Lima, Ohio: Beetle (*Chalcophora campestris* Say). 37271.

Campbell, J. B., Baird, Cal.: Skin and skull of an albinistic gopher (*Thomomys*) (36906); hatchet (37160).

Canby, W. M., Wilmington, Del.: Twelve specimens of violets from the United States. Exchange. 37143.

Candlin, H., Greely, Colo.: Lizard (36969); seven snakes (37058).

Cannon, Miss E., San Francisco, Cal.: Specimen of *Helianthella* from California. 37201.

Capitol, Architect of, Washington, D. C.: Plaster model of Bartholdi's statue of Liberty in New York Harbor. 37177.

Carpenter, Joseph W., St. George, Utah: Ten plants. 37910.

Carr, Mrs. G. O., Washington, D. C.: Indian objects obtained from Great Plains Indians. Purchase. 38163.

Carrico, E. T., Stithton, Ky.: Freshwater shells (37740); snakes (38074).

Carter, Lieut. Commander F. S., U. S. Navy, Hydrographic Office, Navy Department, Washington, D. C.: Snakes, in alcohol, from near Iquitos, Peru. 37256.

Cartwright Brothers, Rye Valley, Oreg. Received through Dr. W. Lindgren. Mastodon and Mammoth teeth. 37236.

Cary, Merritt, Neligh, Nebr.: Lizards. 37046.

Caudell, A. N., Department of Agriculture: Ten specimens of Odonata from the Indian Territory and Massachusetts (36945); 19 specimens of *Rhynchota* and a grasshopper (37421); living larvæ of Myrmeleonids (38076).

Chamberlin, R. V., Salt Lake City, Utah: Type specimens of Lithobiidæ. 37936.

Chamberlin, T. S., Vallejo, Cal.: Catocala moth, *Catocala nebraskæ* Dodge. 37578.

Chandler, H. P., Berkeley, Cal.: Plant (37339); 360 plants collected in the Sierra Nevada of California by Messrs. Chandler and Hall (37696).

Charlton, Prof. O. C., Baylor University, Waco, Tex.: Piece of a meteorite from Fayette County, Tex. 37930.

Chestnut, V. K. (See under Agriculture, Department of.)

Chisholm, R. P., Bessemer, Ala.: Specimens of *Margantia histrionica* Hahn. 37228.

Choster, George W., Southport, England: Ten specimens of *Spiralinella spiralis* Mont., from England; and 50 specimens of *Jordaniella nivosa* Mont., from Norway. 37159.

Claghorn, C. E. (See under Smithsonian Institution.)

Clark, E. A., Flagstaff, Ariz.: Coral from near Concho, Apache County, Ariz. 37395.

Clark, Dr. E. P., The Plains, Va.: Tusk of a boar and teeth of a drum-fish. 37153.

Clarke, Capt. A. G., Lawrence, Kans.: Six-inch shell fired by the U. S. S. *Charleston*, at Calocan, February 10, 1899; wooden cannon with a gas-pipe bore, used during the Philippine insurrection. 36870.

Clarke, Dr. John M. (See under New York State Museum.)

Clements, F. E., Lincoln, Nebr.: Plant from Colorado. 37091.

Cleveland, Capt. B. D., New Bedford, Mass.: Sea leopard (*Ogmorhinus*). Purchase. 37314.

Clough, L., Concord, N. H.: Specimen of fluorite from Westmoreland, N. H. 37483.

Cockerell, Prof. T. D. A., East Las Vegas, N. Mex.: Insects including several types, also specimens of land and fresh-water shells from New Mexico (37018); insects (37055); 5 plants (37074); insects (37076); insects (37102); 11 moths (37168); 6 specimens of Hymenoptera (37186); 5 specimens of *Cambarus gallinus* and a specimen of *Apus* (37193); land and fresh-water shells from New Mexico (37266); specimens of Lepidoptera (37494); 9 plants from New Mexico (37511); 22 specimens of Lepidoptera and Hymenoptera (37570); 8 specimens of Microhymenoptera (37639); type specimen of *Vitrea carolinensis* var. *wetherbyi* Cockerell, from Roan Mountain, North Carolina (37642); caterpillar from New Mexico (37602); 125 specimens of miscellaneous insects (37612); 7 species of land and fresh-water shells (37803); photograph of a type specimen of plant from Colorado (37818); miscellaneous collection of New Mexican insects (37872); 19 plants from New Mexico (37917); 11 plants from New Mexico (38056); 4 plants from New Mexico (38057); specimen of violet from New Mexico (38118); Meloid beetle, *Leonidia neomexicana* Ckll., and 64 specimens of bees, including 42 types and 4 cotypes of Professor Cockerell's species (38137). (See under Agriculture, Department of; New Mexico Agricultural Experiment Station.)

Cockerell, W. P. (See under Agriculture, Department of.)

Coffman, J. B., Dayton, Va.: Loggerhead shrike. 37403.

Colburn, A. E., Washington, D. C.: Bat (*Lasiurus borealis*), from Washington, D. C. 37194.

Cole, Miss Emma J., Grand Rapids, Mich. Received through Department of Agriculture. Plant from Michigan. 36875.

Cole, Leon J., University of Michigan, Ann Arbor, Mich.: Two specimens of *Olfersia americana* and 1 specimen of *Pseudolfersia maculata*. 37798.

Coleman, Mrs. J. I., Troy, Ariz.: Bagworm (*Oiketicus* sp?). 37980.

Coleman, J. W. (See under Sturtevant, R. D.; Suttle, J. Freeman.)

Collier, Arthur J. (See under Agriculture, Department of.)

Collins, F. S., Malden, Mass.: Fifty specimens of algæ, comprising Fascicle xv of Phycotheca Boreali-Americana (36927); 75 plants from various localities (37727). Purchase.

Collins, G. N., Department of Agriculture: Thirty specimens of dragon flies from Porto Rico, and 22 specimens from the District of Columbia (36946); through Department of Agriculture, 14 specimens of *Myxomycetes* from New York (37150).

Collins, W. B., Washington, D. C.: Peseta, silver piece, Spanish money, found on board the wreck of the *Viscaya*. 37036.

Colonna, B. A., Washington, D. C.: Specimens of baryta from Crowders Mount Mine, Gaston County, N. C. 37282.

Columbia University, New York City: Twenty-seven plants, from California and Nevada. 37134.

Colville, Walter, Lake St. Johns, Canada: Nine mammal skulls. Purchase. 36804.

Comabella, Dr. I., Barcelona, Spain: Six specimens of *Carabus mulleri*. Exchange. 37881.

Conger, Edwin H. (See under Hobart, Rev. W. T.)

Conklin, S. A., Kilbourne, Ill.: Specimen of *Stylopyga orientalis* Linné. 38075.

Conzatti, Prof. C., Oxaca, Mexico: One hundred plants. Exchange. 37359. (See under Gray Herbarium.)

Cook, Prof. O. F., Washington, D. C.: Six plants from Ohio, collected by W. A. Kellerman. 36844.

Cook, W. A. (See under Derby, Orville A.)

Coolidge, Dane, New York City: Mammals, lizards, and crayfishes, from Palermo, Sicily, and Sorrento, Italy (36386); 20 skins and skulls of mammals from Italy (36911); 39 skins and skulls of mammals from Barcelonette, France (37107). Purchase.

Cope, Mrs. Annie P., Haverford, Pa.: Philip Island parrot. Purchase. 38027.

Cordley, Prof. A. B., Oregon Agricultural College, Corvallis, Oreg.: Three parasites. 37681.

Cott, W. C., Badger, Nebr.: Thirty-three butterflies. 37712.

Coubeaux, Eugene, Saskatchewan, Northwest Territory, Canada: Six birds' skins from Canada. Exchange. 37645.

Couper, R. H., Cartersville, Ga.: Vertebræ of a snake, and teeth of a bear. 37178.

Coville, F. V. (See under Agriculture, Department of.)

Cox, Emery, Brightwood, D. C.: Young Purple Grackle, *Quiscalus quiscula*, in the flesh (36706); mole (*Scalops aquaticus*) (37199).

Cox, Hazel V., Brightwood, D. C.: Fox Sparrow, *Passerella iliaca*, in the flesh. 37763.

Cox, Dr. N. H. D. (See under Smithsonian Institution.)

Cox, W. J. (See under Mollie Gibson Mining Company.)

Cragin, Prof. F. W., Colorado College, Colorado Springs, Colo.: Five topotypes of *Exogyra weatherfordensis*. Exchange. 38156.

Crain, Mrs. E. J., San Pedro, Cal.: Specimen of *Cancellaria cooperi*, from near Point Fermin, California (36733); 3 specimens of *Capulus californicus* Dall, from *Pecten floridus* dredged at San Pedro (37048).

Crane, Mrs. A. R., Dawson City, Canada: Lead pencil found in a Stikine Indian hut; skin dresser and deer arrow point from Lake Lebarge, 14 photographs. 37470.

Craver, Rev. Samuel P. (See under Foster, W. T.)

Crawford, Lamar, Staunton, Va.: Four flint implements from France, and 3 flint arrow points from California. 38068.

Crosby, F. W., Washington, D. C.: Marcasite, blende, calcite, etc., from Joplin, Mo. (purchase) (36917); galena and marcasite with dolomite (purchase) (36919); 2 specimens of soapstone from Schuyler, Va. (gift) (37805).

Crosby, O. T., Washington, D. C.: Received through Dr. Marcus Benjamin: Abyssinian cincture. 37009.

Cross, Whitman. (See under Interior Department, U. S. Geological Survey.)

Crown, W. S., Washington, D. C.: Albino Bank swallow, *Cliricola riparia*, in flesh. 37020.

Culin, Stewart. (See under Free Museum of Science and Art.)

Cummins, M. D., Pierceton, Ind.: Stone ax and a knife blade from Washington Township, Kosciusko County, Ind. 37377.

Currie, R. P., U. S. National Museum: Twenty-one specimens of Odonata and 42 specimens of Hymenoptera from Stockport, N. Y., and 56 specimens of Odonata from Greatfalls, Md. 35694.

Curry, J. W., Key West, Fla.: Shrimp. 37596.

Curtice, Cooper. (See under Interior Department, U. S. Geological Survey.)

Curtis, Mrs. H. M., New Canaan, Conn.: Two black Blister beetles. 36972.

Curtis, W. E., Washington, D. C.: Clay pipes from Indiana. 37158.

Curtiss, A. H., Jacksonville, Fla.: Forty-six plants (gift) (36936); 138 plants from the Southern States (purchase) (37581).

Cusick, W. C., Union, Oreg.: Nineteen plants (gift) (37360); 137 plants from eastern Oregon (purchase) (37962).

Dall, Dr. W. H., U. S. Geological Survey: Lady's parasol (1804). 36894.

Daly, Mrs. J. E., Washington, D. C.: Quilt embroidered by Mrs. Susan Adel Esputa. 37898.

Damon, R. F., Weymouth, England: Model of *Ascoceras*. Purchase. 37357.

Dampf, Henry, New York City: Pseudoscorpion. 37809.

Danforth, R. E., Riceville, N. C.: Specimens of Hymenoptera from Squirrel Island, Maine. 36799.

Daniels, Mrs. Flora, Ulysses, Pa.: Two specimens of *Polistes pallipes* Lapel. 37885.

Daniels, L. E., La Porte, Ind.: Crayfish and insects (36986); 9 fossil insects from Florissant, Colo. (37312).

Daniels, Dr. Z. T., Siletz Agency, Oreg.: Pewter spoon. 37884.

Dann, J. W., Honeoye Falls, N. Y.: Specimen of carborundum. 37739.

Dannefaerd, S., Auckland, New Zealand: Six birds' skins from New Zealand. Purchase. 37428.

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

Davenport, G. E., Medford, Mass.: Twenty photographs of ferns of New England. 37130.

Davenport, H. C., East Orange, N. J.: Pheasant, *Tragopan caboti* (?) (37512); Pheasant (37584).

Davidson, Dr. A., Clifton, Ariz.: Plants (36746, 37561).

Davis, C. Abbott, Providence, R. I.: Three specimens of Hymenoptera. 37465.

Davis, G. C., Ogilby, Cal.: Geological specimens (37591, 37822).

Davis, Thomas, Crossanchor, Tenn.: Nymph of *Acholla multispinosa* De Geer (37890); Long-sting, *Rhyssa atrata* Fabr. (36723).

Dean, Samuel B., Arlington, Mass.: Old style English "tyg:"—a three-handled drinking cup. 37225.

Deane, Walter, Cambridge, Mass.: Forty-two plants from Texas, collected by R. N. Larrabee. 37651.

Dehls, Louis, Kahoka, Ark.: Specimens of *Pisidium abditum* Hald, from Arkansas. 38142.

Demming, Col. H. C., Harrisburg, Pa.: Specimen of soft rock containing pupal cells of a Digger-bee (*Anthophora* sp.). 38005.

Derby, Orville A., Director Geological Survey, São Paulo, Brazil: Ethnological objects from southern Brazil, collected by W. A. Cook. Purchase. 38128.

Devlin, Edward, U. S. National Museum: Photograph of the historical hall of the Old Colony Historical Society at Taunton, Mass. (36819); Tree-frog from Maryland (38099).

Dewey, L. H. (See under Agriculture, Department of.)

Deyrolle, Les Fils d'Emile, Paris, France: Bird of Paradise (37430); 3 skins of Birds of Paradise (38062); skin of *Amblyornis inornatus* from New Guinea (38063). Purchase.

Dickey, J. A., Bristol, Tenn.: Specimens of zinc blende from Bristol. 37632.

Diehl, Mrs. A. R., New York City: Twelve oriental seals. Purchase. 37370.

Dietz, J. J., Grafton, Ohio: Moth (*Attacus cecropia*). 36715.

Diller, J. S. (See under Lake, W. C.)

Dionne, Mons. (See under Laville University.)

Ditmars, R. L. (See under New York Zoological Park.)

Dod, F. H. Wolley, Calgary, Alberta, Canada: Moths (new to Museum collection) (37484; 37711).

Dodge, W. C., Washington, D. C.: Fifty firearms, ancient and modern. Purchase. 37097.

Dowden, Dr. J. E., Fairmount, W. Va.: Mole cricket, *Gryllotalpa borealis* Burmeister. 36776.

Drake, N. F. (See under Leland Stanford Junior University.)

Dresden, Germany; Royal Zoological and Anthropological-Ethnographical Museum. Received through Dr. A. B. Meyer: Nine ethnological specimens from British New Guinea, and 6 from eastern Africa. Exchange. 37549.

Driver, Fred, Montserrat, West Indies: Bats from Montserrat. 37198.

Droop, E. H., Washington, D. C.: Iron gibbet from Virginia. Purchase. 38091.

Drury, C. T., London, England: Forty-eight fronds of cultivated varieties of ferns for use in raising plants from the spores (37149); 2 ferns from England (37306). Exchange.

Drysdale, H. P., Washington, D. C.: Republican campaign token issued in 1860. 37422.

Du Bois, Miss Constance Goddard, Waterbury, Conn.: Brush of soaproot for cleaning a metate stone, from Mesa Grande, Cal.; redo, or carrying net, made of milkweed fiber, and another one made of palm-leaf fiber. Purchase. 37896.

Du Bose, G. M., Lisbon, Ga.: Shells and turtles. (36767, 36768.)

Du Bose, J. H., Huguenot, Ga.: Snake, *Diadophis punctatus*, from Georgia (37289); snake (*Cyclophis aestivus*) (36852); caterpillar of a Hawk moth, *Thyreus abbotti* Swains (38077).

Duck, D. R., McHenry, N. Dak.: Two birds' skins and a bird's egg. 38048.

Duerden, J. E. (See under Kingston, Jamaica, Institute of.)

Dugès, Dr. A., Guanajuato, Mexico: Twenty-two specimens of Diptera, 7 representing species new to the Museum collection (37577); 3 plants (37692); crustaceans (38011).

Dunblazer, W. H., Clarksville, Ark.: Two lizards. 38153.

Dunham, Phœbe S., St. Augustine, Fla.: Plaster cast of a sea monster. 37189.

Dunham, S. C., Washington, D. C.: Beach gold from Alaska. Purchase. 37537.

Dunn, H. H., Fullerton, Cal.: Skin of Swainson's hawk, *Buteo swainsoni* (37942); 14 birds' skins and 4 birds' eggs from California (38102).

Dunn, James, West End, N. J.: Partially albino specimen of Sea bass (*Centropristes striatus*). 36915.

Durgen, Miss B. (See under Agriculture, Department of.)

Dutcher, Lieut. B. H. (See under Agriculture, Department of.)

Dyer, J. W., Washington, D. C.: Cannon ball found in Wakefield, Va. 37137.

Eads, Lizzie. (See under Medford, H. C.)

Earle, F. S., Agricultural Experiment Station, Auburn, Ala.: Two hundred and ninety-five plants from New Mexico (purchase) (37460); 115 specimens of *Viola* (exchange) (38143).

Eastlake, Dr. Warrenton, Iedamachi, Tokyo, Japan. Received through H. F. Moore: Collection of shells and Japanese insects. 36966.

Eastman, Mrs. M. A., Washington, D. C.: Eleven photographs of New England homespun quilting. Purchase. 37838.

Eastwood, Miss Alice, San Francisco, Cal.: Twenty-seven ferns from the western section of the United States and Lower California. 37652.

Eaton, A. A., Seabrook, N. H.: Plant (36845); 20 specimens representing the genera *Isœtes* and *Lycopodium* (37510). Exchange.

Eddy, Hon. Frank M., M. C., Washington, D. C.: Mounted moose head. Deposit. 38098.

Edwards, S. M., Argusville, N. Dak.: Two species of Unionidæ from North Dakota. 36797.

Eggleston, W. W., Rutland, Vt.: One hundred plants from Vermont. Purchase. 37903.

Eigenmann, Dr. C. H., Bloomington, Ind.: Blind-fish from Illinois, *Chologaster papilliferus* (36734); 2 specimens of Blind-fish, *Amblyopsis spelæus* (36806).

Eisen, Gustav. (See under Harriman Alaskan Expedition.)

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

Ells, Rev. Myron, Union, Wash.: Six half-finished baskets obtained from the Twana Indians (Salishan family). Purchase. 38089.

Elrod, Prof. M. J., University of Montana, Missoula, Mont.: Land and fresh-water shells (36884); specimens of *Epipragmophora elrodi* Pilsbry, from Missoula Mountains, Montana (37001).

Emery, E. R. (See under Agriculture, Department of.)

Emmons, Lieut. G. T., U. S. Navy, Princeton, N. J.: Stone dagger from Fort Rupert, British Columbia (purchase) (36823); ethnological material from Alaska (purchase) (37750); ethnological objects obtained from the Tlinkit Indians (purchase) (37889); 4 baskets from the northwest coast (gift) (38082). (See under Smithsonian Institution, Bureau of Ethnology.)

English, G. L. & Co., New York City: Specimens of lead from Sweden, and specimens of arsenic from Germany (37540); æschynite from Ilmen Mountains, Siberia (37673); sulphur crystal from Sicily (37764); specimen of antimony from Prince William, York County, New Brunswick (37799). Purchase.

Evermann, Prof. B. W., U. S. Fish Commission: Sixty-four butterflies and 4 dragonflies from Indiana (37620); insect larvæ (37682). (See under Fish Commission, U. S.)

Fairbanks, H. W. (See under Interior Department, U. S. Geological Survey.)

Fant, A. L., U. S. National Museum: Twenty-seven pieces of Confederate scrip, dated 1862–1864 (36818); one hundred dollar Confederate note, dated February 17, 1864 (36865).

Farenholt, Dr. A., U. S. Navy, Cebu, Philippine Islands: Beetle (*Trichognathus melon* Olivier). 37458.

Faringsworth, Tilten, Cedar Creek, Tenn.: Centipede from Porto Rico. 37728.

Farwell, O. A., Detroit, Mich.: Specimen of Thaspium from Michigan. 37242.

Faucett, William, Hope Gardens, Kingston, Jamaica: Two plants from Jamaica. 37536.

Featherstonhaugh, Dr. Thomas, Washington, D. C.: Thirty-nine watch movements. 37070.

Feldcamp, Sergt. George, U. S. Army, San Nicholas, Ilocos Norte, Luzon, P. I.: Beetle. 37220.

Ferriss, James H., Joilet, Ill.: Land and fresh-water shells from Arkansas representing 30 species (36905); fern from Arkansas (37552).

Field Columbian Museum, Chicago, Ill. Received through F. J. V. Skiff, director: Breech-loading rifle, pocket rifle, and an old-style swivel rifle (gift) (37669); ethnological material from La Plata and Montez, South America (exchange) (38093).

Finley, J. B., Oregon City, Oreg. Received through Department of Agriculture: Plant. 36992.

Fish Commission, U. S., Hon. G. M. Bowers, Commissioner: Crayfishes collected in West Virginia in 1899 (36745); type specimens of new species of fishes obtained by the steamer *Fish Hawk* expedition to Porto Rico (36735); 100+ specimens of algæ from Porto Rico (37165); 14 plants from Indiana (37213); collection of Ophiurans obtained by the steamer *Albatross* in 1891 (37381); plants collected in northern Indiana by Prof. B. W. Evermann (37438); corals, turtle bones, alcoholic reptiles, and mollusks from the expedition of the *Albatross* to the southern seas (37464); plant from Maine (37468); young Egret from Porto Rico (37698); shrimp (*Penaeus brasiliensis*) from Katama Bay, Martha's Vineyard (37703); corals from Porto Rico, collected by the steamer *Fish Hawk* in 1899 (37753); 363 specimens of fishes from Porto Rico collected by the steamer *Fish Hawk* during January and February of 1899 (37759); collection or Arctic invertebrates made by the Princeton expedition in 1899 (37772); 468 plants collected in West Virginia by E. L. Morris (37835); collection of Japanese crustaceans made by the steamer *Albatross* (37954); skull of a Kamchatkan bear (37958); invertebrates and mollusks obtained principally from the vicinity of Eastport, Maine (38054); specimen of *Aphthalmichthys caribbeus*, type, Gill and Smith, from San Geronimo, Porto Rico, obtained by G. M. Gray (deposit) (38097).

Fisher, Dr. A. K. Received through Department of Agriculture: Fifty plants from Alaska collected by Messrs. Fisher and Osgood. 37205. (See under Agriculture, Department of; Grinnell, Dr. George Bird; Little, L. G.)

Fisher, H. H., Corpus Christi, Tex.: Specimen of *Cassia acutifolia* from Texas. 37736.

Fisher, H. L., Califon, N. J.: Three plants from New Jersey. 37112.

Fisher, W. H., Baltimore, Md.: Snake representing the species *Storeria dekayi* (36851); 4 snakes representing the same species from Maryland (36892); snake (*Eutainia saurita*) from Maryland (37923).

Fleming, J. H., Toronto, Ontario, Canada: Two Stitch birds representing the species *Pogonornis cincta*, from New Zealand. Purchase. 36711.

Fletcher, Dr. James, Dominion Entomologist, Ottawa, Canada: Fifty moths, including four type specimens. 37779.

Fletcher, O. K., Hospital Corps, U. S. A., Manila, P. I.: Specimen of *Tectoris banksii* Donovan. 36858.

Flett, J. B., Washington, D. C.: Plants from Alaska. (37092, 37507, 37635.)

Floyd, A. L. Washington, D. C.: Old-style machete blade from Guayama, Porto Rico, used by the donor during the war with Spain; knife used by a

Floyd, A. L.—Continued.
sailor in the U. S. Navy; U. S. signal flag used during the Cuban campaign. Purchase. 36770.

Floyd, F. G., West Roxbury, Mass.: Five living specimens of Dennstaedtia, from Massachusetts. Exchange. 37206.

Foote Mineral Company, Philadelphia, Pa.: Specimen of silver, from Keweenaw district, Michigan; slab of Sacramento meteorite (37539); geological specimens from various localities (37647). Purchase.

Fort Monroe Arsenal, Fort Monroe, Va. Received through Col. W. A. Mayre, U. S. Army: Two Springfield muzzle-loading rifles; 2 Springfield breech-loading shotguns; 2 Joslyn breech-loading carbines; 2 Colt's army revolvers; 2 Remington army revolvers, and 2 Remington navy revolvers. Purchase. 37533.

Foster, W. T., Sapucay, Paraguay. Received through Hon. J. N. Rutlin, U. S. consul, Asuncion, Paraguay: Collection of insects (purchase) bird skin and frogs (gift) (37045); 3 bats from Sapucay (gift) (37061); received through Rev. Samuel P. Craver and Miss Mary W. Swaney, 80 birds' skins from Paraguay (purchase) (37209); about 170 bats from Paraguay (purchase) (37875).

Fougner, Iver, Crookston, Minn.: Collection of ethnological objects from Bella Coola, British Columbia. 37973. (See under Smithsonian Institution, Bureau of Ethnology.)

Frankfort on the Main, Germany; Museum Senckenbergianum. Received through Dr. F. Kinkelin: Collection of fossil plants. Exchange. 36934.

Free Museum of Science and Art, Philadelphia, Pa.: Received through Stewart Culin, director: Five plaster casts of archæological objects. Exchange. 37005.

French, Capt. F. H., U. S. Army, Bugason, Panay, P. I.: Copy in English of Aguinaldo's "Notice of Justice," a mask, a cigarette holder, and a copy of Aguinaldo's address to the Filipino people. 37463.

Frey, Dr. B. F., New Smyrna, Fla.: Cerambycid beetle, *Callichroma splendidum* Leconte. 36839.

Frierson, L. S., Frierson, La.: Shells from Louisiana. 37063.

Fritsch, Dr. Anton, Prague, Bohemia: Plaster cast of a bust of Joachim Barrande. 37433.

Fuller, T. A., Calumet, Mass.: Ear of pop corn affected with larvæ. 37104.

Fur Seal Commission, Treasury Department: Collection of photographs of fur-seals. Deposit. 37276.

Furbush, Capt. C. L., Tagbilaran, Bohol, P. I.: Four tanned skins of Lemur (*Galeopithecus*). 37224.

Gaines, Angus, Vincennes, Ind.: Frog. 36728.

Garman, H., Agricultural Experiment Station, Lexington, Ky.: Ten specimens of *Armadillidium vulgare* from Lexington. 37824.

Garner, D. L., New York City: Ethnological objects from Mpahomus or Pfau tribe of West Central Africa. 36893.

Gee, N. Gist, Columbia Female College, Columbia, S. C.: Specimen of *Branchipus*. 37791.

Geer, Hon. O. L. (See under Smithsonian Institution.)

Gellineau, Peter, Westerhall Estate, Grenada, W. I.: Bats from the West Indies. Purchase. 38083.

Geologisches Institut. (See under Kiel, Germany.)

Georgeson, C. C. (See under Agriculture, Department of.)

Gerend, John, Sheboygan, Wis.: Sixteen stone sinkers and two pieces of pottery from an Indian camping site in Wisconsin. 38103.

Gerrard, E., Camden Town, London, England: Skeleton and stuffed specimen of a Golden mole. Purchase. 37901.

Gholson, A. J., Round Lake, Miss.: Stone implement from Mississippi. 37778.

Giers, E. T., Washington, D. C.: Bats and three insects from Trinidad, West Indies. Purchase. 36938.

Gilbert, Mrs. A. P., Logan, Okla.: Specimen of *Conorhinus sanguisuga* Leconte (36817); specimen of *Datames formidabilis* Simon (36899); Harvest fly, *Cicada dorsata* Say (37019); Scarabæid beetle belonging to the genus *Phæneus* (37050).

Gilbert, Walter M. (See under Loubat, M. le duc de.)

Girault, A. A., Annapolis, Md.: Galls of *Neuroterus* sp., and two specimens of *Smicra mariæ* Riley (38004); galls and specimens of *Phylloxera caryæcaulis* Fitch, and a specimen of *Catolaccus* n. sp. (38064).

Girty, Dr. George H. (See under Interior Department, U. S. Geological Survey.)

Godman, F. Du Cane, London, England. Received through E. A. Smith, British Museum: Sixty-nine species of land and fresh-water shells from Mexico and Central America. 38139.

Goff, Dean S., Metlaltoyuca, Eastern Puebla, Mexico (Ranco Elgin): Two plants from Eastern Puebla, Mexico. 37999.

Golder, F. A., Unga, Alaska: One hundred plants from Alaska. 37204.

Goldman, E. A., Washington, D.C.: Plants from Mexico (37667, 37731). (See under Agriculture, Department of; Brown, Mrs. N. M.; Nelson, E. W.)

Goldman, Mrs. Leo, Phoenix, Ariz.: Four specimens of basket material obtained from the Pima Indians of southern Arizona. 36749.

Goll, Rev. G. P., Maytown, Pa.: Insects and reptiles collected at Mount Coffee, Liberia, West Africa. 37012.

Gonzales, V. (See under Gray Herbarium.)

Goodfellow, Walter, Paris, France: One thousand one hundred and thirty-six specimens of Humming birds, from Ecuador. Purchase. 36885.[a]

Goodrich, Mrs. L. L., Syracuse, N. Y.: Seven plants belonging to the genus *Epipactis* (exchange) (36939); specimen of Hart's tongue from the original American station at Split Rock, Geddes, near Syracuse (gift) (37827).

Gordon, R. H., Cumberland, Md.: Thirty-nine specimens of Oriskany and 236 specimens of Lower Helderberg fossils, from Mr. Gordon's collection. 37122.

Gordon, R. H., and Hartley, Frank, Cumberland, Md.: Sixty pieces containing fossils illustrating the Lewiston formation section at Pinto, Md. 37392.

Gortner, S. A., Rhea Springs, Tenn.: Crab-spider, *Acrosoma spinea* Hentz. 36801.

Gotcher, H. F., Copperas Cove, Tex.: Specimen of ilmenite with native gold from New Mexico. 38158.

Gottschall, A. H., Harrisburg, Pa.: Twined basket made of bulrushes from the western coast of Oregon. 37893.

Graham, D. D. Received through Mrs. M. C. Stevenson, Bureau of Ethnology. Three Zuñi dresses and a pair of moccasins. Purchase. 37926.

Gray, G. M., Woods Hole, Mass.: Six specimens of crustaceans. 37004. (See under Fish Commission, U. S.)

Gray Herbarium, Cambridge Station, Boston, Mass.: Two plants from Mexico, collected by C. G. Pringle (37305); 356 plants from Mexico and Central America (37358); 22 Mexican plants (37609); 12 plants from Mexico, collected by C. Conzatti and V. Gonzales (37937); 531 plants from the United States and Mexico (37950); 37 plants collected by Messrs. Townsend and Barber in Mexico (37951); 2 plants from Costa Rica (38126). Exchange.

Grayson, G. H., Arkadelphia, Ark.: Head of Buffalo-fish, *Ictiobus bubalus*. 37075.

Greason, Miss Mira, Kaw Agency, Oklahoma: Ancient pottery vase from Hawikuh, near Zuñi, N. Mex. 36824.

Grebnitski, N. A. Received through Dr. Leonhard Stejneger: Thirty-seven plants from the Commander Islands, Bering Sea. 38124.

Gregory, Arthur, Durango, Mexico: Molds of two rare Mexican coins. 37590.

Gribble, R. W., Weston, Tex.: Teeth and bones of small fishes and 6 cretaceous invertebrates. 37832.

[a] Received in 1900.

Griffin, William, Somerset, Ky.: Specimens of bituminous limestone from South Fork River, Pulaski County, Ky. 37315.

Grinnell, Dr. George Bird, New York City. Received through Dr. A. K. Fisher: Type of *Sciurus nævius notabilis*. Deposit. 36998. (See under Kelley, Capt. Luther S.)

Grote, A. R., Hildersheim, Hanover, Germany: Hofmann collection of Lepidoptera. Purchase. 37099.

Grout, Dr. A. J., Boys' High School, Brooklyn, N. Y.: Specimen of *Lycopodium chamæcyparissus* from Vermont (37828); 50 plants (37792).

Grubbs, Dr. Robert, U. S. Army, Manila, P. I.: Specimen of *Phyllium*. 37856.

Guldberg, Ansgar, Christiania, Norway: Seven specimens of minerals from Norway. Purchase. 38092.

Gunn, Fanny A., Washington, D. C.: Eight eggs of Carolina Paroquet, *Conurus carolinensis*. Purchase. 37497.

Guthrie, Leon J., U. S. Weather Observer, Curaçao, West Indies: One hundred and twelve bats from the West Indies. Purchase. 37658.

Haberer, Dr. J. V., Utica, N. Y. Received through Department of Agriculture: Twenty-seven plants from New York (37841); 12 plants from central New York (37700).

Haferlandt, W., and Pippow, Berlin, Germany: Five mammal skins. Purchase. 37109.

Hague, Arnold. (See under Interior Department, U. S. Geological Survey.)

Hall. (See under Chandler, H. P.)

Hall, Harry O., Army Medical Museum, Washington, D. C.: Water-color sketch of the flag used by the minute men at the battles of Concord and Lexington, April 19, 1775. 37504.

Hamlin, Homer, Los Angeles, Cal.: Eleven specimens of Tertiary (?) corals and pelecypods from Los Angeles (37488); humerus of a fossil Auk and a few other bones (37826).

Harden, E. D., New Orleans, La.: Mole cricket (*Gryllotalpa borealis* Burmeister). 37218.

Haring, A. B., Frenchtown, N. J.: Caterpillar of Cecropia Sphinx moth, *Ceratomia catalpæ* Boisduval. 37010.

Harper, Roland, M., New York City: Nine hundred and seventeen plants from Georgia (37672); plants from Georgia (37907, 38058).

Harriman Alaskan Expedition. Received through Dr. C. Hart Merriam. Type specimens of new species of Enchytræidae, described by Gustav Eisen. 36879.

Harrington, W., Hague, Ottawa, Canada: Fifteen bumble-bees. 37858.

Harrison, Benjamin, Jacksonville, Fla.: Specimen of *Pterophryne histrio*, from Nassau Sound, Florida. 37654.

Harrison, Miss Carrie, Department of Agriculture: One hundred specimens of mosses and lichens collected in the Adirondacks (37054); 40 plants from Massachusetts (37384).

Hart, W. W., & Co., New York City: Alaskan sheep and skull, mountain goat, musk ox, Newfoundland lynx. (37324, 37522, 37851.) Purchase.

Hartley, Frank, Cumberland, Md.: Seventeen specimens of fossils (37121); 23 specimens of Helderbergian fossils, from Cumberland and Pinto, Md. (37928).

Hartley, Frank and Gordon, R. H., Cumberland, Md.: A collection of fossils illustrating the Lewiston formation section at Pinto, Md. 37392.

Hartley, M. (See under Remington Arms Company.)

Harvey, Prof. F. L. (See under Agriculture, Department of.)

Harvey, L. H., Orono, Me.: Sixty plants from Maine. Purchase. 36759.

Harward, Miss Winnie, Albuquerque, N. Mex.: Received through Department of Agriculture. Nineteen plants from New Mexico. 36780.

Hasse, Dr. H. E., Soldiers Home, Los Angeles, Cal. Received through Department of Agriculture: Seven plants from California. 37516.

Hatcher, J. B., Carnegie Museum, Pittsburg, Pa.: Fossil meat of nuts and fossil wood from Squaw Creek, Sioux County, Nebr. 37479.

Hawkes, Maj. E. L., Washington, D. C.: Kris, two bolo knives, spear, bamboo bow, arrows and quiver, and wooden bow from the Philippine Islands. Purchase. 38084.

Hawkins, D. D., Terra Ceia, Fla.: Skeleton of a porpoise from Tampa Bay, Fla. 37895.

Hawley, E. H., U. S. National Museum: Dutch hautbois, or Discant schalmay. Purchase. 37389.

Hay, Marshall P., Tallapoosa, Ga. Received through Department of Agriculture: Nineteen plants. 36811.

Hay, W. P., Hinton, W. Va.: Insects (36782); 2 salamanders from West Virginia (36785); specimens of Hymenoptera and other insects (36956); 50 specimens of *Cambarus affinis* from the Potomac River (38095).

Hearne, W. H., Vivian, La.: Mole cricket, *Gryllotalpa borealis* Burmeister. 37051.

Hegen, R. H., Miami, Fla.: One hundred and sixty-five specimens of miscellaneous moths, principally Sphingidæ (38008); 75 miscellaneous specimens of moths (38120).

Heitmuller, A., Washington, D. C.: Two altars from a Roman Catholic Church at Hildesheim, Germany. Exchange 37132.

Hemp, Miss Laura, Jefferson, Md.: Larva of Sphinx moth. 36833.

Henderson, J. B., Washington, D. C.: Land and fresh-water shells from Haiti. 37521.

Henshaw, H. W., Hawaiian Islands. Received through Dr. L. O. Howard: Two hundred and sixty-four Hawaiian insects (36832); crustaceans (37030); miscellaneous collection of insects from the Hawaiian Islands (37105); shrimps (37240); crabs and shrimps (37255); crustaceans, mollusks, reptile, and a fish (37085); natural history specimens from the Hawaiian Islands (37293, 37487, 37524, 37690).

Henshaw, Samuel. (See under Museum of Comparative Zoology.)

Hepburn, Dr. J. H., Fort Bayard, N. Mex.: Specimen of Scarabæid beetle, *Dynastes grantii* Horn. 37043.

Herrera, Prof. A. L., City of Mexico, Mexico. Received through Department of Agriculture: Plant. 37182.

Herron, Lieut. J. S. (See under Agriculture, Department of.)

Hilder, Col. F. F. (deceased): Microscopic newspaper sent into Paris during the German siege, 1870–71, by means of carrier pigeons (36989); 8 human skulls from a small cemetery (Tatalog) north of Manila (37500); 7 specimens of pottery from a cemetery near Santa Ana, Manila, Philippine Islands (37769); 12 sets of negatives and a set of prints of Philippine men and women of different tribes (38094).

Hill, E. H., Savannah, Ga.: Indian burial pot. Purchase. 36748.

Hill, M. S., Blaine, Wash.: Three photographs of Makah Indians. 37394.

Hilliard, G. R., Urbana, Ohio: Worm, *Pecocephalus kewense* (Moseley).

Hindman, Albert, Elmo, Ark., received through Department of Agriculture: Four plants from Arkansas. 37089.

Hine, Prof. James S., Ohio State University, Columbus, Ohio: Four Panorpids, new to the Museum collection. 37717.

Hirase, Y., Kyoto, Japan. Received through Miss Anna Bartsch. Fifty species of Japanese shells. Purchase. 37729.

Hitchcock, A. S., Agricultural College, Manhattan, Kans.: Five hundred and forty-two plants from southwestern Florida. Purchase. 37723.

Hitt, J. E., Augusta, Ga.: Specimen of *Corydalus cornutus* Linnæus. 36881.

Hobart, Rev. W. T., received through Mr. Edwin H. Conger, Envoy Extraordinary and Minister Plenipotentiary of the United States to China: Lock and key to the city gate of Pekin, known as the "front gate." 37959.

Hodge, Dr. E. R., Army Medical Museum, Washington, D. C.: Three postage stamps of the milesima denomi-

Hodge, Dr. E. R. Continued.
nation and 3 of the centavo denomination. 37852.

Hodge, F. W., Smithsonian Institution: Two arrow points, piece of obsidian, fragments of pottery and pumice stone from New Mexico. 37501.

Hogan, William, Olmstead, Ky.: Stone pestle. 37172.

Hoge, J. M. (See under Smithsonian Institution, Bureau of Ethnology.)

Holcomb, Benton, West Granby, Conn.: Beetles and cedar wood. 37771.

Holmes, J. H., Dunedin, Fla.: Marine shells (36796); starfish (*Luidia alternata*) from Sanibel Island (37705).

Holmes, J. S., Bowmans Bluff, N. C.: Jumping mouse 36805.

Holmes, W. H., U. S. National Museum: Two specimens of iron ore from Nova Scotia (37234); 107 specimens of shop refuse from the Jasper quarry at Durham, Pa. (37248). (See under Smithsonian Institution, Bureau of Ethnology.)

Holzinger, J. M., Winona, Minn., received through Department of Agriculture: Moss from the Yellowstone National Park (37436); 5 plants from Minnesota and Montana (37817).

Hooper, I. H., Raht, Tenn.: Piece of rock, with supposed inscriptions, taken from an ancient wall in Raht. 36766.

Hopkins, M. H., Louisville, Fla.: Two plants from Florida. 37125.

Horch, Jacob A., Soldiers' Home, Washington, D. C.: Coins from the Philippine Islands. Purchase. 37746.

Hornaday, W. T., New York City: Head skins of buffalo and Rocky Mountain sheep. 37627.

Hornung, Dr. John, San Francisco, Cal.: Nine mammal skins (36831), 10 starfishes from San Francisco Bay (37603); 3 mammals (37745).

Hough, Dr. Walter. (See under Smithsonian Institution, Bureau of Ethnology.)

Horse, H. D., Oneida, N. Y.: Fifty specimens of *Viola sekerkii* from New York (37032); 2 plants (37702). Exchange.

Hovey, G. U. S., White Church, Kans.: Six scraper stones, from Wyandotte County, Kans. 37793.

Howard, Dr. L. O. (See under Adams, Samuel H.; Agriculture, Department of; Brown, H.; Henshaw, H. W.; Stover, Oliver O.; Townsend, Prof. C. H. Tyler.)

Howe, C. F., Chalky Mount, Barbados, West Indies: Geological specimens. 36958.

Howell, A. H., Department of Agriculture: Eighteen plants from Mansfield, Vt. 36938.

Howell, E. E., Washington D. C.: Three series of Bohemian trilobites, showing the development of *Arethusina*, *Dalmanites*, and *Trinucleus* (purchase) (36925); meteoric iron from Canyon Diablo, Ariz. (exchange) (37066); relief map of Palestine (purchase) (37372); specimens of fossil wood from near Holbrook, Ariz. (purchase) (37538); 5 pieces of polished agate and 2 agate spheres (purchase) (37641); 11 fossil crinoids (purchase) (37722).

Huene von, Dr. T. (See under Interior Department, U. S. Geological Survey.)

Hulbert, H. B., Seoul, Korea, received through Rev. E. E. Rogers: Korean monocycle. Purchase. 37613.

Hulst, Rev. G. D., Brooklyn, N. Y.: Eleven specimens of Lepidoptera (gift) (36996); 2 specimens of ferns from New York (exchange) (37133); plant (*Polypodium vulgare cambricum*) from New York (37254).

Humphreys, J. W., Colon, Colombia: Fourteen bats from Colombia. Purchase. 38090.

Hunter, Mrs. Mary, Washington, D. C.: One hundred plants from the District of Columbia. Purchase. 37033.

Hunter, W. G., Washington, D. C.: Gold ore from near Marshall, N. C. 37267.

Hupperty, Charles. (See under Agriculture, Department of.)

Hutchens, J. M. (See under Agriculture, Department of.)

Hutchins, D. B., Hart, Mich.: Concretion. 37920.

Hutchinson, W. F., Winchester, Va.: Skull of a Virginia deer, *Odocoileus virginianus*. 37939.

Hysell, Dr. J. H., Santiago, Cuba: Crustaceans, beetles, toads, and lizards. Purchase. 37550.

Ihering, Dr. H. von, Museu Paulista, São Paulo, Brazil: Specimens of miscellaneous Unionidæ and marine shells from Guatemala and Brazil. 37767.

Interior Department, *United States Geological Survey:* Specimens of borings (deposit) (36967); Hot Springs deposits and bat guano, from Glenwood Springs, Colo. (37131); Chamberlain shales, from Belt terrane, Big Belt Mountains, Mont., and interformational conglomerates from Belt series, Dearborn River, Mont. (37176); 18 specimens of *Oldhamia occidens* Walcott, from the Cambrian of New York (37226); 35 calciferous fossils from Iowa Mine, Smithville, Lawrence County, Ark.; 33 Lower Silurian fossils from Black Hills, S. Dak., collected by T. A. Jaggar and J. W. Beede; 65 graptolites from California, collected by H. W. Turner; 1,790 Cambrian brachiopods identified by Hon. Charles D. Walcott, and 375 Pre-Cambrian fossils, including the types described and figured by Mr. Walcott (37302); collection of rocks from the Ten-Mile District of Colorado, and Sultan Mount, San Juan County, obtained by Whitman Cross (37322); Dinosaur bones and mammal bones (37346); part of a tusk of a fossil elephant (37419); barite in rhyolite, from Castle Rock, Douglas County, Colo., collected by N. H. Darton (37424); 32 specimens of Ordovician fossils, from the Massanutten sandstone of Goshen, Va. (37453); 26 Niagara fossils from Indian Territory; 1,190 Helderbergian fossils from the same Territory, 140 Oriskanian fossils from the same Territory, and 50 Upper Devonian fossils from Colorado, collected by Dr. G. H. Girty (37478); series of asphalt and bituminous rock specimens collected by G. H. Eldridge (37481); 86 specimens of ores, from the Telluride region of Colorado, selected from the original working collection made in 1896 by C. W. Purington (37485); fossil plants from California (37569); 40 Silurian fossils from Big Belt Mountains, Mont., collected by Hon. C. D. Walcott; 790 Ordovician fossils from Nevada, collected by J. E. Spurr and F. B. Weeks; 170 Devonian fossils from Nevada, collected by J. E. Spurr (37571); collection of rock specimens from San Luis quadrangle, California, collected by H. W. Fairbanks (37611); 50 specimens of rocks from the Boise quadrangle, Idaho, collected by Mr. W. Lindgren (37649); 4 specimens of chrysolite, 1 specimen of realgar, 9 specimens of pisanite, etc., and 1 specimen of olivenite, and a specimen of quartz (37676); 275 specimens of *Obolella atlantica*, from Conception Bay, Newfoundland, and 230 Cambrian brachiopods, from Utah and Colorado (37709); 50,000 specimens of duplicate Miocene mollusks, from Maryland, and Pliocene, from Florida (37761); 1,140 Ordovician and Silurian fossils from the Franklin Range, near El Paso, Tex. (37762); rock illustrating mud cracks in shaly Cambrian sandstone from near Columbine Lake, Animas Valley, Engineer Mountain quadrangle, Colorado, collected by Dr. G. H. Girty (37811); 125 Cambrian brachiopods from Nevada (37943); collection of Cambrian fossils from Newfoundland, made by Hon. Charles D. Walcott and S. Ward Loper (37944); 150 specimens of Upper Cambrian brachiopods, from Osceola, Nev. (37945); collection of Cambrian fossils from Russia, Norway, and Sweden, made by M. Schmalensee (37946); 13 Cambrian and Ordovician fossils collected by Dr. T. von Huene in Norway and Sweden (37947); 30 specimens of calciferous fossils from Tennessee and 28 specimens of Silurian fossils collected by Cooper Curtice (37953); large block of black obsidian from Obsidian Cliffs, Yellowstone National Park, collected by Arnold Hague (37969); 3 specimens of fish remains from Rockwood, Colo., collected by Whitman Cross, and fish remains from Aspen, Colo., collected by George W. Tower (37970); rocks from Pike's Peak quadrangle, Colorado, including many specimens from the Cripple Creek

Interior Department, *United States Geological Survey*—Continued.

special quadrangle, collected by Whitman Cross (38042); collection of rocks and ores from Elkhorn, Mont., collected by W. H. Weed (38085). (See under Batchelder, J. F.; Brögger, Prof. W. C.; Lucas, I.; Washburne, Chester.)

International Emery and Corundum Company, Chester, Mass.: Specimens of corundum and two specimens of margarite. 37839.

Ireland, W. J., Arapahoe, Nebr.: Spider representing the species *Lathrodectus mætans* Fabr. (37219); pedipalp (37966).

Jaggar, T. A. (See under Interior Department, U. S. Geological Survey.)

James, F. L., Grand Mound, Wash.: Specimen of *Mantispa brunnea* Say (36722); specimen of *Sinea diadema* Fabr. (36974).

James, Mrs. Julian, Washington, D. C.: Straw hat from Porto Rico, made of strips of palm leaf dyed red and green (37994); silver ring, presented by the Indian chief, Chin-ko-ka-ki-pa, to Charles King Gracy (38080).

Janson, O. E., & Son, London, England: Three specimens of Whitehead mammals (36789) 4 specimens of Whitehead mammals (36970); 14 birds' skins from the Philippine Islands (36834); skeleton of Moa, *Eurypapteryx crassa* (36904); 4 mammal skins (36859). Purchase.

Jarvis, P. W., Kingston, Jamaica: Five crabs. 37998.

Jenkins, Dr. O. P., Stanford University, Cal.: Type specimens of fishes from the Hawaiian Islands, collected by Drs. Jenkins and T. D. Wood. 37724.

Jochimemson, Louis. (See under Robb, M. L.)

Johnson, Prof. C. W., Wagner Free Institute, Philadelphia, Pa.: One hundred and thirty-five specimens of Diptera representing cotypes and several new species and genera (36994); 7 specimens of Diptera including 3 cotypes (37057); 6 specimens of Diptera, including one cotype (37456).

Johnson, T. K., Guthrie, Okla.: Larva of a moth (*Lagoa crispata* Packard). 37011.

Johnson, William R., Rossland, S. C.: Specimen of *Harpactor americanus* Bergr. 38129.

Jones, A. W., Salina, Kans. Received through T. W. Stanton. Two fossil plants from bluffs on Smoky River, Ellsworth County, Kans. 37259.

Jones, C. W., Battersea, England: Five broken clay pipes and a copper coin (37748); 15 clay pipes and a fragment of a stem, from the grounds of Lambeth Palace, London (37528).

Jones, Marcus E., Salt Lake City, Utah: One hundred and twenty-six plants. 37775.

Jordan, Dr. David S. (See under Leland Stanford Junior University.)

Jouy, Mrs. M. S. F., U. S. National Museum: Five tracings of sculptures on ruin of Xochialco, Mexico, made by the late P. L. Jouy. 37534.

Kansas, University of, Lawrence, Kans. Received through E. H. Sellards: Fossil plants from the Lawrence shales and Permian of Kansas (exchange) (36853). Received through S. W. Williston: Nineteen specimens of Permian *Fusulina* from Beaumont, Kans. (37304) (gift); 111 fossil plants (exchange) (37677).

Kearfott, W. D., New York City: Twenty-two specimens of Lepidoptera, native and exotic (36720); 28 specimens of Lepidoptera from New Guinea and Australia (37353).

Kearney, T. H., Jr. (See under Ruth, A.)

Keeler, L., Benton, Ohio: Larva of *Orgyia leucostigma*. 36714.

Kellerman, W. A. (See under Cook, Prof. O. F.)

Kellogg, R. S., Department of Agriculture: Two teeth of *Ptychodus*. 37630.

Kelly, Capt Luther S., U. S. Army, Dapitan and Dajsitan, Mindanao, P. I. Received through Dr. George B. Grinnell: Skin of Hornbill, from the Philippine Islands (36941); horns of Min-

Kelly, Capt. Luther S.—Continued.
danao Barking deer (*Rusa*) (38026). (See under War Department.)

Kelsey, F. W., San Diego, Cal.: Eighteen specimens of fresh-water mollusks, 3 species, from China. 36828.

Kendall, W. C., U. S. Fish Commission: Twenty specimens of fossils, 3 species, from Freeport, Me. 37432.

Kerr, John G., Denver, Colo.: Indurated volcanic mud. 37475.

Kiefer, George. (See under War Department.)

Kiel, Germany, Geologisches Institut. Received through Dr. K. Brandt, director: Crab (*Pseudothelphusa fossor*). Exchange. 36736.

Kilbourne and Forrester, St. Francisville, La.: Albino specimen of the common mole (*Scalops aquaticus*). 37865.

Kimball, James P., New York City: Specimens showing replacement of limestone by martite, from Serita River, Vancouver Island, British Columbia. 38021.

Kimball, Miss L. F., National City, Cal.: Thirty ferns from California (exchange) (36725); 8 plants representing the species *Asplenium vespertinum* (gift) (37755); 12 ferns from San Diego County, Cal. (exchange) (37956).

Kincaid, Prof. Trevor, University of Washington, Seattle, Wash.: Twenty-two Psychodidæ representing typotypes of 9 species (gift) (36882); Alaskan crabs (exchange) (36890); 12 moths from Rock Springs, Wyo. (gift) (37049).

King, W. H., and Bean, B. A., U. S. National Museum: Reptiles, insects, and marine invertebrates from Florida. 37693.

Kingel, F., Palm Beach, Fla.: Two moths and a larva. 36764.

Kingston, Jamaica, Institute of Jamaica. Received through J. E Duerden: Four specimens of *Peripatus*. 37664.

Kinkelin, Dr. F. (See under Frankfort on the Main, Museum Senckenbergianum.)

Kinnear, W. T., Forss by Thurso, Scotland: Ten specimens of paleozoic fishes. Purchase. 37546.

Kirk, Harry J. (See under Agriculture, Department of.)

Kirkaldy, W., Wimbledon, England. Sixty-six specimens of Hemiptera. Exchange. 37789.

Kirsch, Louis. (See under Williamsburgh Scientific Society, Brooklyn, N. Y.)

Kizer, Dr. D. T., Springfield, Mo.: Shells. 36848.

Kleinschmidt, E. H., Helena, Mont.: Acadian owl *Nyctala acadica*, from Montana. 37496.

Kline, J. J., Concord, Ky. Received through W. R. Burns: Archæological and geological specimens. 37583.

Kloss, C. B. Received through Dr. W. L. Abbott, Singapore, Straits Settlements: Fifty-six birds' skins from the vicinity of Singapore. 37410.

Klumph, W. E., Corning, Ohio: Stone pipe from Sunday Creek, Perry County. 37459.

Knight, C. H., Washington, D. C.: Headdress of an Ayshire Indian, Napo River, between Ecuador and Colombia. Purchase. 37505.

Kober, Dr. G. M., Washington, D. C.: Seventeen specimens of marine shells from New Mexico (exchange) (37396); old-style German clock (purchase) (37506).

Koons, Prof. B. F., Storrs, Conn. Salamander. Exchange. 37284.

Kotchibie, Dr., director, Imperial Survey, Japan. Received through J. E. Spurr, U. S. Geological Survey. Specimen of reinite from Kurasawa, Kai, Japan. 37675.

Krantz, Dr. F., Bonn, Germany: One hundred and seventy-seven specimens of Nautiloids and Ammonoids, and a series of cephalopod models. 37399.

Kuntzelman, I., Bainbridge, Pa.: Fishes and a snake from Pennsylvania. 37610.

Kurtz, H. M., Woodland, Pa.: Two fossil plants. 37878.

Lacey, R. S., Washington, D. C.: Banner-stone from near Mount Olivet Church, Ballston, Va. 37594.

Lacoe, R. D., Pittston, Pa.: One hundred and twenty-five fossil plants from the supposed Middle Devonian at St. Johns, New Brunswick. 37174.

Lake, W. C., Harbor, Oreg. Received through J. S. Diller. Nodule of priceite from southwestern Oregon. 37268.

Lamb, T. F., Portland, Me.: Cut specimen of yellow beryl, cut specimen of yellow beryl mounted in gold, and two fragments of beryl. Purchase. 36860.

Lambson, G. H., Baird, Cal.: Two Pitt River Indian baskets. 36909.

Lane, J. J., Piedmont, Mo.: Specimen of *Dynastes tityus* Linné. 37068.

Langille, H. D., Washington, D. C. Received through Department of Agriculture. Nineteen plants from Washington State. 37551.

Langley, Mr. S. P., Secretary of the Smithsonian Institution: Time-indicating lamp from Nuremberg (37342); antique scale from Paris, France (7343).

Lansburgh, Max, Washington, D. C.: Cards of invitation and other papers relating to historical events (37408, 37619).

Lant, J. A., Tarrytown, N. Y.: Old Bradford Press, pull-down jobber, star card press, ink balls, and breyers. Purchase. 36751.

Larrabee, R. N. (See under Deane, Walter.)

Lathrop, A. P. (See under St. Paul Gas Light Company.)

Laville University, Quebec, Canada. Received through Monsignor Dionne. Fifteen type specimens of Chamber's Tineidae. 37780.

Law, Charles, Sr., West Pittston, Pa.: Granite from Fulton County, Iowa (37821); piece of iridescent anthracite coal from Butler mine, Pittston (37862).

Ledyard, H. B. (See under Michigan Central Railroad Company.)

Lee, Harry A. (See under Mollie Gibson Mining Company.)

Lege, B. K., Yoakum, Tex.: Plant. 37183.

Lehman, W. V., Tremont, Pa.: Three fossil plants (*Sphenopteris* sp.) from Swatara Gap, near Tremont. 37250.

Leiden, Holland: Royal Geological Museum. Received through Prof. K. Martin, Director. Twenty-six specimens (13 species) of fossil corals from Curaçao, Bonaire, etc. Exchange. 37492.

Leland Stanford Junior University, Stanford University, Cal. Received through Dr. D. S. Jordan. Fishes collected by N. F. Drake at Tientsin, China (37391); Japanese fishes (38029).

Leon, Dr. Nicholas, care Nacional Museum, Mexico, Mexico: Thirty-eight photographs of Mexicans of different tribes in ordinary costumes. 37239.

Leroux, Ernest, Paris, France: Facsimile of Codex Bourbonicus. Purchase. 37527.

Le Sage, Capt. J. V., Colfax, La.: Stingsnake, *Farancia abacura*, from Louisiana. 36814.

Lewis, H. M. See under White Dental Manufacturing Co.)

Lindgren, Dr. W. (See under Cartwright Brothers, and Interior Department, U. S. Geological Survey.)

Lindsay, L., Nogales, Ariz.: Four earthen pots; bones unearthed in the streets of Nogales. 36713.

L'Instrumental, Paris, France: Six musical instruments. Purchase. 38127.

Lippmann, Prof. G., Paris, France: Photograph (still-life group) in natural colors, and a photograph (solar spectrum) also in natural colors. 37111.

Little, L. G., Lanthus, Ind. Received through Dr. A. K. Fisher. Five eggs of Short-billed Marsh wren, *Cistothorus stellaris*. 37455.

Little, P. J., Ebensburg, Pa.: Waterbug. 36965.

Livingston, A. J., Butte, Mont.: Seven photographs of fossils. 37633.

Lloyd, Mr. (See under Tracy, S. M.)

Lockwood, Mrs. Eliza, Los Angeles, Cal.: Potato Sphinx moth, *Protopaxee cingulata* Fabr. 37026.

London, England: British Museum. (See under Agriculture, Department of.)

Long, W. H., jr., Austin, Tex.: Specimens of Proctotrypids. 37493.

Loomis, Rev. Henry, Yokohama, Japan: Japanese shells (36980); echinoderms, barnacles, and mollusks from Japan and adjacent territory (37393).

Loper, Prof. S. Ward. (See under Interior Department, U. S. Geological Survey.)

Loring, J. Alden, New York City: Nine skins and skulls of mammals. 37732.

Loubat, M. le Duc de, Paris, France: Received through Walter M. Gilbert, Columbia University, New York City: Six Mexican codices; Tonalamatl der Aubin'schen Sammlung; Seler: Auf Alten Wegen in Mexico and Guatemala; Codex Telleriano Remensis; Codex Vaticanus 3773; Codex Vaticanus 3738 (de Rios); Codex Borgia; Codex Bologna. 37443.

Lounsbury, C. P., Government Entomologist, Cape Town, Cape Colony, South Africa: Sixty-three specimens of Diptera (27 species), principally new to Museum collection. 37979.

Lovett, Edward, Croydon, England: Set of Maundy money, A. D. 1900, the last issued by Queen Victoria. Exchange. 37650.

Low, Capt. Thomas, Anclote, Fla.: Shrimps. 37938.

Lowe, H. N., Long Beach, Cal.: Nine specimens (5 species) of mollusks, and a crustacean, from San Clement Island, Cal. 37972.

Lucas, I., Passaic, N. J. Received through Interior Department, U. S. Geological Survey: Views of the red sandstone formation near the banks of the Passaic River. 37128.

Lunt, William, Botanical Station, St. Kitts, British West Indies: Eleven species of land shells from Trinidad, West Indies. 37976.

Lyman, H. H., Montreal, Canada: Butterfly. 36719.

Lyon, M. W., jr., U. S. National Museum: Two species of land shells from San Juan, P. R. (36754); natural history specimens from the vicinity of La Guayra, Venezuela; silver, nickel, and copper coins (36930, 36943).

Lyon, R., Cherry, Ariz.: Specimens of *Dynastes grantii* Horn. 37482.

MacGillivray, Alexander, Entomological Laboratory, Ithica, N. Y.: Parasites from *Pieris rapae*, *Apanteles glomeratus* and *Tetrastichus semidex*. 37886.

McBride, Prof. T. H., Iowa City, Iowa: Specimen of *Stemonitis axifera* from Washington. Exchange. 37094.

McCalla, W. C., St. Catharine, Ontario: Four hundred and thirty-two plants from the northern Rocky Mountain region. 36739.

McCaskey, Capt. William S., U. S. Army. (See under War Department.)

McClain, G. C., jr., Washington, D. C.: Two shells from the *Viscaya*, and a shell from the *Maria Theresa*. 37281.

McClure Steam Ship Co., New York City: Diagram illustrating the development of the horse. 37060.

McColl, W. W., Salamanca, N. Y.: Water bug (*Banacus griseus* Say). 36888.

McCormick, L. M., Glen Island Museum, Long Island, N. Y.: Mammals and reptiles from Porto Rico and the Philippine Islands. 37321.

McCormick, W. F. J., Cocoanut Grove, Fla.: Mouse-fish, *Pterophryne gibba*. 37340.

McDonald, W. H., Elizabeth, N. J.: Specimen of *Lycopodium* from New York. 37508.

McFarland, Miss Mary C., Washington, D. C.: Four articles of dress belonging to the costume of a Siamese noble; 5 gold Siamese coins; 13 silver Siamese coins, and 4 Siamese copper coins. Purchase. 37364.

McGee, W J, Bureau of Ethnology, Washington, D. C.: Ethnological objects obtained from the Cocopa Indians. 37787.

McGirr, Capt. Thomas L., U. S. Volunteers, Misamis, Mindanao, P. I.: Comb made by the Moros (37336); an orchid and a specimen of grass from the Philippine Islands (37397); 2 specimens of *Ovulum volva* L., or "Shuttle-shell," from Mindanao (37476); 20 species of marine shells from the Philippine Islands (38083); 75 species of marine and land shells from Panquil Bay, Mindanao, and other localities (38161).

McGowan, Samuel, Charleston, S. C.: Four abnormal eggs. 38003.

McGregor, R. C., Palo Alto, Cal.: Crustaceans from Alaska (37188); Pacific cider, *Somateria v-nigra* (37786).

McGuire, J. D., Washington, D. C.: Sixteen worked stones, stone ax, broken arrow points, specimens of bones, from Long Pier, Castine Branch, Maine. 37247. (See under Smithsonian Institution.)

McIntyre, Frank, Bohemia, Oreg.: Geological material from Bohemia. 37216.

McKeever, G. W., Marion, Ohio: Water beetle. 36944.

McKinley, L. L., Longview, Tex.: Mole cricket, *Gryllotalpa borealis* Burm. 37078.

McLanahan, Mrs. S. C., Hollidaysburg, Pa.: Dermestid larva. 36707.

McMullen, Logan, Jelm, Wyo.: Specimens of pink mineral from Jelm Mountain, Albany County, Wyo. 37264.

McNary & Gaines, Xenia, Ohio: Plant. 37685.

McRae, W. C., Coketon, W. Va.: Specimen of *Corydalus cornutus* Linnaeus. 36868.

Macoun, John, Ottawa, Ontario, Canada: One hundred plants from Canada. Exchange. 37855.

Maddren, A. G., Port Townsend, Wash.: Five specimens of Middle Devonian corals from Alaska. 37707.

Maier, T. F., La Mott, Pa.: Eggs of Katydid. 37837.

Marlatt, C. L., Department of Agriculture: Two trapdoor spider nests and a spider from Lamesa, collected by Nina Strachass (36843); about 400 specimens of Hymenoptera from Kansas (37185).

Marlatt, C. L.—Continued.

Marsh, Dr. H. R., Joliet, Ill.: Collection of ethnological objects, from Point Barrow, Alaska (purchase) (37830); adz head of nephrite, from Point Barrow, Alaska (gift). (38133).

Marshall, Ernest and Henry, Laurel, Md.: Red squirrel, *Sciurus hudsonicus loquax*, and a muskrat (*Fiber zibethicus*). 37520.

Marshall, George, U. S. National Museum: Tortoise (*Cistudo carolina*) from Maryland (36849); snake (37308).

Marshall, Henry, U. S. National Museum: Ground lizard (*Leiolopisma laterale*) from Washington, D. C. 37285.

Marshall, Dr. W. S., Madison, Wis.: Nine specimens of Diptera, including two species new to the Museum collection. 37349.

Marston, B., Kearney, Nebr.: Immature membracid, and eggs of Pentatomid. 36902.

Martin, H. T., Lawrence, Kans.: Fossils from Kansas. 37777. Purchase.

Martin, Prof. K. (See under Leiden, Holland, Royal Geological Museum.)

Marye, Col. W. A., U. S. Army. (See under Fort Monroe Arsenal.)

Masius, A. G. (See under Agriculture, Department of.)

Massie, John R., Washington, D. C.: One thousand and seventy-four birds' skins from various parts of the United States. Purchase. 37765.

Masta, Caroline, Pierreville, Canada: Collection of Abenaki Indian baskets. Purchase. 36975.

Matchett, George G. and John I., Philadelphia, Pa.: Specimen of soft rock containing pupal cells of a Digger bee (*Anthophora* sp.). 38005.

Mather, Mrs. Adelaide. (See under Mather, Fred. (deceased).

Mather, Fred. (deceased), received through Mrs. Adelaide Mather, Brooklyn, N. Y.: Pair of snowshoes, pair of moccasins, birds' eggs, fish eggs, etc. 37279.

Mather, W. (no address given): Egg of California Condor, *Gymnogyps californianus*, from California. Purchase. 38115.

Matthews, Dr. Washington, U. S. Army, Washington, D. C.: Rattle, comb, and part of a loom of the cliff dwellers. 37376.

Maxon, W. R., U. S. National Museum: Twenty plants from central New York (36726); two birds' skins from New York (36737); 15 plants from Alabama (36779); 58 specimens of insects from Alabama (36807); 48 specimens of Odonata, a fly and a beetle from central New York (36808); plant from Maryland (36937); 6 specimens of Odonata and a specimen of Myrmeleonid (36951); 2 birds' skins from New York (36940); specimen of *Ophioglossum vulgatum* from Maryland (36937); 20 specimens of dragon flies from the vicinity of Washington (37103); 25 specimens of *Myxomycetes* from Virginia (37163); 20 specimens of *Myxomycetes* from Maryland (37181); 16 specimens of *Myxomycetes* from the District of Columbia (37190); 24 plants from New York and the District of Columbia (37566); plant (37871); 4 plants from Virginia Beach, Va. (37918).

Maxwell, C. W., Norfolk, Va.: Ants representing the species *Myrmica lævinodis* Nylander. 36775.

Maxwell, P. P., Davidson, N. C.: Butterfly (*Danais archippus* Fab.). 37184.

Maynard, G. C., U. S. National Museum: Two specimens of submarine telegraph cables laid between the main coast of Massachusetts and Nantucket in 1856–57 (37531); specimens of iron electric conductor, telephone cable, and submarine telephone cable (37605).

Mayre, Col. W. A., U. S. Army. (See under Fort Monroe Arsenal.)

Meacham, William, St. Paul, Minn.: Three cockroaches. 36995.

Mearns, Dr. E. A., U. S. Army, Fort Adams, Newport, R. I.: Natural history specimens from Rhode Island (36984, 37318); shells and mammal skeletons (37416); five birds' skins, fish bones, barnacles, mammal skins, and a pine cone (37462); natural history specimens from the vicinity of Newport (37560); natural history specimens from Florida (37574, 37657, 37758, 37770, 37825, 37934); natural history specimens and ethnological objects from Florida (37905); natural history material from Florida (37955, 37543, 37604); nest and three eggs of Worm-eating warbler, *Helmintheros vermivorus*, and egg of Cowbird, *Molothrus ater*, from Maryland (38017). (See under Ash, C. E., jr.)

Mearns, Louis di Z., Newport, R. I.: Specimen of *Corvus americanus;* three Muskrats (*Fiber zibethicus*) and two House rats (*Mus decumanus*) (36985); mammals, birds, and reptiles (37319); two mammals (37477). Deposit.

Medford, H. C. Tupelo, Miss.: Waterbug (*Benacus griseus* Say) (gift) (36857); portion of a large fossil femur (gift) (36903); part of tibia of a Dinosaur (gift) (37141); Indian relics obtained by Lizzie Eades (purchase) (37751); acorns from Bosque County, Tex. (gift) (38066).

Meehan, J. V., U. S. National Museum: Connecticut one-cent piece of the issue of 1787. 37629.

Melton, T. A., Manila, P. I. Received through the Department of Agriculture: Plant. 36874.

Meredith, H. B., Danville, Pa.: Specimen of *Ajuga genevensis* from Pennsylvania. 37666.

Merriam, Dr. C. Hart. (See under Harriman Alaskan Expedition.)

Merrick, H. D., New Brighton, Pa.: Fifty-four moths. 37714.

Merrill, Elmer D. (See under Agriculture, Department of.)

Merrill, Dr. G. P., U. S. National Museum: Unionidæ from Maine (36710); limestone and residual clay from Maryland (37971).

Mesny, A. B. Le P., Washington, D. C.: Honey barrel, or bee's nest, made by a Leaf-cutting bee (*Megachile* sp.). 37270.

METCALF, JAMES K., Silver City, N. Mex.: Specimens of spherulites. Purchase. 37853.

MEXICO, MEXICO: INSTITUTO-GEOLOGICO OF MEXICO. Received through José C. Aguilera. Six specimens of rocks. Exchange. 37427.

DE MEY, Dr. C. F., U. S. Army, Manila, P. I.: Received through Office of Surgeon-General, War Department. Cocoanut crab, *Birgus latro* Linnæus. 37052.

MEYER, Dr. A. B. (See under Dresden, Germany, Royal Zoological and Anthropological-Ethnographical Museum.)

MEYER, S. N., Washington, D. C.: Badge of the Confederate celebration of General Lee's birthday, and four campaign badges of Messrs. McKinley and Bryan. 37499.

MICHELI, MARC, Romilly, Geneva, Switzerland: Nine hundred and thirty-three plants from Mexico. Purchase. 37509.

MICHIGAN CENTRAL RAILROAD COMPANY. Received through H. B. Ledyard, president, Detroit, Mich.: Siemens galvanometer. 37861.

MILES, Mrs. CORNELIA, Denver, Colo.: Plant. 36827.

MILLER, Mrs. ELIZABETH PAGE, Peterboro, N. Y.: Frogs from New York (36948); natural history specimens from New York (37042).

MILLER, Mrs. FRANK, Washington, D. C.: Luna moth. 37978.

MILLER, GERRIT S., Jr., U. S. National Museum: Two specimens of *Phallus* from the District of Columbia (37385); about 400 natural history specimens from Peterboro, N. Y. (36921); collection of frogs from New Hampshire, Mississippi, and Virginia (36784); 13 plants from central New York (37164).

MILLER, GERRIT S., Jr., and E. A. PREBLE, U. S. National Museum: Two tree frogs from Virginia. 36952.

MILLER, H. C., Jackson, Ohio: Five caddis worms. 36729.

MILLSPAUGH, Dr. C. H., Field Columbian Museum, Chicago, Ill. Received through Department of Agriculture: Plant from the West Indies. 37572.

MINOT, A., Cedar Rapids, Iowa: Arrowhead from Atkinson, Nebr. 36923.

MITCHELL, Hon. J. D., Victoria, Tex.: Specimen of *Callinectes sapidus* with an albino claw (37029); 3 species of shells from Texas (37621).

MOHR, Dr. CHARLES, Asheville, N. C.: Two plants. 36973.

MOLLIE GIBSON MINING COMPANY, Denver, Colo.: Received through W. J. Cox, superintendent, and H. A. Lee, Bureau of Mines, Denver. Native silver from Colorado. 37653.

MOLLOY, J. M., Nez Perces Agency, Spalding, Idaho: Butterflies. 36742.

MONTAGUE, H. C., Washington, D. C.: A Burnside army carbine and a Maynard army carbine. Purchase. 37586.

MONTANDON, A. L., Bucarest, Roumania: Three small mammals and two reptiles. 37699.

MONTEVIDEO, URUGUAY, MUSEO NACIONAL. Received through J. Arechavaleta, director: Eight bats. Exchange. 36929.

MOONEY, JAMES. (See under Smithsonian Institution, Bureau of Ethnology.)

MOORE, C. B., Philadelphia, Pa.: Three shell implements from Florida and South Carolina (36727); vessel found inverted over fragments of bone in a cemetery near Point Washington, Fla. (38106).

MOORE, E. KIRK, Hampton, S. C.: Photograph of a bottle and cast of seal on bottle found in an Indian grave. 36924.

MOORE, E. P., Enid, Oklahoma: Head of Cotton-tail rabbit. 37913.

MOORE, FELIX T., Washington, D. C.: Five Confederate notes issued from the State of Alabama. 37299.

MOORE, H. F. (See under Eastlake, Dr. Warrenton).

MORGAN, BURT, Central, S. C.: Cerambycid beetle (*Orthosoma brunneum* Forster) 36873.

Morgan, Dr. E. L., Washington, D. C.: Gray squirrel. *Sciurus carolinensis*. 37195.

Morgan, G. D., Maxey, Tenn.: Reptiles and batrachians from Tennessee. 37287.

Morgan, Mrs. G. W., Mount Vernon, Ohio: Gold sword, pair of silver mounted pistols, two military belts, a Mexican war sword and spurs, civil war sword and spurs and five shoulder-straps. 37280.

Morley, Claude, Ipswich, England: Specimen of *Sphecophaga vesparum* Westbrook. 37844.

Morrey, J. B., Washington, D. C.: Two Lapp costumes. Purchase. 37704.

Morris, Mrs. D. H., New York City: Horn-tailed sawfly, *Tremex columba* Linnaeus. 37582.

Morris, E. L. (See under Fish Commission, U. S.; Western High School.)

Moss, William, Ashton-under-Lyne, England: Five specimens of land-mollusks (3 species) from Trinidad (37406); land and fresh-water shells from Trinidad, West Indies (37977).

Murdoch, Miss E. P., Washington, D. C.: Five patterns of Mexican drawn work (37101); pair of old beaded moccasins from the Iroquois Indians of New York (37968).

Musée de St. Germain. (See under Seine-et-Oise.)

Musée Zoologique de l'Academie Imperiale des Sciences. (See under St. Petersburg, Russia.)

Museo Nacional. (See under Montevideo, Uruguay.)

Museum für Naturkunde. (See under Berlin, Germany.)

Museum of Comparative Zoology, Cambridge, Mass. Received through Samuel Henshaw: Copy plates of Garman's deep-sea fishes. 37559.

Narbel, Paul, Cour, Lausanne, Switzerland: Forty-nine mammal skins and skulls. (37006, 37017, 37269.) Exchange.

Nash, C. W., Toronto, Canada: Specimens of elaterid larvæ infested with *Cordyceps acicularis* Berk. and Rav. 37880.

Nash, Dr. G. W., Kings Bridge, N. Y.: Received through Smithsonian Institution, Bureau of Ethnology. Piece of grass cloth from Kongo River, Africa. 37257.

Nathan, Joseph. (See under Smithsonian Institution, Bureau of Ethnology.)

National Capital Centennial, Citizens' Committee. (See under Smithsonian Institution.)

Navy Department (Bureau of Equipment), Rear Admiral R. B. Bradford, Chief. Collection of ocean bottom specimens collected by the U. S. S. *Nero*. 37100.

Needham, Prof. J. G., Lake Forest, Ill.: Five specimens of Diptera (37139); 8 specimens of parasitic Hymenoptera (37272).

Nelson, Aven. (See under Agriculture, Department of.)

Nelson, E. W., Department of Agriculture: Fifteen skins and skulls of West Indian seals from Triangle Keys, Campeche, Mexico, collected by the donor and E. A. Goldman (purchase) (36783); objects from a mound in Arizona, fragments of pottery from Mexico, and Eskimo objects from the mouth of the Yukon River, Alaska (gift) (37368). (See under Agriculture, Department of.)

Nelson, Elias, Washington, D. C.: Ninety-seven plants from various localities in the United States. Purchase. 37790.

Nelson, J. H., Kahoka, Mo.: Five chipped flint specimens from Missouri. 37904.

Neville, W. R., Austin, Tex.: Hellgrammite fly. *Corydalis cornuta* Linné. 38152.

Nevin, Miss Blanch, Windsor Forges, Churchtown, Pa.: Three Japanese wedding cups and two Chinese shell spoons. 37003.

New Mexico Agricultural Experiment Station, Mesilla Park, N. Mex. Received through Prof. T. D. A. Cockerell: Two earthworms from Las Vegas (36717); flies, beetles, and wasps (36913); insects from New Mexico (36955).

New York Botanical Gardens, Bronx Park, N. Y.: Plant from Columbia University greenhouse (37034); specimen of *Selaginella densa* Rydberg (37093); 21 plants from Colorado, collected by P. A. Rydberg (37329); 248 plants from Yukon, Alaska, collected by Mr. Williams (38002). Exchange.

New York State Museum, Albany, N. Y. Received through Dr. John M. Clarke: Three specimens of fossils. 36990.

New York Zoological Park. (See under New York Zoological Society.)

New York Zoological Society. Received through New York Zoological Park, R. L Ditmars: King cobra. 37730.

Newcomb, B. M., Oak Hill, Cal.: Mercury in gangue from Phoenix and Karl quicksilver mines, San Luis Obispo County, Cal. 37940.

Newlon, Dr. W. S., Oswego, Kans.: Specimen of *Cordaites* (?) from the Cherokee shale. 38009.

Nixon, S. D., Baltimore, Md.: Water snake, *Natrix sipedon*. 37922.

Nolan, W. J., Weatherfield Center, Vt. Received through Department of Agriculture: Two plants. 37151.

North American Belgian Hare Company, Washington, D. C. Received through J. Howard Payne: Belgian hare. 37857.

North Carolina State Museum, Raleigh, N. C. Received through H. H. Brimley: Elk. Deposit. 37803.

Norton Company, H. P., Seattle, Wash.: Skin of Glacier Bear, from Alaska. Purchase. 36953.

Notestein, F. N., Alma, Mich.: Snake. 37794.

Nylander, Olaf, Caribou, Me.: Four species of *Pisidium* from Maine. 37553.

O'Neill, J. A., Franklin, La. Received through Department of Agriculture: Five plants. 37152.

Oakes, Miss F. F., Blackstone, Ill.: Cerambycid beetle, *Prionus imbricornis* Linnæus. 36786.

Offer, William, Miami, Fla.: Land, fresh-water, and marine shells. 37834.

Oldham, Perry B., Seguin, Tex.: Sixteen crayfishes (37912, 37927); 3 specimens of crayfishes (*Cambarus clarkii*) (37848).

Oldroyd, Mrs. T. S., Los Angeles, Cal.: Two specimens of marine shells from San Pedro, Cal. 37550.

Olds, H. W., Washington, D. C.: Specimen of *Plantago aristata nuttallii* from Maryland. 38117.

Olney, Mrs. M. P., Spokane, Wash.: Shells of *Pyramidula* from Idaho. 37545.

Oneida Community, Limited, Kenwood, N. Y.: Mouse trap, 6 Newhouse traps, old-style English trap, and an old-style German trap. 38088.

Orcutt, C. R., San Diego, Cal.: Shells and echini from Lower California (36813); 35 specimens of Cactaceæ from the United States and Lower California (37229); echinoderms, crustaceans, corals, foraminifera, and mollusks, from various localities (37863).

Osborn, Prof. Herbert, Ohio State University, Columbus, Ohio: Seven types of Jassidæ belonging to the genus *Scaphoideus*. 37354.

Osgood, N. H. (See under Agriculture, Department of.)

Osterloh, Paul, Leipzig, Germany: Series of models illustrating the structure and development of a feather. Purchase. 37541.

Ottawa, Canada, Geological Survey. Received through Dr. H. M. Ami: Thirty specimens of Lower Carboniferous (Windsor) limestone fossils, and 11 specimens of *Stringocephalus burtini* from Manitoba. 37491.

Ottolengui, Dr. R., New York City: One hundred and two specimens of Lepidoptera. 36763.

Oussani, Rev. Gabriel, New York City: Sixty-six Babylonian seals, 5 inscribed earthen bowls, 4 glass bottles, 2 figurines, pieces of blue tile, alabaster jar, lamp, and a carving representing a deer (the last five from southern Arabia). Purchase. 37297.

Overacker, M. L. (See under Agriculture, Department of.)

Ozias, J. W., Lawrence, Kans.: Letters written by American soldiers from the Philippine Islands on Spanish official paper, newspapers from Manila, and ethnological objects. 37644.

Page, L. W., Department of Agriculture: Two facetted pebbles, from Martha's Vineyard and Cape Cod, Massachusetts. 37801.

Paine, R. G., U. S. National Museum: Tree frogs from South Carolina. 38101.

Palmer, Dr. Edward, Washington D. C.: Shells, crustaceans, earthworms, and geological specimens, from Mexico (purchase) (36968); small wicker basket of willow from Santa Maria del Rio, near San Luis Potosi, Mexico (gift) (37964).

Palmer, William, U. S. National Museum: Natural history material from Cuba (36920, 36962); two frogs (*Rana palustris*) from Maryland (36949); two birds' skins (gift) and four mountain sheep (purchase) (37413, 37414); snake, 122 plants, insects, plants, two lizards, insects, plants, and two Spanish coins, from Cuba (36740, 36757, 36781, 36787, 36741, 36916, 36981, 37016); two skins of *Ammodramus princeps*, from Smiths Island, Virginia (37515); five specimens of *Viola* from Virginia (38031); five ferns from Maryland and Virginia (38039); Woodchuck, *Arctomys monax* (38065); two birds' nests from Virginia (38067); two specimens of *Polioptila carula*, with nest and 8 eggs (37625); salamander from Virginia (38100).

Parish, S. B., San Bernardino, Cal.: Plants from California (36821, 37437, 38025). Gift and exchange.

Parsons, F. R., Providence, R. I.: Four eggs of an albino specimen of the Three-toed woodpecker, *Picoides americanus dorsalis*, from Arizona. 37768.

Patterson, Rev. B. Craig, Barterbrook, Va.: Ghost-head, or ant-nose coin of China, issued 612–589 B. C. 38052.

Paxson, H. D., Philadelphia, Pa.: Pottery, lamps, tinder boxes, etc., from Holland and Pennsylvania. Exchange. 37210.

Payn, E. J., Olympia, Wash.: Specimen of gold-silver ore from Okanogan district, Washington. 37426.

Payne, J. Howard. (See under North American Belgian Hare Company.)

Peabody, Mrs. H. M. (See under Smithsonian Institution, Bureau of Ethnology.)

Pearse, A. S., Omaha, Nebr.: Natural history specimens from East Pryor Creek, near Billings, Mont. 37607.

Pease, G. H., Placer, Oreg.: Ammonite and 2 specimens of *Trigonia* from the Cretaceous rocks on Grave Creek, Jackson County, Oreg. 37897.

Peck, Prof. C. H., Albany, N. Y.: Specimen of *Viola* from New York. 37203.

Peck, W. J., Pittston, Pa.: Rolled coal bowlder from Mount Lookout Shaft, Wyoming, Pa. 38157.

Pennypacker, C. F., West Chester, Pa.: Specimen of cummingtonite. Purchase. 37829.

Perdew, G. M., Cumberland, Md.: Eleven specimens of fossils. Exchange. 37120.

Periolat, C. F., Chicago, Ill.: Skin and skull of a Gray wolf from Alaska, and a pair of horns of the Giant moose of Alaska. Purchase. 37167.

Petersen, H. P., Washington, D. C.: Two cut opals from Mexico, and 12 cut "matrix turquoise" from New Mexico. 38023.

Philadelphia Academy of Sciences, Philadelphia, Pa.: Two bats (*Chilonycteris*). Exchange. 37323.

Philadelphia Commercial Museum, Philadelphia, Pa.: Twenty-five specimens of violets from different sections of the United States. Exchange. 37053.

Phillips, Mrs. Imogene. (See under Smithsonian Institution, Bureau of Ethnology.)

Phillips, J. W., Hailey, Mo.: Fungus. 37200.

Pidgeon, H. and A. E. Stanfield, Fort Wrangel, Alaska: Five photographs of black Alaskan sheep (*Ovis stonei*). Gift for Pan American Exposition. 37386.

Pidgeon, H., Fort Wrangel, Alaska.: Skin and skull of black Alaskan sheep. 37450.

Pigorini, Luigi, director, Musei Preistorico-Ethnografico, Rome, Italy: Two full-sized photographs of the gilded Atlatl, from ancient Mexico. Exchange. 37965.

Pinchot, Gifford. (See under Agriculture, Department of.)

Piper, C. V., Pullman, Wash.: Seven plants. Exchange. 37073.

Piper, Miss M. G., U. S. National Museum: Specimen of *Alaus oculatus*. 38119.

Pitcher, James R., Shorthills, N. J. (received through Department of Agriculture): Plant. 37274.

Pittier, H., San José, Costa Rica, Central America: One hundred and fifty-six plants from Costa Rica. Purchase. 38024.

Pittsburgh Reduction Company, Pittsburg, Pa.: Ten pieces of bare and insulated cable. 37067.

Plank, E. N., Decatur, Ark.: Four plants (36731); plant from Texas (37952). (See under Agriculture, Department of).

Plumacher, Edward. (See under Smithsonian Institution.)

Poling, O. C., Quincy, Ill.; Two specimens of *Neophasia terlootii* Behr (37258); 30 specimens of Lepidoptera (37328).

Pollard, C. L., U. S. National Museum: Fifty-eight insects (36807); 6 specimens of Odonata and a Myrmeleonid (36951); 3 specimens of Odonata from New Jersey (36950); 15 plants from Alabama (36779); 50 plants from the District of Columbia (37908); salamander from Slide Mountain, New York (38028); 200 plants from North Carolina (38030); 50 plants from New York (38086); 5 birds from North Carolina (38150).

Potter, C. L., Rumford Point, Me.: Slab of muscovite. 37084.

Prather, J. K., Waco, Tex.: Collection of Cretaceous fossil vertebrates. 36712.

Pratt, J. H., Chapelhill, N. C.: Specimen of pseudo meteoric iron from Davidson County, N. C. (37784); specimens of corundums from Canada, tourmalines, feldspars, lepidolite, scheelite, and wolframite from various localities in New England (37352).

Pratt, P. H., East Bridgewater, Mass.: Wampum and arrow points. 37251.

Preble, E. A., Biological Survey, Department of Agriculture: Frog from Virginia. 37288. (See under Agriculture, Department of; Miller, Gerrit S., jr.)

Preble, E. A. and A. E. (See under Agriculture, Department of.)

Prevost, Victor. (See under Rosch, John, and Scandler, W. I.).

Price, Miss S. F., Bowling Green, Ky.: Two species of shell from Kentucky. 36964.

Priest, B. W., Bank House, Keepham, Norfolk, England: Foraminifera from the West Indies and Ireland. Exchange. 37991.

Pringle, C. G., Charlotte, Vt.: Seventy-seven Mexican plants (purchase) (36761); 300 Mexican plants (purchase) (37469). (See under Gray Herbarium.)

Proudfit, Robert, U. S. National Museum: U. S. infantry button, explosive bullet, minie rifle bullet from Bennings, D. C. (37363); stone hatchet, or gouge, stone tablet with notched edge from near Bennings (37719).

Pruett, G. H., Washington, D. C.: Scorpion, *Centrurus carolinianus* Beaur. 38096.

Purington, C. W. (See under Interior Department, U. S. Geological Survey.)

Purpus, C. A., San Diego, Cal.: Eighty-seven plants from Lower California. Purchase. 37317.

Ralph, Dr. W. L., U. S. National Museum: Eighteen birds' eggs and 3 nests from Grand Manan, New Brunswick (36932); 88 birds' eggs from various

Ralph, Dr. W. L.—Continued.
localities in the United States (37742); 4 eggs of Hudsonian chickadee, *Parus hudsonicus*, and 2 crocodile eggs from Florida (37452); 74 birds' eggs and 9 nests from Grand Manan, New Brunswick (37867); egg of the Mississippi kite, *Icterus mississippiensis*, from South Carolina (37868); bird skins and 4 birds' eggs from Florida (37894); nest and 6 eggs of Tufted titmouse, *Parus bicolor*, from the District of Columbia (37975); 4 eggs of Wood thrush, *Hylocichla mustelina*, from the District of Columbia (38006); 13 birds' eggs and 3 nests from the District of Columbia (38018); 22 birds' eggs and a bird skin from Florida (38040); egg of a California condor, *Gymnogyps californianus*, from California (38122).

Randall, F. A., Warren, Pa.: Devonian and Lower Carboniferous invertebrates (37129); 3,421 specimens of Devonian and Carboniferous fossils (36935); Devonian and Carboniferous fossils and plants (36935).

Ransome, F. L., Washington, D. C.: Native tellurium from Good Hope mine, near Vulcan, Gunnison County, Colo. 37776.

Rathbun, R. F., Washington, D. C.: Specimen of *Limulus*. 36987.

Rawlings, Stuart L., San Dimas, Durango, Mexico: Two specimens of Membracids (*Umbonia* sp.). 37369.

Read, A. M., Washington, D. C.: Watch manufactured in France by Romilly about the year 1240. 36891.

Reasoner, E. N., Oneco, Fla.: Plant. 37735.

Redieske, Paul, Superintendent Lincoln Park, Chicago, Ill.: Two photographs of Rocky Mountain sheep. 37686.

Reed, John A. (no address given): Badge of the Independent Order of Good Americans, Baltimore, Md. 38648.

Reeder, John T., Calumet, Mich.: Eight specimens of silver and copper ores (purchase, Buffalo Exposition) and 2 specimens of copper (gift). 37697.

Reeves, James A., Joplin, Mo.: Burlington formation crinoid. 38044.

Rehn, J. A. G., and A. N. Caudell, Department of Agriculture: Nineteen specimens of *Rynchota* and a grasshopper. 37421.

Remington Arms Company, Received through M. Hartley, president, New York City: Double rifle hammerless shotgun, military magazine rifle, Remington rifle, and a Remington double Derringer. 37963.

Reverchon, J., Rose Cottage, Dallas, Tex.: Five plants. 36810.

Reynolds, Lawrence R., Cocorit, Sonora, Mexico: Twenty-seven specimens, 6 species, of fresh-water shells, from the delta of the Yaqui River, near Cocorit. 37882.

Richards, J. W., Lehigh University, Bethlehem, Pa.: Two specimens of wavellite in clay and a specimen of axinite. 37916.

Richards, W. M., Talent, Oreg.: Two teeth of a horse, probably representing a fossil species. 37981.

Richardson, H. E., Manchester, N. H.: Two Forficulae (*Labia minor* Linnæus). 37348.

Richardson, James, and Sons, Kingston, Ontario, Canada: Feldspar from the quarries of Feldspar, Kingston County. 38047.

Riddle, A., Government Printing Office, Washington, D. C.: Spider (*Dolomedes scriptus* Hentz). 36708.

Ries, Dr. Heinrich, Cornell University, Ithaca, N. Y.: Iron ores and rocks from Europe. Purchase. (37180, 37215.)

Riley, J. H., U. S. National Museum: Snake (36740); plants, insects, lizards, from Cuba (36757, 36781, 36787, 36741, 36916, 36962, 36981); specimen of *Sciuruscarolinensis* (37813); natural history specimens from Cuba (36920); 2 eggs of Broad-winged hawk from Virginia (37974); 2 eggs of *Buteo latissimus* from Virginia (38043).

Rivers, J. J., Ocean Park, Cal.: Twelve specimens of Pleistocene fossils from Los Angeles County. 37320.

Robb, M. L., Tonku, China: Leaf insect from Guiniaras Islands, Philippine

Robb, M. L.—Continued.
group, found by Louis Jehmenson (37263); 46 miscellaneous specimens of insects (38053).

Robbins and Appleton, New York City: Vanguard and Maximus watch movements. Purchase. 38175.

Roberts, W. J., Branchton, Pa.: Weevil (*Eurymycter fasciatus* Oliver). 37056.

Robinette, W. W., Robinette, Tenn.: Seventeen sponges (37156); 50 specimens of Ordovician fossils and 40 specimens of Lower Carboniferous fossils (38081). Purchase.

Robinson, Capt. Wirt, U. S. Army, West Point, N. Y.: Birds' skins, nests, and eggs from Venezuela (37567); skins and skulls of mammals, and a bat (*Glossophaga sorocina*), from Venezuela (37887, 38116).

Rockwell, J. E., U. S. National Museum: Facsimile of the New England Courant, dated February 11, 1723. 37643.

Roebling, W. A., Trenton, N. J.: Eleven specimens of stilbite, 5 specimens of hydromica, clarkeite, 1 specimen of epidote, 1 specimen of tourmaline, and 2 specimens of pectolite. 37800.

Rogers, Rev. E. E. (See under Hulbert, H. B.)

Roon, G. Van, Rotterdam, Holland: Sixty-one specimens of exotic Coleoptera. Exchange. 37565.

Rosch, John, White Plains, N. Y.: Calotype negative made by Victor Prevost. 36889.

Rosenberg, W. F. H., London, England: Twenty-three mammal skins (36880); 15 birds' skins from Ecuador and New Zealand (37337). Purchase.

Rosenstock, Dr. Edward, Gotha, Germany: Eighty-three plants from Europe. 37744. Exchange.

Rowan Granite Company, Woodside, N. C.: Two cubes of granite from a quarry at Granite, near Salisbury. 37983.

Rowell, J. G., Claremont, N. H.: Beans infested with insects. 37334.

Royal Botanical Garden. (See under Sibpur, Calcutta, India.)

Royal Geological Museum. (See under Leiden, Holland.)

Ruffin, Hon. H. N. (See under Foster, W. T.)

Rust, H. N. (See under Smithsonian Institution, Bureau of Ethnology.)

Ruth, A., Knoxville, Tenn. Received through T. H. Kearney, jr. Plants. 37743.

Rydberg, P. A., Bronx Park, N. Y.: Plants from Washington and Colorado (37668, 37854). (See under New York Botanical Garden.)

St. Paul Gas Light Company, St. Paul, Minn.: Received through A. P. Lathrop, general manager. Two samples of underground cable and a line insulator. 37405.

St. Petersburg, Russia, Musée Zoologique de L'Academie Imperiale des Sciences. Received through W. Salensky: Seven rodents. Exchange. 36793.

Salensky, W. (See under St. Petersburg, Russia, Musée Zoologique de L'Academie Imperiale des Sciences.)

Saltztein, A. L., Washington, D. C.: Watch. 36908. Purchase.

Samson, H. W., Washington, D. C.: Badge issued by the Pan-American Exposition. 37597.

Sandberg Botanical Exchange Bureau, Minneapolis, Minn.: Nineteen plants from various localities. 37623.

Sanders, R. F., Dawsonville, Ga.: Sphinx-moth, *Chaerocampa tersa* Linné. 37138.

Sanders, T., jr., Newark, N. J.: Specimen of massive granite from Minerva, N. Y. 37919.

Sandos, W. A., Opelousas, La.: Locustid, 37230.

Sargent, Prof. C. S., Jamaica Plains, Mass.: One hundred plants from the United States. 37674.

Saunders, M. B., South Norwalk, Conn.: Long-sting, *Thalessa lunator* Fabr. 36798.

SAUNDERS, W. E., London, Ontario, Canada: Fourteen plants from Ontario, Canada. Exchange. 37207.

SCANDLER, W. I., New York City: Calotype negative made by Victor Prevost. 36889.

SCANLAN, Mrs. M., White Hills, Ariz.: Geological specimen from Arizona. 37575.

SCARBOROUGH, R. B., Conway, S. C.: Photograph of a whale. 37327.

SCHEIB, Rev. K., Lawrenceburg, Ind.: Leaf-shaped blade of flint from a mound near Lawrenceburg. Exchange. 37236.

SCHELLWEIN, Dr. E., director, Provinzial Museum, Königsberg, Prussia: Forty-six specimens of Carboniferous brachiopods (21 species). Exchange. 37929.

SCHENCK, JOHN T., Cumberland, Md.: Thirty specimens of Helderbergian and Oriskanian fossils from Cumberland. Exchange. 38155.

SCHERFFIUS, JACOB, Winona, Minn. Received through Hon. J. A. Tawney. Geological specimen found on the Wisconsin side of the Mississippi River. 37823.

SCHIMALENSEE, M. (See under Interior Department, U. S. Geographical Survey.)

SCHNABEL, C. L., Portland, Oreg.: Bronze button made from the borings of a cannon captured by the Second Oregon Regiment at San Ysidore, near Manila, Philippine Islands. 36820.

SCHRADER, F. C., Washington, D. C.: Plants from Alaska. 37088.

SCHUCHERT, CHARLES, U. S. National Museum: Silurian and Devonian fossils from Windsor and Arisaig, Nova Scotia; Dalhousie, New Brunswick, and Gaspe, Quebec (36942); 300 Lower Helderberg fossils from Cumberland, Md., and Keyser, W. Va. (37123); 50 fossils from the Manlius formation at Buffalo, N. Y.; 50 from the Niagara at Lewiston, Pa.; 130 from the Helderberg at Lewiston, Pa., and 275 from the Helderberg at Bloomfield, Pa. (37948); water limestone from the Upper Silurian, north

SCHUCHERT, CHARLES—Continued.
Buffalo, N. Y. (37931); about 10,000 pieces of Cincinnati fossils (exchange) (38014); about 400 specimens of Helderbergian fossils from localities in eastern Pennsylvania (38015); Helderbergian and Oriskanian fossils from western Maryland (38154).

SCHWARZ, E. A. and H. S. BARBER, U. S. National Museum. Reptiles from Arizona. 38046.

SEABORNE, C. R., Gallup, N. Mex.: Lizard. Purchase. 36982.

SEAL, W. P., Delair, N. J.: Eleven eggs of a Bull snake, *Pituophis melanoleucus*, from New Jersey. 36850.

SEEGER, G. A., U. S. National Museum: Snake (*Tropidonotus sipedon*) from Maryland (36753); 2 snakes from Maryland (37286).

SEINE-ET-OISE, FRANCE, MUSÉE DE ST. GERMAIN. Cast of a Lychnarion, hermaphrodites, 2 silver casseroles, and galvanic reproduction of gems, comprising 15 specimens. Exchange. 37547.

SEIP, A. N., Washington, D. C.: Five specimens of "shin-plasters," or "State script." 36841.

SELLARDS, E. H., University of Kansas, Lawrence, Kans.: Six pieces of Oread limestone containing *Fusulina*. 37303. (See under Kansas, University of.)

SEMPERS, J. FORD, Aikin, Md.: Birds' skins and birds' eggs, from Maryland and Massachusetts. 37345.

SETON-KARR, H. W., Wimbledon, London, England: Collection of chipped flints from quarries in Egypt. 37154.

SHACKELFORD, Mrs. R. S., The Dalles, Oreg.: Klickitat Indian woman's dance dress; dance dress of a Klickitat woman, with rows of beading and pendants; also 20 ethnological objects obtained from the Klickitat, Cowlitz, and Skokomish Indians (purchase) (37147); 2 sally bags made by the Wasco Indians of Washington (gift) (37802); basket material and a basket made by the Wasco Indians (gift) (37002).

Sharp, Dr. David. (See under Cambridge University.)

Sharp, J. H. (See under Smithsonian Institution, Bureau of Ethnology.)

Sharpe, Prof. R. W., Dubuque, Iowa: Normal and pathologic Unionidæ from Dubuque. 36878.

Sheldon, E. P. (See under Agriculture, Department of.)

Shellack, Dr. E. H., Galena, Kans.: Specimen of Upper Silurian (Niagara) coral of the genus *Favosites*. 37924.

Shepard, Dr. C. U., Pinehurst, S. C.: Specimen of meteorite from Warren County, Mo. Exchange. 37797.

Shepherd, T. M., Grady, Tex.: Skulls of Gray fox (*Urocyon*), Coon (*Procyon*), and Wild-cat (*Felis*) (37957); skin of a wolf (37795).

Sherman, Franklin, Jr., Department of Agriculture, Raleigh, N. C.: Five galls of *Andricus tubicola*. 37401.

Shrader, F. C. Received through Department of Agriculture: Plant from Russia. 38125.

Shubert, A. B., Chicago, Ill.: Carved wooden bowl. Purchase. 37142.

Shufeldt, Miss M. A., Morristown, N. J.: One hundred and ten specimens of oriental art from China, Japan, and Korea. Purchase. 38151.

Shufeldt, Percy, Washington, D. C.: Seven specimens of the genera *Orizomys* and *Microtus*. 37461.

Sibpur, Calcutta, India, Royal Botanical Garden: One hundred and ninety-one plants from India. Exchange. 36963.

Silver, A. B., Halifax, Nova Scotia: Two specimens of *Salmo salar ouananiche*. 37338.

Simpson, C. T., U. S. National Museum: Land and fresh-water shells, from Haiti. 37521.

Singer, Commander Frederick, U. S. Navy, inspector, Seventh light-house district, Key West, Fla.: Specimen of Blenny and a Pipe-fish. 37932.

Sipe, Porter, Davis, W. Va.: American bittern, *Botaurus lentiginosus*, from West Virginia. 37148.

Sirdefield, Rev. A. C., Melbourne, Fla.: Two Lubber grasshoppers, *Dictyophorus reticulatus* Thunb. 37738.

Skiff, F. J. V. (See under Field Columbian Museum, Chicago, Ill.)

Slade, G. T., Dunmore, Pa.: Cylinder, crossheads, and four eccentric rods of the locomotive "Stourbridge Lion." 37788.

Slater, Miss S. R., Moulmein, Burma, India: Custard-apple seeds from Burma. 37202.

Slocum, Capt. Joshua, Newport, R. I.: Stone ax found at Manley, near Sydney, Australia. 36871.

Slosson, Mrs. A. T., New York City: Four specimens of parasitic Hymenoptera, including two species new to the Museum collection (37217); 37 specimens of Diptera from Biscayne Bay, Florida, principally new to the Museum collection, and one representing a new genus (37774); 11 specimens of parasitic Hymenoptera (37846).

Small, H. B. Hamilton, Bermuda: Two plants from Bermuda. 38055.

Smallwood, Miss M. E., Cold Spring Harbor, L. I.: Specimens of *Talorchestia*. 36826.

Smith, E. A. (See under Godman, F. Du Cane.)

Smith, Fred., Wolverine Copper Mine, Houghton County, Mich.: Specimens of moneykite and mohawkite from Wolverine Copper Mine. 37366.

Smith, George D., New York City: Letters and other documents relating to the inventions of J. Ericsson. Purchase. 36755.

Smith, Dr. H. C., Auburn, Wash.: Dipterous larva. 37529.

Smith, Dr. H. M., U. S. Fish Commission: Specimen of *Lampsilis ligamentrinus gibbus* from Arkansas (36730); 44 specimens (5 species) of land shells from Rome, Italy (37380).

Smith, Prof. J. B., New Brunswick, N. J.: Four specimens of *Chrysocharis oscinidis* Ashm. (37737); 6 types of Noctuid moths (37773).

Smith, J. D., Baltimore, Md.: Plant from Guatemala. 37580.

Smith, Rev. P. J., Beatty, Pa.: Specimen of *Cephalothrips coloradensis*. 36794.

Smith, W. D., Prophetstown, Ill.: Cecropia Moth, *Attacus cecropia* Linnæus. 38168.

Smithsonian Institution, Mr. S. P. Langley, Secretary.

Collection of 873 medals and 29 coins. Received from Mr. Henry Adams, Washington, D. C. 37081. Deposit.

Three pieces of native Bicol armor, 3 bolos, signal torch, 3 spears, 2 bows, 15 arrows, bird trap, fish basket, war club, sword, and wooden shield. Received from Brig. Gen. James M. Bell, U. S. V., Military Governor, Nueva Caceres, Philippine Islands. 37548.

Medal struck to commemorate the one hundredth anniversary of the establishment of the seat of government in the District of Columbia. Received from the Citizens' Committee. 37589.

Lafayette medal. Received from Mr. C. E. Claghorn, Philadelphia, Pa. 37997.

Two human skulls, powder flask, syringe, telephone, 2 horns and 2 hunting bags, 7 birds' skins, etc., from Batanga Cameroons, West Africa. Received from Dr. N. H. D. Cox, Baltimore, Md. 37614.

Medal struck in commemoration of the dedication of the capitol of the Territory of Arizona. Received from Hon. O. L. Geer, Phoenix, Ariz. 37688.

Collection of stone implements from Potomac-Chesapeake tide-water province. Received from Mr. J. D. McGuire, Ellicott City, Md. 37330.

Skull, bows, arrows, and spears used by the Motilon Indians, and a collection of skulls and pottery from La Hoyada. Received from Mr. Edward Plumacher, United States consul, Maracaibo, Venezuela. 36732, 37331.

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

Alaskan totem pole obtained through Iver Fougner (36752); leaf-shaped blades of gray flint, from a mound in Scott County, Ill. (36777); 30 leaf-shaped flints from a cache in Jackson County, Ind. (36778); 30 plants collected by Dr. Walter Hough in Arizona during his connection with the Fewkes expedition (37127); collection of Bella Coola objects and natural history specimens received from Iver Fougner (37021); 113 ethnological objects from southern California received from H. N. Rust (37098); wooden carving of Zuñi war god, wooden carving of Zuñi war goddess, Pueblo vases and fragments, stone fetish of the Zuñis, miscellaneous stone implements, and 10 molds of aboriginal relics (36918); received from Mrs. H. M. Peabody, Navajo woman's dress (37161); 3,215 relics from the Etowah Mounds and vicinity, Bartow County, Ga. (37113)[a]; relics comprising 16,756 specimens from mounds on the Davis plantation (old Evans place), Burke County, Ga. (37114)[a]; relics from mounds in various places, comprising 36,514 objects 37115)[a]; received through Mr. W. H. Holmes, quarry refuse from Indian quarries (37341); 4 baskets manufactured by the Cherokee Indians and some wooden spoons, collected by James Mooney on the Cherokee Reservation, N. C. (37412); 5 baskets made by Palomas Apache Indians (37474); Tarumari Indian mummy (37556); received through J. H. Sharp 11 oil paintings of American Indians, Sioux, Cheyenne, and Crow tribes (37595); received from Lieut. G. T. Emmons, U. S. Navy, arrow heads, spear points, stone celts, etc., from Spring Island, British Columbia (37766); 18,907 stone implements from aboriginal village sites in Georgia (38007); received through Joseph Nathan, ethnological and archæological objects from California (38162); through J. M. Hoge, carved stone pipe from Virginia (38169); through J. C. Brennan, 100 stone implements

[a] These specimens were originally deposited in the National Museum by Dr. Roland Steiner, Groveton, Georgia, in previous years, and have since been purchased from him by the Bureau of Ethnology.

Smithsonian Institution—Continued.
from Jamaica (38170); through Mrs. Imogene Phillips, drawing of a ruined temple in Yucatan (38171); through Mrs. J. W. Barndollar, belt formerly worn by Chief Sitting Bull (38172); through Dr. C. W. Branch, stone implements and pottery from the West Indies (38173). (See under Nash, Dr. George W.)

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

Zebu (*Bos indicus*), tapir (*Elasmognathus*) (36769); snake (*Epicrates inornatus*) (36774); leopard (*Felis pardus*) and porcupine (*Erethizon dorsatus*) (36977); snake (*Epicrates inornatus*) from Porto Rico (37013); snake (*Crotalus horridus*) from West Virginia (37014); snake (*Crotalus horridus*) from North Carolina (37015); *Macacus cynomolgus* and *Capromys pilorides* (37039); snake (*Boa constrictor*) (37040); iguana (*Stenosaura teres*) from Mexico (37041); Douroucoli monkey (*Nyctipithecus azaræ*), porcupine (*Erethizon dorsatus*), kangaroo (*Macropus reficollis bennetti* (?), kit fox (*Vulpes velox*) (37108); 3 specimens of *Orcortyx pictus plumiferus* and a specimen of *Dendronessa galericulata* (37221); buffalo (*Bison americanus*), gopher-snake (*Spilotes corais couperii*), Lanzaroote pigeon (*Columba*), gannet (*Sula bassana*) (37253); parrot (*Amazona viridigenalis*) (37265); rabbit (*Lepus americanus bairdi*), spider-monkey, *Ateles ater* (37277); crocodile, from Venezuela (37307); iguana (37301); peccary (*Dicotyles labiatus*), beaver (*Castor canadensis*) (37420); lizard and a snake (37439); mule deer (*Cariacus macrotis*) and a moose (*Alces americanus*) (37513); duck hawk (37757); baboon (*Papio*) (37671); peccary (*Dicotyles tajacu*) (37661); Cuban deer (*Odocoileus*) (37660); moose (*Alces americana*) (37662); sea lion (*Zalophus californicus*) (37663); *Boa constrictor*, from Para, Brazil (37670); crocodile (37781); puma (*Felis concolor*), skunk (*Cincha*), gray squirrel (*Sciurus carolinensis*) (37812); parrot (*Amazona salvini*) (37925); 3 young lions and a sloth (37992); alligator from Florida (38108); cormorant (38148); swan (*Cygnus gibbus*) (38149).

Smithsonian Institution—Continued.

Snodgrass, R. E., Palo Alto, Cal.: Two hundred and sixteen specimens of Diptera from the Galapagos Islands. 37638.

Snyder, A. J., Belvidere, Ill.: Eight butterflies. 37725.

Snyder, J. O., Stanford University, Cal.; Reptiles and batrachians from California. 37375.

Snyder, N. R., United States consul, Port Antonio, Jamaica, West Indies: Two stone celts and a polished pebble from Priestmans River, northeastern coast of Jamaica. 37426.

Spencer, A. L., Oenaville, Tex.: Longhorn beetle, *Callichroma plicatum* Lec. 38140.

Spies, Albert, Newark, N. J.: Cecropia Moth, *Attacus cecropia* Linnæus. 38145.

Spratt, Prof. C. C., Bridgton Academy, North Bridgton, Me.: Two specimens of Myriapods. 37273.

Sprendall, A. E., New Berlin, Ohio: Beetle. 36900.

Springer, Frank, East Lasvegas, N. Mex.: Large slab covered with *Uintacrinus socialis*, a Cretaceous crinoid. 37514.

Spurr, J. E. (See under Interior Department, U. S. Geological Survey.)

Stabler, J. P., Sandspring, Md.: Two Red-tailed hawks (37344, 37440); Sparrow-hawk (37900).

Standinger, Dr. O., and A. Bang-Haas, Dresden, Germany: Seventy-seven butterflies. Purchase. 37116.

Stanfield, A. E., and H. Pidgeon, Fort Wrangel, Alaska: Five photographs of Black Alaskan sheep (*Ovis stonei*). 37386.

Stangl, Dr. P. L., Luzon, Bacoor, Philippine Islands: Insects from the Philippine Islands (36867, 37077, 37140); insects and invertebrates (37157); insects (37300, 37490, 37716); reptiles and

STANGL, Dr. P. L.—Continued.
batrachians from Cavite Province (38036); insects (38049); shell of Mubonium (38165).

STANTON, T. W. (See under Jones, A. W.)

STANTON, Mrs. Gen. WILLIAM, Fort Riley, Kans.: Basket from Fort Sill, Okla., made by an Apache Indian. 37616.

STEARNS, J. B., Camden, Me.: Pottery from ancient graves in Chiriqui. Exchange. 37866.

STEARNS, Dr. R. E. C., Los Angeles, Cal.: Specimens of *Vallonia pulchella* Müller. 37000.

STEELE, E. S., Washington, D. C.: Plants. Purchase and gift. (36747, 37232, 37260.)

STEELE, W. C., Switzerland, Ga.: Received through Department of Agriculture. Plant from Florida. 37361.

STEERE, Prof. J. B., Ann Arbor, Mich.: Ethnological objects obtained from the Jamamadys Indians on the Purus River, Brazil (purchase) (37902); mammals, reptiles, fishes, and invertebrates from the Amazon River region, Brazil, collected for the Pan-American Exposition (37996); 13 birds' skins from Brazil (purchase) (38135).

STEINER, Dr. ROLAND, Grovetown, Ga.: Two fish baskets (36750); old-style piggin and a deerskin trunk (36910); wooden mug (37136); 3 fish traps (38146). (See under Smithsonian Institution, Bureau of Ethnology.)

STEJNEGER, Dr. LEONHARD, U. S. National Museum: Lizard from Virginia. 38035. (See under Agriculture, Department of; Grebnitski, N. A.)

STEJNEGER, Miss Thora, Department of Agriculture: Twelve mammals from Norway. Purchase. 37646.

STEPHENS, J. H., Jacksonville, Fla.: Part of a tooth of a southern mammoth. 37062.

STERLING, Dr. E. C., Director, Adelaide Museum, Adelaide, Australia: Forty-seven photographs of native Australians. 37888.

STEVENS, CHARLES, Columbus, Kans.: Galena and sphalerite with calcite crystals from Stephens Brothers' mine, Peacock City, Kans. 37941.

STEVENSON, J. A., Miami, Fla.: Land shells from the Bahamas (36788); about 40 specimens, 12 species, of marine shells from Florida (37517).

STEVENSON, Mrs. M. A. (See under Graham, D. D.)

STEWART, ALBAN, Jefferson Barracks, Mo.: Vertebrate fossils from Missouri. 37551. (See under Wood, Levi.)

STEWART, GUY, College Park, Md.: Fern. 36773.

STONE, WITMER, Academy of Natural Sciences, Philadelphia, Pa.: Specimen of *Viola affinis* from Pennsylvania. 38087.

STOVER, O. O., Westbrook, Me. Received through Dr. L. O. Howard: Five specimens of Neuroptera and two of Hymenoptera. 37710.

STRACHASS, NINA. (See under Marlatt, C. L.)

STROTHER, W. L., Vicksburg, Miss.: Chrysomelid beetle (*Coptocycla aurichalcea* Fab.). 38051.

STURTEVANT, R. D., Augustin, Ala.: Portion of a meteorite which fell at Selma; collected by J. W. Coleman. 37563.

STURTZ, B., Bonn, Germany: Thirty-eight European cephalopods. Purchase. 37223.

SUTTLE, J. FREEMAN, Felix, Ala.: Portion of a meteorite which fell at Selma; collected by J. W. Coleman. 37562.

SWANEY, Miss MARY. (See under Foster, W. T.)

SWETT, Miss ANNIE K., Washington, D. C.: Coccinellid beetle, *Anatis 15-punctata* Oliv. 38050.

SYDNEY, AUSTRALIA, AUSTRALIAN MUSEUM: One thousand and seventeen specimens of marine, fresh-water, and land shells (204 species); two specimens of *Dinolestes mülleri*. Exchange. 38034.

SYDNEY, NEW SOUTH WALES, BOTANIC GARDENS. Received through Department of Agriculture: Eighty-two plants from Australia. Exchange. 36758.

SYDNEY, NEW SOUTH WALES, DEPARTMENT OF MINES AND AGRICULTURE: Parasitic Hymenoptera. 37106.

TARTAGLI, A., Brozzi, near Florence, Italy: Mammal skins. Purchase. 37860.

TASSIN, WIRT, Washington, D. C.: Sapphire graver, sapphire file, and two pieces of uncut sapphire. 37434.

TAWNEY, Hon. J. A. (See under Jacob Scherffius.)

TAYLOR, C. B., Kingston, Jamaica: Two bats. 37197.

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

TAYLOR, Rev. G. W., Nanaimo, B. C.: Specimens of *Lasaea rubra* Mtg., and *Phyllaphysia taylori* Dall, from near Nanaimo, B. C. 37244.

TAYLOR, Dr. L. M., Washington, D. C.: War club with stone head of catlinite, probably Samoan. 37249.

THAYER, A. H. and GERALD, Dublin, N. H.: Mouse (*Mus musculus*) from Sorrento, Italy. 38160.

THOMAS, Miss B. T., Fort Defiance, Ariz. (post-office, Gallup, N. Mex.) Lizard. 38166.

THOMAS, J. E., Atlanta, Tex.: Rabbit scalp with horn. 37262.

THOMAS, OLDFIELD, British Museum (Natural History), London, England: Nine bats from Europe and South America. 37523.

THOMPSON, C. H., Baker City, Oreg.: Obsidian coated with an oxide of aluminum. 37170.

THOMPSON, C. W., Tacoma, Wash.: Ore from Carbon River mining district, Washington. 37637.

THOMPSON, ERNEST SETON, New York City: Two specimens of White-tail deer (37417); skulls, head skins, and leg bones of deer (37525). Purchase.

THOMPSON, J. W., Philadelphia, Pa.: Painted cast of a Japanese giant salamander. Purchase. 37684.

THORNS, F. R., Ashboro, N. C.: Samples of copper ore from Scarlet mine, near Ashboro. 37023.

TILDEN, Miss J. E., University of Minnesota, Minneapolis, Minn.: One hundred plants. Purchase. 37819.

TILLOTSON, LOTTIE S., Seattle, Wash.: Plant. 37701.

TINGMAN, A. G., Indio, Cal.: Specimens of fossil *Planorbis*. 37921.

TITUS, Prof. E. S. G., Fort Collins, Colo.: Chalcid parasite on *Carneades tesselata*. (37024); 17 bumble-bees (37859).

TOLLIN, OSCAR, Sarasota, Fla.: Marine shells from Marco, Fla. 36800.

TOMPKINS, R. J., Old Point Comfort, Va.: Herring gull. 37734.

TOURGEE, A. W., U. S. consul, Bordeaux, France: Nest of Chardomeret, from France. 36914.

TOWER, G. W. (See under Interior Department, U. S. Geological Survey.)

TOWNE, E. B., West Newton, Mass.: Eleven specimens of California condor skins, 1 egg and a few bones of the same, from California (deposit) (37278); skin of California vulture and 2 colored drawings of the same (deposit) (37429).

TOWNSEND, Prof. C. H. TYLER, received through Dr. L. O. Howard. Six thousand specimens of Diptera from Mexico. Deposit. 37245.

TRACY, S. M., Biloxi, Miss.: Received through Department of Agriculture. Plants (36791, 36822, 37072); plants from Mississippi and Louisiana, collected by Messrs. Tracy and Lloyd (37095); 813 plants from the Gulf coast (purchase) (37622).

TRAPHAGEN, Dr. F. W., Bozeman, Mont.: Two specimens of Bellerophon (*Euphemus* n. sp.) (37192); 2 briquettes of Dakota lignite and pitch (37899).

TRASK, Mrs. BLANCHE, Avalon, Santa Catalina Island, Cal. Received through Department of Agriculture. Fifty-nine plants (36855); 38 plants (37747). Purchase.

TREGASKIS, J. and M. L., London, England: Dish and patera of Samian ware. Purchase. 37044.

TROSCHEL, A., Chicago, Ill.: Fifty-four specimens of Lepidoptera. Exchange. 37680.

TUCHEBAND, Dr. A., Maranhoa, Brazil: Twenty-five bats from Brazil. Purchase. 37518.

Tucker, Leroy, Washington, D. C.: Colt's naval revolver worn by Gen. Frank Tucker, Adjutant-General C. S. A.; also a protector's revolver (purchase) (37332); Allen's patent solid cylinder revolver (gift) (37333).

Turin, Italy, Zoological Museum of Turin. Received through Lorenzo Camerano: Three bats. Exchange. 37626.

Turner, G. B., U. S. National Museum: Steel-head salmon as accessory to a Kadiak bear group. Purchase. 36960.

Turner, H. W. (See under Interior Department, U. S. Geological Survey.)

Turner, Mrs. Harriet, Alexandria, Va.: Coiled basket with body of sedge, sewed with strips of hard wood, and a handle of the same material, said to be from Arizona. 37741.

Udden, J. A., Rock Island, Ill.: Atmospheric deposits from various localities. Exchange. 36829.

Umbach, L. M., Naperville, Ill.: Two hundred and twenty-five plants, principally from Ontario. Exchange. 37467.

Umlauff, J. F. F., Museum, Hamburg, Germany: Skins and skulls of mammals. (36837, 36838.) Purchase.

U. S. National Museum, Anthropological Laboratories: Twenty-eight casts of stone implements from Michigan. 37749.

University of Upsala. (See under Upsala, Sweden.)

Upsala, Sweden, University of Upsala: Twenty-four birds' skins from Spitzbergen. Exchange. 38174.

Vasey, Miss Flora, U. S. National Museum: Stenograph. 37554.

Vaughan, T. Wayland, U. S. Geological Survey: Fifteen specimens of coral (*Dichocoeniz stokesi*) from Florida. 37796.

Velie, Dr. J. W., St. Joseph, Mich.: Three specimens of ophiurans, starfishes, and two photographs of a starfish. 37820.

Vernon, Dr. J. B., Walnut Ridge, Ark.: Mussel shell and four pearls. 37502.

Verrill, Prof. A. E., Peabody Museum, Yale University, New Haven, Conn.: Fifty-nine crustaceans from Bermuda (37555); 16 specimens (6 species) of crustaceans from Bermuda and other localities (37665).

Voight, B. G., Denver, Colo.: Pair of specimens of *Leucosticte australis* from Colorado. 37592.

Voorhies, Dr. H. G., Mount Vernon, Mo.: Vertebrate fossils. 37721.

Vroman, A. C., Pasadena, Cal.: Pack of Indian playing-cards. 37027.

Waddington, A. H., Parkersburg, Oreg.: Plant. 36872.

Wadleigh, Miss Frances, Washington, D. C.: Two dried sponges from Swampscott, Mass. 37486.

Wadmond, S. C., Racine, Wis.: Forty specimens of violets from Wisconsin. Exchange. 37383.

Wadsworth, Miss Mattie, Hallowell, Me.: Thirty-eight dragonflies, representing 9 species. Exchange. 37233.

Walcott, C. D., Hon. (See under Interior Department, U. S. Geological Survey.)

Walcott, C. D., Jr., Washington, D. C.: Three salamanders from Wisconsin. 37083.

Walker, Bryant, Detroit, Mich.: Fresh-water mussel (36979); three shells of *Lampsilis ellipsiformis* from Michigan (37785); fresh-water shells from Florida and Michigan (37906).

Walker, Henry P., Washington D. C.: Three specimens of ferns from New Hampshire. 37869.

Walker, Dr. J. W., Pine Ridge Agency, S. Dak.: Minerals, vertebrate fossils, and invertebrate fossils. 37283.

Wall, A. R., Taal, Province of Batangas, Luzon, Philippine Islands: Rhinoceros beetle (*Trichognathus melon* Olivier). 37457.

Waller, S. L., San Francisco, Cal.: Six relics from the Philippine Islands. 37212.

Wallihan, A. G., Lay, Colo.: Ten photographs of mammals. 37087.

WALLINGSFORD, W. W., U. S. National Museum: Copy of "Gilham's Manual for Volunteers and Militia, 1861," found in a Confederate fort at Hilton Head, South Carolina, during the Civil War. 37961.

WANNER, Prof. A., York, Pa.: Thirty-one specimens of fossil plants from the Triassic of York County. Exchange. 37683.

WAR DEPARTMENT: Received through Gen. John M. Wilson, Chief of Engineers, U. S. Army: Collection of geological and mineralogical specimens and fossil fishes, incident to the geological surveys west of the 100th meridian (37169). Received through Army Medical Museum, Surgeon-General's Office, Col. Alfred A. Woodhull, in charge, 3 mummies from Peru, obtained by George Kiefer in 1886, 1888, and 1899 (37371). Received through Capt. William S. McCaskey, Fort Santiago, Manila, Philippine Islands, section of Spanish flagstaff from the walls of the arsenal at Fort Santiago (37847). Deposit. Received through Department of Agriculture: One hundred and fifteen plants collected by Capt. L. S. Kelly in the Philippines (38061). (See under de Mey, Dr. C. F., U. S. Army.)

WARD, H. A., Rochester, N. Y.: Meteorite, from Misshof, Russia (exchange) (37783); meteorite from Bjurbole, southern coast of Finland (exchange) (37815); two large fan corals (purchase) (37808); three meteorites (exchange) (38159).

WARD, Prof. LESTER F., U. S. Geological Survey: Two hundred and fifty plants from Arizona. 38130.

WARD, ROWLAND, LIMITED, London, England: Specimen of Tahr, *Hemitragus jemlaicus*. Purchase. 38107.

WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N. Y.: Dried and alcoholic crustaceans (36482); large group of calcite crystals (37079); doubly terminate crystal of calcite (37080); cast of Snapping turtle and a cast of Baur's turtle (37325); concretionary clay from Weymouth, England, concretionary granite from Korsfors, Sweden, concretionary clay iron stone from New York, fulgurite from Starcynow, Poland, volcanic bomb from Mount Etna, and pisolitic limestone from Fern Island, New Zealand, (37636); specimen of *Rhea americana* (37733). Purchase.

WARD'S NATURAL SCIENCE ESTABLISHMENT—Continued.

WASHBURNE, CHESTER, Beaver Creek, Oreg.: Received through U. S. Geological Survey: Seventy-five specimens (23 species) of cretaceous mollusks from from the Chicō formation, Crook County, Oreg. 37558.

WASHINGTON, C. S., U. S. National Museum: Two specimens of tortoise (*Cistudo carolina*) from Washington, D. C., and Maryland (36866, 37071).

WEED, A. C., Ithaca, N. Y.: Alcoholic specimens of *Ancylus tardus* Say, from a creek near New Hartford, N. Y. 37892.

WEED, W. H. (See under Interior Department, U. S. Geological Survey.)

WEEKS, Miss A. D. (See under Agriculture, Department of.)

WEEKS, F. E. (See under Interior Department, U. S. Geological Survey.)

WEEMS, J. B. (no address given): Badge of the Maryland Cadets, 1887. 37694.

WELLER, Prof. STUART, University of Chicago, Chicago, Ill.: Three specimens of *Orthis missouriensis*. 37833.

WELLS, A. C., Short Hills, N. J. Received through Department of Agriculture: Eight plants from New Jersey. 37126.

WELSBACH COMPANY, Philadelphia, Pa. Received through W. E. Barrows, president: Six platinum nuggets from Trinity County, Cal. 37568.

WENZEL, H. W., Philadelphia, Pa.: Ten specimens of parasitic Hymenoptera. 37400.

WESTERN HIGH SCHOOL, Washington, D. C. Received through E. L. Morris: Two plants from Maryland. Exchange. 38069.

WHEELER, Dr. Q. M., University of Texas, Austin, Tex.: Collection of ants and two parasites, representing new genera. 37347.

White, Dr. C. A., Washington, D. C.: Weaver's glass brought from England in 1827 by James Pilkington, of Dighton, Mass. (36863); specimens of an old form of pin used in mounting insects (37447).

White, David, U. S. Geological Survey: Five specimens of *Camptosorus rhizophyllus* from Pennsylvania. 36928.

White Dental Manufacturing Company, Philadelphia, Pa. Received through H. M. Lewis: Nugget of native platinum. Purchase. 37640.

White, Miss Josie, Redding, Cal.: Sphinx moth, *Protoparce cingulata* Fabr, and a specimen of *Catocala* sp. 37069.

Whited, Kirk, Ellensburg, Wash. Received through Department of Agriculture: Forty-nine plants from Washington (exchange) (37309); 110 plants from Washington (exchange) (36756); 6 plants from Washington (gift) (37498).

Whitesell, O. C., Streator, Ill.: Part of a human skull. 37252.

Whitehead, Caleb, Washington, D. C.: Sample of beach gold from Cape Nome, Alaska. Purchase. 37519.

Whiting, Dr. C. A., Pacific School of Osteopathy, Los Angeles, Cal.: Holothurians, ascidians, barnacles, and crustaceans. (37655, 37656.)

Wilbur, Mrs. C. D., Newark, N. J.: Receipt of payment on account of bond for lands, dated December 23, 1799, and signed by William Henry Harrison. 37145.

Wilcox, T. E. (See under Agriculture, Department of.)

Wileman, A. E., British consulate, Kobe, Japan: One hundred living cocoons of *Monema flavescens*, and 100 moths representing various species. 37760.

Wilkie, J. E., Chief of Secret Service Bureau, Treasury Department: Specimen of the work of termites in a package of paper blanks. 37982.

Wilkinson, E. H. Received through Department of Agriculture: Twenty plants from Texas. 36993.

Willard, Mrs. L. G., Sanibel, Fla.: Three species of marine shells. 37608.

Willey, Henry, New Bedford, Mass.: Ten thousand plants, including lichens, from various localities. Purchase. 36901.

Williams, H. E., Sarepta, Miss.: Lucanid beetle, *Lucanus elaphus* Fabr. 37840.

Williams, Dr. J. J. G., Germantown, Pa.: Six specimens of *Tremex columba* Linnæus, and two parasites representing the species *Thalessa lunator* Fabr. 36802.

Williams, T. A., Takoma Park, D. C.: Lichen from Oregon. 37435.

Williams, Mr. (See under New York Botanical Garden.)

Williamsburgh Scientific Society, Brooklyn, N. Y. Received through Louis Kirsch: Five specimens of cut and polished white topaz. Exchange. 38109.

Williamson, E. B., Vanderbilt University, Nashville, Tenn.: Fifteen specimens (5 species) of dragonflies (exchange) (37118); 6 male specimens of *Calopteryx angustipennis* (exchange) (37715); 6 living and 3 dead crayfishes, from Tennessee (gift) (37864); 11 crayfishes (gift) (37877); 2 crayfishes (*Cambarus rusticus*), from Richland Creek, Nashville, Tenn. (gift) (38045).

Willis, Mrs. I. G., Front Royal, Va. Twelve plants. 36970.

Willis, Mrs. N. P., Washington, D. C.: One hundred plants from Switzerland. 37601.

Williston, S. W. (See under Kansas, University of.)

Wilson, Dr. H. V., Biological Laboratory, Beaufort, N. C.: Specimen of *Alpheus* with parasitic isopod. 37037.

Wilson, J. D., Syracuse, N. Y. Three specimens of *Goniatites vanuxemi* from Manlius, N. Y. Purchase. 37008.

Wilson, Brig. Gen. John M. (See under War Department.)

WILSON, Miss THOMASANA W., Washington, D. C.: Grooved stone ax from Montgomery County, Md. 36765.

WINNSBORO GRANITE COMPANY, Charleston, S. C.: Specimen of granite from Rion, S. C. 36999.

WOHLGEMUTH, CARL, Bozen, Tyrol, Austria: Complete costume of a Tyrolean peasant, with watch and other articles. Exchange. 38134.

WOLTZ, GEORGE, U. S. National Museum: Two sergeant's chevrons, U. S. Infantry; two service straps, U. S. Artillery; and two enlistment stripes, U. S. Infantry (38010); five bound volumes of Army tactics (38136).

WOMAN'S COLLEGE OF BALTIMORE, Baltimore, Md.: Received through Arthur Bibbins, director. Collection of rocks. Exchange. 37466.

WOOD, LEVI, Church, Mich.: Mastodon bones from Church, collected by Alban Stewart. Purchase. 38114.

WOOD, Dr. T. D. (See under Jenkins, Dr. O. P.)

WOOD, Maj. W. W., U. S. A., Jefferson Barracks, Mo.: Luna moth, *Actias luna* Linnæus. 36862.

WOODBURY, Mrs. FRANK M., Pelham, N. H.: Rose galls, *Rhodites bicolor* Harr. 38147.

WOODDELL, G. P., Seven Oaks, Fla.: Received through Department of Agriculture. Plant from Florida. 37124.

WOODHULL, Col. A. A. (See under War Department.)

WOOLMAN, Mrs. M. S., New York City: Loom used in the schools of New York City. 37542.

WOOSTER, L. C., State Normal School, Emporia, Kans.: Two goniatites from the Upper Coal Measures. 37227.

WOOTON, E. O., Mesilla Park, N. Mex.: Received through Department of Agriculture. Plant from New Mexico. 37598.

WORTHEN, C. K., Warsaw, Ill.: Five birds' skins from Galapagos Islands (purchase) (36709); 110 mammal skins and skulls from British America (gift) (36835); tortoise egg from South Albemarle Island, Galapagos group (purchase) (36743); 5 birds' skins from the Galapagos Islands (purchase) (36709); Whooping crane (purchase) (37587); 3 birds' skins and a Stormy petrel (purchase) (37628).

WRIGHT, B. H., Penn Yan, N. Y.: Three specimens of unios from Florida. 37294.

WRIGHT, E. M., Eureka, Ills.: Five specimens, 3 species, of marine shells from California. 37378.

YALE, CHARLES, Louisiana, Mo.: Nine specimens of Carboniferous crinoids (exchange) (37449); 3 specimens of Burlington group blastoids, 5 specimens of Burlington group crinoids (37631); 11 specimens of sub-carboniferous crinoids, blastoids, and corals (37842).

YOUNG, B. H., Louisville, Ky.: Mounted skin of a tarpon. 37086.

YOUNG BROTHERS, Cartersville, Ga.: Mole-cricket, *Gryllotalpa borealis*. 36957.

YOUNG, C. M., Crow Agency, Mont.: Timber wolf from Montana. Purchase. 37757.

YOUNG, R. T., Boulder, Colo.: Mammals and birds from Texas and Colorado. Deposit. 36926.

YOUNG, R. T., Waring, Tex.: Two batrachians from Colorado. 37038.

YOUNGLOVE, Dr. J. E., Bowling Green, Ky.: Nineteen specimens of Pentremites. 37028.

ZERFASS, J. J. R., Ephrata, Pa.: "Christopher Sauer" Bible. Purchase. 37146.

ZOLLIKOFER, E. H., St. Gallen, Switzerland: Ninety-one small mammals from Switzerland, Italy, and Sicily (37532); mammals from Switzerland (38013). Purchase.

APPENDIX III.

Distribution of Specimens.

AMERICA.

North America.

CANADA.

Ontario.

Billings, Walter R., Ottawa: Fossil crinoids (32 specimens); fossils (53 specimens). Exchange. (D. 13874, 13986.)

Fowler, James, Kingston: Violets (10 specimens). Exchange. (D. 14034.)

Geological Survey of Canada, Ottawa: Fossils (10 specimens); plants (3 specimens). Exchange. (D. 14144, 14265.)

Macoun, J. M., Ottawa: Violets (10 specimens). Exchange. (D. 14030.)

Saunders, N. E., London: Plants (6 specimens). Exchange. (D. 13985.)

MEXICO.

Mexico.

National Medical Institute, Mexico: Plants (708 specimens). Gift. (D. 14737.)

National Museum, Mexico: Plants (3 specimens); geological material (6 specimens). Exchange. (D. 14730, 14113.)

UNITED STATES.

Alabama.

Earle, F. S., Auburn: Violets (10 specimens). Exchange. (D. 14006.)

Arkansas.

Fort Smith: Public School, Marine invertebrates (288 specimens, Series VI, set 100). Gift. (D. 14275.)

California.

Anderson, F. M., Berkeley: Fossils (14 specimens). Exchange. (D. 14236.)

Brandegee, T. S., San Diego: Plants (4 specimens). Lent for study. (D. 14321.)

California—Continued.

California Academy of Sciences, San Francisco: Plants (3 specimens). Exchange. (D. 14266.)

Chandler, Harley P., Berkeley: Plants (49 specimens). Lent for study. (D. 14390.)

Eastwood, Alice, San Francisco: Violets (10 specimens). Exchange. (D. 14011.)

Grinnell, Joseph, Palo Alto: Pigmy Owl (23 skins). Lent for study. (D. 13992.)

Kimball, Laura F., National City: Plants (21 specimens). Exchange. (D. 13745.)

Lewis, J. B., Petaluma: Stone implements (8 specimens). Exchange. (D. 13739.)

Loomis, L. M., San Francisco: Birds' skins (6 specimens). Exchange. (D. 13906.)

Northrup, C. H., San Jose: Shells (3 specimens). For study. (D. 13868.)

Smith, James Perrin, Stanford University: Fossil ammonoids (19 specimens); Mesozoic fossils (77 specimens). Lent for study. (D. 13905, 14003.)

Colorado.

Ball, E. D., Fort Collins: Insects (283 specimens). Lent for study. (D. 13898.)

Bethel, E. C., Denver: Violets (10 specimens). Exchange. (D. 14014.)

Osterhout, G. E., New Windsor: Violets (10 specimens). (D. 14033.)

Titus, E. S. G., Fort Collins: Bees (332 specimens). Lent for study. (D. 13894.)

Connecticut.

Coe, Wesley R., New Haven: Nemerteans (71 specimens). Lent for study. (D. 14445.)

Connecticut—Continued.

Eames, E. H., Bridgeport: Violets (10 specimens). Exchange. (D. 14036.)

Edwards, Charles L., Hartford: Holothurians (39 specimens). Lent for study. (D. 14044.)

Evans, A. W., New Haven: Plants (66 specimens); plants (7 specimens). Lent for study. (D. 14186, 14685.)

Koons, B. F., Storrs: One snake. Exchange. (D. 14083.)

Peabody Museum, New Haven: Violets (10 specimens); marine invertebrate (1 specimen). Exchange. (D. 14140, 14380.)

Pirsson, L. V., New Haven: Geological material (15 specimens). Exchange. (D. 14686.)

Robinson, H. H., New Haven: Rocks (7 specimens). Lent for study. (D. 14574.)

Verrill, A. E., New Haven: Crustaceans (12 specimens). Exchange. (D. 14299.)

Delaware.

Canby, W. M., Wilmington: Plants (16 specimens); violets (10 specimens); plants (9 specimens). Exchange. (D. 13773, 14009, 14702.)

District of Columbia.

Beckwith, Paul, Washington: Mauser rifle. Exchange. (D. 14185.)

Benjamin, Mrs. C. G., Washington: Moki peach basket. Exchange. (D. 14118.)

Columbian University, Washington: Fossils (375 specimens). Lent for study. (D. 14117.)

Crosby, O. T., Washington: Cinctures (2 specimens). Lent for study. (D. 14313.)

Department of Agriculture, Washington: Minerals (222 specimens) (D. 14631).

Greene, E. L., Washington: Violets (10 specimens). Exchange. (D. 14031.)

Hayford, Mark C., Washington: Geological material (22 specimens); botanical material (6 specimens). Exchange. (D. 13828, 13848.)

District of Columbia—Continued.

Heitmuller, A., Washington: Ethnological material (167 specimens); Pueblo pottery (55 specimens). Exchange. (D. 13952, 14129.)

Holm, Theodor, Brookland: Plants (15 specimens). Lent for study. (D. 14425.)

Howell, E. E., Washington: Marble (3 slabs). Exchange. (D. 13925.)

Knowlton, F. H., Washington: Ferns (3 specimens). Exchange. (D. 14344.)

Morris, E. L., Washington: Violets (10 specimens). Exchange. (D. 14024.)

Nelson, Elias, Washington: Plants (47 specimens). Exchange. (D. 14470.)

Peters, A. J., Washington: Violets (10 specimens). Exchange. (D. 14037.)

Ridgway, R., Brookland: Birds' skins (34 specimens). Lent for study. (D. 13858.)

Topping, D. L., Washington: Ferns (3 specimens); plants (20 specimens). Exchange. (D. 14352, 14465.)

U. S. Fish Commission: Fur-seal skins (3 specimens). Economic crustaceans (49 specimens). Ethnological material. Lent for study. Crustaceans (48 specimens). Lent for study. Shells (67 specimens). Lent for study. Rigged-boat models (7 specimens); collection of fishery apparatus. Shrimp. (D. 13964, 14088, 14090, 14315, 14334, 14394, 14395, 14632.)

U. S. Geological Survey: Minerals (16 specimens). (D. 14689.)

Yaste, W. J., Washington: Pueblo (3 specimens.) Exchange. (D. 14739.)

Georgia.

Wesleyan Female College, Macon: Geological material (43 specimens). Gift. (D. 14423.)

Idaho.

University of Idaho, Moscow: Geological material (28 specimens and 18 thin sections). Gift. (D. 14415.)

Illinois.

Chicago, University of Chicago: Fossils (10 specimens). Exchange. (D. 14141.)

Illinois—Continued.

Elliot, D. G., Chicago: American mammals (14 skulls); alcoholic bats (4 specimens). Lent for study. (D. 14641, 14760.)

Enteman, M. M., Chicago: Insects (392 specimens). Lent for study. (D. 14270.)

Field Columbian Museum, Chicago: Indian shields (8 specimens). Exchange. (D. 14525.)

Forbes, S. A., Urbana: Orang-outang (skull). Lent for study. (D. 13919.)

Meek, S. E., Chicago: Shark (jaw) and fish (teeth). Lent for study. (D. 14420.)

Millspaugh, C. F., Chicago: Violets (10 specimens). Exchange. (D. 14025.)

St. Francis Academy, Joliet: Casts of prehistoric stone implements (95 specimens, set 77). Gift. (D. 14095.)

Tarbell, F. G., Chicago: Etruscan pottery (4 specimens). Lent for study. (D. 14066.)

Troschel, A., Chicago: Lepidoptera (54 specimens). Exchange. (D. 14419.)

Umbach, L. M., Naperville: Violets (10 specimens). Exchange. (D. 14026.)

Indiana.

Blatchley, W. S., Indianapolis: Salamanders (3 specimens). Lent for study. (D. 14619.)

Eigenmann, C. G., Bloomington: Salamander. Lent for study. (D. 14154.)

Evermann, B. W., Culver: Plants (105 specimens) Lent for study. (D. 13804.)

Scheib, K., Lawrenceburg: Indian relics (14 specimens). Exchange. (D. 14075.)

Workingman's Institute and Public Library, New Harmony: Casts of prehistoric stone implements (set 79); invertebrates (24 specimens). Gift. (D. 14296.)

Iowa

Fink, B., Fayette: Plants (9 specimens). Exchange. (D. 14684.)

Historical Department of Iowa, Des Moines. Archæological material (54 specimens). Gift. (D. 13812.)

Iowa—Continued.

Iowa City: University of Iowa. Hydroids. Gift. (D. 14642.)

Jewell Lutheran College, Jewell: Marine invertebrates (291 specimens, Series VI, set 99). Gift. (D. 14148.)

Sharpe, R. W., Dubuque: Ostracoda (500 specimens). Lent for study. (D. 13791.)

Kansas.

Hitchcock, A. S., Manhattan: Violets (10 specimens). Exchange. (D. 14023.)

Lawrence: University of Kansas. Fossil plants (128 specimens). Exchange. (D. 13818.)

Kentucky.

Garman, H., Lexington: Marine invertebrates (20 specimens). Lent for study. (D. 14501.)

Price, Sadie F., Bowling Green: Ferns (3 specimens). Exchange. (D. 14353.)

Louisiana.

Louisiana Industrial Institute, Ruston: Geological material (32 specimens); invertebrates (26 specimens). Gift. (D. 14479.)

Monroe, City School: Geological material (31 specimens); invertebrates (28 specimens). Gift. (D. 14487.)

Maine.

Norton, Arthur H., Westbrook: Birds' skins (18 specimens). Lent for study. (D. 13847.)

Wadsworth, Mattie, Hallowell: Odonata (32 specimens). Exchange. (D. 13979.)

Maryland.

Bantz, G. E., Baltimore: Sponges (15 specimens). For study. (D. 14259.)

Smith, John Donnell, Baltimore: Plants (90 specimens). Exchange. (D. 14158.)

Woman's College, Baltimore: Collection of Foraminifera and Pteropod ooze. Gift. (D. 14131.)

Massachusetts.

Amherst College, Amherst: Collection of Foraminifera. Gift. (D. 14547.)

Bangs, Outram, Boston. Birds' skins (16 specimens). Lent for study. (D. 14731, 14181.)

Massachusetts—Continued.

Brewster, William, Cambridge: Birds' skins (2 specimens). Lent for study. (D. 14475.)

Clarke, S. F., Williamstown: Marine invertebrates (2 specimens). Lent for study. (D. 13938.)

Crosby, W. O., Boston: Green Porphyry (1 specimen). Exchange. (D. 14719.)

Cummings, Clara, Wellesley: Plants (10 specimens). Exchange. (D. 14373.)

Davenport, G. E., Medford: Ferns (12 specimens). Lent for study. Plants (14 specimens). Exchange. Plants (2 specimens). Lent for study. Plants (51 specimens). Lent for study. Plants (3 specimens). Lent for study. Plants (2 specimens). Exchange. Plants (13 specimens). Lent for study. (D. 13767, 13817, 13980, 14110, 14138, 14481.)

Deane, Walter, Boston: Violets (10 specimens). Exchange. Plant (1 specimen). Lent for study. (D. 14010, 14292.)

Dodge, Raynal, Newburyport: Plants (4 specimens). Exchange. (D. 13967.)

Eigenmann, C. H., Woods Hole: Fishes (24 specimens). Lent for study. (D. 13866.)

Fernald, M. L., Boston: Violets (10 specimens). Exchange. Plants (155 specimens). Lent for study. (D. 14336.)

Garman, S., Cambridge: Fishes (2 specimens). Lent for study. (D. 14663.)

Gray Herbarium, Boston: Plants (81 specimens). Lent for study. Violets (10 specimens). Exchange. Plants (70 specimens). Exchange. Plants (47 specimens). Lent for study. Plants (3 specimens). Exchange. Plants (152 specimens). Exchange. Plants (319 specimens). Exchange. (D. 13799, 14012, 14183, 14184, 14263, 14593, 14714.)

Holmes, S. J., Woods Hole: Amphipods. Lent for study. (D. 13845.)

Massachusetts—Continued.

Howe, Reginald Heber, jr., Brookline: Birds' skins (68 specimens). Lent for study. (D. 14145.)

Hyatt, Alpheus, Boston: Shells. Lent for study. (D. 13780.)

Morse, E. S., Salem: Cambrian brachiopods (20 specimens). For study. (D. 14544.)

Museum of Comparative Zoology, Cambridge: Fossils (10 specimens); Ophiurans (212 specimens). Exchange. (D. 14142, 14383.)

Roberts, E. W., Chelsea: Indian baskets (9 specimens). Exchange. (D. 14515.)

Robinson, B. L., Boston: Plants (4 specimens). Lent for study. (D. 14630.)

Slosson, Margaret, Andover: Plants (2 specimens). Exchange. (D. 14139.)

True, R. H., Cambridge: Plants (60 specimens). Lent for study. (D. 14529.)

Wilson, Charles B., Westfield: Parasitic Copepods (2,900 specimens). Lent for study. (D. 14568.)

Woodworth, W. McM., Cambridge: Geological material (28 specimens and 4 thin sections). Lent for study. (D. 14045.)

Michigan.

Clark, H. L., Olivet: One bird in alcohol. Lent for study. (D. 13974.)

Cole, Leon J., Ann Arbor: Marine invertebrates (3 specimens). Lent for study. (D. 14000.)

Minnesota.

McMillan, Conway, Minneapolis: Violets (10 specimens). Exchange. (D. 14021)

Minneapolis, University of Minnesota: Plants (3 specimens). Exchange. (D. 14264.)

Tilden, Josephine E., Minneapolis: Plant. Lent for study. (D. 14124.)

Missouri.

Glatfelter, M. M., St. Louis: Violets (10 specimens). Exchange. (D 14008.)

Missouri Botanical Gardens, St. Louis: Violets (10 specimens). Exchange.

Missouri—Continued.

Living plants (2 specimens). Exchange. Plants (3 specimens). Gift. (D. 14016, 14058, 14262.)

Trelease, William, St. Louis: Plants (58 specimens). Lent for study. (D. 13900, 14472.)

Yale, Charles, Louisiana: Fossils (13 specimens). Exchange. (D. 14204.)

Nebraska.

Williams, A. L., Omaha: Foraminifera. For study. (D. 14169.)

New Hampshire.

Eaton, A. A., Seabrook: Plants (5 specimens). Lent for study. Violets (10 specimens). Exchange. Plants (44 specimens). Lent for study. Plants (10 specimens). Lent for study. (D. 13895, 14015, 14128, 14322.)

New Jersey.

Best, G. N., Rosemont: Plants (28 specimens). Lent for study. (D. 13957.)

Brown, Mrs. John Crosby, Orange: Musical instruments (2 specimens). Exchange. (D. 14749.)

Emmons, G. T., Princeton: Indian basket and bone carving. Exchange. (D. 14536.)

Trenton: High School, Casts of prehistoric stone implements (80 specimens, set 86). Gift. (D. 14487.)

Washington, H. S., Locust: Minerals (2 specimens). Exchange. (D. 14655.)

New Mexico.

Birtwell, F. J., Albuquerque: Birds' skins (60 specimens); birds' skins (50 specimens); birds' skins (75 specimens). Lent for study. (D. 14280, 14301, 14348.)

Springer, Frank, East Las Vegas: Dried specimen of *Pentacrinus*. Exchange. (D. 14449.)

New York.

Allen, J. A., New York: Birds' skins (2 specimens); plants (43 specimens); 16 skins of opossum and 19 skulls. Lent for study. (D. 13761, 13763, 14546.)

American Museum of Natural History, New York: Seven plaster casts of stone and whalebone clubs. Exchange.

New York—Continued.

Fossils (10 specimens). Exchange. Eskimo clothing, etc. Exchange. Fossil medusæ (31 specimens). Gift. (D. 13861, 14146, 14346, 14534.)

Bicknell, E. P., Riverdale-on-Hudson: Violets (10 specimens). Exchange. (D. 14017.)

Boas, Franz, New York: Copper images. Lent for study. (D. 14471.)

Britton, Dr. N. L., New York: Violets (10 specimens). Exchange. Plant. Lent for study. (D. 14039, 14418.)

Britton, Mrs. N. L., New York: Plants (29 specimens). Lent for study. Plants (65 specimens). Lent for study. Plants (14 specimens). Exchange. Plants (85 specimens). Exchange. Plants (35 specimens). Exchange. Plants (7 specimens). Lent for study. Plants (27 specimens). Exchange. Plants (9 specimens). Lent for study. (D. 14194, 14114, 14215, 14278, 14350, 14550, 14708, 14709.)

Brooklyn: Institute of Arts and Sciences, Pueblo pottery (55 specimens). Exchange. (D. 14693.)

Brooklyn: Public School No. 15, Casts of prehistoric stone implements (83 specimens, set 82). Gift. (D. 44422.)

Buffalo: Historical Society, Casts of prehistoric stone implements (97 specimens, set 75). Gift. (D. 13774.)

Burnham, S. H., Vaughns: Violets (10 specimens). Exchange. (D. 14022.)

Bussing, D. S., Minaville: Stone implements (58 specimens). Exchange. (D. 14571.)

Chapman, Frank M., New York: Capromys (28 specimens). Lent for study. (D. 14320.)

Clarke, John M., Albany: Fossils (559 specimens); fossil (1 specimen); fossils (54 specimens). Lent for study. (D. 14001, 14237, 14620.)

Clute, W. M., Binghamton: Plants (3 specimens). Exchange. (D. 14279.)

Cochrane, A. V. S., Hudson: (Geological material (22 specimens). For examination. (D. 14404.)

New York—Continued.

Columbia University, New York: Plants (3 specimens). Exchange. (D. 14261.)

Cowell, J. F., Buffalo: Violets (10 specimens). Exchange. (D. 14027.)

Dwight, Jonathan, jr., New York: Birds' skins (28 specimens). Lent for study. (D. 14507.)

Gilbert, B. D., Clayville: Plants (3 specimens). Lent for study. (D. 14551.)

Grammar School No. 2, Brooklyn: Casts of prehistoric stone implements (97 specimens, set 74). Gift. (D. 13747.)

Grout, H. J., Brooklyn: Plants (12 specimens). Exchange. (D. 13877.)

Haberer, J. V., Utica: Plants (77 specimens). Lent for study. (D. 14543.)

Hay, O. P., New York: Fossils (2 specimens and fragments). Lent for study. (D. 14454.)

House, H. D., Syracuse: Plants (41 specimens). Exchange. (D. 14054.)

New York Botanical Garden, Bronx Park, New York: Plants (3 specimens). Lent for study. Plants (120 specimens). Lent for study. (Plant (1 specimen). Exchange. Plants (2 specimens). Lent for study. Plants (315 specimens). Exchange. (D. 13941, 14056, 14182, 14248, 14748.)

New York State Museum, Albany: Fossils (10 specimens). Exchange. (D. 14147.)

Robinson, Wirt, West Point: Mouse (skin and skull). Exchange. (D. 14530.)

Rowlee, W. W., Ithaca: Violets (10 specimens). Exchange. (D. 14032.)

Rydberg, P. A., Bronx Park, New York: Plants (206 specimens); plants (70 specimens); plants (123 specimens). Lent for study. (D. 14073, 14094, 14195.)

Smith, Mrs. Hugh M., Brooklyn: Plants (32 specimens). Exchange. (D. 14362.)

Underwood, L. M., New York: Plants (5 specimens). Lent for study. (D. 14458.)

New York—Continued.

Union College, Schenectady: Isopods (10 specimens). Exchange. (D. 14323.)

North Carolina.

Beadle, C. D., Biltmore: Violets (10 specimens). Exchange. Plants (50 specimens). Lent for study. (D. 14013, 14165.)

Biltmore Herbarium, Biltmore: Ferns (3 specimens). Exchange. (D. 14351.)

Mohr, Charles, Asheville: Plants (5 specimens). Lent for study. (D. 13875.)

Ohio.

Comstock, F. W., Cleveland: Violets (10 specimens). Exchange. (D. 14035.)

Dayton: Public Library and Museum, Corals and sponges (55 specimens). Gift. (D. 14041.)

Hine, James S., Columbus: Shells (2 specimens). Lent for study. (D. 14162.)

Pennsylvania.

Academy of Natural Sciences, Philadelphia: Alcoholic bats (2 specimens); plants (3 specimens). Exchange. (D. 14120, 14260.)

Barbour, W. C., Sayre: Plants (31 specimens). Exchange. (D. 14224.)

Carnegie Museum, Pittsburg: Model of Red River cart and model of Chinese wheelbarrow. Lent for study. Model of Egyptian chariot and model of Persian farm cart. Lent for study. Rattlesnakes (2 specimens); marine invertebrates (310 specimens); fossils (10 specimens). Exchange. (D. 13764, 13888, 13932, 14092, 14143.)

Crawford, Joseph, Philadelphia: Violets (10 specimens); ferns (3 specimens). Exchange. (D. 14007, 14354.)

Culin, Stewart, Philadelphia: Indian games (16). Lent for study. (D. 14557.)

Dixon, Samuel G., Philadelphia: Terracotta spindle-whorls (37 specimens). Lent for study. (D. 14598.)

Free Museum of Science and Art, Philadelphia: Ethnological material (158 specimens); game of Mancala. Lent for study. (D. 13907, 13921.)

Pennsylvania—Continued.

Heller, A. A., Lancaster: Plants (25 specimens). Lent for study. Plants (69 specimens). Lent for study. Violets (10 specimens). Exchange. (D. 13769, 13996, 14341.)

Paxson, H. D., Bycot Station: Ethnological and archaeological material (317 specimens); casts of prehistoric stone implements (95 specimens, set 80). Exchange. (D. 14341.)

Philadelphia: Commercial Museum, Violets (10 specimens). Exchange. (D. 14028.)

Rehn, J. A. G., Philadelphia: Bats (3 specimens); bats (35 specimens). Lent for study. (D. 14384, 14605.)

Strecker, Hermann, Reading: Lepidoptera (9 specimens). Lent for study. Lepidoptera (3 specimens). Exchange. (D. 13768.)

Rhode Island.

Collins, Franklin, Providence: Violets (10 specimens). Exchange. (D. 14018.)

Critchley, W. F., Providence: Two skulls of fur seals. Lent for study. (D. 14115.)

Museum of Natural History, Providence: White-footed mice (3 specimens). Gift. (D. 14081.)

Parsons, F. R., Providence: Birds' eggs (19 specimens). Exchange. (D. 14337.)

Tennessee.

Martin College for Young Ladies, Pulaski: Casts of prehistoric stone implements (97 specimens, set 76). Gift. (D. 13975.)

Williamson, E. D., Nashville: Dragon flies (14 specimens). Exchange. Insects (9 specimens). Lent for study. Dragon flies (199 specimens.) Lent for study. Dragon flies (24 specimens.) Exchange. Dragon fly. Exchange. (D. 13947, 14116, 14281, 14294, 14379.)

Texas.

Singley, J. A., Giddings: Eocene corals (55 specimens). Exchange. (D. 13826.)

Utah.

Jones, Marcus E., Salt Lake City: Violets (10 specimens). Exchange. (D. 14020.)

Washington.

Flett, J. B., Tacoma: Plants (25 specimens). Exchange. (D. 14232.)

Piper, C. V., Pullman: Plants (22 specimens). Exchange. (D. 13913.)

Wisconsin.

Black River Falls: High school, Casts of prehistoric stone implements (80 specimens, set 87). Gift. (D. 14581.)

Eau Claire: High school, Casts of prehistoric stone implements (81 specimens, set 88). Gift. (D. 14522.)

Elkhorn: High school, Casts of prehistoric stone implements (87 specimens, set 81). Gift. (D. 14333.)

La Crosse: High school, Casts of prehistoric stone implements (81 specimens, set 89). Gift. (D. 14523.)

Omro: High school, Casts of prehistoric stone implements (99 specimens, set 78). Gift. (D. 14256.)

Racine: High school, Casts of prehistoric stone implements (81 specimens, set 90). Gift. (D. 14597.)

Sheboygan: High school, Casts of prehistoric stone implements (84 specimens, set 83); fishes (69 specimens). Gift. (D. 14491.)

Waukesha: High school, Casts of prehistoric stone implements (80 specimens, set 84); fishes (66 specimens, set 115). Gift. (D. 14492.)

West Bend: High school, Casts of prehistoric stone implements (80 specimens, set 85); fishes (68 specimens, set 113). Gift. (D. 14493.)

Wyocena: Public schools, Casts of prehistoric stone implements (82 specimens, set 91). Gift. (D. 14720.)

Wadmond, S. C., Racine: Plants (20 specimens). Exchange. (D. 14703.)

Wyoming.

Rocky Mountain Herbarium, Laramie: Plant. For study. (D. 14461.)

WEST INDIES.

Jamaica.

Taylor, C. B., Kingston: Shells (3 specimens). For study. (D. 14405.)

SOUTH AMERICA.

BRAZIL.

Derby, Orville A., São Paulo: Sandstone. Lent for study. (D. 13959.)

Museu Paulista, São Paulo: Insects (8 specimens). Exchange. (D. 13805.)

URUGUAY.

National Museum, Montevideo: Alcoholic specimens of bats. Gift. (D. 14168.)

ASIA.

INDIA.

Indian Museum, Culcutta: Ophiurans (39 specimens). Exchange. (D. 13488.)

EUROPE.

AUSTRIA.

Berwerth, Fred, Vienna: Meteorite. Exchange. (D. 14559.)

Imperial Royal Geological Establishment, Vienna: Fossils (10 specimens). Exchange. (D. 14152.)

Royal Natural History Museum, Vienna: Ophiurans (42 specimens). Exchange. (D. 14387.)

BELGIUM.

Mahillon, Victor C., Brussels: Model of musical instrument. Exchange. (D. 14716.)

de Vrière, Baron Raoul, Lophem Zedelghem: Beetles (226 specimens). Exchange. (D. 13869.)

DENMARK.

Bergh, R., Copenhagen, Mollusks (3 specimens). Lent for study. (D. 13793.)

Zoological Museum, Copenhagen: Ophiurans (50 specimens). Exchange. Echini (5 specimens). Exchange. Echini (1 specimen). Lent for study. (D. 14398, 14524.)

FRANCE.

Gandoger, Michel, Villefranche: Plants (179 specimens). Exchange. (D. 14715.)

Grès, Louis, Noisy-le-Sec, Seine: Plants (8 specimens). Lent for study. (D. 13827.)

Museum of Natural History, Paris: Economic crustaceans (69 specimens); fossils (10 specimens); ophiurans (57 specimens). Exchange. (D. 13830, 14161, 14389.)

Sidorot, Professor, Rennes: Plant. For study. (D. 14309.)

GERMANY.

Krantz, F., Bonn: Meteorite. Exchange. (D. 13978.)

Royal Museum of Natural History, Berlin: Diptera (384 specimens). Exchange. (D. 14700.)

Schellwien, E., Königsberg: Fossils (516 specimens). Lent for study. (D. 14122.)

Von Zittel, Karl A., Munich: Fossils (10 specimens). Exchange. (D. 14150.)

Zoological Museum, Kiel: Shrimp. Exchange. (D. 13762.)

GREAT BRITAIN.

England.

British Museum (Natural History), London: Bats (2 specimens); squirrels (2 skins and skulls); fossils (10 specimens); ophiurans (71 specimens). Exchange. Mammals (7 specimens). Lent for study. Mammals (3 specimens). Exchange. (D. 13902, 13904, 14151, 14386, 14160.)

Druery, Charles T., London: Ferns (10 specimens); plants (5 specimens). Exchange. (D. 13945, 13981.)

Günther, A., Surrey: Mexican toad. Lent for study. (D. 14277.)

Hampson, Sir George F., London: Moths (10 specimens). Lent for study. (D. 13878.)

Lovett, Edward, Croydon: Archæological material (40 specimens). Exchange. (D. 14447.)

Lydekker, R., London: Casts of Eskimo faces (6 specimens); Indian heads (5 specimens). Exchange. (D. 14391.)

England—Continued.

Priest, B. W., Keepham: Foraminifera (12 specimens). For study. (D. 13862.)

Royal Gardens, Kew: Plants (246 specimens). Exchange. Plants (2 specimens). Lent for study. (D. 14057, 14595, 14654.)

Thomas, Oldfield, London: Squirrel (skin and skull); squirrels (9 specimens); Cuban bats (4 skins and skulls). Lent for study. (D. 13903, 13983, 14667.)

Ireland.

Science and Art Museum, Dublin: Material from flint working sites. Gift. (D. 13936.)

HOLLAND.

van Roon, G., Rotterdam: Beetles (71 specimens). Exchange. (D. 14340.)

Royal Geological Museum, Leiden: Fossils (39 specimens). Exchange. (D. 14276.)

ITALY.

Camerano, Lorenzo, Turin: Bones of a Barren Ground Caribou (3 specimens.) Lent for study. (D. 14583.)

Gestro, R., Genoa: Bats in alcohol (24 specimens). Exchange. (D. 14180.)

Royal Zoological Museum, Turin: Bats in alcohol (3 specimens); marine invertebrates (2 specimens). Exchange. (D. 14364, 14369.)

NORWAY.

Brögger, W. C., Christiania: Rocks (79 specimens). Exchange. (D. 14706.)

SPAIN.

Comabella, I., Barcelona: Coleoptera (12 specimens). Exchange. (D. 14613.)

SWEDEN.

Natural History Museum, Stockholm: Fossils (10 specimens). Exchange. (D. 14149.)

SWITZERLAND.

Narbel, Paul, Lausanne: Mammals (48 skins and skulls). Exchange. (D. 14464.)

OCEANIA.

NEW ZEALAND.

Canterbury Museum, Christchurch: Fossils (44 specimens). Exchange. (D. 14109.)

APPENDIX IV.

Bibliography.

PUBLICATIONS OF THE MUSEUM.

ANNUAL REPORT.

Annual Report | of the | Board of Regents | of the | Smithsonian Institution, | showing | the operations, expenditures, and condition | of the Institution | for the | year ending June 30, 1897. | — | Report | of the | U. S. National Museum. | Part II. | — | Washington: | Government Printing Office. | 1901.

8 vo., pp. xii, 1–515, 110 pls.

Annual Report | of the | Board of Regents | of the | Smithsonian Institution, | showing | the operations, expenditures, and condition | of the Institution | for the | year ending June 30, 1898. | — | Report | of the | National Museum. | — | Washington: | Government Printing Office. | 1900.

8vo., pp. xviii, 1–1294, 36 pls., 347 figs.

Annual Report | of the | Board of Regents | of the | Smithsonian Institution, | showing | the operations, expenditures, and condition | of the Institution | for the | year ending June 30, 1899. | — | Report | of the | U. S. National Museum. | — | Washington: | Government Printing Office. | 1901.

8vo., pp. xv, 1–598, 62 pls., 74 figs.

PROCEEDINGS.

Smithsonian Institution. | United States National Museum. | — | Proceedings | of the | United States National Museum. | — | Volume XXII. | — | Published under the direction of the Smithsonian Institution. | — | Washington: | Government Printing Office. | 1900.

8vo., pp. xii, 1–1075, 18 pls., 15 figs.

SPECIAL BULLETIN.

Smithsonian Institution. | United States National Museum. | — | Special Bulletin. | — | American Hydroids. | — | Part I. | The Plumularidæ, | with thirty-four plates, | By | Charles Cleveland Nutting, | Professor of Zoology, University of Iowa. | — | Washington: | Government Printing Office. | 1900.

Special Bulletin U. S. Nat Mus., No. 4.
4to., pp. ii, 1–285, 34 pls., 124 figs.

PAPERS PUBLISHED IN SEPARATE FORM DURING THE YEAR ENDING JUNE 30, 1901.

[From the Report for 1898.]

Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1898. By Charles D. Walcott. pp. 1–149.

The crocodilians, lizards, and snakes of North America. By Edward Drinker Cope. pp. 153–1270, pls. 1–36, figs. 1–346.

[From the Report for 1899.]

[From Volume 23 of the Proceedings.]

No. 1220. On the Wheatears (*Saxicola*) occurring in North America. By Leonhard Stejneger. pp. 473–481.

No. 1221. List of fishes collected in the River Pei-Ho, at Tientsin, China, by Noah Fields Drake, with descriptions of seven new species. By James Francis Abbott. pp. 483–491.

No. 1222. Key to the Isopods of the Atlantic coast of North America, with descriptions of new and little-known species. By Harriet Richardson. pp. 493–579.

No. 1223. Some spiders and other Arachnida from southern Arizona. By Nathan Banks. pp. 581–590, pl. 22.

No. 1224. A new Dinosaur, *Stegosaurus marshi*, from the Lower Cretaceous of South Dakota. By Frederic A. Lucas. pp. 591, 592, pls. 23, 24.

No. 1225. New Diptera in the U. S. National Museum. By D. W. Coquillett. pp. 593–618.

No. 1226. A list of ferns and fern allies of North America north of Mexico, with principal synonyms and distribution. By William R. Maxon. pp. 619–651.

No. 1227. A systematic arrangement of the families of the Diptera. By D. W. Coquillett. pp. 653–658.

No. 1228. A comparison of the osteology of the Jerboas and Jumping Mice. By Marcus W. Lyon, jr. pp. 659–668, pls. 25–27.

No. 1229. Cambrian Brachiapoda; *Obolella*, subgenus *Glyptias; Bicia; Obolus*, subgenus *Westonia;* with descriptions of new species. By Charles D. Walcott. pp. 669–695.

No. 1230. A revision of certain species of plants of the genus *Antennaria*. By Elias Nelson. pp. 697–713.

No. 1231. Description of new species of Snake from Clarion Island, west coast of Mexico. By Leonhard Stejneger. pp. 715–717.

No. 1232. On the relationship of the Lutianoid fish, *Aphareus furcatus*. By David Starr Jordan and Edwin Chapin Starks. pp. 719–723, pls. 28, 29.

No. 1234. The proper names of *Bdellostoma* or *Heptatrema*. By Theodore Gill. pp. 735–738.

CIRCULAR 50.

[Circular requesting information relating to the nesting habits, nests, and eggs of North American birds.] By Richard Rathbun. 1901. pp. [1]–[3].

PAPERS BY OFFICERS OF THE NATIONAL MUSEUM AND OTHERS, BASED WHOLLY OR IN PART UPON THE NATIONAL COLLECTIONS.

ABBOTT, James Francis. List of fishes collected in the River Pei-Ho, at Tientsin, China, by Noah Fields Drake, with descriptions of seven new species.

Proc. U. S. Nat. Mus., XXIII, No. 1221, Feb. 25, 1901, pp. 483–491.

ADLER, Cyrus, and CASANOWICZ, I. M. Descriptive catalogue of a collection of objects of Jewish ceremonial deposited in the U. S. National Museum, by Hadji Ephraim Benguiat.

Rep. *Smithsonian Inst.* (U. S. Nat. Mus.), 1899 (1901), pp. 539–561, pls. 1–36.

ALLEN, J. A. List of birds collected in the district of Santa Marta, Colombia, by Mr. Herbert H. Smith.

Bull. Am. Mus. Nat. Hist., XIII, Aug. 25, 1900, pp. 117–184.

This is a list of species collected by Mr. Smith in the Santa Marta region of Colombia, together with the additional species (mentioned in brackets) recorded by Mr. Bangs in earlier papers. Some 380 species are treated, often at considerable length. The list is preceded by an analysis of previous work in this region and a list of papers bearing on the territory under consideration. The following are described as new: *Odontophorus atrifrons*

ALLEN, J. A.—Continued.

(p. 127), *Myiobius assimilis* (p. 144), *Ochthœca jessupi* (p. 151), *O. olivacea* (p. 152), *Attila parvirostris* (p. 153), *Attila rufipectus* (p. 153), *Grallaria bangsi* (p. 159), *Myrmothcrula sanctæmartæ* (p. 160), and *Hylophilus brunneus* (p. 171).

ASHMEAD, WILLIAM H. The Aculeate Hymenoptera of the islands of St. Vincent and Grenada, with additions to the Parasitic Hymenoptera and a list of the described Hymenoptera of the West Indies.

Trans. Ent. Soc. London, July, 1900, pp. 207-367.

Records the species of the Aculeata taken on these islands by Mr. Herbert H. Smith, gives additions to the Parasitica, and finishes with a complete list of the Hymenoptera of the West Indies. One hundred and three new species are described and 1,291 West Indian species are listed.

——— Classification of the Ichneumon flies, or the superfamily Ichneumonoidea.

Proc. U. S. Nat. Mus., XXIII, No. 1206, Oct. 13, 1900, pp. 1-220.

This vast superfamily is divided by the author into 6 families (Evaniidæ, Agriotypidæ, Ichneumonidæ, Alysiidæ, Braconidæ, and Stephanidæ), 28 subfamilies, 64 tribes, and 1,146 genera, tables for all of which are given. In his introduction he says that a difference of opinion always has existed and, in the nature of the case, always will exist, as to what constitute sufficient characters for the erection of genera and higher groups; in consequence, he has recognized many genera which are ignored by some authors. A high tribute is paid to Dr. Arnold Förster's work on these insects, upon which, he states, his own work is almost entirely based, he having restored most of Förster's genera and recognized his so-called families as either subfamilies or tribes. A table of the author's superfamilies in the Hymenoptera is reproduced at the beginning of the work, and at the end are tables for the separation of the 94 families into which the order is divided. Eighty genera are new. Lists, with references, are given for the genera which are unknown to the author, and for those which have been incorrectly placed in the Ichneumonoidea. A bibliography of genera, alphabetically arranged, is also included.

——— Classification of the fossorial, predaceous, and parasitic wasps, or the superfamily Vespoidea. (Paper No. 3.)

Canadian Entomologist, XXXII, No. 10, Oct., 1900, pp. 295, 296.

Treats of the subfamily Ageniinæ and gives a table for separating the six genera placed therein.

ASHMEAD, WILLIAM H. Description of a new genus in the Aphelininæ.

Canadian Entomologist, XXXII, No. 11, Nov., 1900, p. 349.

Describes *Myiocnema comperei*, new genus and species, from Brisbane, Queensland, bred from *Lecanium oleæ* Bernard.

——— Some changes in generic names in the Hymenoptera.

Canadian Entomologist, XXXII, No. 12, Dec., 1900, p. 368.

The author proposes new names for sixteen genera whose original names are preoccupied in other groups of zoology.

——— Some hymenopterous parasites from dragon-fly eggs.

Entomological News, XI, No. 10, Dec., 1900, pp. 615-617.

Gives descriptions of five species, *Hyperteles polynemæ*, *Tetrastichus polynemæ*, *Brachista pallida*, *Centrobia odonatæ*, and *Polynema needhami*, all bred from the eggs of species of *Lestes*, by Prof. James G. Needham.

——— Some new exotic parasitic Hymenoptera.

Entomological News, XI, No. 10, Dec., 1900, pp. 623-630.

Seven new species are described from a collection received for determination from the Städtisches Museum für Natur-, Völker- und Handels-kunde at Bremen. Six of these species are from the Chatham Islands, collected by the director of the Bremen museum, Dr. Hugo H. Schauinsland, and the assistant entomologist, Prof. T. D. Alfken. Two new genera of Braconidæ are described, *Schauinslandia* and *Doryctomorpha*, and a table for the separation of the subfamilies of the Alysiidæ is included.

——— [Hymenoptera parasitica.]

Psyche, IX, No. 297, Jan., 1901, pp. 147, 148.

Included in "Some insects of the Hudsonian Zone in New Mexico.—II," by Prof. T. D. A. Cockerell. Eight species are listed, six of which are new.

——— [Hymenoptera (part).]

Psyche, IX, No. 300, Apr., 1901, pp. 185, 186.

Included in "Some insects of the Hudsonian Zone in New Mexico.—IV," by Prof. T. D. A. Cockerell. Six species are listed, two of which are new.

——— *Magrettina*, a new genus in the family Mymosidæ.

Proc. Ent. Soc. Wash., IV, No. 4, May 25, 1901, pp. 444, 445.

The fossorial wasp, *Meria nocturna* Morawitz, from Turkestan, is here made the type of a new genus which is named in honor of the Italian hymenopterologist, Dr. Paolo Magretti, of Milan.

ASHMEAD, WILLIAM H. Three new parasitic Hymenoptera from South Africa.

Canadian Entomologist, XXXIII, No. 5, May, 1901, pp. 138–140.

Describes *Allotropa lounsburyi* and *Coccidencyrtus flavus*, bred from *Dactylopius* sp. on Gorse, and *Tetrastichus prospaltæ*, bred from *Prospalta aurantii* Howard, infesting a *Mytilaspis* sp. on *Salix capensis*.

BANGS, OUTRAM. Notes on a collection of Bahama birds.

Auk, XVII, July, 1900, pp. 283–293, 1 text fig.

Notes on 51 species of Bahama birds, of which the following are described as new: *Spotyto cunicularia cavicola* (p, 287), *Geothlypis maynardi* (p. 290), and *Dendroica achrustera* (p. 292).

——— List of birds collected by W. W. Brown, jr., at Loma del Leon, Panama.

Proc. New England Zool. Club, II, Sept. 20, 1900, pp. 13–34.

An annotated list of 148 species collected by Mr. Brown at Loma del Leon, otherwise known as Lion Hill Station, Panama. Three species are described as new, viz, *Mionectes oleagineus parcus* (p. 20), *Myrmelastes ecterus* (p. 25), and *Saltator lacertosus* (p. 31).

——— Birds of San Miguel Island, Panama.

Auk, XVII, Jan., 1901, pp. 24–32.

A list of 42 species, with critical notes on some of them. *Melanerpes seductus* (p. 26), *Phæthornis hyalinus* (p. 27), *Elænia sordidata* (p. 28), and *Rhamphocelus limatus* (p. 31), are described as new.

——— A new Honey creeper from San Miguel Island, Panama.

Proc. New England Zool. Club, II, Feb. 8, 1901, pp. 51, 52.

Cœreba cerinoclunis (p. 52) is described as a new species, related to *C. luteola*.

——— A new Meadow lark from South America.

Proc. New England Zool. Club, II, Feb. 15, 1901, pp. 55, 56.

Sturnella magna paralios (p. 56), from San Sebastian, Colombia, is described as new.

BANKS, NATHAN. New genera and species of American Phalangida.

Journ. N. Y. Ent. Soc., VIII, No. 3, Sept., 1900, p. 199–201.

Describes three new genera and five new species from the United States and Mexico.

——— Some Arachnida from Alabama.

Proc. Acad. Nat. Sci. Phila., Sept., 1900, pp. 529–543.

A list of 145 species from the State, and descriptions of four new species.

BANKS, NATHAN. Camphor secreted by an insect.

Science (new series), XII, No. 304, Oct. 26, 1900, p. 649.

Notes on this subject published by Prof. E. D. Cope many years ago.

——— Two new species of *Troctes*.

Entomological News, XI, No. 8, Oct., 1900, pp. 559, 560.

Describes *T. bicolor* and *T. niger*, with a table for all species of the United States.

——— [Arachnida] [Neuroptera.]

Psyche, IX, No. 295, Nov., 1900, pp. 123, 124.

Included in "Some Insects of the Hudsonian Zone in New Mexico—I," edited by Prof. T. D. A. Cockerell. List of species, with description of one new form.

——— A new species of *Myrmeleon* from Texas.

Entomological News, XI, No. 9, Nov., 1900, p. 596.

Describes *M. texanum*.

——— Papers from the Harriman Alaska Expedition. X. Entomological results (4): The Neuropteroid Insects.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 465–476, pls. XXII–XXVIII, 20 figs.

A list of 34 species with descriptions of 7 new ones.

——— Papers from the Harriman Alaska Expedition. XI. Entomological results (5): The Arachnida.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 477–486, pl. XXIX, 9 figs.

A list of 52 species, with descriptions of 6 new forms.

——— A list of works on North American entomology.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 24, 1900, pp. 1–95.

A list of works useful for the study of North American insects.

——— Some spiders and other Arachnida from southern Arizona.

Proc. U. S. Nat. Mus., XXIII, No. 1223, Feb. 25, 1901, pp. 581–690, pl. XXII, 11 figs.

A list of 35 species from the Territory, with descriptions of 8 new species.

——— Notes on entomology.

Science (new series), XIII, No. 330, Apr. 26, 1901, pp. 668, 669.

A series of miscellaneous notes.

——— Gli Insetti Nocivi.

Science (new series), XIII, No. 331, May 3, 1901, p. 706.

A review of the work of this title by A. Lunardoni and G. Leonardi.

BANKS, NATHAN. Flies as carriers of disease.

Am. Naturalist, XXXV, No. 413, May, 1901, pp. 406, 407.

Review of Dr. Howard's paper on the insect fauna of human excrement.

——— A new genus of Endoparasitic Acarians.

Geneeskundig Tijdschrift voor Ned.-Indië, XLI, 2, May, 1901, 3 pp.

Describes a mite found in the lungs of a Javanese monkey.

——— A new Ascalaphid from the United States.

Entomological News, XII, No. 6, June, 1901, p. 172.

Describes *Ulula albifrons*, and gives a table of the species of the genus in the United States.

——— Bibliography of the more important contributions to American economic entomology. Part VII.

U. S. Department of Agriculture, Washington, 1901, pp. 1–113.

Brings the literature down to January 1, 1900.

BARTSCH, PAUL. Birds of the road.

Osprey, IV, 1901, Nos. 11, 12, pp. 162–166, 3 figs.; V, No. 1, pp. 2–6, 4 figs.

These are two popular articles discussing the birds of Washington and its vicinity. Figures of the common forms, and their nests accompany the sketches.

——— A trip to the Zoological Park.

Osprey, V, 1901, No. 2, pp. 19–21.

This article deals with the winter birds of the park, and also refers to a number of the caged inhabitants.

BENEDICT, JAMES E. The Hermit crabs of the *Pagurus bernhardus* type.

Proc. U. S. Nat. Mus., XXIII, No. 1216, Jan. 19, 1901, pp. 451–466, 6 text figs.

The seven species referred to this group are described and six of them are figured. The so-called *P. bernhardus* of the Atlantic coast of North America is separated from the European *P. bernhardus* under the name of *P. acadianus*.

BIRTWELL, FRANCIS J. Description of a supposed new subspecies of *Parus* from New Mexico.

Auk, XVIII, April, 1901, pp. 165–167.

Parus gambeli thayeri is described as new.

BISHOP, LOUIS B. Birds of the Yukon region, with notes on other species.

North Am. Fauna, No. 19, Oct. 6, 1900, pp. 47–76.

A fully annotated list of the species met with in the Yukon district.

BREWSTER, WILLIAM, and BANGS, OUTRAM. Description of a new Becard from Lower Urugnay.

Proc. New England Zool. Club, II, Feb. 15, 1901, pp. 53, 54.

Pachyrhamphus notius (p. 53) is described as new. It is most nearly related to *P. polychropterus*.

BUSCK, AUGUST. New species of moths of the superfamily Tineina from Florida.

Proc. U. S. Nat. Mus., XXIII, No. 1208, Oct. 15, 1900, pp. 225–254, pl. 1.

Descriptions and life histories of 32 new species. Five new genera are erected. All of the types are in the National Museum.

——— New American Tineina.

Journ. N. Y. Ent. Soc., VIII, No. 4, Dec., 1900, pp. 234–248, pl. IX.

Descriptions and life histories of 10 new species. Four new genera are noted. All of the types are in the National Museum.

——— A new Canadian Tineid.

Canadian Entomologist, XXXIII, No. 1, Jan. 1901, p. 14.

Description and life history of *Anacampsis lupinella*, with notes on allied species. The types in the U. S. National Meseum.

——— *Nepticula pomivorella* Packard, alias *Micropteryx pomivorella* Packard.

Canadian Entomologist, XXXIII, No. 2, Feb., 1901, p. 52.

Generic correction and notes on life history of *Nepticula pomivorella* Packard and *Coptodisca splendoriferella* Clem.

——— [*Glyphidocera floridanella* n. sp.]

Proc. Ent. Soc. Wash., IV, No. 4, May 25, 1901, p. 475.

The description of this species, prepared by Mr. Busck, is included in a paper by Dr. H. G. Dyar, entitled "Notes on the winter Lepidoptera of Lake Worth, Florida."

CASANOWICZ, I. M. The position of woman in the Talmud.

Am. Anthropologist (new series), III, 1901, pp. 170–172.

——— (See also under Cyrus Adler.)

CAUDELL, ANDREW N. Description of larvæ of *Azelina peplaria* Hubn.

Entomological News, XI, No. 9. Nov., 1900, p. 583.

——— Papers from the Harriman Alaska expedition. XV. Entomological results (9): The Orthoptera.

Proc. Wash. Acad. Sci., II. Dec. 20, 1900, pp. 511, 512.

One species, *Melanoplus borealis* Fieber, is recorded as being the only Orthopteran contained in the collection.

CAUDELL, Andrew N. The genus *Sinea* of Amyot & Serville.

Journ. N. Y. Ent. Soc., IX, No. 1, Mar., 1901, pp. 1–11, pls. 1, 2, 17 figs.

A synopsis of the genus, with a table for the separation of the species. Twelve of the species are described, one (*Sinea confusa*) being new. The paper is based partly upon Museum material, and the type is in the Museum collection.

——— On some Arizona Acridiidæ.

Canadian Entomologist, XXXIII, No. 4, Apr., 1901, pp. 102–106.

Gives a list of 11 species, represented by 32 specimens, purchased by the author from the collector, Dr. R. E. Kunze, of Phœnix, Ariz. One of these, *Aræopteryx penelope*, is described as representing a new genus and species. The type is in the National Museum.

CHAPMAN, Frank M. A study of the genus *Sturnella*.

Bull. Am. Mus. Nat. Hist., XIII, Dec. 31, 1900, pp. 297–320, 8 text figs.

A review of the genus *Sturnella*, mainly devoted to the forms *magna* and *neglecta*. A discussion of the relationships of these two forms, and the geographical variation of each occupies a large share of the paper, while text figures show certain characteristics of the feather markings of the two forms. Seven forms of *Sturnella* are recognized, all of them being treated as subspecies of *Sturnella magna*.

CHITTENDEN, Frank H. Some insects injurious to the violet, rose, and other ornamental plants.

Bull. Div. Ent., U. S. Dept. Agric., (new series), No. 24, May 18, 1901, pp. 1–114, pls. I–IV, figs. 1–29.

Of violet insects, the following are given special mention: *Phlyctænia rubigalis, Emphytus canadensis, Tetranychus bimaculatus, Rhopalosiphum violæ, Diplosis violicola, Peridroma saucia, Noctua c-nigrum, Prodenia commelinæ, P. ornithogalli, P. cudiopta.* Brief mention is made of *Laphygma frugiperda*, white grubs (*Lachnosterna arcuata, Allorhina nitida*, etc.); wireworms (*Agriotes mancus*, etc.); "green aphis" (*Myzus mahaleb* and *Rhopalosiphum dianthi*); *Dactylopius virgatus;* butterfly caterpillars (*Euptoieta claudia*, etc.); *Oligia grata; Lophoderus triferana;* unknown Tortricid; unknown leaf-miner; *Spilosoma virginica; Arctia nais* (?); myriapods, sowbugs, etc.; *Aphodius granarius.* The rose insects especially mentioned are *Penthina nimbatana, Aramigus fulleri, Hoplia callipyge, Rhynchites bicolor, Cladius pectinicornis, Trichius piger, Elaphidion villosum, Heliothis* (*Chloridia*) *rhexiæ, Penthina cyanana, Cacœcia rosaceana, C. rosana*, etc. Miscellaneous insects treated are, *Loxostege obliteralis* and *Sciara inconstans.*

CHITTENDEN, Frank H. The destructive Green Pea louse, *Nectarophora destructor* John.

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 43, May 23, 1901, pp. 1–8, figs. 1–3.

A general account of this species, with a rather full consideration of natural enemies and methods of control.

COOK, Orator F. Camphor secreted by an animal (*Polyzonium*).

Science (new series), XII, No. 301, Oct. 5, 1900, pp. 516–521.

An account of camphor secretion by *Polyzonium rosalbum*, with notes on the nature of the various secretions by other Diplopoda.

——— Peach yellows: A cause suggested.

Science (new series), XII, No. 310, Dec. 7, 1900, pp. 875–881.

Briefly stated, the proposition is simply that the "yellows" of the peach may be the result of the poisoning of the protoplasm of the living cells by the bite of a small arthropod, probably a mite of the family Phytoptidæ.

——— *Duoporus*, a new Diplopod from Mexico.

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, pp. 402–404.

Describes *Duoporus*, new genus, and *D. barretti*, new species, from Cuernavaca, Mexico, collected by Mr. O. W. Barrett.

——— Priority of place and the method of types.

Science (new series), XIII, No. 331, May 3, 1901, pp. 712, 713.

——— A kinetic theory of evolution.

Science (new series), XIII, No. 338, June 21, 1901, pp. 969–978.

COPE, Edward Drinker. The crocodilians, lizards, and snakes of North America.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1898 (1900), pp. 153–1270, pls. 1–36, figs. 1–346.

A posthumous work.

COQUILLETT, Daniel W. Papers from the Harriman Alaska expedition. IX. Entomological results (3): The Diptera.

Proc. Wash. Acad. Sci., II, Dec. 7, 1900, pp. 389–464.

Gives a list of 276 species, with their known distribution, and describes one genus and 63 species as new.

COQUILLETT, DANIEL W. A new genus of Ortalidæ.

Entomological News, XII, No. 1, Jan., 1901, p. 15.

Describes a new genus and species from the Southern States.

——— Three new species of Diptera.

Entomological News, XII, No. 1, Jan., 1901, pp. 16–18.

Describes 3 new species, chiefly from Washington, D. C., obtained by Dr. L. O. Howard while investigating the spreading of diseases by insects.

——— New Diptera in the U. S. National Museum.

Proc. U. S. Nat. Mus., XXIII, No. 1225, Mar. 27, 1901, pp. 593–618.

Describes 2 new genera and 71 new species from various parts of the United States.

——— A systematic arrangement of the families of the Diptera.

Proc. U. S. Nat. Mus., XXIII, No. 1227, May 2, 1901, pp. 653–658.

Briefly reviews the various attempts that have been made in the past at classifying the families, and gives a modified arrangement, based on recent research.

——— Descriptions of three lepidopterous larvæ.

Journ. N. Y. Ent. Soc., IX, No. 2, June, 1901, pp. 85, 86.

Describes the larvæ of *Homœosoma mucidellum* Ragonot *Ephestiodes gilvescentella* Ragonot, and *Sctiosoma fernaldella* Riley.

——— [Diptera.]

Pysche, IX, No. 297, 1901, p. 149.

Included in "Some insects of the Hudsonian Zone in New Mexico.—II," edited by Prof. T. D. A. Cockerell. Gives a list of 23 species, with their known distribution, and describes 2 of the species as new.

COUTIÈRE, H. Sur quelques Alpheidæ des côtes américaines (Collection de l'U. S. National Museum, Washington).

C. R. Acad. Sci., Paris, CXXXI, No. 5, July, 1900, pp. 356–358.

Preliminary notice of Alpheidæ sent by the U. S. National Museum to Dr. Coutière for study. Notes 3 new species, *Alpheus rathbuni*, *A. faxoni* and *Automate rugosa;* places *Athanas ortmanni* Rankin in Jousseaumea, and draws several conclusions from the occurrence of vast numbers of *Synalpheus laevimanus longicarpus* from a single locality.

COVILLE, FREDERICK V. The tree willows of Alaska.

Proc. Wash. Acad. Sci., II, Oct. 10, 1900, pp. 275–286, pl. XV, figs. *a–e*.

An account of the 5 tree willows of Alaska, one of them, *Salix amplifolia*, being a new species.

——— *Ribes mescalerium*, an undescribed currant from New Mexico and Texas.

Proc. Biol. Soc. Wash., XIII, Dec. 21, 1900, pp. 195–198.

——— The home of *Botrychium pumicola*.

Bull. Torrey Botan. Club, Feb. 28, 1901, pp. 109–111, one plate.

An account of the anomalous habitat of this fern in the pumice gravel at Crater Lake, Oregon.

——— *Ribes coloradense*, an undescribed currant from the Rocky Mountains of Colorado.

Proc. Biol. Soc. Wash., XIV, Mar. 9, 1901, pp. 1–6.

——— *Juncus columbianus*, an undescribed rush from the Columbia Plains.

Proc. Biol. Soc. Wash., XIV, June 19, 1901, pp. 87–89.

CURRIE, ROLLA P. A new Bird of Paradise.

Proc. U. S. Nat. Mus., XXII, No. 1204, July 7, 1900, pp. 497–499, pl. XVII.

Describes *Cicinnurus lyogyrus*, new species, from a specimen in the National Museum labeled "New Guinea," received from Monsieur A. Boucard. A table is given showing the important structural differences between this form and *Cicinnurus regius* (Linnæus). The plate gives outline figures of the pectoral shield, head, and tail of each species.

——— A dwarf Ant-lion fly.

Proc. Ent. Soc. Wash., IV, No. 4, May 13, 1901, pp. 435–437.

The new genus *Maracandula* is erected for *Myrmeleon pygmæus* Hagen from Mexico, and the species is redescribed from material recently collected in Madera Canyon, Santa Rita Mountains, Arizona, by Mr. E. A. Schwarz, and at Phoenix, Ariz., by Dr. R. E. Kunzé.

DALL, WILLIAM HEALEY. [Review of] A monograph of Christmas Island.

Science (new series), XII, No. 293, Aug. 10, 1900, pp. 225, 226.

A review of the Monograph on the fauna of Christmas Island, issued by the British Museum.

DALL, WILLIAM HEALEY. A new *Murex* from California.

Nautilus, XIV, No. 4, Aug., 1900, p. 37.

Murex petri, n. sp., is described from San Pedro, Cal., and compared with its allied species.

——— Some names which must be discarded.

Nautilus, XIV, No. 4, Aug., 1900, p. 44.

An enumeration of some names which being preoccupied in nomenclature must be replaced by others. *Cistella* Gray, 1853, not Gistel, 1848, is named *Argyrotheca*; *Eurya* H. and A. Adams, 1858, not Gistel, 1848, is named *Mazatlania*; *Glomus* Jeffreys, 1876, not Gistel, 1848, is named *Pristigloma*. By a process of elimination it is shown that *Mitrularia* Schumacher, 1817, must be replaced by *Cheilea* Modeer, 1793.

——— [Review of] The Norwegian North Polar Expedition, 1893–1896.

Science (new series), XII, No. 293, Oct. 12, 1900, pp. 562, 563.

A review of the first volume of the "Scientific Results" of Nansen's expedition.

——— A new species of *Cerion*.

Nautilus, XIV, No. 6, Oct., 1900, p. 65.

Cerion stevensoni, n. sp., is described from Rum Cay, Bahamas.

——— Synopsis of the family Tellinidæ and of the North American species.

Proc. U. S. Nat. Mus., XXIII, No. 1210, Nov. 14, 1900, pp. 285–326, pl. II–IV.

The family is discussed, reviewed, and a new classification proposed for the forms contained in it. The limits of the genera, subgenera and sections contained in the family are newly restricted, and the following new subdivisions are proposed: *Phyllodina*, new section, type *Tellina squamifera* Deshayes; *Merisca*, new section, type *Tellina crystallina* Wood, *Scrobiculina*, new section, type *Scrobicularia viridotincta* Cpr., *Scissula*, new section, type *Tellina decora* Say, *Peronidia*, new section, type *Tellina albicans* Gmelin; *Psammacoma*, new subgenus, type *Macoma candida* Bertin; *Cydippina*, new section, type *Macoma brevifrons* Say; *Psammotreta*, new section, type *Tellina aurora* Hanley.

The following new species are described and figured: *Tellina* (*Eurytellina*) *georgiana*; *Tellina* (*Liotellina*) *iheringi*; *Tellina* (*Elliptotellina*) *americana*, *Tellina* (*Angulus*) *promera*; *Tellina* (*Angulus*) *flagellum*; *Tellina* (*Angulus*) *colorata*; *Tellina* (*Angulus*) *texana*; *Macoma phenax*, *Macoma* (*Psammacoma*) *extenuata*; and *Macoma* (*Psammacoma*) *tageliformis*; all from the Atlantic coasts of America. The following are new from the Pacific coast: *Tellina* (*Merisca*) *reclusa*, *Tellina* (*Elliptotellina*) *pacifica*; *Tellina* (*Phyllodina*) *pristiphora*; *Tellina* (*Eurytellina*) *leucogonia*; *Tellina* (*Moerella*) *meropsis*; *Tellina* (*Moerella*) *amianta*; *Tellina* (*Moerella*) *paziana*; *Tellina* (*Angulus*) *maceillii*; *Tellina* (*Angulus*) *suffusa*; *Tellina* (*Angulus*) *cerrosiana*; *Tellina* (*Angulus*) *panamensis*; *Tellina* (*Angulus*) *recurva*; *Tellina* (*Angulus*) *carpenteri*; *Tellina* (*Ondardia*) *buttoni*; *Tellina* (*Peronidia*) *santarosæ*; *Macoma krausei*; *Macoma nitkana*; *Macoma alaskana*; *Macoma tennirostris*; and *Macoma* (*Psammacoma*) *panamensis*. A number of hitherto unfigured species are illustrated.

——— Letter to the editor.

Science (new series), XII, No. 308, Nov. 23, 1900, pp. 808, 809.

A correction of some statements as to the geological relations of South America and the West Indies which had appeared in an article by Professor Bray on the relations of the American floras, in the issue of Nov. 9, 1900.

——— Contributions to the Tertiary fauna of Florida. Part V, Teleodesmacea: *Solen* to *Diplodonta*.

Trans. Wagner Free Inst. Sci., III, part V, Nov. 28, 1900, pp. 949–1218, pl. XXXVI–XLVII.

This is a continuation of the monographic review of the Tertiary fossils (especially those of the Oligocene and later beds) of the southeastern United States. The types of this work are nearly all in the National Museum collection. The work includes, in most instances, a thorough revision of the nomenclature of each group, an enumeration of the known Tertiary species in American beds, a description with figures of the new or unfigured forms and comparisons with the Pacific coast and other fossil faunas and with the now existing fauna of the adjacent seas. The Oligocene of the West Indian region being practically the same as part of the Floridian beds, is also included in the general revision. The following groups are covered by the present issue: Solenacea, Tellinacea, Isocardiacea, Cardiacea, Leptonacea, and the families Petricolidæ, Cooperellidæ, and Diplodontidæ. The following sections are proposed as as new: *Orobitella* in *Montacuta*; *Arctica* and *Rombergia* in *Strigilla*; *Dinocardium* in *Cardium*, *Garum* and *Psammoica* in *Psammobia*; *Platydonax* and *Grammatodonax* in *Donax*; *Semelina* in *Semele*; and the following new species are described and figured: *Abra triangulata*; *Aligena minor*, *A. nuda*; *Alveinus rotundus*; *Ancillaria chipolana*; *Anisodonta americana*, *A. bowdeniana*, *A. carolina*; *Astyris perfervida*, *A. turgidula*; *Bornia dodona*, *B. floridana*, *B. mazyckii*, *B. plectopygia*; *B. rota*, *B. scintillata*; *Cardium acrocome*, *C. alicula*, *C. aminense*, *C. apalcticum*, *C. arcstum*, *C. bowdenense*, *C. bulbosum*, *C. burnsii*, *C. ecstum*, *C. chipolanum*, *C. compressum*, *C. etcnolium*, *C. darwini*, *C. delphicum*, *C. depauperatum*, *C. dominicanum*, *C.*

DALL, WILLIAM HEALEY—Continued.

druidicum, C. gatunense, C. malacum, C. marylandicum, C. maturense; C. odalium, C. pansatrum, C. parile, C. phlyctæna, C. precursor, C. propeciliare, C. simrothi, C. taniopleura, C. taphrium, C. turtoni, C. virile, C. waltonianum, C. whitei, C. willcoxi; Chama willcoxi; Cooperella carpenteri; Crassatellites clarkensis, C. densus, C. meridionalis, C. psychoptera; Cypræa chilona; Cyrena pompholyx; Diplodonta caloosaënsis, D. gabbi, D. leana, D. minor, D. punctarella, D. radiata, D. shilohensis, D. yorkensis; Donax chipolana, D. cuneata; Erycina americana, E. carolinensis, E. chipolana, E. curtidens, E. fabulina, E. kurtzii, E. marylandica, E. plicatula, E. protracta, E. undosa; Eunaticina caractacus; Hindsiella acuta, H. carolinensis, H. donacia, H. nephritica; Isocardia carolina, I. floridana, I. gabbi, I. hoernesi; Kellia triangula; Lucina plesiolopha; Macoma alumensis, M. arctata, M. calhounensis, M. conradi, M. holmesii, M. irma, M. kelseyi, M. olivella, M. tracta, M. vendryesi; Metis chipolana, M. magnoliana, M. trinitaria; Petricola calvertensis, P. harrisi; Pleurotoma boadicea, P. lapenotieri; Protocardia jamaicensis; Psammobia claibornensis, Rochefortia stantoni, R. stimpsoni; Semele alumensis, S. appressa, S. chipolana, S. compacta, S. cythercoidea, S. duplinensis, S. leana, S. lirulata, S. mutica, S. scintillata, S. silicata, S. smithii, S. stearnsii, S. striulata; Serripes protractus; Siliqua oregonia; Solen abruptus, S. amphistemma, S. conradi; Sportella lioconcha, S. lubrica, S. obolus, S. pelex, S. petropolitana, S. recessa, S. unicarinata, S. whitfieldi, S. yorkensis; Tellina acalypta, T. acloneta, T. acosmita, T. acrocosmia, T. agria, T. aldrichi, T. calliglypta, T. caloosana, T. chipolana, T. cloneta, T. cossmanni, T. cynoglossa, T. dinomera, T. dodona, T. dupliniana, T. eutænia, T. halidona, T. halistrepta, T. hendersoni, T. lampra, T. leana, T. lepidota, T. merula, T. nucinella, T. pharcida, T. pressa, T. propetendla, T. propetenera, T. roburina, T. sayi, T. scapha, T. scitula, T. sclera, T. segregata, T. simpsoni, T. spillmani, T. strophia, T. suberis, T. umbra, Trapezium claibornense; Terebra psilis; Velorita floridana; Venus burnsii, V. caloosana, V. halidona, V. langdoni, V. tarquinia, V. ulocyma; Montacuta actinophora, M. chipolana, M. claiborniana; M. floridana, M. mariana, M. petropolitana, M. sagrinata.

——— Recent work on mollusks.

Science (new series), XII, No. 309, Nov. 30, 1900, pp. 822–825.

A résumé of the progress of malacological science during the year, with a summary of some of the more important researches, and some original notes on the Volutacea.

——— On a genus (*Phyllaplysia*) new to the Pacific coast.

Nautilus, XIV, No. 8, Dec., 1900, pp. 91, 92.
Phyllaplysia taylori, n. sp., from Vancouver Island, is described as new.

DALL, WILLIAM HEALEY. A new species of *Pleurobranchus* from California.

Nautilus, XIV, No. 8, Dec., 1900, p. 92.
Pleurobranchus (*Oscaniella*) *californicus*, n. sp., from San Pedro, Cal., is described.

——— Synopsis of the family Cardiidæ and of the North American species.

Proc. U. S. Nat. Mus., XXIII, No. 1214, Jan. 2, 1901, pp. 381–392.

This paper, like the Synopsis of the *Tellinidæ*, includes a revision and classification of the family, bibliography, lists of east and west American species, notes, etc. The following are proposed as new: Section *Acrosterigma*, type *Cardium dalli* Heilp.; Section *Trigoniocardia*, type *C. graniferum* Sowerby; *Cardium* (*Trachycardium*) *pristipleura*, new name for *C. maculosum* Sowerby, 1833, not Wood, 1815; *Cardium consors* var. *laxum*, new variety; and *C. comoxense* new variety of *C. californiense* Deshayes.

——— A new *Lyropecten*.

Nautilus, XIV, No. 10, Feb., 1901, pp. 117, 118.
Pecten (*Lyropecten*) *dilleri*, n. sp., is described from the Upper Miocene of Rio Dell, California.

——— A new species of *Subemarginula* from California.

Nautilus, XIV, No. 11, Mar., 1901, pp. 125, 126.
Subemarginula yatesii, n. sp., from Monterey Bay, obtained by Dr. Yates, is described.

——— Results of the Branner-Agassiz expedition to Brazil. V.—Mollusks from the vicinity of Pernambuco.

Proc. Wash. Acad. Sci., III, Apr., 1901, pp. 139–147.

An annotated list of the species collected, of which *Mulinia branneri* and *Drillia greeleyi* are described as new.

——— A new Pinna from California.

Nautilus, XIV, No. 12, Apr., 1901, pp. 142, 143.
Atrina oldroydi, n. sp. from San Pedro, Cal., is described, the genus being new to California.

——— [Review of] Lang's Lehrbuch der vergleichenden Anatomie; Mollusks.

Science (new series), XIII, No. 337, June 14, 1901, pp. 945, 946.

A review of the new edition of Lang's work relating to the Mollusca, edited by Dr. Hensehel.

——— Memorial of George Brown Goode. Goode's activities in relation to American science.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1901), II, pp. 25–31.

Address delivered at the Goode Memorial meeting of February 13, 1897, and printed in the Museum Report as part of the proceedings of that meeting.

DOANE, R. W. New North American Tipulidæ.

Journ. N. Y. Ent. Soc., VIII, No. 3, Sept., 1900, pp. 182–198, pls. VII, VIII, 13 figs.

Gives descriptions of 44 new species and one new genus.

DWIGHT, JONATHAN, Jr. The sequence of plumages and moults of the Passerine birds of New York.

Annals N. Y. Acad. Sci., XIII, Oct., 1900, pp. 73–360, pls. I–VII.

A comprehensive account of the moulting of the Passerine birds of New York, including the sequence of moults and plumages, classification of plumages, and discussion of the theories of color change without moult. The paper is followed by a full bibliography.

——— The moult of the North American shore birds (Limicolæ).

Auk, XVII, Oct., 1900, pp. 368–385.

This paper gives an account of the moult in various shore birds, as well as notes on the sequence of moults, time of moulting, and a classification of the plumages in this group of birds.

DYAR, HARRISON G. Partial life history of *Dichogama redtenbacheri* Led.

Canadian Entomologist, XXXII, No. 9, Sept., 1900, pp. 271, 272.

——— Note on the genus *Dyaria* Neum.

Canadian Entomologist, XXXII, No. 9, Sept., 1900, p. 284.

Refers this genus to the Pyralidæ, near *Cænodomus*.

——— Life history of a South American Slug-caterpillar, *Sibine fusca* Stoll.

Entomological News, XI, No. 7, Sept., 1900, pp. 517–526, pl. XIII, 10 figs.

——— Notes on the larval cases of Lacosomidæ (Perophoridæ) and life history of *Lacosoma chiridota* Grt.

Journ. N. Y. Ent. Soc., VIII, No. 3, Sept., 1900, pp. 177–180, pl. VI, 9 figs.

——— Life histories of some North American moths.

Proc. U. S. Nat. Mus., XXIII, No. 1209, Oct. 15, 1900, pp. 255–284.

This paper deals with sixteen species.

——— Notes on some North American species of Tineidæ.

Canadian Entomologist, XXXII, No. 10, Oct., 1900, pp. 305–311.

Gives a synopsis of the genera of the Anaphorinæ, and synopses of the species of *Eulepiste*, *Hypoclopus*, *Acrolophus*, and *Pseudanaphora*. One new species is described, *Eulepiste cockerelli*, and there are notes on ten other species.

DYAR, HARRISON G. New species of Anaphorinæ.

Canadian Entomologist, XXXII, No. 11, Nov., 1900, pp. 326–328.

Describes *Atopocera barnesii*, *Neolophus persimplex*, *Orthologhus piger* and *Felderia dorsimacula*. Synopses are given for the species of *Anaphora* and *Orthologhus*.

——— Change of preoccupied names.

Canadian Entomologist, XXXII, No. 11, Nov., 1900, p. 347.

Parasa prasina Dyar is changed to *Parasa wellesca*, and the genus *Callarctia* Leech is changed to *Eulecchia*.

——— Papers from the Harriman Alaska expedition. XII. Entomological results (6): The Lepidoptera.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 487–501.

A list of 77 species and varieties. Of the nine new species four are described by Prof. John B. Smith, two by Rev. George D. Hulst, one by Dr. R. Ottolengui, one by Dr. C. H. Fernald, and one by Mr. William Beutenmüller.

——— Life history of *Callidryas agarithe*.

Entomological News, XI, No. 10, Dec., 1900, pp. 618, 619.

——— Supplementary notes on Orgyia.

Psyche, IX, No. 296, Dec., 1900, pp. 143, 144.

Notes on *Notolophus oslari* Barnes, and *N. inornata* Beutenmüller.

——— A century of larval descriptions.

Entomologist's Record and Journal of Variation, XIII, No. 1, Jan. 15, 1901, pp. 37–41.

A brief review of the descriptive work on lepidopterous larvæ from the middle of the eighteenth to the beginning of the twentieth century. The work done during the last one hundred years is especially dealt with, in order to show what has been accomplished in that time as evidenced in the very greatly increased percentage of larval forms known in Europe and North America, and in the completeness and accuracy of their descriptions. The various larval characters are discussed with a view to determining their value in classification. The paper concludes with a list of the points which are usually covered in the description of larvæ at the present time and without which a larva should not be considered as fully described.

——— [Lepidoptera Heterocera (part).]

Psyche, IX, No. 298, Feb., 1901, p. 164.

Included in "Some insects of the Hudsonian Zone in New Mexico.—III," edited by Prof. T. D. A. Cockerell. A list of seven previously described species.

DYAR, HARRISON G. Notes on the genitalia of *Halisidota harrisii* Walsh.

Canadian Entomologist, XXXIII, No. 2, Feb., 1901, p. 30, 2 figs.

A comparison of the genitalia of *Halisidota harrisii* with those of *H. tessclaris*, in large series, shows the two forms to be distinct species.

——— Descriptions of some Pyralid larvæ from southern Florida.

Journ. N. Y. Ent. Soc., IX, No. 1, Mar., 1901, pp. 19–24.

Describes the larvæ of *Margaronia bivitralis* Guenée, *M. infimalis* Guenée, *Sylepta gordialis* Guenée, *S. anormalis* Guenée, *Dichogama amabilis* Möschl., *D. bergii* Möschl., *Epicorsia mellinalis* Hübner, *Terastia meticulosalis* Guenée, *Agathodes designalis* Guenée, *Desmia tages* Cramer, *Lineodes integra* Zell., and *L. triangularis* Möschl., *Thyridopyralis*, new genus, is described, with *T. gallaerandialis*, new species. The larva of the latter is also described.

——— An apparently new Tortricid from Florida.

Journ. N. Y. Ent. Soc., IX, No. 1, Mar., 1901, pp. 24, 25.

Describes *Lophoderus amatana*, new species.

——— Note on the larva of *Arctia intermedia*.

Journ. N. Y. Ent. Soc., IX, No. 1, Mar., 1901, pp. 25, 26.

Supplementary to the remarks on page 89, Volume VIII, of this Journal.

——— On the fluctuations of the postspiracular tubercle in Noctuid larvæ.

Proc. Ent. Soc. Wash., IV, No. 4, Apr. 24, 1901, pp. 370–373.

Describes the variations in the positions of this tubercle in different species of Noctuidæ and compares the result with an arrangement of the family proposed by Prof. J. B. Smith.

——— On certain identifications in the genus *Acronycta*.

Canadian Entomologist, XXXIII, No. 4, Apr., 1901, p. 122.

Discusses certain changes in synonomy made by Prof. John B. Smith in his paper on pages 333 to 336 of Volume XXXII of the Canadian Entomologist.

——— A new species of *Bertholdia*.

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, p. 391.

Describes *Bertholdia soror*, new species, from Venezuela, and gives a synopsis of the species in the genus.

DYAR, HARRISON G. A parallel evolution in a certain larval character between the Syntomidæ and the Pericopidæ.

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, pp. 407–409.

Refers to the structure of the thoracic tubercles in these groups. Describes the larvæ of *Daritis howardi* Henry Edwards, and *Gnophæla latipennis* Boisduval.

——— Life history of *Callidapteryx dryopterata* Grt.

Proc. Ent. Soc. Wash., IV, No. 4, May 10, 1901, pp. 414–418.

Description of eggs and larval stages of this species. Discusses its systematic position and gives a genealogical tree of the families of the Bombycoidea.

——— On the distinction of species in the Cochlidian genus *Sibine*.

Proc. Ent. Soc. Wash., IV, No. 4, May 11, 1901, pp. 422–427.

Describes the male genitalia of five species of *Sibine*. *S. apicalis*, from Mexico, is described as new.

——— A division of the genus *Sphingicampa* Walsh, with remarks on the larvæ.

Proc. Ent. Soc. Wash., IV, No. 4, May 13, 1901, pp. 427–430.

Separation of two groups in this genus. Notes on the larvæ of ten species.

——— A remarkable Sphinx larva (*Lophostethus dumolinii* Latr.).

Proc. Ent. Soc. Wash., IV, No. 4, May 13, 1901, pp. 440–442.

Description of this larva, showing that the characters of this species may be interpreted as those of a true sphinx, not a Ceratocampid.

——— Notes on the winter Lepidoptera of Lake Worth, Florida.

Proc. Ent. Soc. Wash., IV, No. 4, May 25, 1901, pp. 446–485.

A faunal list of this region, with descriptions of a number of larvæ. *Ingura burseræ* Dyar, *Synchlora louisa* var. *hulstiana* Dyar, *Nola apera* var. *lagunculariæ* Dyar, and *Glyphidocera floridanella* Busck are described as new.

——— Note on the larva of *Psaphidia thaxterianus*.

Journ. N. Y. Ent. Soc., IX., No. 2, June, 1901, pp. 84, 85.

——— Diagnosis of a new Arctian.

Journ. N. Y. Ent. Soc., IX, No. 2, June, 1901, p. 85.

Describes *Dodia albertæ*, new genus and species, from Calgary, Alberta, Canada.

DYAR, HARRISON G. Life histories of North American Geometridæ, XIII–XXII.

Psyche, IX, No. 292, Aug., 1900, pp. 93, 94; No. 293, Sept., 1900, pp. 106, 107; No. 294, Oct., 1900, pp. 118, 119; No. 295, Nov., 1900, pp. 130–132; No. 296, Dec., 1900, pp. 142, 143; No. 297, Jan., 1901, pp. 155, 156; No. 298, Feb., 1901, pp. 165, 166; No. 299, Mar., 1901, pp. 177–179; No. 300, Apr., 1901, pp. 189–191; No. 301, May, 1901, pp. 203, 204.

EVERMANN, BARTON W., and MARSH, MILLARD C. The fishes of Porto Rico.

Bull. U. S. Fish Com., 1900, pp. 51–350, pls. 1–52.

This paper is included in the general report on the investigations in Porto Rico of the United States Fish Commission steamer *Fish Hawk*, in 1899. It contains a list of 291 species recorded from the Island, twelve of which are here described as new to science.

FERNALD, C. H. New Pyralidæ and Tortricidæ from Palm Beach, Florida.

Jour. N. Y. Ent. Soc., IX, No. 2, June, 1901, pp. 49–52.

Describes eight new species collected or bred by Dr. H. G. Dyar. The types are all in the National Museum.

FONTAINE, W. M. (See under Lester F. Ward.)

GILL, THEODORE. The proper names of *Bdellostoma* or *Heptatrema*.

Proc. U. S. Nat. Mus., XXIII, No. 1234, June 6, 1901, pp. 735–738.

GIRTY, GEORGE H. Devonian fossils from southwestern Colorado. The fauna of the Ouray limestone.

20th Ann. Rep. U. S. Geol. Surv., 1900, pp. 25–81, pls. 3–7.

Describes the basal Upper Devonian faunas of southwestern Colorado, a part of which had heretofore been regarded as of Carboniferous age. The author concludes that the Ouray limestone fauna mostly resembles the 'Athabasca fauna described by Whiteaves, which he justly concludes to be of about the same age as the Tully limestone of the New York section.'

The entire material was transmitted to this Museum under accession No. 35935 and is registered under Catalogue Nos. 33905–33988.

GRINNELL, JOSEPH. The intermediate Wren-tit.

Condor, II, July–Aug., 1900. pp. 85–86.

Chamæa fasciata intermedia (p. 86), is described as new.

GRINNELL, JOSEPH. Birds of the Kotzebue Sound region of Alaska.

Pacific Coast Avifauna, No. 1, Nov. 14, 1900, pp. 1–80, 1 map.

A report on the birds of the Kotzebue Sound region, based on a year's observations in this part of Alaska. One hundred and thirteen are listed species; in some cases extensive notes are added. *Lanius borealis invictus* is described as new. A useful bibliography is appended to this paper.

HEIDEMANN, OTTO. A new species of Tingitidæ.

Canadian Entomologist, XXXI, No. 10, Oct., 1899, pp. 301, 302.

Describes *Gargaphia angulata*. (Omitted by mistake from last year's report.)

——— Papers from the Harriman Alaska expedition. XIII. Entomological results (7): The Heteroptera.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 503–506.

This paper contains a list of Hemiptera-Heteroptera collected by Prof. T. Kincaid. The 17 species are mostly well known.

——— Note on *Aradus* (*Quilnus*) *niger* Stal.

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, pp. 389, 390.

Account of the capture, by the author, of several specimens of this interesting species in the woods near Soldiers' Home, D. C. This is the first time it has been recorded since it was originally described by Stal from "Carolina meridionalis."

——— Remarks on the Spittle insect, *Clastoptera xanthocephala* Germ.

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, pp. 399–402, pl. VI, 8 figs.

Gives the habits and life history of this species as observed by Mr. Heidemann on stems of chrysanthemums and on the rag weed (*Ambrosia artemisiæfolia*). Another species, *Clastoptera obtusa* Say, has been observed by Dr. J. A. Lintner, and also by the writer, living upon black alder. Reference is made to the literature on spittle insects and to the common beliefs and superstitions at one time held by people in regard to the origin of the spittle-like masses.

The plate figures the insect in its different stages, a chrysanthemum branch with the mass of "spittle," and the anal segments of the insect with the aperture as it appears when open and closed.

HENSHAW, H. W. Occurrence of *Larus glaucescens* and other American birds in Hawaii.

Auk, XVII, July, 1900, pp. 201–206.

Notes on six species of birds occasionally found on the island of Hawaii.

HENSHAW, H. W. Description of a new Shearwater from the Hawaiian Islands.

Auk, XVII, July, 1900, pp. 246, 247.
Puffinus newelli is described as new.

——— The Yellow-billed Tropic bird in the Hawaiian Islands.

Auk, XVIII, Jan., 1901, p. 105.
A note on the occurrence of this species in the island of Hawaii.

——— Occurrence of *Tringa maculata* and other American birds in Hawaii.

Auk, XVIII, Apr., 1901, p. 202.
Notes on 6 species of American birds found during migrations on the island of Hawaii.

HOLMES, WILLIAM H. The obsidian mines of Hidalgo, Mexico.

Am. Anthropologist (new series), II, July-Sept., 1900, pp. 405–416, pls. 1–16.

——— Review of the evidence relating to auriferous gravel man in California.

Rep. Smithsonian Inst., 1899 (1901), pp. 419–472, pls. I–XVI.

HOUGH, WALTER. An early West Virginia pottery.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1899 (1901), pp. 511–521, pls. 1–18.

HOWARD, LELAND O. The differences between malarial and nonmalarial mosquitoes.

Scientific American, LXXXIII, No. 1, July 7, 1900, pp. 8, 9, 1 pl.
Gives full life round of *Anopheles quadrimaculatus*.

——— Diptera collected in Hawaii by H. W. Henshaw.

Proc. Ent. Soc. Wash., IV, No. 4, July 16, 1900, pp. 489, 490.

——— Notes on the mosquitoes of the United States, giving some account of their structure and biology, with remarks on remedies.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 25, Aug. 23, 1900, pp. 1–70, 22 figs.
This paper is sufficiently well described in its title, except that it includes an analytical table of North American mosquitoes prepared by D. W. Coquillett.

——— Two interesting uses of insects by natives in Natal.

Scientific American, LXXXIII, No. 17, Oct. 27, 1900, p. 267, 3 figs.
Notes on the use of cocoons of *Ageronia mimosæ* as anklets and wax of *Ceroplastes* as head rings.

HOWARD, LELAND O. Establishment of a beneficial insect in California.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 26, Nov. 1, 1900, pp. 16, 17.
An account of the introduction of *Scutellista cyanea* Mots., from South Africa into California and its establishment at San Jose as a parasite of *Lecanium olex* Bern.

——— Beneficial work of *Hyperaspis signata*.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 26, Nov. 1, 1900, pp. 17, 18, 1 fig.
Destruction of *Pulvinaria acericola* at Knoxville, Tenn., by this Coccinellid whose larva superficially resembles *Dactylopius*.

——— The Ulke collection of Coleoptera.

Science (new series), XII, No. 311, Dec. 14, 1900, pp. 918–920.
A summary or the character of this great collection and of the services of Henry Ulke to Coleopterology. The collection was purchased by the Carnegie Museum at Pittsburg, Pa.

——— The structure and life history of the Harlequin fly (*Chironomus*).

Science (new series), XII, No. 312, Dec. 21, 1900, pp. 363, 364.
Review of book by L. C. Miall and A. R. Hammond.

——— Contributions a l'étude des hyménoptères entomophages.

Science (new series), XII, No. 312, Dec. 21, 1900, pp. 961–963.
Review of paper by L. G. Seuret.

——— A contribution to the study of the insect fauna of human excrement.

Proc. Wash. Acad. Sci., II, Dec. 28, 1900, pp. 541–604, figs. 17–38, pls. XXX, XXXI.
The exact details of a prolonged investigation, extending through two years, with full lists of the species studied and specific accounts of all the Diptera (77 species). Many new facts relating to the biology of certain forms are presented.

——— Remarks on *Psorophora ciliata*, with notes on its early stages.

Canadian Entomologist, XXXII, No. 12, Dec., 1900, pp. 353–357, 3 figs.
The first published descriptions of the larvæ and pupæ of this genus, and an account of the localities in which they were found, and the conditions under which they live.

——— Regulations of foreign governments regarding importation of American plants, trees, and fruits.

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 41, 1900, pp. 1–4.
A compilation of the regulations described for the use of American exporters of plants, trees, and fruits.

HOWARD, Leland O. Smyrna fig culture in the United States.

Yearbook U. S. Dept. Agric., 1900, pp. 77–106, 8 pls., 7 figs.

An account of the attempts to grow the Smyrna fig in this country, of the successful introduction of *Blastophaga grossorum* from Algeria by the Department of Agriculture, and an account of the practical work carried on through the summer of 1900 at Fresno, Cal., under the supervision of Mr. E. A. Schwarz, who was detailed by the Department of Agriculture, for this purpose; also an account of the life history of *Blastophaga*.

——— Flies and typhoid fever.

Popular Science Monthly, LVIII, No. 3, Jan., 1901, pp. 249–256, 11 figs. (Published Dec. 28, 1900.)

A succinct résumé of the results of the investigations of which a detailed account is given in the following paper.

——— The attitude of the State toward scientific investigation.

Science (new series), XIII, No. 316, Jan. 18, 1901, pp. 87–96.

An abstract of this paper was published in *Nature*, Feb. 7, 1901, pp. 357, 358.

Part of a public discussion before the American Society of Naturalists at the Baltimore meeting, December, 1900, in which the work of the United States Government in zoology was especially considered.

——— A new industry brought by an insect.

Forum, XXX, No. 5, Jan., 1901, pp. 605–607. (Published Dec. 29, 1900.)

A brief account of the introduction and establishment of *Blastophaga grossorum* in the fig orchards of George C. Roeding, of Fresno, Cal.

——— Some diptera bred from cow dung.

Canadian Entomologist, XXXIII, No. 2, Feb., 1901, pp. 42–44.

A list of species of Diptera (determined by Mr. Coquillett) reared from cow dung at the Department of Agriculture in 1890, with remarks on coprophagous insects.

——— Malaria and certain mosquitoes.

Century Magazine, LXI, No. 6, Apr., 1901, pp. 941–949, 14 figs.

A rather popular article, giving an account of the development of the malarial organism and the biology of the malaria-bearing mosquitoes of the genus *Anopheles*.

——— Mosquitoes, how they live, how they carry disease, how they are classified, and how they may be destroyed.

New York (McClure, Phillips & Co.), June 3, 1901, pp. XV, 241, 1 pl, 50 figs.

A full, popular treatise on mosquitoes, especially directed towards the disease-transfer function and methods of extermination.

HOWARD, Leland O. Fighting pests with insect foes.

Everybody's Magazine, V, June, 1901, pp. 572–577, 9 figs.

An account of the introduction of certain beneficial insects into the United States and other countries for the purpose of destroying injurious species, together with a brief mention of the introduction of the South African locust fungus for practical use against western grasshoppers.

——— The death-bringing House fly.

Good Housekeeping, XXXII, No. 6, June, 1901, pp. 461, 462, 2 figs.

The habits and life history of *Musca domestica*, its relation to the human economy, and the remedies to be used.

HOWE, Reginald Heber, Jr. A new subspecies of the genus *Hylocichla*.

Auk, XVII, July, 1900, pp. 270, 271.

Hylocichla fuscescens fuliginosa (p. 271) is described as new.

——— A study of the genus *Macrorhamphus*.

Auk, XVIII, Apr., 1901, pp. 157–162, 1 map.

A study of the two American species of the genus convinces Mr. Howe that the form *scolopaceus* should be reduced to a subspecies of *M. griseus*. A description of the characteristic features of the plumage of each form is given, and a map showing the breeding range and the migration routes of each form accompanies the paper.

——— Variation in size in the Wood pewee.

Auk, XVIII, Apr., 1901, p. 194.

A series of measurements of the Wood-pewee from the northern and southern parts of its range.

HUBBARD, Henry G. Letters from the Southwest. Insect fauna in the burrows of desert rodents.[a]

Proc. Ent. Soc. Wash., IV, No. 4, Apr. 24, 1901, pp. 361–364.

Some burrows of spermophiles and the Kangaroo rat were explored by the writer at Palm Springs in the Colorado Desert of California.

Quite a number of insects were thus found, the most interesting being three species of the Coleopterous family Histeridæ. Two of these belong to new genera allied to *Chelioxenus*, which inhabits the burrows of the Florida land tortoise.

——— Letters from the Southwest. The Colorado Desert.[a]

Proc. Ent. Soc. Wash., IV, No. 4, Apr. 24, 1901, pp. 374–376.

A general description of the Colorado Desert to serve as an introduction to the next paper.

[a] A posthumous paper.

HUBBARD, HENRY G. Letters from the Southwest. Salton Lake in the Colorado Desert, and its insect fauna.[a]

Proc. Ent. Soc. Wash., IV, No. 4, Apr. 24, 1901, pp. 376–378.

An enumeration of the insects observed by the writer during one day's collecting at the so-called Salton Lake, with notes on their mode of occurrence. The saline fauna of that locality, both of aquatic and terrestrial species, is not a rich one.

——— Insect fauna of *Dasylirion wheeleri*.[a]

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, pp. 381, 382.

Young and vigorous Dasylirion plants in southern Arizona do not seem to be infested by insects, but partly decayed plants harbor numerous insects, mostly Coleoptera, many of which are not yet described and are peculiar to this plant.

——— Insect life in Florida caves.[a]

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, pp. 394–396.

A brief account of the insects observed in several caves of Hernando and Citrus counties, Fla.

JORDAN, DAVID STARR, and SNYDER, JOHN OTTERBEIN. A list of fishes collected in Japan by Keinosuke Otaki, and by the United States steamer *Albatross*, with descriptions of fourteen new species.

Proc. U. S. Nat. Mus., XXIII, No. 1213, Dec. 10, 1900, pp. 335–380, pls. IX–XX.

JORDAN, DAVID STARR, and STARKS, EDWIN CHAPIN. On the relationships of the Lutianoid fish, *Aphareus furcatus*.

Proc. U. S. Nat. Mus., XXIII, No. 1232, June 21, 1901, pp. 719–723, pls. XXVIII, XXIX.

KINCAID, TREVOR. Papers from the Harriman Alaska expedition. VII. Entomological results (1): The Tenthredinoidea.

Proc. Wash. Acad. Sci., II, Nov. 21, 1900, pp. 341–365.

Introduction concerning the arthropoda of Alaska, a résumé of the localities visited, and the insects, spiders, mites, and myriapods collected by the author on this expedition. The body of the paper consists of a report upon 56 species of saw-flies, 32 of which are described as new.

——— Papers from the Harriman Alaska expedition. VIII. Entomological results (2): The metamorphoses of some Alaskan Coleoptera.

Proc. Wash. Acad. Sci., II, Nov. 24, 1900, pp. 367–388, pls. XXII–XXVI, 44 figs.

Describes and figures the immature stages of nine species.

KINCAID, TREVOR. Papers from the Harriman Alaska expedition. XIV. Entomological results (8): The Sphegoidea and Vespoidea.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 507–510.

A list of nine species, two of which are here described for the first time.

KNOWLTON, FRANK HALL. Fossil plants of the Esmeralda formation.

21st Ann. Rep. U. S. Geol. Surv., 1900, pt. II, pp. 200–222, pl. XXX.

This paper contains the description of a collection of fossil plants from the vicinity of Silver Peak in Esmeralda County, Nev. Sixteen species are described, all but one of them being new. The beds are lake beds of freshwater origin and probably of the Miocene Age.

——— Fossil hickory nuts.

Plant World, IV, 1901, pp. 51–52.

This paper mentions some fossil hickory nuts (*Archihicoria siouxensis*) from the Bad Lands of Sioux County, Nebr., specimens of which are now in the Museum collections.

——— A fossil flower.

Plant World, IV, 1901, pp. 73, 74.

This paper describes a flower of Hydrangea from the Mascall beds of the John Day Basin, Oregon.

(See also under Lester F. Ward.)

LUCAS, FREDERIC A. The lachrymal bone in pinnipeds.

Science (new series), XII, July 27, 1900, p. 150.

It is noted that this bone occurs in embryonic and very young eared seals.

——— A new rhinoceros, *Trigonias osborni*, from the Miocene of South Dakota.

Proc. U. S. Nat. Mus., XXIII, No. 1207, Oct. 9, 1900, pp. 221–223, figs. 1, 2.

A new genus and species, characterized by a full set of incisors in the upper jaw. The lower procumbent tooth, usually called a canine, is shown to be an incisor.

——— The pelvic girdle of Zeuglodon, *Basilosaurus cetoides* (Owen), with notes on other portions of the skeleton.

Proc. U. S. Nat. Mus., XXIII, No. 1211, Nov. 8, 1900, pp. 327–331, pls. V–VII.

Describes the pelvis and femur for the first time, and gives characters of the genera *Basilosaurus* and *Dorudon*.

——— A new fossil cyprinoid, *Leuciscus turneri*, from the Miocene of Nevada.

Proc. U. S. Nat. Mus., XXIII, No. 1212, Nov. 8, 1900, pp. 333, 334, pl. VIII.

[a] A posthumous paper.

LUCAS, FREDERIC A. Paleontological notes.

Science (new series), XII, Nov. 23, 1900, pp. 809, 810.

Includes *Thespesius* vs. *Chasosaurus;* A new locality for *Thespesius;* The dentition, hyoid, and cranial cavity of *Basilosaurus.*

——— A new Dinosaur, *Stegosaurus marshi*, from the Lower Cretaceous of South Dakota.

Proc. U. S. Nat. Mus., XXIII, No. 1224, Feb. 26, 1901, pp. 591, 592, pls. XXIII, XXIV.

——— Description of skull of *Lepidosteus atrox.* [Fossil Lepidosteids from the Green River shales of Wyoming, by C. R. Eastman.]

Bull. Mus. Comp. Zool., Cambridge, XXXVI, No. 3, Aug. 29, 1900, p. 73.

——— Characters and relations of *Gallinuloides*, a fossil gallinaceous bird from the Green River shales of Wyoming.

Bull. Mus. Comp. Zool., Cambridge, XXXVI, No. 4, Aug. 28, 1900, pp. 79–84, pl. 1, one text figure.

Describes the structure of this bird in detail and compares it with recent gallinaceous birds. It is shown to be very closely related to the Curassows.

LYON, MARCUS W., Jr. A comparison of the osteology of the Jerboas and Jumping mice.

Proc. U. S. Nat. Mus., XXIII, No. 1228, May 2, 1901, pp. 659–668, pls. XXV–XXVII.

MCNEILL, JEROME. Revision of the Orthopteran genus *Trimerotropis.*

Proc. U. S. Nat. Mus., XXIII, No. 1215, Jan. 19, 1901, pp. 393–449, pl. XXI, 6 figs.

Trimerotropis belongs to a group of genera which have the median carina of the pronotum cut by two transverse furrows. A table is given for separating the genera of this group, two of these, *Metator* and *Trepidatus*, being new. A key is given for the 13 groups and 54 species into which *Trimerotropis* is divided, while one subgenus, *Agonozoa*, and 24 of the species are described as new.

MARLATT, C. L. The scale insect and mite enemies of citrus trees.

Yearbook U. S. Dept. Agric., 1900, pp. 247–290, pls. XXVI–XXXI, figs. 9–33.

An enumeration of the more important of this class of insects, their life histories, natural enemies, remedies, and distribution. The paper was published in separate form in June, 1901.

MARLATT, C. L. How to control the San Jose scale.

Circ. Div. Ent., U. S. Dept. Agric., No. 42 (second series), Oct. 22, 1900, pp. 1–6.

Describes the various methods of winter treatment for this scale insect.

——— The European pear scale, *Diaspis piricola* (Del Guercio) Saccardo, 1895.

Entomological News, XI, No. 9, Nov., 1900, pp. 590–594.

Bibliography, synonymy, and notes on the occurrence of this species in the United States.

——— Important insecticides. Directions for their preparation and use. (A revision of *Farmers' Bulletin* No. 19.)

Farmers' Bull., U. S. Dept. Agric., No. 127, Feb. 6, 1901, pp. 1–42, 6 figs.

——— The principal insect enemies of growing wheat.

Farmers' Bull., U. S. Dept. Agric., No. 132, April 6, 1901, 40 pp., 25 figs.

Life histories and natural enemies of and remedies against these insects.

MARSH, MILLARD C. (See under Barton W. Evermann.)

MASON, OTIS TUFTON. Traps of the Amerinds.

Proc. Am. Assoc. Adv. Sci., XLIX, 1900, pp. 301–313.

Discusses the subject of traps from the side of invention and shows their salutary influence in mind growth.

——— A primitive frame for weaving narrow fabrics.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1899 (1901), pp. 485–510, pls. 1–9, figs. 1–19.

Traces a simple device for weaving from the Indians in the Mississippi Valley and the Pueblo region, through New England, and thence to European countries.

——— The pointed bark canoes of the Kootenai and the Amur.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1899 (1901), pp. 523–537, pls. 1–5, figs. 1–6.

Calls attention to the similarity between the bark canoes of the Kootenai River, in Washington, and those of the Amur, in having both ends pointed below the water line. The paper includes notes on the Kootenai canoe by Meriden S. Hill.

MAXON, WILLIAM R. Notes on American ferns: II.

Fern Bull., VIII, 1900, pp. 58, 59.

A discussion regarding a fern referred tentatively to *Polypodium vulgare acutum* Moore.

MAXON, WILLIAM R. Notes on American ferns: III.

Fern Bull., VIII, 1900, pp. 84, 85.

History of the discovery of *Trichomanes petersii* A. Gray in the only (three) localities known. *Pellæa densa* (Brack.) Hook. is reported from the vicinity of Durham, Ontario.

——— The Hart's-tongue in New York and Tennessee.

Plant World, III, 1900, pp. 129–132, pl. 4.

A description of the habitat of this species in central New York and in Tennessee, with an account of its rediscovery in the latter region.

——— On the occurrence of the Hart's-tongue in America.

Fernwort Papers. [Published by the Linnæan Fern Chapter], 1900, pp. 30–46.

Treats at length of the distribution of this species, *Phyllitis scolopendrium* (L.) Newm., in North America, including description of habitat and known data relating to the several stations. Specimens collected in Chiapas, Mexico, are regarded as representing a distinct species, *Phyllitis lindeni* (Hook.) Maxon.

——— *Polypodium vulgare orcophilum* Maxon, subsp. nov. [In Morris: Some plants of West Virginia.]

Proc. Biol. Soc. Wash., XIII, 1900, p. 171.

A description of the fern previously referred to *Polypodium vulgare acutum* Moore.

——— *Polypodium hesperium*, a new fern from western North America.

Proc. Biol. Soc. Wash., XIII, 1900, pp. 199, 200.

A brief discussion of the aggregate *Polypodium vulgare* L., followed by a description of the new species mentioned in the title, which occurs commonly in the mountains of the western United States.

——— A list of the Pteridophyta collected in Alaska in 1900 by Mr. J. B. Flett, with description of a new *Dryopteris*.

Bull. Torrey Botan. Club, XXVII, 1900, pp. 637–641.

Twenty-three species are listed, one of which, *Dryopteris aquilonaris*, from Nome City, is described as new.

——— Notes on the validity of *Asplenium ebenoides* as a species.

Botan. Gaz., XXX, 1900, pp. 410–415.

A review of what has been written on the subject. The hybridity of ferns in general is discussed briefly, and the tentative proposition advanced that the fern in question may be a fertile hybrid.

MAXON, WILLIAM R. A list of the ferns and fern allies of North America north of Mexico, with principal synonyms and distribution.

Proc. U. S. Nat. Mus., XXIII, p. 1226, May 4, 1901, pp. 619–651.

The list proper is preceded by an introduction, which is largely historical and includes a list of the principal papers and books treating of the ferns of the United States and Canada. The following new combinations are made: *Pteridium caudatum* (L.) Maxon; *Dryopteris oreopteris* (Sw.) Maxon; *Woodsia oblusa plummeræ* (Lemmon) Maxon; *Isoetes paupercula* (Engelm.) A. A. Eaton; *Isoetes canadensis* (Engelm.) A. A. Eaton; and the new names *Polypodium vulgare deceptum* Maxon and *Lycopodium chapmani* Underw. are proposed.

MERRILL, GEORGE P. Guide to the study of the collections in the Section of Applied Geology: The nonmetallic minerals.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1899 (1901), pp. 155–483, pls. 1–30.

Designed primarily as a handbook, this work gives a very exhaustive account of the occurrence and uses of nonmetallic minerals as represented in the Museum collections.

MERRILL, GEORGE P., and STOKES, H. N. A new stony meteorite from Allegan, Mich., and a new iron meteorite from Mart, Tex.

Proc. Wash. Acad. Sci., II, July 25, 1900, pp. 41–68.

This paper gives an account of the fall and presents the results of microscopic and chemical examinations of the Allegan stone, and chemical analyses of the iron.

MILLER, GERRIT S., Jr. The Giant squirrels of Burmah and the Malay Peninsula.

Proc. Wash. Acad. Sci., II, July 25, 1900, pp. 69–77.

New species: *Ratufa melanopepla* (p. 71), and *R. pyrsonota* (p. 75).

——— Descriptions of two new squirrels from Trong, Lower Siam.

Proc. Wash. Acad. Sci., II, July 25, 1900, pp. 79–81.

New subspecies: *Sciurus notatus miniatus* (p. 79) and *S. tennis surdus* (p. 80).

——— Preliminary revision of the European Redbacked mice.

Proc. Wash. Acad. Sci., II, July 26, 1900, pp. 83–109.

New: *Craseomys* (subgenus, p. 87), *Evotomys norvegicus* (p. 93), *Evotomys rasconiæ* (p. 96),

MILLER, GERRIT S., Jr.—Continued.

Evotomys hercynicus helveticus (p. 98), *Evotomys hercynicus succicus* (p. 101), *Evotomys hercynicus britannicus* (p. 103).

——— Mammals collected by Dr. W. L. Abbott on islands in the South China Sea.

Proc. Wash. Acad. Sci., II, Aug. 20, 1900, pp. 203–246, figs. 10–16.

New species: *Mus flaviventer* (p. 201), *Mus anambæ* (p. 205), *Mus lingensis* (p. 206), *Mus streptans* (p. 207), *Mus tiomanicus* (p. 209), *Mus siantanicus* (p. 210), *Mus tambelanicus* (p. 212), *Mus obscurus* (p. 213), *Ratufa anambæ* (p. 215), *Ratufa tiomanensis* (p. 216), *Funambulus castaneus* (p. 217), *Sciurus mimellus* (p. 218), *Sciurus mimiculus* (p. 219), *Sciurus tenuirostris* (p. 221), *Sciurus anambensis* (p. 223), *Sciurus abbottii* (p. 224), *Sciurus klossii* (p. 225), *Tragulus rufulus* (p. 227), *Tupaia lunaæ* (p. 229), *Tupaia sordida* (p. 231), *Tupaia chrysomalla* (p. 232), *Hipposideros barbensis* (p. 233), *Rhinolophus minutus* (p. 235), *Emballonura anambensis* (p. 236), *Pteropus lepidus* (p. 237), and *Macacus pumilus* (p. 241).

——— A second collection of bats from the island of Curaçao.

Proc. Biol. Soc. Wash., XIII, Oct. 31, 1900, pp. 159–162.

New species: *Mormoops intermedia* (p. 160), *Natalus lamidirostris* (p. 160), and *Molossus pygmæus* (p. 162).

——— A new Gerbille from eastern Turkestan.

Proc. Biol. Soc. Wash., XIII, Oct. 31, 1900, pp. 163, 164.

New species: *Gerbillus arenivolor* (p. 163).

——— A new Freetailed bat from Central America.

Ann. and Mag. Nat. Hist. (series 7), VI, Nov, 1900, pp. 471, 472.

New species: *Promops nanus* (p. 471). Based in part on material belonging to the British Museum.

——— Key to the land mammals of eastern North America.

Bull. N. Y. State Mus., VIII, Oct. (Nov. 21, 1900), pp. 61–160.

New subspecies: *Odocoilcus americanus borealis* (p. 83).

——— A new Mouse deer from Lower Siam.

Proc. Biol. Soc. Wash., XIII, Dec. 21, 1900, pp. 185, 186.

New species. *Tragulus canescens* (p. 185).

MILLER, GERRIT S., Jr. Mammals collected by Dr. W. L. Abbott on Pulo Lankawi and the Butang Islands.

Proc. Biol. Soc. Wash., XIII, Dec. 21, 1900, pp. 187–193.

New: *Mus vociferans langkawensis* (p. 188), *Mus surifer flavidulus* (p. 189), *Mus surifer batangensis* (p. 190), *Mus pannosus* (p. 190), and *Tragulus umbrinus* (p. 191).

——— A collection of small mammals from Mount Coffee, Liberia.

Proc. Wash. Acad. Sci., II, Dec. 28, 1900, pp. 631–649, figs. 39–43.

New: *Sciurus rufobrachiatus libericus* (p. 633), *Mus defua* (p. 635), *Mus tullbergi rostratus* (p. 637), *Dasymys rufulus* (p. 639), *Arvicanthis planifrons* (p. 641), *Myosorex muricauda* (p. 645), and *Pipistrellus minusculus* (p. 647).

——— A new bat from Peru.

Ann. and Mag. Nat. Hist. (Series 7), VI, Dec., 1900, pp. 570–571, 1 fig.

New: *Tomopeas* (p. 570), *Tomopeas ravus* (p. 571). Based in part on material belonging to the British Museum.

——— Mammals collected by Dr. W. L. Abbott on the Natuna Islands.

Proc. Wash. Acad. Sci., III, Mar. 26, 1901, pp. 111–138.

New species: *Tragulus bunguranensis* (p. 115), *Tragulus pallidus* (p. 116), *Sus natunensis* (p. 117), *Mus integer* (p. 119), *Sciurus procerus* (p. 122), *Sciurus liangensis* (p. 123), *Sciurus lutescens* (p. 124), *Sciurus caraix* (p. 125), *Sciurus rutiliventris* (p. 126), *Sciurus rubidiventris* (p. 127), *Sciurus lautensis* (p. 128), *Ratufa angusticeps* (p. 130), *Arctogalidia inornata* (p. 131), *Tupaia siharasensis* (p. 133), *Pipistrellus subtilidens* (p. 134), and *Rhinolophus spadix* (p. 136).

——— The subgenus *Rhinosciurus* of Trouessart.

Proc. Biol. Soc. Wash., XIV, Apr. 2, 1901, p. 23.

New genus. *Sciurotamias* (p. 23).

——— A new squirrel from Borneo.

Proc. Biol. Soc. Wash., XIV, Apr. 5, 1901, pp. 33, 34.

New species: *Sciurus parvus* (p. 33).

——— A new deer from Costa Rica.

Proc. Biol. Soc. Wash., XIV, Apr. 25, 1901, pp. 35–37.

New species: *Odocoilcus costaricensis* (p. 35).

——— A new dormouse from Italy.

Proc. Biol. Soc. Wash., XIV, Apr 25 1901, pp. 39, 40.

New species: *Eliomys cinlicaudu* (p. 39).

MILLER, Gerrit S., Jr. Five new shrews from Europe.

Proc. Biol. Soc. Wash., XIV, Apr. 25, 1901, pp. 41–45.

New: *Crocidura sicula* (p. 41), *Crocidura caudata* (p. 42), *Sorex araneus alticola* (p. 43), *Sorex araneus curonotus* (p. 44), *Neomys fodiens minor* (p. 45).

——— A new shrew from Switzerland.

Proc. Biol. Soc. Wash., XIV, June 27, 1901, pp. 95, 96.

New species: *Crocidura mimula* (p. 95).

——— The Alpine varying hare.

Proc. Biol. Soc. Wash., XIV, June 27, 1901, pp. 97, 98.

New species: *Lepus varronis* (p. 97).

NELSON, E. W. Descriptions of thirty new North American birds in the Biological Survey collection.

Auk, XVII, July, 1900, pp. 253–270.

The following species are described for the first time: *Crypturus inornatus* (p. 253), *Dendrortyx macroura dilutus* (p. 254), *Cyrtonyx montezumæ mearnsi* (p. 255), *Amazona oratrix tresmariæ* (p. 256), *Momotus lessoni goldmani* (p. 256), *Melanerpes frontalis* (p. 257), *M. santacruzi fumosus* (p. 258), *M. dubius veræcruzis* (p. 259), *Dryobates villosus intermedius* (p. 259), *Nyctibius jamaicensis mexicanus* (p. 260), *Antrostomus ocasæ* (p. 260), *A. chiapensis* (p. 261), *Cypseloides brunneitorques griseifrons* (p. 262), *Thalurania ridgwayi* (p. 262), *Empidonax timidus* (p. 263), *E. batirdi perplexus* (p. 263), *Myiopagis placens jaliscensis* (p. 264), *Sittasomus sylvioides jaliscensis* (p. 264), *Dendrornis flavigaster megarhynchus* (p. 265), *Xanthoura luxuosa speciosa* (p. 265), *Callothrus æneus assimilis* (p. 266), *Sturnella magna alticola* (p. 266), *Quiscalus macrourus obscurus* (p. 267), *Amphispiza bilineata pacifica* (p. 267), *Vireo perquisitor* (p. 267), *V. amauronotus strenuus* (p. 268), *Basileuterus belli scitulus* (p. 268), *Geothlypis trichas modestus* (p. 269), *Thryothorus felix grandis* (p. 269), and *Harporhynchus curvirostris maculatus* (p. 269).

——— Descriptions of five new birds from Mexico.

Auk, XVIII, Jan., 1901, pp. 46–49.

Five species of birds are described as new, viz: *Glaucidium palmarum* (p. 46), *Colinus minor* (p. 47), *Empidonax trepidus* (p. 47), *Phæniculaphis littoralis* (p. 48), and *Helcodytes zonatus restrictus* (p. 49).

NELSON, Elias. A revision of certain species of plants of the genus *Intermaria*.

Proc. U. S. Nat. Mus., XXIII, No. 1230, June 4, 1901, pp. 697–713.

NORTON, Arthur H. Birds of the Bowdoin College expedition to Labrador in 1891.

Proc. Portland Soc. Nat. Hist., II, May 20, 1901, pp. 139–158. pl. II.

An account of 36 species, in some cases with extended critical notes. *Fratercula glacialis naumanni* is a new name for the Puffin inhabiting Spitzbergen. The Labrador Spruce Grouse is found to be the true *Canachites canadensis*, and *C. canadensis canace* (Linn.) is determined to be the proper name for the Canada Grouse.

NUTTING, Charles Cleveland. Smithsonian Institution. | United States National Museum. | ——— | Special Bulletin. | ——— | American Hydroids. | ——— | Part I. | The Plumularidæ, | with thirty-four plates. | By | Charles Cleveland Nutting, | Professor of Zoology, University of Iowa. | ——— | Washington: | Government Printing Office. | 1900.

Spec. Bull. U. S. Nat. Mus., No. 4, Oct. 5, 1900, pp. 1–285, text figs. 1–124.

A monograph, with the following divisions: 1. Morphology of the Plumularidæ. 2. Systematic discussion. Twenty-two genera and 121 species, many of which are new, are described and figured. Analytical keys of the genera and species are given.

OSGOOD, Wilfred H. New subspecies of North American birds.

Auk, XVIII, Apr., 1901, pp. 179–185.

Lagopus leucurus altipetens (p. 180), *Anorthura hiemalis helleri* (p. 181), *Certhia familiaris zelotes* (p. 182), and *Hylocichla aonalaschkæ verecunda* (p. 183) are described as new.

PALMER, William. Ecology of the Maryland Yellow-throat and its relatives.

Auk, XVII, July, 1900, pp. 216–242.

An account of the variations of the Maryland Yellow throat and some of its relatives, together with a discussion of the moults, changes of plumages, migrations, etc.

PERGANDE, Theodore. Papers from the Harriman Alaska expedition. XVI Entomological results (10): The Aphididæ.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 513–517.

A list of four species, three of which are new.

PERGANDE, THEODORE. Papers from the Harriman Alaska expedition. XVII. Entomological results (11): The Formicidæ.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 519–521.

A list of five species, subspecies, and varieties, of which one subspecies and two varieties are described as new.

POLLARD, CHARLES LOUIS. A new *Helianthus* from Florida.

Proc. Biol. Soc. Wash., XIII, Nov. 30, 1900, p. 184.

Describes *H. agrestis*, n. sp., the type of which is deposited in the U. S. National Herbarium.

——— The families of flowering plants.

Plant World, Supplement, 1900–1901, pp. 45–132.

A monthly series of popular articles on the plant families, based partly on observations made in the National Herbarium. (Continued from the previous year.)

RATHBUN, MARY J. Synopses of North American invertebrates. XI. The Catometopous or Grapsoid crabs of North America.

Am. Naturalist, XXXIV, No. 403, July, 1900, pp. 583–592, text figs. 1–15.

Three new species are diagnosed: *Uca spinicarpa*, *Pinnixa cristata*, *Raphonotus bowci*, a[n] *Echinophilus mellitæ*.

——— Results of the Branner-Agassiz expedition to Brazil. I. The Decapod and Stomatopod Crustacea.

Proc. Wash. Acad. Sci., II, Aug. 20, 1900, pp. 133–156, pl. VIII.

Seventy species are noticed. These were collected by Dr. J. C. Branner and Mr. Arthur W. Greeley during an expedition to Brazil for the purpose of studying the stone and coral reefs between Cape St. Roque and Rio de Janeiro. Six new species are described and the range of many others is extended.

RATHBUN, RICHARD. Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1899.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1899 (1901) pp. 1–152.

RICHARDSON, HARRIET. Results of the Branner-Agassiz expedition to Brazil. II. The Isopod Crustacea.

Proc. Wash. Acad. Sci., II, Aug. 20, 1900, pp. 157–159, text figs. 1–4.

Two species are noticed, *Corallana acuticauda* Miers, the male of which is here described for the first time, and *Bopyrus alphei*, a new species parasitic in the branchial cavity of *Alpheus heterochælis* Say.

RICHARDSON, HARRIET—Continued.

——— Key to the Isopods of the Atlantic coast of North America, with descriptions of new and little known species.

Proc. U. S. Nat. Mus., XXIII, No. 1222, Feb. 28, 1901, pp. 493–579, text figs. 1–34.

Includes keys to families, genera, and species. A new genus, *Synuropus*, and fourteen new species are described. *Erichsonella* Benedict, *nom. nov.*, is substituted for *Erichsonia*, preoccupied.

RICHMOND, CHARLES W. On the generic name of the Californian condor.

Condor, III, Mar.–Apr., 1901, p. 49.

Gymnogyps is shown to be the proper generic name for the Californian condor.

——— On the name *Vespertilio blossevillii*.

Proc. Biol. Soc. Wash., XIV, Apr. 2, 1901, p. 24.

A note showing that *Vespertilio blossevillii*, and not *V. bonariensis*, should be employed as the name of this South American bat.

——— New name for *Nyctala*.

Auk, XVIII, Apr., 1901, p. 193.

Cryptoglaux is proposed in place of *Nyctala*, preoccupied.

RIDGWAY, ROBERT. New birds of the families Tanagridæ and Icteridæ.

Proc. Wash. Acad. Sci., III, Apr. 15, 1901, pp. 149–155.

The following genera and species are described as new: *Calospiza florida arcuvi* (p. 149), *Piranga rosco-gularis cozumelæ* (p. 149), *Rhamphocelus dimidiatus isthmicus* (p. 150), *Phænicothraupis salvini peninsularis* (p. 150), *P. salvini discolor* (p. 150), *Chlorospingus sumichrasti* (p. 150), *Iridophanes* (type: *Dacnis pulcherrima* Sclater), (p. 150), *Zarhynchus wagleri mexicanus* (p. 151), *Holoquiscalus martinicensis* (p. 151), *Scaphidurus major nelsoni* (p. 151), *Icterus cucullatus sennetti* (p. 152), *Icterus gularis tamaulipensis* (p. 152), *Icterus mesomelas taczanowskii* (p. 153), *Agelæus phœniceus fortis* (p. 153), *A. p. neutralis* (p. 153), *A. p. caurinus* (p. 153), *Pseudagelæus* (type: *Agelæus imthurni* Sclater), (p. 155), and *Xanthopsar* (type: *Oriolus flavus* Gmelin), (p. 155).

ROSE, JOSEPH NELSON, and COULTER, JOHN M. Monograph of the North American Umbelliferæ.

Contrib. U. S. Nat. Herbarium, VII, No. 1, 1900, pp. 1–256.

SCHUCHERT, CHARLES. On the Helderbergian fossils near Montreal, Canada.

Am. Geologist, XXVII, Apr., 1901, pp. 245–253 4 figs.

Here is given a corrected list of the fossils found on St. Helens Island, showing that two distinct faunas occur there, one, the Helderbergian, older than the agglomerate, and another, from a block in the agglomerate, of Middle Devonian age. The Helderbergian fauna is not mixed up with Silurian nor Middle Devonian fossils, as described by previous students.

SCHWARZ, EUGENE A. Papers from the Harriman Alaska expedition. XVIII. Entomological results (12): Coleoptera.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 523–537.

One hundred and fifty-five species are listed, one of which, *Nebria kincaidi*, is described as new.

——— Papers from the Harriman Alaska expedition. XIX. Entomological results (13): Psyllidæ.

Proc. Wash. Acad. Sci., II, Dec. 20, 1900, pp. 539, 540.

A list of 3 species, referred to their genera, but unnamed and undescribed. One of these is supposed to be new.

——— On the insect fauna of the mistletoe.

Proc. Ent. Soc. Wash., IV, No. 4, May 3, 1901, pp. 392–394.

An enumeration of the insects observed to live in or on *Phoradendron macrophyllum* in Arizona.

SIMPSON, CHARLES TORREY. On the evidence of the Unionidæ regarding the former courses of the Tennessee and other Southern rivers.

Science (new series), XII, July 27, 1900, pp. 133–136, 1 map.

Introductory remarks on the relation of Biology to Physiography, by C. W. Hayes and Mr. R. Campbell, are included in this paper.

The conclusion is reached from the evidence of the Unionidæ that the Tennessee River formerly flowed into the Coosa River and into the Gulf of Mexico through the Alabama system. Many of the species which are abundant in the Tennessee system and that do not occur in the Lower Mississippi are found slightly changed in the Alabama and its tributaries. A large number of species of the genus *Pleurobema* of the Tennessee drainage are closely related to those of the Alabama drainage. There is also evidence, from the present distribution of the Unionidæ, pointing to a former connection between the Etowah, the Chattahoochee, and the Savannah, or other nearby streams which empty into the Atlantic.

SIMPSON, CHARLES TORREY—Continued.

——— Synopsis of the Naiades, or Pearly fresh-water mussels.

Proc. U. S. Nat. Mus., XXII, No. 1205, Oct. 8, 1900, pp. 501–1044.

The classification is founded on the characters of the soft parts, more especially of the Marsupium, and of minor shell characters which are correlated with the animal. A full synonymy and bibliography are given.

——— *Alasmidonta marginata* Say.

Nautilus, XV, June, 1901, pp. 16, 17.

Notes on 2 forms of *Alasmidonta*, in which an attempt is made to determine which is the true *A. marginata* of Say.

SMITH, JOHN B. A hundred new moths of the family Noctuidæ.

Proc. U. S. Nat. Mus., XXIII, No. 1203, July 11, 1900, pp. 413–495.

Descriptions of 100 new species, most of which are in the collection of the U. S. National Museum.

——— Contributions toward a monograph of the North American Noctuidæ. Revision of the species of *Xylina* Ochs.

Trans. Am. Ent. Soc., XXVII, No. 1, Aug., 1900, pp. 1–46, pls. I–V, 72 figs.

Thirty-four species are included, of which number six are described for the first time. Two of the plates are taken up with figures of the genitalia, while the other three give photographic reproductions of the moths themselves. Based partly on Museum material.

——— Contributions toward a monograph of the Noctuidæ of Boreal North America. Revision of the species of *Acontia* Ochs.

Trans. Am. Ent. Soc., XXVII, No. 1, Sept., 1900, pp. 47–84.

Two species of *Tornacontia*, two of *Conacontia* and thirty-two of *Acontia* are included. Of these one species of *Tornacontia*, one of *Conacontia*, and twelve of *Acontia* are described as new. Based partly on Museum material.

STARKS, EDWIN CHAPIN. (See under DAVID STARR JORDAN.)

STEELE, E. S. Sixth list of additions to the flora of Washington, D. C., and vicinity.

Proc. Biol. Soc. Wash., XIV, June 19 1901, pp. 47–86.

This paper records a number of additions to the District flora. The author describes

STEELE, E. S.—Continued.

Lycopus sherardi, n. sp.; Prof. E. L. Greene describes *Viola luteocærulea*, n. sp., and Mr. Alvah A. Eaton *Isoetes saccharata palmeri*, n. var. and *Isoetes saccharata reticulata*, n. var. The collections on which the paper is based are deposited in the National Herbarium.

STEJNEGER, Leonhard. On a new species of Spiny-tailed iguana from Utilla Island, Honduras.

Proc. U. S. Nat. Mus., XXIII, No. 1217, Jan. 19, 1901, pp. 467, 468.

Ctenosaura bakeri described as a new species; type, Cat. No. 26317, U. S. N. M.

——— A new systematic name for the Yellow boa of Jamaica.

Proc. U. S. Nat. Mus., XXIII, No. 1218, Jan. 19, 1901, pp. 469, 470.

Epicrates subflavus described as a new species; type, Cat. No. 14507, U. S. N. M.

——— Diagnosis of a new species of iguanoid lizard from Green Cay, Bahama Islands.

Proc. U. S. Nat. Mus., XXIII, No. 1219, Jan. 19, 1901, p. 471.

Leiocephalus virescens described as a new species; type, Cat. No. 26758, U. S. N. M.

——— On the Wheatears (*Saxicola*) occurring in North America.

Proc. U. S. Nat. Mus., XXIII, No. 1220, Feb. 25, 1901, pp. 473–481.

A study of the Wheatears occurring in North America, in which it is shown that a form hitherto overlooked occurs in Greenland; this is recognized as *Saxicola œnanthe leucorrhoa* (Gmelin). A full synonymy of both forms is given, together with an extended table of measurements.

——— [Review of] Scharff's History of the European Fauna.

Am. Naturalist, XXXV, Feb., 1901, pp. 87–116.

A critical review of Dr. Scharff's book, in which the writer maintains, in contradistinction to Scharff, the Arctic character of the climate of Europe during the Glacial epoch. He disagrees with him in assigning an American origin to the animals constituting Scharff's "Arctic Migration" and suggests that they form apreGlacial "first Siberian invasion."

——— Crocodilian nomenclature.

Science (new series), XIII, No. 323, March 8, 1901, p. 394.

Contends for *Jacaretinga crocodilus* (Linn.) as the correct name for *Caiman sclerops*, and *Crocodylus niloticus* for the Nile crocodile, against Mr. W. J. Fox in *Science*, Feb. 8, 1901, p. 232.

STEJNEGER, Leonhard. The two races of *Saxicola œnanthe*.

Auk, XVIII, April, 1901, pp. 186, 187.

Some additional notes on the two forms of Wheatears inhabiting the Western Hemisphere, with measurements of some migrants from east and west Africa.

——— Corrections to Eckel's "The Snakes of New York State."

Am. Naturalist, XXXV, May, 1901, p. 428.

Shows that *Oscola clerica* and *Natrix erythrogaster* have been erroneously attributed to the State of New York.

——— Description of a new species of snake from Clarion Island, west coast of Mexico.

Proc. U. S. Nat. Mus., XXIII, No. 1231, June 5, 1901, pp. 715–717.

Bascanion anthonyi described as a new species; type, Cat. No. 21390, U. S. N. M.

——— Description of two new lizards of the genus *Anolis* from Cocos and Malpelo islands.

Bull. Mus. Comp. Zool. Harv. Coll., XXXVI, No. 6, pp. 161–164, 1 pl.

Anolis agassizi described as a new species on p. 161 and figured on plate; type, Cat. No. 22101, U. S. N. M. *Anolis townsendi*, n. sp., p. 263; type, Cat. No. 22107, U. S. N. M.

STOKES, H. N. (See under George P. Merrill.)

STRONG, R. M. A quantitative study of variation in the smaller North American shrikes.

Am. Naturalist, XXXV, April, 1901, pp. 271–298, 8 text figs.

In this paper the precise criterion of species introduced by Davenport is applied to the shrikes of the *Lanius ludovicianus* group. A detailed account of the methods employed is given.

VAUGHAN, T. Wayland. *Trochocyathus woolmani*, a new coral from the Cretaceous of New Jersey.

Proc. Acad. Nat. Sci. Phila., 1900, pp. 636, 637, 3 figs.

——— The Eocene and Lower Oligocene coral faunas of the United States.

Monogr. U. S. Geol. Surv., XXIX, 1900, pp. 5–263, pls. 1–24.

——— A Tertiary coral reef near Bainbridge, Georgia.

Science (new series), XII, 1900, pp. 873–875.

VAUGHAN, T. WAYLAND. The locality of the type of *Priomastraea vaughani* Gregory.

Ann. & Mag. Nat. Hist. (series 7), VII, No. 39, Mar., 1901, p. 300.

——— Corals from the Eocene of Maryland and Virginia.

Maryland Geol. Surv., Eocene. Baltimore, Johns Hopkins Press, 1901, pp. 222–232, pl. LXI.

——— Shell Bluff, Georgia, one of Lyell's original localities.

Science (new series), XIII, 1901, p. 270.

——— Some fossil corals from the elevated reefs of Curaçao, Aruba, and Bonaire.

A paper published by the Rijks Geologisch Museum, Leiden, ser. II, Bd. II, Heft I, pp. 1–91.

VERRILL, A. E. Additions to the Crustacea and Pycnogonida of the Bermudas.

Trans. Conn. Acad. Arts and Sci., X, pt. 2, No. XV, Sept., 1900, pp. 573–582, pl. LXX, figs. 9, 10, text figs. 2–4.

About 20 species of Crustacea are added to list of those known from the Bermudas. The determinations were made in part by Miss Rathbun.

WALCOTT, CHARLES D. Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1898.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1898 (1900), pp. 1–149.

——— Cambrian brachiopoda: *Obolella*, subgenus *Glyptias; Bicia; Obolus*, subgenus *Westonia;* with descriptions of new species.

Proc. U. S. Nat. Mus., XXIII, No. 1229, May 22, 1901, pp. 669–695.

The author here continues his studies of the Cambrian brachiopods and defines the genus *Obolella* and the new subgenus *Glyptias* with 3 species; also the genus *Bicia* and 2 species. Further notes are made on *Obolus* and its 8 subgenera, of which one, *Westonia*, is new. Ten new species of *Obolus* are defined.

WANNER, ATREUS. (See under Lester F. Ward.)

WARD, LESTER F. (with W. M. Fontaine, Atreus Wanner, and F. H. Knowlton). Status of the Mesozoic floras of the United States. First paper—The Older Mesozoic.

20th Ann. Rep. U. S. Geol. Surv., 1898–99, II, 1900, pp. 211–748, pls. XXI–CLXXIX.

This paper is based largely on specimens in the Museum collections, and is the first of a series of papers to be devoted to a comprehensive statement of the progress of the development of the Mesozoic floras of the United States.

The paper gives an historical account of the work thus far done on the Triassic and Jurassic floras of the United States, and also includes many new descriptions, nearly 200 species or separate forms being described. Prof. Atreus Wanner describes a new Triassic flora from material collected by himself in York County, Pa., which is also figured by himself. Professor Fontaine redescribes the Emmons collection made 50 years ago in the Trias of North Carolina. The whereabouts of this collection was unknown for many years. He also describes and illustrates the Jurassic flora of Oroville, Cal. Professor Ward describes and illustrates 20 species of *Cycadella* from 83 Jurassic cycadean trunks from Carbon County, Wyo., and Professor Knowlton describes fossil wood from the Trias of North Carolina and the Jurassic of the Black Hills of Wyoming, and the Freezeout Hills of Carbon County, in the same State. A new genus of Jurassic conifers from South Dakota is described as *Pinoxylon*. Professor Ward gives a brief notice of the Triassic flora of Virginia and points out its agreement with the Triassic flora of Lunz in Austria, referred by Stur to the Keuper.

WHITE, DAVID. The stratigraphic succession of the fossil floras of the Pottsville formation in the southern anthracite coal field, Pennsylvania.

20th Ann. Rep. U. S. Geol. Surv., 1898–99, pt. II, 1900, pp. 749–930, pls. CLXXX–CXCIII.

This paper is based partly on Museum material. The Pottsville formation is said to constitute, lithologically and paleontologically, a division of the Carboniferous coordinate with the Lower Coal Measures, "Allegheny Series," etc., or the lowest member of what in a broad sense the author terms the Mesocarboniferous in the Appalachian province. Its flora, so far, is said to be largely identical in both its generic and specific composition with that from the supposed Middle Devonian beds at St. John, New Brunswick.

WILLIAMSON, E. B. The subgenus *Stylurus* Needham, Selys' Groups VI and VII of the genus *Gomphus* (Odonata), and on the post-anal cells in the latter.

Trans. Am. Ent. Soc., XXVII, No. 3, May, 1901, pp. 205–217, pls. VIII, IX, 32 figs.

A consideration of 5 species of *Gomphus*—*amnicola*, *scudderi*, *plagiatus*, *spiniceps*, and *notatus*. These are separated by a key, and each is described in detail. The results of a study of the post-anal cells of 3 European and 26 North American species of *Gomphus* are also recorded and tabulated. Based partly on Museum material.

WILSON, THOMAS. L'Antiquité des Peaux-Rouges en Amérique.

L'Anthropologie, XII, 1901, Nos. 1–2, pp. 41–49.

A translation into French of the author's paper on "The antiquity of the red race in America," published in the Report of the U. S. National Museum for 1895, pp. 1039–1045.

——— Criminology.

Proc. Am. Assoc. Adv. Sci. (New York meeting), XLIX, 1900, pp. 294–300.

A reply to Prof. C. Lombroso's theory of the *criminel-né*.

LIST OF AUTHORS.

Abbott, James F., Omi, Otsu, Japan.
Adler, Cyrus, U. S. National Museum.
Allen, J. A., American Museum of Natural History, New York City.
American Ornithologists' Union, Committee on Nomenclature, New York City.
Ashmead, William H., U. S. National Museum.
Bangs, Outram, Boston, Mass.
Banks, Nathan, Falls Church, Va.
Bartsch, Paul, U. S. National Museum.
Benedict, James E., U. S. National Museum.
Birtwell, Francis J., Albuquerque, N. Mex.
Bishop, Louis B., New Haven, Conn.
Brewster, William, Cambridge, Mass.
Busck, August, U. S. Department of Agriculture.
Casanowicz, I. M., U. S. National Museum.
Caudell, Andrew N., U. S. Department of Agriculture.
Chapman, Frank M., American Museum of Natural History, New York City.
Chittenden, Frank H., U. S. Department of Agriculture.
Cook, Orator F., U. S. Department of Agriculture.
Cope, Edward Drinker (deceased).
Coquillett, Daniel W., U. S. Department of Agriculture.
Coutière, H., Museum d'Histoire Naturelle, Paris, France.
Coville, Frederick V., Department of Agriculture.
Currie, Rolla P., U. S. National Museum.
Dall, William H., U. S. Geological Survey.
Doane, R. W., Pearson, Wash.
Dwight, Jonathan, Jr., New York City.
Dyar, Harrison G., U. S. Department of Agriculture.
Evermann, Barton W., U. S. Fish Commission.
Fernald, C. H., U. S. Department of Agriculture.
Fontaine, W. M., University of Virginia, Charlottesville, Va.
Gill, Theodore N., Smithsonian Institution.
Girty, George H., U. S. Geological Survey.
Grinnell, Joseph, Pasadena, Cal.
Heidemann, Otto, Washington, D. C.
Henshaw, H. W., Hilo, Hawaii.
Holmes, W. H., U. S. National Museum.
Hough, Walter, U. S. National Museum.
Howard, Leland O., U. S. Department of Agriculture.
Howe, Reginald Heber, Jr., Longwood, Mass.
Hubbard, Henry G. (deceased).
Jordan, David Starr, President Leland Stanford Junior University, Stanford University, Cal.
Kincaid, Trevor, Seattle, Wash.
Knowlton, Frank H., U. S. Geological Survey.

Lucas, Frederic A., U. S. National Museum.
Lyon, Marcus W., Jr., U. S. National Museum.
McNeill, Jerome, Arkansas Industrial University, Fayetteville, Ark.
Marlatt, C. L., U. S. Department of Agriculture.
Mason, Otis Tufton, U. S. National Museum.
Maxon, William R., U. S. National Musuem.
Merrill, George P., U. S. National Museum.
Miller, Gerrit S., Jr., U. S. National Museum.
Nelson, E. W., U. S. Department of Agriculture.
Nelson, Elias, Laramie, Wyo.
Norton, Arthur H., Westbrook, Me.
Nutting, C. C., State University, Iowa City, Iowa.
Osgood, Wilfred H., U. S. Department of Agriculture.
Palmer, William, U. S. National Musuem.
Pergande, Theo., U. S. Department of Agriculture.
Pollard, Charles L., U. S. National Museum.
Rathbun, Mary J., U. S. National Museum.
Rathbun, Richard, Assistant Secretary, Smithsonian Institution.
Richardson, Harriet, U. S. National Museum.
Richmond, Charles W., U. S. National Museum.
Ridgway, Robert, U. S. National Museum.
Rose, Joseph N., U. S. National Museum.
Schuchert, Charles, U. S. National Museum.
Schwarz, Eugene A., U. S. Department of Agriculture.
Simpson, Charles Torrey, U. S. National Museum.
Smith, John B., Rutgers College, New Brunswick, N. J.
Steele, E. S., U. S. Department of Agriculture.
Stejneger, Leonhard, U. S. National Museum.
Stokes, H. N., U. S. Geological Survey.
Strong, R. M., Morgan Park, Ill.
Vaughan, T. Wayland, U. S. Geological Survey.
Verrill, A. E., Yale University, New Haven, Conn.
Walcott, Charles D., Director U. S. Geological Survey.
Wanner, Atreus, York, Pa.
Ward, Lester F., U. S. Geological Survey.
White, David, U. S. Geological Survey.
Williamson, E. B., Bluffton, Ind.
Wilson, Thomas, U. S. National Museum.