PART I.

REPORT

UPON THE

CONDITION AND PROGRESS OF THE U. S. NATIONAL MUSEUM DURING THE YEAR ENDING JUNE 30, 1900.

BY

RICHARD RATHBUN,

ASSISTANT SECRETARY OF THE SMITHSONIAN INSTITUTION.

REPORT

UPON

THE CONDITION AND PROGRESS OF THE U. S. NATIONAL MUSEUM DURING THE YEAR ENDING JUNE 30, 1900.

BY

RICHARD RATHBUN,
Assistant Secretary of the Smithsonian Institution.

GENERAL CONSIDERATIONS.

The act of Congress of 1846 establishing the Smithsonian Institution made it the legal place of deposit for 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," and thereby created, in fact if not in name, a national museum. With extraordinary foresight the same act provided for additions to the national collections by exchange, donation, or other means, and for the arrangement and classification of the specimens in a manner best to facilitate their examination and study, all in such broad and comprehensive terms as to cover the full activities of a great establishment of this kind.

The Smithson fund at that time amounted to about half a million dollars, a sum then considered ample to meet the needs of the multifarious operations upon which it was proposed that the Smithsonian Institution should enter. In 1846 probably not more than one or two universities or learned establishments in America had so large an endowment, and it was apparently the idea of Congress that the fund was sufficient both for the erection of a building and for the care of the collections which would be turned over to it or acquired by the national surveys and in other ways. The Museum thus began as an integral part of the Institution, coordinate with its library, and was required by law to provide for the Government collections which had previously accumulated, a duty which the Institution did not see its way clear to fulfill until 1858, when Congress began to make small yearly appropriations for the purpose. So inadequate, however, were the

sums voted, 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, a considerable portion of the collections were and still are the actual property of the Institution, through exploration, gift, and purchase, and at least a number of the officials in charge of the collections were employed at its expense.

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 Government surveys, and of arranging them in a manner convenient for study, every effort is made to complete the representation in all departments of science and the arts capable of being illustrated in a material way. Extensive series of specimens, selected with reference to their educational value and the popular interest they may excite, and bearing appropriate labels, are exposed to view in the public halls. The duplicate specimens are made up into sets for exchange and 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, being constantly called upon to answer

questions relating to every subject with which it might, in the remotest degree, be concerned.

The first scientific collection to come into the possession of the Institution—and, in fact, it accompanied the bequest—was the small but valuable mineralogical cabinet of James Smithson, the founder, who was himself a chemist and mineralogist of repute, and a Fellow of the Royal Society of London. Some six years before the Institution had been formally established, however, a society was organized in Washington under the name of the National Institution, afterwards changed to the National Institute, which had for its avowed purpose the direction of the Smithson bequest and the pursuit of objects in consonance with the terms of that foundation. One of these objects was the gathering of historical and natural-history specimens, from both official and private sources, prominent among the former having been the United States Exploring Expedition of 1838–1842. Rooms in the Patent Office building were secured for the museum of the society, which was virtually recognized as the appropriate place of deposit for all Government collections held in Washington, and here was actually accumulated the nucleus of the National Museum. Another important service rendered by the society was, as Doctor Goode has said, 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 in 1846, though it continued in existence until 1861. The Government collections in its possession, which were practically in the care of the Commissioner of Patents, were turned over to the Smithsonian Institution in 1858. Other material directly under the control of the National Institute remained at the Patent Office until 1862, and a portion of the historical objects were retained there until 1883.

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

Resolved, That it is the intention of the act of Congress, 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.[1]

[1] Report of committee on organization, p. 20.

The transfer of Government collections to the Institution was, in accordance with the Congressional act of 1846, to be effected "whenever suitable arrangements can be made from time to time for their reception." In the absence of any stated limitations as to the time or character of arrangements, 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 Smithsonian fund for the support of so large an undertaking. The cost of the large 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, and thus nine years were 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 in sentiment, so that when, in 1857, the necessary arrangements 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. The appropriations continued very small, however, for many years, during which the Institution was obliged to make up the deficit.

The vast amount of material secured for the Government at the close of the Centennial Exhibition of 1876, which impelled the erection of a second building, for the exclusive use of the Museum, resulted in a larger and more systematic organization. Twenty-five more years have now elapsed, noteworthy for extensive explorations and surveys both at home and abroad. Material has been pouring in from these in a never-ceasing flow, first filling far beyond their ordinary capacity the halls and storerooms of the two large buildings, and then requiring to a greater and greater extent each year the use of outside quarters for their mere shelter. The main buildings are essentially fireproof, but not so the others, containing collections valued at hundreds of thousands of dollars, which, through accident or maliciousness, might at any time be destroyed.

While the collections in the custody of the National Institute remained at the Patent Office until 1858, material for a museum was, in the meantime, being accumulated at the Smithsonian Institution. Reference has been made to the cabinet of minerals which had belonged to Smithson, unhappily destroyed by fire in 1865. The personal bent of Professor Baird, who became the Assistant Secretary of the Institution in 1850, was toward the collection of natural-history specimens for the purposes of study. With the approval of Secretary Henry, he put into operation plans for the accomplishment of this object, which, fostered and encouraged, were soon yielding regular and abundant returns. Professor Baird's own vacations were spent in field researches. Officers of the Army and Navy and of other branches of

the Government service, fishermen, fur traders, private explorers, and such powerful organizations as the Hudson 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.

Having as its first purpose the promotion of scientific research, next accepting the custody of the Government and other collections, and finally developing broadly along educational lines, the history of the National Museum may, as the late Doctor Goode has pointed out, be divided into three epochs, which he describes 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.

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.

In these words the objects of the Museum are so clearly defined and the plan laid down is so broad that those who come after have but to perfect the details while preserving that unity of interests which is requisite if the structure as a whole shall forever prove worthy of its founders and of this great nation.

AS A MUSEUM OF RECORD.

In its capacity of 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, whose inquiries into new regions and into new fields have been pushed without stint. Scientific institutions everywhere, foreign governments and individuals have likewise contributed abundant stores of great value, and a small fund in recent years has permitted of some purchases to supply desiderata. The richness of the collections has also been much increased through the exchange of duplicate specimens with other similar establishments.

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 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 United States 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 or 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 Philadelphia Exhibition

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 the thirty 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.

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. It has gone on steadily increasing every year, and now, at the close of 1900, the number of specimens is in excess of 4,800,000.

While these figures convey no impression of the bulk of the collections, when it is considered that in 1883 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 much more than enough material of great intrinsic and scientific value to fill a larger building than 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, as they are 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. Advantage of the opportunity thus afforded is 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 occasionally sent out to representatives of other

museums or laboratories having the means of providing for its safe-keeping, this being done more particularly when they are engaged to work up special subjects or when they desire to use the material for comparison in connection with their own collections.

Being charged primarily with the custodianship of its collections, the members of the scientific staff of the National Museum have 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 care in accordance with the most advanced researches. The fact, however, that many papers descriptive of the collections are produced each year is indicative of the industry which prevails among the staff and of the extent to which the hours of work are prolonged.

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 consists in the main of an exhibition of all the classes of objects which it represents, so labeled that the public may be instructed as by an encyclopedia cut apart and spread out, except that its illustrations are real and material things. Conceding all the space required, the principal difficulty incident to the proper installation of such a collection is in the selection of its parts so that while visitors may have placed before them all that is genuinely essential, they shall not be overburdened or confused with details. With the advance in museum methods, moreover, the objects on display are being grouped to a greater and greater extent, to show relationships, with, whenever possible, some added notion of their natural environment, so that at a glance the visitor may better

comprehend their true character and significance. In this direction the National Museum has been making conspicuous progress, and probably now takes the lead.

No museum administrator had a better understanding of the public needs than the late Doctor Goode, and none labored more earnestly and conscientiously than he to make this a museum for, as well as of, the people. His assistants were relied upon to arrange and maintain the study series in a manner acceptable to the specialist, but the interests of the public were retained in his own immediate charge. His mind was ever occupied in devising ways for so presenting the features of nature and the thoughts and activities of mankind that the visitor, by the very force of his surroundings, was bound to receive and carry with him some definite impression, some new bit of knowledge.

Doctor 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.

In this, as in every other activity of a live organization, change and improvement are constant. The receipt of new material will, it is to be expected, continue unceasingly, and every year something must arrive in which the public has a right to share. During the past five years the progress made in the installation of the exhibition series has been especially noteworthy, and now for the first time every hall designed for public use is permanently opened, though not one is above addition or improvement, and in some the arrangement is entirely provisional.

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, as it requires the working over of entire collections before the reserve and duplicate series can be separated, and the labeling and packing take much time. Many hundreds of these sets have been given away, but none have been prepared recently, and the few remaining on hand at the beginning of the year have now been disposed of.

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 being brought constantly and

prominently before the public. These expositions have of late followed one another so closely and have required so extensive preparation as to interfere greatly with the legitimate 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.

The publications of the Museum may be classed, at least in a general way, as belonging to its educational side, though they are mainly technical, and in that respect most useful to the investigator. They spread the work of the Museum abroad and make known the nature and extent of its collections. The Annual Report was first printed as a separate volume of the Smithsonian Report in 1884, and has just reached its seventeenth volume. Besides the administrative part, it has consisted mainly of semipopular papers on interesting portions of the collection. Of the Proceedings, made up of technical papers of small to moderate size, twenty-one volumes have been issued and another is in press. The Bulletins, reserved chiefly for the larger and more exhaustive scientific papers, number forty-nine, of which the last one printed (Bulletin 47), a monograph of the fishes of North and Middle America, is in four parts, completed near the close of the year.

PRESSING NEEDS OF THE MUSEUM.

By 1883, only two years after possession had been taken of the present Museum building, its capacity was found to be wholly insufficient, and an estimate for a second structure of even larger size was at once submitted to Congress. In his report for 1884, Doctor Goode explained that it was a serious problem where to store the incoming collections, leaving entirely out of consideration the question of their display. The needs in this direction, always increasing, have been urged in every subsequent report, but so far without effective result. The Senate voted $500,000 for a new building in 1888, and again in 1890, 1892, and 1896, but all these measures failed of action in the House.

The Museum has now reached a crisis in its history which must be frankly met. It can no longer comply with the mandates of Congress imposed upon it by the act of 1846 establishing the Smithsonian Institution. The two buildings which it occupies are overcrowded to the extent that the collections they contain can only in part be arranged and classified so as to permit of their examination as required by law, and many of the collections are so inaccessible as to endanger their very safety. Many hundreds of boxes, to a large extent turned over by the Government surveys and filled with material valued at

hundreds of thousands of dollars, are stacked up in frame and cheaply constructed brick buildings, liable at any time to destruction by fire. There is no place where this material, composing fully one-half of the Museum's possessions, can be unpacked and spread out for study or reference, while the portion suitable for exhibition would alone more than fill another structure as large as the present Museum building.

For the existence of this condition neither the National Museum nor the Smithsonian Institution can be held responsible. The Institution was made the custodian of all collections belonging to the Government in the Congressional act providing for and thus preceding its organization. It has fulfilled the obligation conscientiously and in accordance with the spirit of the law, even when its own funds have had to be drawn upon. It has shown that the trust was not misplaced, and in the face of obstacles which have at times seemed insurmountable has given its museum feature a standing not excelled in any country in the world, though in accommodations and display its position is decidedly inferior to many.

A national museum is not of the nature of a project which may await the pleasure of summary action. Its material accumulates with the exploration and development of the country—in the case of the United States mainly through Congressional direction—and if the material collected by this means be destroyed or otherwise disposed of, the most of it can only be replaced, if at all, at greatly increased cost. For many years this country has been supporting extensive investigations under authority of Congress. Prominent among the bureaus whose work requires the collecting of specimens and their transfer to Washington for purposes of study are the Geological Survey, the Fish Commission, the Biological Survey and the divisions of Entomology and Botany of the Department of Agriculture, and the Bureau of American Ethnology. A large amount of material has reached Washington in the past, and will certainly continue to do so, from other Government sources, such as Army and Navy expeditions, representatives abroad of the Department of State, the Revenue-Marine Service, and the Coast and Geodetic Survey. These bureaus depend by law upon the National Museum for the care of their collections. Having for the most part very inadequate accommodations in their own buildings, much of their material is turned over as soon as received in Washington, and thus the Museum is called upon, very appropriately, to make greater provision for the handling and storing of specimens than is generally supposed. This unworked material has, in one sense, even greater value than that which has been determined and described, as its study is expected to develop facts yet undiscovered, and the responsibility for its safe-keeping is increased accordingly.

The demand for additional space and for new cases, always incessant,

has reached a stage where the helplessness of the authorities to meet it is pathetic. Galleries have been built in some of the Museum halls. Their capacity has not sufficed to keep pace with the current demands of the years in which they were constructed, and collection after collection has been carted away to one of the outside buildings. These now are all practically filled, and next year a new one must be leased, or accessions turned away, or the exhibition halls transformed into storehouses.

On its educational side there is equal cause for complaint. The public demands to see more than is now placed before it, and what is already on display is so closely crowded as to be difficult of inspection. As previously explained, there is much material in storage which should be put on exhibition. In fact, a very large share of the collections can be best looked after and protected in the exposed cases of the open halls. With its great resources, exceeding those of any State, municipal, or private establishment, the Government is under a moral obligation to foster and promote the educational feature of the Museum to the fullest extent possible. Congress has acknowledged this obligation from the very start, and has, perhaps, done more in support of this object than of any other. It is the one, moreover, which requires the most space and most expensive furnishings—the largest item in the construction of a new building.

Laboratories of much larger size than the existing ones are required in all the departments. This is not alone in the interest of the work carried on by employees of the Museum. Better accommodations are needed for the assistants from other scientific bureaus who are called here to consult the collections, and who could to some extent carry on their investigations much more advantageously at the Museum than in their own buildings were proper facilities afforded them. The wants of scientific men from other parts of the country and from abroad, who turn to the national collections for materials for their study, and many of whom visit Washington every year, have also to be considered and provided for.

And finally, the shops where cases are made, where paint is stored and mixed, where the taxidermy, modeling, and coarser preparatory work is done, now distributed among as many outside buildings, require to be brought together in the interest of economy and of better administration.

As a result of its extraordinary growth under the very inadequate provisions made for its maintenance, the National Museum has been obliged to adapt itself to circumstances, to scatter its belongings and its work, so that to-day its form and its administration are conditioned by the restrictions under which it labors and not in accordance with the best ideals, in the realization of many of which it was originally a pioneer. The first and most urgent need is a new building, large,

dignified, and accessible, with extensive halls and ample accommodations for its collections and activities. Such a house provided, it may take its proper place among the great museums of the world. The interests of the Government and of research will be promoted, the public will secure its proper measure of advantages, educational establishments throughout the country will be benefited, and a museum worthy of the generous people all over the United States who have lavished gifts upon it, of the patient toil of the many scientific men who have given it the best years of their lives, often without hope of reward, and of this great, prosperous, and enlightened nation will grace the national capital.

IMPORTANT ACCESSIONS AND WORK OF THE YEAR.

The additions to the collections in the various departments aggregated considerably over 200,000 objects. The most important accession was the so-called Marsh collection of fossil vertebrates received from the United States Geological Survey. Its contents can not as yet be fully determined, as the matrix still hides many of the specimens, but the latter range from small teeth to more or less perfect skeletons weighing from 500 to 2,000 pounds apiece. The total weight of the collection is over 80 tons, and its value, at a rough estimate, has been placed at not less than $150,000. Another noteworthy acquisition by the Department of Geology was the collection of minerals belonging to the late Prof. C. U. Shepard, consisting of over 5,000 specimens, among which are many rarities and much of historical value, including a large number of Professor Shepard's types. The meteorite collection, which has been increased to 742 specimens, now ranks among the largest in the world, while in the field of paleobotany the National Museum has become the center of systematic work.

Dr. William L. Abbott, in continuation of many past favors, has contributed nearly 1,200 specimens of mammals, birds, and batrachians, besides a large quantity of material in other groups, the results of his explorations among the islands of the China Sea, and in Trong, Lower Siam, and Singapore. Other large and valuable additions have been the birds, mollusks, insects, and plants of the E. H. Harriman Alaskan Expedition; the unique collection of spiders belonging to the late Dr. George Marx; many birds from Hawaii and Colombia; large numbers of bats from the West Indian region; and fishes from both sides of the Pacific Ocean.

The additions to the herbarium numbered over 27,000 specimens, mainly from the Southern and Western States, Alaska, Mexico, and Europe.

In anthropology over 33,716 objects were received, among them many of great scientific and historical value. A large number of these

were obtained through the instrumentality of the Bureau of American Ethnology.

Following are some of the more important changes in connection with the exhibition series: The gallery in the northeast court has been newly furnished with ebonized cases of elegant design, in which the collection of ceramics, together with other works in glass, lacquer, and metal, has been installed with very effective results. The Indian basketry collection, one of the finest now in existence, has been arranged, with the ethnological exhibits from Latin America, in the corresponding gallery of the northwest court. The display in the hall containing the Catlin paintings and the Indian groups has been as nearly completed as the material on hand permits, while the medical exhibit has been entirely revised, and many additions and readjustments have been made in the Hall of History.

The south or Mammal Hall has been partly refitted with large cases, and its contents rearranged, the American species being retained on the floor, while those from other countries have been transferred to the new gallery above. In this hall are displayed, in several groups, some of the finest examples of taxidermic work ever produced. The floor space of the south east range has been entirely given over to the exhibition of fishes, reptiles, and batrachians, and the reorganization of the bird collection in the Smithsonian building, chiefly through a reduction in the number of specimens displayed, has been nearly finished. The lighting by electricity of the cases in the central quadrangle of the latter hall, containing bright-plumaged birds, has resulted satisfactorily, bringing into use what has practically been a large waste space.

The systematic exhibition series in practical geology, occupying the gallery of the southwest court, has been essentially completed. Important changes have been made in the collections illustrating the building stones and mineral resources of the United States, and good progress is to be noted in the installation of invertebrate fossils. Several striking special exhibits of geological structure and phenomena have also been added.

The total number of persons who visited the exhibition halls during the year was 225,440 for the Museum building and 133,147 for the Smithsonian building, an average daily attendance of 720 at the former and of 425 at the latter.

The principal researches completed, or in which marked progress was made during the year by assistants of the Museum, have related to mammals, birds, insects, mollusks, crustaceans, plants, and certain branches of ethnology and geology. Reference should especially be made to a monograph by Mr. Robert Ridgway on the Birds of North and Middle America, on which he has been engaged for several years. The first volume is nearly ready for printing, and several additional

volumes will be required to complete the work. Specimens in greater or less number have been sent for study to the representatives of over twenty prominent museums and universities in different parts of the United States.

More of the Museum staff than usual were in the field, the duration of their absence from Washington varying from two or three weeks to as many months. Mr. William H. Dall, Mr. Robert Ridgway, Dr. C. Hart Merriam, and Mr. F. V. Coville accompanied the Harriman Alaskan Expedition. Mr. Leonhard Stejneger, Dr. Charles W. Richmond, Mr. William Palmer, and Mr. J. H. Riley visited Cuba and Porto Rico in the interest of the Pan-American Exposition. The whale fishery of Newfoundland was investigated by Dr. Frederick W. True, and the anthropology of Cuba and Jamaica by Mr. William H. Holmes. Collections of plants were made in Mexico by Dr. J. N. Rose and Dr. Walter Hough; of vertebrates in Venezuela by Mr. Marcus W. Lyon, jr.; of fishes in the Vineyard Sound region of Massachusetts by Mr. Barton A. Bean, and of fossils in Wyoming by Mr. Charles Schuchert and Dr. Lester F. Ward.

From the appropriation of $300,000 made by Congress for the Government exhibit at the Pan-American Exposition of 1901 $50,000 have been allotted to the use of the Smithsonian Institution and its bureaus. Before the close of the year the plans for the display by the Museum had been practically settled, and considerable progress had been made in bringing the necessary collections together and in starting the work of preparing them.

REPORTS OF HEAD CURATORS.

REPORT ON THE DEPARTMENT OF ANTHROPOLOGY FOR THE YEAR 1899-1900.

By William H. Holmes,
Head Curator.

ORGANIZATION AND PERSONNEL.

The organization of the department has remained practically unchanged during the year.

Owing to the lack of space in the exhibition halls, the Division of Somatology and several sections are not represented in the exhibition series, and numerous other branches are but meagerly shown.

The only change made in the personnel of the anthropological staff was the assignment of Mr. Paul Beckwith, of the clerical force, to the duties of aid in the Division of History and Biography. Mr. Beckwith's services are also utilized in the Section of Coins and Medals.

The death of Mr. A. Zeno Shindler, a preparator in the department, occurred during the year. Mr. Shindler had been attached to the Smithsonian Institution and Museum for twenty-five years or more, doing excellent service as a painter of ethnological portraits and in coloring casts in the Department of Biology as well as that of Anthropology.

DEPARTMENT OFFICES.

During previous years the offices occupied by members of the staff of the department were much scattered and, in the main, not conveniently situated with respect to the exhibition halls. Recently, however, the roomy west portal of the Museum building has been remodeled as an office for the head curator, while the adjoining rooms on the north and south have been fitted up as department laboratories and utilized largely for receiving and distributing collections. The office of the curator of the Division of Ethnology connects with this suite on the south, and the department recorder occupies a room on the north. On the floor above are five small rooms, occupied by assistant curators, aids, and preparators. Rooms requiring it have been connected by means of speaking tubes, and a telephone has been introduced into one of the laboratories, greatly facilitating the transaction of business. All of these rooms have been renovated and repaired during the year. The several honorary members of the staff occupy,

of necessity, offices at points convenient to the work in which they are primarily engaged. A sectional library has been established in the office of the head curator, which is intended to be supplied with such general reference works as may not be available for the several divisions and sections.

EXHIBITION CASES.

Little progress was made during the year in the direction of increased or improved facilities for installation. The handsome ebonized wall case, 64 feet in length and 9 feet in height, built in the gallery of the northeast court during the previous year, has been fitted up with shelving, and the ceramic collections, together with numerous works in glass, lacquer, and metal, have been installed in it. This case, built by the Museum mechanics, is probably not surpassed anywhere for beauty, convenience, and mechanical perfection. Much attention has been given to the reassemblage and fitting up of cases already in use, and the furniture of the department presents a much more creditable appearance than at any previous period.

ACCESSIONS.

Accessions to the collections of the department have been of average number and importance. The following statistical statement gives the accessions by divisions and sections:

	Permanent accessions.		Temporary accessions.	
	Number.	Number of specimens.	Number.	Number of specimens.
1. Division of Ethnology	81	2,337	5	50
2. Division of Technology	24	121	8	35
3. Division of Prehistoric Archæology	67	1,513	10	28,426
4. Division of American History	53	323	31	430
5. Division of Religions	1	1	2	13
6. Division of Somatology	4	7	.....	.....
7. Section of Graphic Arts	1	2	2	23
8. Section of Ceramics	4	19	4	99
9. Section of Photography	1	10	.....	.....
10. Section of Music	5	10	.....	.....

The manner of acquirement is indicated in the following table:

	Number of accessions.	Number of specimens.
By gift	175	2,089
By collection	4	375
By purchase	40	1,361
By manufacture	9	21
By Smithsonian and governmental deposits	9	147
By temporary deposit	59	29,285
By exchange	15	438

IMPORTANT ACCESSIONS.

A considerable number of collections acquired during the year are worthy of special mention, as follows:

By gift.—1. Ethnological material from the Malay Archipelago, donated by Dr. William L. Abbott; 67 specimens.

2. Two ancient stone chairs from Ecuador, presented by Hon. Perry M. de Leon, United States consul-general at Guayaquil. These valuable specimens were discovered about thirty years ago as the result of a freshet. The waters uncovered what appeared to be an ancient council chamber in which had been placed a large stone table surrounded by numerous chairs.

3. A mummy from the valley of Cuzco, Peru, presented by Dr. C. H. Russell, surgeon U. S. S. *Newark*.

4. The Ramage printing press, presented by Barnhart Bros. & Spindler, of Chicago, Ill. This press marks the change in the hand press from wood construction to iron. It is said to have been made in 1775.

5. A series of 32 insulated electrical conductors, presented by the American Electrical Works, of Providence, R. I.

6. Two typewriting machines, presented by the Hammond Typewriter Company, New York. One of these machines is of the model first made by the company, in 1884, and the other is of the latest style, made in 1900.

7. Collection of weapons of Australian aborigines; 33 specimens; presented by Hon. F. W. Goding, United States consul at Newcastle, New South Wales.

8. Two antique bronze cannon from Manila, presented by Admiral George Dewey, United States Navy.

9. United States regulation sword used by Gen. J. B. McPherson throughout the civil war, presented by Mr. D. W. Wood.

10. Wedding dress of Mrs. Joseph Little, of Hagerstown, Md., June 17, 1784; presented by Mrs. S. H. Young.

11. Collection of postage stamps used in the Philippine Islands at the time of American occupation, presented by Mr. Charles Doran.

By collection.—1. Archæological and historical relics from Cuba and Jamaica, by Mr. W. H. Holmes; 200 specimens.

2. Ethnological and archæological objects from Mexico and Arizona, by Dr. Walter Hough; 153 specimens.

3. Ethnological collections from the Pacific Islands, by Mr. C. H. Townsend and Mr. H. F. Moore of the *Albatross* expedition of 1899–1900; 243 specimens (partial returns).

4. Collection of Indian skulls and ethnological materials from Tierra del Fuego and Patagonia, by Prof. J. B. Hatcher; 37 specimens.

By purchase.—1. Collection of ethnological specimens from the Kongo Valley, Africa, from the Rev. S. P. Verner; 275 specimens.

2. Copper implements from an ancient interment in Houghton County, Mich., through the Bureau of Ethnology, from Mr. Isaac Otis, Westburg, N. Y.: 4 specimens.

3. Ancient stone implements from the West Indian Islands; 274 specimens; through the Bureau of Ethnology; from Mr. Louis Guesde, of Pointe a Pitre, Guadeloupe Island.

4. Three antique printing presses, from Mr. John A. Lant, Tarrytown, N. Y.

5. Collection of small arms, from Col. W. C. Dodge, Washington City; 57 specimens.

6. Collection of implements, etc., from an Illinois mound, through the Bureau of Ethnology, from Mr. C. E. Clifton, Washington City; 140 specimens.

7. Collection of Washoe Indian baskets; 47 specimens, through the Bureau of Ethnology, from Mr. Eugene Mead, Grand Rapids, Mich.

8. Ethnological specimens from the tribes of Angola, Africa; 59 specimens; from Rev. W. P. Dodson, Brooklyn, N. Y.

Permanent deposit.—1. Historical collections relating to the Spanish-American war, cannon, small arms, uniforms, etc.; 66 specimens, from the United States Navy Department.

2. Historical flags; 33 specimens, from the Smithsonian Institution. (Gift of Library of Congress.)

3. Personal relics of Gen. Thomas Swords; 48 specimens, from the Smithsonian Institution. (Gift of Miss E. H. Cotheal.)

Loans from private sources.—1. Collection of vases, by Grueby Faience Company, Boston, Mass.; 12 specimens.

2. Collection of important objects, historical and personal, by Admiral George Dewey, United States Navy; 80 specimens.

3. Historical collections by the societies of Colonial Dames (53 specimens) and Daughters of the American Revolution (18 specimens).

4. Collection of books and bindings, by Miss E. R. Scidmore; 23 specimens.

5. Collection of stone implements from Georgia, by Dr. Roland Steiner; 18,907 specimens.

6. Autograph letters of persons prominent in the civil war; 103 specimens; by Mrs. L. O. Mason.

7. Military and personal relics of the Ord family; 28 specimens; by Lieut. James T. Ord.

CARE OF COLLECTIONS.

During the past year, and during the two preceding years as well, there was a constant shifting and reshifting of the collections, resulting from reclassification and the demand of additional material for installation. Instructive and valuable specimens have been selected and placed on exhibition and less important material has been placed in

storage. The effort has been to constantly improve the condition and enhance the usefulness of the collections. The task of destroying moths and other injurious insects has been faithfully performed by Mr. Joseph Palmer, preparator, who is able to report the rare occurrence of these pests among the collections of the department. The work of poisoning is begun at once upon the arrival of specimens and is generally completed before assignment is made to the divisions and sections. The extensive basketry collection has been thoroughly cleaned and treated with preservatives, and other articles requiring it have been treated in like manner. Poisoned specimens are specially tagged or marked, and a card catalogue recording dates and kind of treatment is kept.

STORAGE.

A great body of material belonging to the collection is in storage in the Smithsonian Institution, in the Museum, and in three outbuildings. During the year the head curator undertook the task of examining all of this storage material, the object being to determine its nature and availability for exhibition. He was made chairman of a committee by the executive curator and was instructed to investigate the entire storage material of the Museum. A force of from six to ten men was employed for six weeks in this work. The storage material has been accumulating for twenty-five years without full separation of the various classes of collections and with but meager records. The multitude of crates, boxes, and uncased objects was gotten out and classified. The anthropological property was segregated by divisions and sections, and a card catalogue was made enumerating briefly the contents of each package. The same information was placed upon the packages which are so arranged that the labels are visible and so they can be removed with a minimum of labor. Up to date the catalogue contains 711 cards. In addition, there is a large body of collections mounted in glass covered unit boxes for exposition use. This material is now stacked in the storage buildings.

CATALOGUING.

The routine for the reception, distribution, and cataloguing of collections is given in last year's report. The work of the head curator's office and of each division and section has been conducted according to the plan laid down in that report, and the results seem to be entirely satisfactory. In writing the present report the head curator has assembled on his desk the following data: The department's books recording accessions, permanent and temporary, for the year; the card catalogue of accessions; the card catalogue of collections for the year from all the divisions and sections; the card catalogue of storage; the card catalogue of exchanges; the card catalogue of articles poisoned

or otherwise treated, and a card catalogue of articles, such as models and casts, made for the Museum by preparators or other persons employed by the Museum. At the same time a detailed report of the operations of each division and section for the year is in the hands of the head curator, who is able, through these various sources of information, to understand and summarize the work of the year with much ease and satisfaction.

INSTALLATION.

The year has witnessed very decided progress in the work of installation, the divisions of Ethnology, Technology, History, and Medicine, and the sections of Graphic Arts and Ceramics having made most gratifying headway. Prof. O. T. Mason reports, for the Division of Ethnology, that the cases in the west north range are so fully installed and labeled that this room may be considered to fall little short of completion. During the year the force of the division has been partly engaged in installing collections in the gallery of the northwest court. On the east side of this gallery there are cases containing typical exhibits of basketry from all parts of the world. On the north side the series of rail cases shows the types of California basketry, while in the wall cases a series of baskets is shown representing various tribes from British Columbia to Mexico. On the south and west sides of this gallery are exhibits of ethnological materials of Latin America, beginning with Sonora on the north and ending with Tierra del Fuego on the south.

The honorary curator of the Division of Mechanical Technology, Dr. J. E. Watkins, reports that important improvements in the installation of the Section of Land Transportation have been made. The base and iron rail of the locomotive "John Bull" have been completed. The ox cart from New Mexico and the Red River cart have been placed on a new mahogany base and installed with other wheeled vehicles. The large wooden models of the locomotives "Tom Thumb" and "Arabian" have been removed to storage, and small models are being made to take their place in the exhibit. The original driving wheels of the locomotives "John Bull" and "De Witt Clinton" and several other antique car wheels have been permanently installed on the piers within the hall. The boiler of the locomotive "Stourbridge Lion" has been fitted with wooden axles and mounted on its wheels. It is hoped that additional parts of this locomotive may be secured, so that it may, in time, be restored to approximately its original condition.

The curator of the Division of Prehistoric Archæology, Dr. Thomas Wilson, mentions in his report the very obvious fact that the exhibition cases of the division are overcrowded. With every accession of importance he is compelled to condense the exhibits in order to make

room. During the year the work of segregating various exhibition units has been continued, but it is not deemed advisable to begin the radical change of installation so manifestly called for until extensive improvements are made in the hall.

Mr. A. H. Clark, honorary custodian of the Section of American History, states that very satisfactory progress has been made in the care of the collections of that section. Additional cases have been introduced into the north hall and the rotunda, and various rearrangements of cases and exhibits have been made. The contents of many cases have been reclassified and installation has been perfected. The superb collection of personal relics of Admiral George Dewey, deposited during the year, has been installed in cases near the Museum entrance. During the year it has been necessary to send numerous exhibits to storage. Increased exhibition room for this section is very much needed.

A complete reinstallation of the exhibits included in the Division of Medicine has been made during the year by the honorary curator, Medical Director J. M. Flint, United States Navy. The cases have been arranged in alcove style, thus giving a passageway of proper width along the gallery. Included with the collections of this division are two cases containing exhibits designed to illustrate the composition of the human body.

Noteworthy improvements have been made in the installation of the Section of Graphic Arts. Mr. Paul Brockett has conducted this work under the immediate supervision of the head curator. Two cases have been added, one containing series of exhibits illustrating the history of the book, and the other, examples of modern binding; the latter exhibit is lent by Miss E. R. Scidmore.

The Section of Ceramics has been assigned to the northeast court gallery, which has been fitted up with excellent cases. Early in the year the collections of ceramics, glass, lacquer, bronze, etc., were installed here by the head curator, the arrangement being primarily by countries and secondarily by varieties or factories.

LABELING.

The important work of labeling the collections of the department is progressing satisfactorily. The system of case labeling adopted during the preceding year, and described in the report for that year, has been successfully applied, and many labels are already in place. The printing of labels for several halls is now going forward, and minor labels have been prepared in large numbers by the various curators. As soon as the work of labeling is reasonably complete and the installation satisfactory, it is planned to prepare a key or guide to the collections of the department.

FIELD WORK.

The department has not been able to carry on extensive field work during the year. The explorations of Dr. Walter Hough, made in connection with an expedition conducted by Dr. J. N. Rose, of the Division of Botany, were mentioned in the report of last year, although not completed until August of the present year. The collections made are of very considerable scientific value, including, as they do, many plants used in the native arts, ancient and modern, besides numerous specimens of native handiwork. During the year Mr. C. H. Townsend returned from his voyage on the *Albatross*, bringing a large collection of ethnological specimens from the Pacific islands, and Dr. W. H. Abbott, continuing his explorations in the Malay Archipelago, has forwarded many objects of interest. Col. H. H. Hilder, of the Bureau of American Ethnology, has visited the Philippines, collecting for the Pan-American Exposition, and reports the shipment of much material that will finally enrich the Museum. Maj. J. W. Powell and Mr. W. H. Holmes spent three months in Cuba and Jamaica, securing valuable collections of relics illustrating the ancient peoples of these islands.

RESEARCHES.

The curators of the department have found time, aside from their duties as custodians of the collections, to engage in important researches based largely, as usual, on the national collections. The head curator has continued his studies relating to aboriginal pottery, to the evidences of auriferous gravel man in California, and to antiquities of Mexico. The curator of ethnology has made progress toward completing his monograph on American aboriginal zootechny, and has made a careful study of the recently received Hudson collection of California basketry. The assistant curator of ethnology has continued his studies in heating and illumination, and has prepared a manuscript on the primitive stages of illumination, covering the use of the torch and the candle. He has also pointed out the connection between Mexico and the Philippines with relation to the introduction of plants and industries from Mexico to the Philippines and from the Philippines to Mexico.

The curator of prehistoric archæology has made further progress in his studies relating to primitive trepannation, working experimentally with primitive utensils upon various specimens of human crania. He has also been interested in the discovery of the truth with respect to allegations that prehistoric man was ambidextrous, studying the statistics furnished by our Indian schools and the rich collections of his division.

The curator of the Division of Religions has completed an illustrated catalogue of the Benguiat collection of Jewish ceremonial objects.

The curator of the Division of Mechanical Technology has been prosecuting researches in various sections of this division, and Mr. G. C. Maynard, aid, continues his studies with respect to the electrical collections.

The extensive collections of the department naturally form the basis of study in many branches of research. Students are made welcome at all times, and not a few have availed themselves of the facilities offered. Mr. Foster Jennings, Rev. Dr. W. E. Griffis, Mr. W. H. Patton, Mr. J. D. McGuire, and Mr. E. Quesada have pursued investigations in the Divisions of Ethnology and Somatology. Mr. Frank Calvert, Prof. F. B. Tarbell, and Mr. Willard Nye, jr., have consulted the collections in prehistoric archæology, and Mr. Franklin W. Smith and the Association for the Study of Comparative Religions have pursued investigations in the Division of Religions. Scientific and numerous nonscientific writers engaged in the preparation of matter for periodicals and newspapers have found the department a profitable field.

LOANS.

It is not usual to lend collections to students desiring to study them outside of the Museum, save in cases where loss or injury is not imminent. In several instances, however, articles have been turned over to the Bureau of American Ethnology, and a few loans have been made to museums. A collection of Shoshone and Ute crania was forwarded to the American Museum of Natural History at the request of Prof. F. W. Putnam. These were studied by Dr. A. Hrdlicka, and returned in good order. A number of games have also been loaned to the museum of the University of Pennsylvania for the use of Mr. Stewart Culin. Numerous models belonging to the Section of Transportation were loaned to the Carnegie Museum, Pittsburg, Pa., in order that copies of them might be made for that institution. A collection of electrical apparatus numbering 56 specimens was loaned to the American Commissioner-General for the Paris Exposition.

REPORT ON THE DEPARTMENT OF BIOLOGY FOR THE YEAR 1899–1900.

By Frederick W. True,

Head Curator.

The past year has been one of unusual activity in several of the divisions, and a number of important advances have been made. It has been marked also by the beginning of preparations for the Pan-American Exposition, which opens at Buffalo, N. Y., in May, 1901.

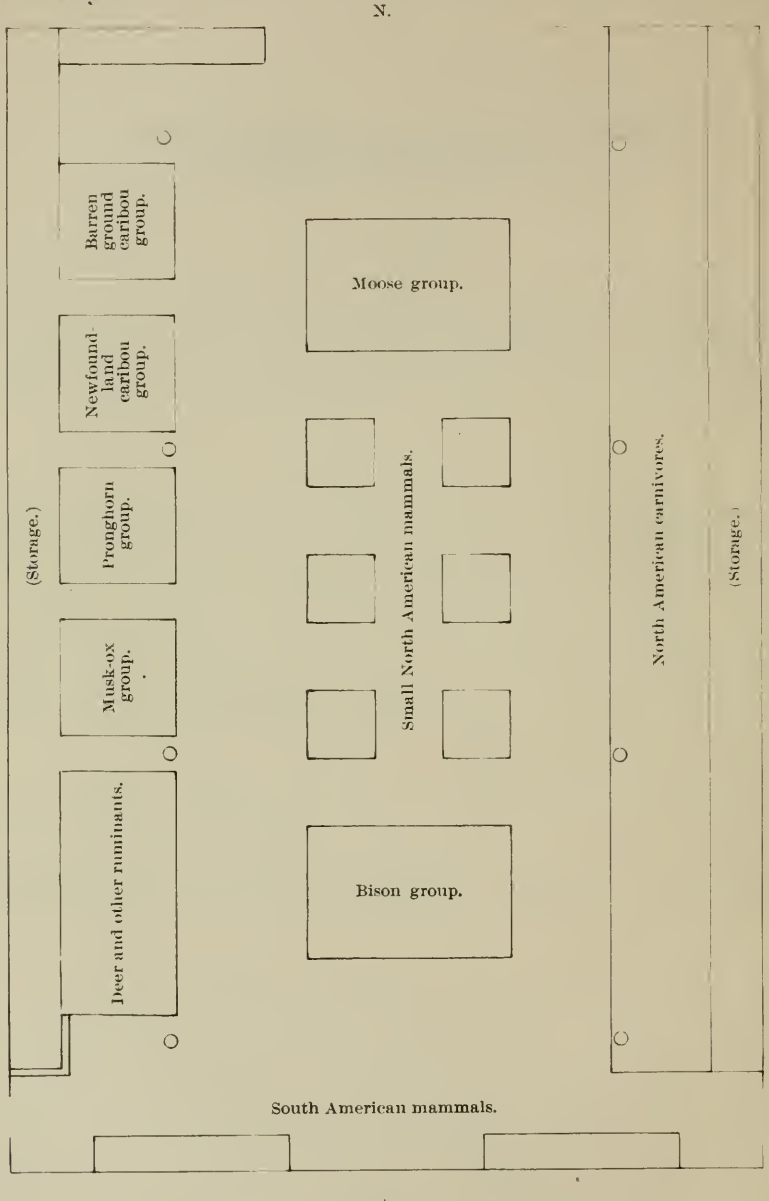
IMPROVEMENT OF EXHIBITION HALLS.

In the Division of Mammals a plan for improving the housing of the exhibition series, worked out last year, was carried into effect. A large case, 91 feet long and 9 feet deep, was built along the east wall of the south hall, and in it were placed all the North American carnivores. This allowed the removal of the unsightly temporary case containing the seals from the center of the hall, and the placing of the groups of bison and moose, the finest zoological groups the Museum possesses, in a better light. The present arrangement of cases is shown on the following page.

The large cast and skeleton of a humpback whale, which was for many years suspended from the roof in this hall, was removed to the adjoining osteological hall, replacing a skeleton of the same species formerly exhibited there. This change has improved the lighting in the south hall, as the cast formerly obstructed the light from the main south window.

An important change was, after full consideration, made in the south east range, occupied last year jointly by the exhibits of reptiles and of fishes and a part of the mammal collections of the Biological Survey of the Department of Agriculture. The range was completely floored over at the level of the gallery, dividing the hall into an upper and lower story. The mammal collections referred to were transferred to the upper story, leaving the ground floor entirely free for exhibition purposes, a decided advantage both as to increase of space and improvement of appearance.

As the old wooden floor could not be replaced at once by a stone pavement, it was thought best not to attempt a rearrangement and extension of the exhibition series of reptiles, batrachians, and fishes until next year.



U. S. NATIONAL MUSEUM, SOUTH HALL—AMERICAN MAMMALS.

No important change has taken place in the Hall of Comparative Anatomy, but the introduction of skylights in the roof of this hall has increased the amount of light.

The flooring over of the south east range, already mentioned, made it possible to extend the laboratory of the Division of Plants. New dust-tight cases were built for the herbarium and placed in the second story of the range, which they occupy jointly with the mammal collections of the Department of Agriculture. A row of skylights in the roof over these cases gives abundance of light.

The work of reorganizing the exhibition series of birds in the main hall of the Smithsonian building, which was begun last year, has been completed, except in so far as regards labeling. The old wooden floor in this hall was replaced by one of stone and cement (terrazzo) at the beginning of the year and a plan was adopted for lighting the center of the hall, formerly almost totally dark, by artificial means. New cases with large glass were provided for the four spaces about the entrance, styled "the quadrangle," and in them have been placed special exhibits of birds of more than ordinary interest, such as the birds of paradise, parrots, hornbills, etc. The cases are lighted by incandescent electric lamps, provided with hoods and reflectors. The result of these changes is that this section of the hall, formerly unfit for exhibition purposes, is now one of the most attractive points in the building. The reduction in the number of birds exhibited has relieved the congested condition of the cases, and makes it possible to view each specimen satisfactorily. The cases themselves are old and not as free from dust as could be wished, but otherwise the improvement effected may be considered to have amply repaid the labor involved. A considerable amount of relabeling remains to be done, and better provision made for the bird groups and the collections of eggs and nests.

A series of enlarged illustrations of Rotifers was added to the new exhibition series of lower invertebrates during the year. In the North American series the groups remaining to be represented are the parasitic and nonparasitic worms and the polyzoa and certain of the crustacea.

No opportunity was found during the year to reorganize the exhibits of insects and of plants, and no important changes were made in the exhibition series of mollusks. The osteological exhibit, as stated in a previous report, is as full as can be accommodated in the present quarters.

EXPLORATIONS.

The extensive collecting operations of Dr. W. L. Abbott, who generously donates the fruit of his labors to the Museum, continued during the year.

The activities of the scientific bureaus of the Government, involving the acquisition of natural history specimens, vary from year to year. During the past year, as in many years preceding, the operations of the United States Fish Commission resulted in large additions to the Museum.

A new source of increment has been found in the willingness of observers of the Weather Bureau, especially those in the West Indies, to collect material desired by the Museum.

Purchases were more frequent during the past year than formerly, and the success in filling important gaps in various series was most gratifying. Indeed, the zoological collections have reached the stage where means to supply definite deficiencies by expenditure of money is a matter of the greatest importance. Not less important, and promoting the same end, is the employment of trained collectors to visit localities selected for specific reasons. During the past year several such opportunities were taken advantage of with most beneficial results.

While the Museum has never been in a position financially to maintain extensive field operations, members of the scientific staff have nearly every year made collections of more or less magnitude. Several such enterprises were entered into last year. In addition, opportunities occur, from time to time, to accompany field parties under private auspices. Several members of the scientific staff joined the Harriman Alaska Expedition by invitation of Mr. Edw. H. Harriman. At the close of the year, Mr. M. W. Lyon, jr., was detailed to accompany Lieut. Wirt Robinson, U. S. A., to Venezuela.

During the summer of 1899 Messrs. J. N. Rose and Walter Hough were engaged for three months in a botanical expedition in central and southern Mexico. They visited numerous places where collections had been made previously, and obtained many plants from type localities, not a few of which were not represented in the herbarium, besides numerous undescribed species.

Mr. B. A. Bean pursued ichthyological investigations for the Museum in Edgartown Harbor, Massachusetts, and obtained an excellent series of fishes for the collection.

The head curator spent some weeks, by the favor of the Cabot Steam Whaling Company, at their station in Newfoundland, where he had admirable opportunities to study fresh examples of finback and humpback whales.

ACCESSIONS.

The accessions of the year compare favorably in scientific importance with those of preceding years, but were somewhat less numerous than in 1898–99.

Accessions to the collections are received from a great variety of sources, among which the donations of numerous friends and correspondents of the Smithsonian Institution are conspicuous.

Dr. W. L. Abbott, whose name is associated in these reports with so many valuable donations, presented large zoological collections during the year from the islands of the China Sea, from Trong, Lower Siam, and Singapore. These collections comprised no less than 257

mammals, 763 birds, and 125 batrachians, together with insects and other invertebrates. They are of great interest to the Museum, since they contain many species new to science, as well as a variety of others previously unrepresented here. Their value for scientific purposes is much enhanced by the accurate and thorough manner in which they are labeled by Dr. Abbott.

While with the Harriman Alaska expedition Mr. Ridgway obtained over 300 birds and Mr. Dall collected a considerable number of interesting mollusks. The collection of insects presented by Mr. Harriman numbers over 4,000 specimens, and is probably the largest and most complete collection of Alaska insects ever brought together. It contains many new forms and a large series of species from boreal America not previously represented in the Museum. The collecting was done by Mr. Trevor Kincaid, of the University of Washington.

Sir Charles Eliot, British Samoan commissioner, presented to the Museum an excellent series of shells and naked mollusks, and a large number of other invertebrates, which he collected in Samoa.

The zoological collectors sent out by the Institution in the interest of the Pan-American Exposition to Cuba and Porto Rico obtained a large amount of interesting material. Doctors Stejneger and Richmond collected 250 birds, 549 reptiles and batrachians, 126 bats, and a quantity of insects, crustaceans, earthworms, and other specimens. Messrs. J. H. Riley and William Palmer in Cuba, at the close of the year, had collected 509 bats, 298 birds, 209 reptiles and batrachians, a large number of fishes, more than 1,700 insects, besides other invertebrates, and plants and specimens of other kinds.

The most important purchase of the year was the Goodfellow collection of humming birds, comprising about 1,200 specimens. Many species are represented by series of from 10 to 20 skins. The skins are admirably prepared and very fully labeled. A large number of the species was previously unrepresented in the collection.

Another purchase of importance was the Marx collection of spiders, containing several thousand specimens, chiefly North American, and including numerous types and co-types of described species.

An especially noteworthy specimen obtained this year was the skeleton of the recently-discovered Marsupial Mole, *Notoryctes*, which was received in exchange from the University College, Dundee.

Endeavors to add to the Museum collection of bats have been very successful. Mr. Ernest T. Giers presented 88 specimens from the island of Trinidad. Lieut. J. W. Daniel, jr., presented 46 specimens from Cuba; 196 specimens from Curaçao were purchased from Mr. Leon J. Guthrie. Mr. P. McDonough presented 29 specimens from the Barbados, and Mr. L. M. McCormick presented 17 specimens from the Philippine Islands. In addition, the collectors for the Pan-American Exposition (as above stated) obtained 126 specimens in Porto Rico and 509 in Cuba. Altogether, therefore, over 1,000 specimens of bats have been added during the year.

Two collections of European mammals, comprising 185 specimens, were purchased. The proprietors of Forepaugh and Sells Brothers' shows presented an African rhinoceros which died in their menagerie.

Skeletons of the aye-aye, potto, and a porpoise (*Neomeris*) were purchased, and skeletons of a guanaco and a spotted hyena were obtained from the National Zoological Park.

Among birds a very interesting addition was the skeleton of Harris's cormorant, received in exchange from Leland Stanford Junior University. It is at present the only known skeleton of this rare species. A valuable collection of Hawaiian birds, containing about 500 specimens, was purchased from Mr. H. W. Henshaw. Mr. Outram Bangs presented a collection of about 300 Colombian and Panama birds. From Maj. W. A. Glassford, U. S. A., was received a specimen of the Cuban Macaw (*Ara tricolor*), which is now believed to be extinct. Dr. E. A. Mearns, U. S. A., presented a number of reptiles which he collected in Texas.

An excellent collection of Japanese fishes, including the types of 14 new forms, was presented by the Leland Stanford Junior University, through Dr. David S. Jordan. These were supplemented by collections from the same region transmitted by the Fish Commission, together with Alaskan, Hawaiian, and Californian fishes. A collection of fishes of the Red Sea, in an especially fine state of preservation, and also fishes of the Mediterranean, were obtained from the Museo Civico, Milan, Italy. New Zealand fishes were obtained from the Public Museum at Wanganui.

Mr. Barton A. Bean made a collection of fishes in the vicinity of Woods Hole, Mass., in which were included the young of a number of southern forms not previously found so far north.

Among mollusks the most interesting addition was a fine collection of some 800 specimens of South Australian shells received in exchange from Walter D. Reed, esq., of Adelaide. A small series of rare shells was received from the Bishop Memorial Museum, Honolulu, and Mr. Dall also presented specimens collected by himself in the Hawaiian Islands.

A valuable series of land shells from the Galapagos Islands was received from the Leland Stanford Junior University, and the Museum series is now probably unsurpassed. Rare land shells from the Hawaiian Islands were presented by Mrs. Henrietta D. Walcott, of Dedham, Mass. Mr. B. H. Wright, of Penn Yan, N. Y., continued his generous donations of type specimens of river mussels (Naiades) from the South and West.

Many fine shells have been added to the Pacific coast series by correspondents in California, among whom should be mentioned Mrs. T. S. Oldroyd, Prof. F. W. Kelsey, and Hon. Delos Arnold.

The additions to the collections of insects and arachnida and myriapoda were very extensive, numbering no less than 85,000 specimens. Mention has already been made of the Marx collection of spiders and of Dr. Abbott's donations. Mr. Hugo Soltau presented a large collection of coleoptera. Mr. E. A. Schwarz continued to make important additions to the Hubbard and Schwarz collection. Large numbers of insects were received from the New Mexico Agricultural College, through Prof. T. D. A. Cockerell, including many types and co-types of species described by Professor Cockerell. Prof. John B. Smith presented types of various species of Noctuidæ described by him. Collections of Mexican hymenoptera and South American lepidoptera were purchased. Co-types of species described by Doctor Horn were received from the California Academy of Sciences.

The Department of Agriculture transmitted a collection of insects from Porto Rico collected by Mr. August Busck.

A large collection of crustaceans from the coast of Brazil, obtained by the Branner-Agassiz Expedition of 1899, was presented by Dr. J. C. Branner. Dr. C. H. Eigenmann presented cotypes of an Isopod crustacean from Izel's Cave, Texas. Dr. C. A. Kofoid presented co-types of a new genus of Volvocidæ, and Rev. George W. Taylor co-types of two species of British Columbia sponges. Mr. H. W. Henshaw presented a number of crustaceans from the Hawaiian Islands. Crustaceans collected in Texas and Mexico were received from the biological survey of the Department of Agriculture. Corals and crustaceans collected in Porto Rico were received from the United States Fish Commission.

The additions to the herbarium were very extensive, exceeding 27,000 specimens. Two large donations deserve special mention. Dr. Charles Mohr, of Mobile, Ala., an enthusiastic botanist and collector, presented to the Institution his herbarium of more than 3,000 specimens, chiefly from the southern United States. As the national herbarium was previously deficient in plants from the South, Dr. Mohr's contribution was especially acceptable. Of similar importance was the donation of the De Chalmot collection of 3,000 plants, from the United States and Europe, by Mrs. Marie De Chalmot, of Holcombs Rock, Va. In the same connection should be mentioned the gift of about 1,100 plants, chiefly from the United States, by Mr. A. H. Curtiss, of Jacksonville, Fla.

Extensive series from Porto Rico, Mexico, the District of Columbia, the Yellowstone National Park, the Pribilof Islands, Canada, Jamaica, and the New England States were purchased, and collections from Montana, Central America, and the Philippine Islands were obtained by exchange.

Dr. J. N. Rose, while pursuing botanical investigations in Mexico, collected some 1,200 specimens for the Museum.

The Department of Agriculture transmitted 2,500 Alaskan plants collected by Mr. F. V. Coville and Mr. T. H. Kearney, 2,300 specimens from Virginia and North Carolina collected by Mr. Kearney, and 807 specimens from the State of Washington collected by Mr. Kirk Whited. The United States Geological Survey transmitted 413 plants from Oregon.

STUDY COLLECTIONS.

In the Division of Mammals satisfactory progress was made in re-arranging the study collections of rodents, insectivores, and bats, comprising several thousand specimens, and the work of remodeling skins for study purposes was continued for about five months. The majority of these small skins are now in excellent condition. The collection of skins of large mammals is still in confusion owing to lack of proper case room.

The curator of the Division of Birds having been detailed for work on the manuscript of his Manual of the Birds of North and Middle America, and the assistant curator having been in the West Indies for some months, little was accomplished in this division beyond the re-arrangement of the exhibition series, already referred to, and the performance of routine work. The great study collection of birds is, however, in a very satisfactory condition except that portion which is still in old-style cases. Before this can be put in order some eighteen half-unit cases must be provided, for which funds have not been available thus far.

The curator of the Division of Comparative Anatomy and assistant were occupied very largely with work on vertebrate fossils, especially with the transfer of the Marsh collections from New Haven. This, and the necessity of re-arranging the exhibition hall, left little time for other than routine work. The condition of the osteological collections is satisfactory.

Mr. Dall, honorary curator of the Division of Mollusks, reports as follows:

> Progress in the revision of the study series is naturally slow but constant. All the reserve material is accessible and in order. Anything in the collection can be found in a few minutes and the genera are catalogued on cards which refer to their location in the cases. The whole duplicate collection is in first-class order and catalogued on cards. The unadministered alcoholics are catalogued by genera on cards and located so that any jar can be found at once.

In the Division of Marine Invertebrates the study collection of dry specimens of sea urchins was overhauled and arranged systematically for more convenient reference. The collection of worms was transferred to a room in the north tower of the Smithsonian building.

Regarding the study collection of insects, Doctor Howard, honorary curator, reports as follows:

The collections are in excellent condition, and totally free from museum pests. During April and May all the cabinets and boxes were examined for museum pests, and not a specimen was found infested. It is the first year in the history of the division that such a state of affairs has existed, and this is due principally to the fact that a large percentage of the insects is now permanently arranged in the new standard insect drawers.

The identification of species and the frequent rearrangement of the different orders still continues. Most of the orders are now arranged more or less satisfactorily, except the exotic material. The exotic material, particularly in the orders Rhynchota, Orthoptera, Coleoptera and Lepidoptera, is only partially arranged and identified, and it will take many months, if not two or three years, before all can be satisfactorily arranged and identified.

Doctor Dyar has done much work on the Lepidoptera, Mr. Schwarz on the Coleoptera, Mr. Coquillett on the Diptera, Mr. Ashmead on the Hymenoptera, Mr. Banks on the Arachnida, Mr. Currie on some of the Neuropteroid insects, particularly on the Odonata and Myrmeleonidæ, and Mr. Heidemann on some families in the Rhynchota.

The order Orthoptera, especially the exotic material, is almost entirely unarranged.

Reference has already been made to the improvements in the botanical laboratory. The following statement by Mr. F. V. Coville, honorary curator of the Division of Plants, explains more fully the character and extent of these changes, as well as the progress of routine work during the year:

During the past year the gallery of the south east range has been extended over the center court and about 1,200 square feet have been added to our floor space. This has enabled us to transfer the cases which were temporarily placed on the exhibition gallery to permanent quarters as well as to make room for some new cases. After considerable experimenting a very satisfactory case was planned and eighty new cases have been made and put in place. Each case contains four rows of six pigeonholes, each of the standard size. In addition to the usual doors which fit against felt strips, a second set of doors can be added. These are only to be used during the process of fumigating.

The new cases are stacked in nine double rows, the alternate double rows being two cases high, while the other are one case high. These low cases furnish an abundance of table room either for the distribution of specimens into the cases or as a convenient place for the critical examination of plants. Above these table cases five skylights have just been added, which furnish an abundance of light and suitable ventilation.

During the year the entire collection has been transferred to zinc-lined cases and poisoned with carbon bisulphide. While this work has been done as carefully as possible, yet it requires a great deal of time and is more or less injurious to the plants. In spite of this care, I regret to say, after the specimens are returned to their proper places in the herbarium, the ravages of the insects are still considerable.

Three preparators have been engaged in mounting and labeling specimens during the year. The total number of specimens mounted is 24,049 against 22,559 last year. Nearly all of these have been stamped and incorporated into the general herbarium.

The marking of all accessions with a uniform stamp was begun in 1895, and 76,030 sheets had been stamped at the close of the year covered by this report.

RESEARCHES AND PUBLICATIONS.

The present year saw the completion of Jordan and Evermann's elaborate manual of the Fishes of North and Middle America, which constitutes Bulletin 47 of the National Museum. The companion work on birds by Mr. Robert Ridgway progressed favorably and the manuscript of the first volume was very nearly ready for the printer at the close of the year. The first installment of completed manuscript, about 250 pages, was submitted. A paper on the birds of Trong, Lower Siam, collected by Dr. W. L. Abbott, was begun by Dr. Charles Richmond.

Mr. B. A. Bean engaged in the study of the fishes of New York, Woods Hole, Mass., and the District of Columbia, and also determined the fishes collected by Mr. J. B. Hatcher in Patagonia.

A revision of the two great groups of bivalve mollusks, the Tellinidæ and Cardiidæ, including their classification and a review of the American species, recent and Tertiary, was completed during the year by Mr. William H. Dall. Over 100 new forms, recent and fossil, were detected and described.

Mr. Simpson completed his revision of the Naiades, or river mussels, a work which represents many years of arduous study, and may be considered the most important contribution to the subject since the appearance of Doctor Lea's last synopsis. Mr. Paul Bartsch has undertaken and partially completed a revision of the Pyramidellidæ of the Pacific coast, a puzzling group of shells requiring much microscopical investigation.

Mr. Richard Rathbun reports as follows regarding the scientific work of the Division of Marine Invertebrates:

The extensive collection of Decapod crustaceans obtained by the United States Fish Commission steamer *Fish Hawk* in Porto Rico in the early part of 1899, were transferred to this division for study. The report on the Anomura has been completed by Doctor Benedict, and that on the Macrura by Miss Rathbun, who has also the portion on the Brachyura well under way. These reports will be published by the Fish Commission.

Doctor Benedict has nearly completed a monograph of the Galatheidæ, to be published in the Proceedings.

Some of the Crustacea collected on the Branner-Agassiz expedition to Brazil in 1899, by Dr. J. C. Branner and Mr. A. W. Greeley, have been worked up in this division, the Decapoda and Stomatopoda by Miss Rathbun, the Isopoda by Miss Richardson. Reports on the same are now in press and will appear in the Proceedings of the Washington Academy of Sciences. The Annelida of the same expedition will be studied by Doctor Benedict.

A beginning has been made toward a report on the Decapoda collected from Puget Sound northward to Bering Sea by the Harriman Alaskan expedition, summer of 1899.

Miss Rathbun has completed a report on the Decapod Crustacea of West Africa, which has been published in the Proceedings, and has also made a series of keys to North American crabs, two of which have already been published in the American Naturalist.

The Decapoda and Isopoda collected on an expedition to the Galapagos Islands in 1898–99, sent out by Stanford University, have been received for study. The Isopoda have been written up by Miss Richardson, and the Brachyura and Macrura have been determined by Miss Rathbun.

During last summer Miss Rathbun made a study of a certain portion of the fresh-water crabs belonging to the Museum of Natural History, Paris.

Miss Richardson has prepared a key to North American Isopoda, which has appeared in two numbers of the American Naturalist; she has also nearly completed an account of the Isopoda of the Atlantic coast of North America, with descriptions of many new species.

Mr. F. A. Lucas, in connection with work on fossil vertebrates, has engaged in studies of the gallinaceous birds and of the cormorants, and also of certain Cyprinodont fishes.

The treatise on the reptiles of Japan, prepared by Doctor Stejneger, was delayed for want of satisfactory illustrations, but toward the close of the year means were found to obtain desirable results, and it is expected that the work can soon be published. Doctor Stejneger has been engaged also on a monograph of the reptiles and batrachians of Porto Rico, and, since his return from a visit to that island, has extended the scope of his work to include a general survey of the Antilles.

Activity in mammalogy has been due almost exclusively to Mr. G. S. Miller, jr., who has studied and published upon numerous lots of material in the Division of Mammals. He published fourteen contributions during the year, including a series of directions for preparing specimens of small mammals. His work on the free-tailed American bats has been held back awaiting the accumulation of additional material. An extended report on the mammals collected by Doctor Abbott in the islands of the South China Sea, by Mr. Miller, was completed during the year, and also a report on the mammals collected by Mr. Currie in Liberia.

Mr. Ashmead continued work on his monograph of the North American Braconidæ and on his reports on Japanese hymenoptera, on the hymenoptera collected by Doctor Abbott in Africa and Siam, and on the parasitic hymenoptera of the Hawaiian Islands. He completed reports on the aculeate hymenoptera of St. Vincent and Grenada received from the British Museum in 1897, and on the Australia hymenoptera collected by Albert Koebele, and others bred by Mr. W. W. Froggatt in New Zealand. Mr. Coquillett prepared monographs of the flies of the families Ephydridæ and Drosophilidæ and began a report on the Diptera of the Harriman Expedition. A monograph of the antlions of North America was begun by Mr. R. P. Currie.

Dr. J. N. Rose, besides determining the plants collected by him in Mexico, completed, conjointly with Dr. J. M. Coulter, a revision of the Umbelliferæ of the United States, containing notices of about 50 species new to science. The Museum collection in this order is very rich and contains fully 9,000 sheets.

Mr. Pollard continued his investigations of the North American violets to which reference was made last year. In this work Professor Greene, of the Catholic University of America, has largely coöperated. One set of duplicate specimens was distributed last year, as mentioned in my previous report.

The head curator continued his investigations of the whalebone whales of the North Atlantic, in connection with which he located and as far as possible examined and photographed the types of the various species hitherto described.

USE OF THE COLLECTIONS.

The staff of the Biological Survey of the Department of Agriculture has, as in past years, made extensive use of the zoological collections, especially those of mammals and birds. Mr. Outram Bangs, of Boston, Mass., made comparisons of birds recently collected for him in Panama and Colombia with those from this region in the Museum. The collections of Alaskan birds were examined by Dr. Louis B. Bishop, of New Haven, Conn., in connection with his determinations of birds collected by him in the Yukon region. Dr. A. W. Grabau, who is making a special study of the mollusks of the family Fusidæ, spent some time in examining the Museum collections. Numerous persons brought shells to the Museum to be compared and named.

Many workers have been engaged upon the collections of the Division of Marine Invertebrates during the year. Miss H. Richardson continued work on the Isopods, Mr. T. Wayland Vaughan on West Indian corals, and Mr. W. P. Hay on crayfishes. The Museum has had the benefit of the services of these experts on several occasions. Dr. Albert Mann spent several weeks in examining the deep-sea deposits for diatoms. Several months were spent by Mrs. F. B. Arnold in general studies of invertebrates in connection with a popular work on marine life which she is about to publish.

The collection of fishes have been made use of, as in preceding years, by various officers of the United States Fish Commission, particularly by Doctors Evermann, Kendall, and Smith, and Mr. M. C. Marsh.

The herbarium was extensively consulted during the year, both by the members of the scientific staff of the Department of Agriculture engaged in botanical work, and other botanists.

LOAN OF SPECIMENS.

As in previous years, the use of the collections for scientific purposes is not confined to examination of material in the Museum laboratories. Large numbers of specimens are sent out for study every year to naturalists throughout the United States and in other countries.

During the past year this has obtained to a large extent as regards plants, birds, mammals, and marine invertebrates, and special mention should be made of some of the more important loans.

The collection of crustaceans of the family Alpheidæ, which was to have been worked up by Prof. F. H. Herrick, having been returned by him with the statement that circumstances prevented his carrying out the undertaking, it was transmitted to Dr. H. Coutière, Museum of Natural History, Paris, who has been many years engaged in the study of the group.

Applications having been received simultaneously from Professor Edwards, of the University of Cincinnati (now of Trinity College), and Dr. Hubert L. Clark, of Olivet College, Michigan, for the use of the collections of Holothurians for monographic purposes, it was decided to divide the collections, sending the Apoda to Dr. Clark, and the remainder of the specimens to Professor Edwards. Mr. Robert W. Hall, New Haven, Conn., obtained the use of the large collection of *Palæmonetes* for special study of that genus. Samples of ocean bottom were sent to Dr. Albert Mann, who desired to search them for diatoms.

Dr. J. Percy Moore, who has been engaged for some time in working up the collections of leeches, received an additional consignment of specimens during the year.

The Museum collection of meadow larks (35 skins) was sent to Mr. F. M. Chapman, of the American Museum of Natural History, New York, for use in a revision of the genus *Sturnella*.

The collection of lemmings (124 skins) was lent to Mr. Witmer Stone, of the Academy of Natural Sciences, Philadelphia, who was engaged in a study of the species of this group of rodents.

At the request of Dr. D. S. Jordan the collections of Japanese and Corean fishes made by Messrs. Jouy, Morse, Hitchcock, and Bernadou were sent to the Leland Stanford Junior University, to aid in his work on the fish faunas of these countries.

A collection of insects of the family Saldidæ (Rhynchota) was sent for the purpose of study to Prof. H. E. Summers, of the Iowa Agricultural College, who is engaged in monographing the family. Specimens of Tipulidæ and Ortalidæ (Diptera) were lent to Prof. R. W. Doane, for monographic purposes.

A collection of Hymenoptera was sent to Prof. T. D. A. Cockerell, of Mesilla Park, N. Mex., for study in connection with his investigations of the mouth parts of these insects. Several other loans of insects were made during the year.

The extensive use of the herbarium by experts outside of Washington is shown by the fact that 3,232 herbarium sheets were sent out for study during the year.

DISTRIBUTION OF DUPLICATES.

The demand for zoölogical material by educational institutions showed no abatement during the year. Nearly all the sets of duplicate specimens prepared some years ago have now been distributed, and it will be necessary to form additional series at no distant date. Eighteen of the educational sets of marine invertebrates and eleven special sets were distributed.

PREPARATIONS FOR THE PAN-AMERICAN EXPOSITION.

The head curator of the department was appointed representative of the Smithsonian Institution and National Museum for the Pan-American Exposition, to be held at Buffalo, in 1901. A plan for the exhibition of an outline series representing the vertebrate fauna of America was formed at an early date, and in February, 1900, Doctors Stejneger and Richmond were detailed to make collections in Porto Rico and other islands of the Antilles, and Messrs. William Palmer and J. H. Riley in Cuba. As already mentioned, a large amount of valuable zoölogical and botanical material was obtained. Taxidermic work for the exposition has been carried on during the year.

PERSONNEL.

On July 10, 1899, Mr. W. R. Maxon received temporary appointment as aid in the Division of Plants, and on November 16, 1899, he was regularly added to the staff and was assigned to the section of Cryptogamic collections. Mr. Sidney I. Wilson, of St. Joseph, Mo., spent several months in the Division of Birds as a volunteer assistant, with the purpose of increasing his knowledge of ornithology. The Museum has profited by the coöperation of Mr. H. C. Oberholser, who determined several collections of birds during the year. Professor Greene contributed valuable expert services in the preparation of sets of herbarium specimens of the various species of violets.

VIEW SHOWING WALL AND RAIL CASES AND INSTALLATION OF NONMETALLIC MINERALS ON GALLERY OF SOUTHWEST COURT OF UNITED STATES NATIONAL MUSEUM, LOOKING WEST.

VIEW SHOWING RAIL CASE AND INSTALLATION OF NONMETALLIC MINERALS ON GALLERY OF SOUTHWEST COURT OF UNITED STATES NATIONAL MUSEUM, LOOKING NORTH.

FOR DESCRIPTION SEE PAGE 47.

REPORT ON THE DEPARTMENT OF GEOLOGY FOR THE YEAR 1899-1900.

By George P. Merrill,
Head Curator.

The fiscal year just closed has been one of steady progress in the department, and so far as the Section of Vertebrate Paleontology is concerned, has been notable for the marked increase in the size and value of the collections. Indeed, it is not too much to say that, so far as acquisition of material is concerned, the progress made in this section is without parallel in the history of the Museum.

ACCESSIONS.

The total number of accessions received by the various divisions is tabulated below, the totals for 1898–99 being also given for the sake of comparison:

Divisions.	Regular.	Temporary.	Total. 1899–1900.	Total. 1898–99.
Geology	108	189	297	279
Mineralogy	37	120	157	116
Vertebrate Paleontology	30	.....	30	.....
Invertebrate Paleontology	72	.....	72	99
Paleobotany	21	.....	21	39

It is, however, impossible to gain from these figures any tangible idea of the value or amount of material received, since accessions vary almost indefinitely, not only in number of specimens, but in the value of the individual objects comprising them.

In the Division of Geology the more important materials received were as follows: A series of orbicular granites from Finland, Sweden, and Rhode Island; a series of nearly 400 specimens of volcanic materials from the Hawaiian Islands; some 2,000 specimens of rocks representing areas surveyed by the United States Geological Survey, and turned into the Museum for preservation, with a view to future reference in accordance with the usual custom. These comprise rocks from the Little Belt Mountains, the Uvalde, the Anthracite and Crested Butte, and the Big Trees quadrangles; and the Silver Cliff and Rosita districts of Colorado, besides much miscellaneous material.

In the Division of Minerals the most important accession has been the private collection of Prof. Charles U. Shepard, comprising some 5,000 specimens, many of which are very choice and rare, as noted below. The meteorite collection has increased more than during any similar period in its history since the receipt of the Shepard collection of meteorites in July, 1886. This great increase is due in part to the purchase of the Allegan stone (some 64 pounds) which fell at Allegan, Michigan, on July 10, 1899. In addition to this the following specimens have been obtained:

Aërolites.—Jerome, Gove County, Kansas; Schönenberg, Bavaria; Bishopville, Sumter County, South Carolina; Indarka, Russia; Lissa, Bohemia.

Aërosiderites.—Augustinowka, Russia, and Bischtube, Russia.

The gem collection has been increased by three fine opals, and three cut Japanese beryls.

The principal accession of the year in the Section of Vertebrate Fossils has been the Marsh collection, which was formally transferred to the Museum in December, 1899. This I will refer to in detail later. In addition to this, the section has received: Through exchange with the Glen Island Museum a fine specimen of fossil gar, *Lepidosteus simplex;* a very perfect skull and a large part of the body of the fossil gar, *Lepidosteus atrox*, the gift of Mr. Charles Schuchert; types of new Jurassic fishes, described by Dr. C. R. Eastmann and transferred to the Museum by the Geological Survey; a number of specimens of a new *Leuciscus*, also received from the Geological Survey; a fine skull and cranium of an *Elotherium* and a *Diceratherium*, purchased from Mr. Frank Stillwell.

The most important collections received in the Section of Invertebrate Paleontology are: The Cragin collection (1,322 specimens) of Texas Jurassic fossils; the John M. Clarke collection (617 specimens) of New York Lower Helderberg fossils; the Townsend collection (864 specimens) of Guelph (Upper Silurian) fossils; a collection of some 1,002 Mesozoic fossils, collected in Wyoming by Mr. Schuchert; a series of specimens showing the twenty stages through which the Cambrian trilobite *Sao hirsuta* passes during its development, received in exchange from Dr. Anton Fritsch, of the Bohemian Museum; a series of corals illustrating Mr. Vaughan's forthcoming work on American corals; a life-size model of the crustacean *Stylonurus* as restored by Dr. C. E. Beecher; a specimen of the rare echinoid *Oligonoporus nobilis*, the gift of Mr. W. L. Woods; and from the Geological Survey a series of labeled Cambrian brachiopods (366 specimens) and Rocky Mountain, Ordovician, Silurian, and Devonian fossils (740 specimens).

Additions of value in the Section of Paleobotany have come almost wholly through the United States Geological Survey, and comprise: A series of plants associated with the lavas of the Cascade Range, as described and figured by Dr. F. H. Knowlton in the Twentieth Annual Report of the United States Geological Survey; plants from

the Montana formations, described by the same author in Bulletin 163 of the Survey; plants of the Payette formation described by Dr. Knowlton in the Eighteenth Annual Report of the United States Geological Survey; plants from the Cascades of the Columbia; plants from Esmeralda County, Nevada; a fine series of cycads from the Freezeout Hills north of the Medicine Bow River, Carbon County, Wyoming, collected by Mr. Charles Schuchert and Dr. Lester F. Ward.

PROGRESS IN INSTALLATION.

The progress in caring for the collections has been eminently satisfactory. The confusion incidental to the erection of the new galleries has been practically overcome, and it is not too much to say that the collections as a whole are in better condition now than ever before.

The installation of the systematic series in the Section of Applied Geology on the gallery in the southwest court (Plates 1 and 2) has been practically completed and some 2,500 new labels have been supplied. The reserve collection of ores has been arranged in the storage drawers beneath the rail cases and a complete card catalogue of the same prepared. Great changes have been made incidentally on the ground floor of the court, which is now given up to the building-stone collection; the collection illustrating the mineral resources of the United States, and various special collections, as the Tenth Census collection of iron ores; rocks and ores illustrating the geology of Leadville; and collections illustrating the metallurgy of gold, silver, lead, copper, zinc, and iron.

Progress in the Section of Vertebrate Paleontology has been slow, since the energies of the division have been occupied almost entirely in making a temporary place for the Marsh collection. One hundred and thirteen boxes of this collection have been opened and their contents distributed and catalogued. Fifteen skulls of *Titanotherium*, and the limb bones of a large dinosaur have been mounted for exhibition.

In the Section of Invertebrate Paleontology Mr. Schuchert reports the mounting of 2,850 specimens of Triassic, Jurassic, Cretaceous, Ordovician, Silurian, Lower Helderberg, and Lower Carboniferous fossils. In addition, the I. H. Harris collection of Cincinnati fossils, comprising 75 boxes, has been unpacked, assorted, and prepared for installation. A large amount of material has been also added to the duplicate collections.

In the Section of Paleobotany the work of installing the Lacoe collection has been practically completed. Many of the older Museum collections which have never been satisfactorily cared for have been overhauled and catalogued and numbers painted upon the specimens in a way, it is hoped, to avoid possible confusion in the future.

The work of building storage racks on galleries of the east south and west south ranges has been completed and satisfactory progress made in installing in the drawer space thus afforded material belonging to the sections of Vertebrate Paleontology and Paleobotany.

The duplicate series designed to show the origin of soils through rock weathering and for distribution to schools and colleges, to which reference was made in my last report, has been practically completed, so far as gathering the materials is concerned; the work of labeling, wrapping, and properly describing remains yet to be done. In addition to this, some 2,000 duplicates have been weeded out from the collections of the Division of Geology alone, wrapped and labeled, and sent to the storage sheds, according to our usual custom. Mr. Schuchert reports that he has now in storage unassorted duplicate materials aggregating many thousands of specimens.

With the reorganization of 1897, the plans for a Division of Technology were sufficiently formulated to enable me to turn over a large amount of manufactured material and special exhibits, which had long been recognized as not belonging properly to the Department of Geology, but which were allowed to remain there simply that they might be cared for. The space thus gained in storage and exhibition rooms has been of material value to the department.

The constant intrusion of new materials in our exhibition series, together with the shifting of collections made possible by the acquisition of new cases on the galleries, has brought prominently forward the question of labels, with particular reference to color, board, and character of type. It need scarcely be said that the first necessity of a label is legibility. Brevity and conciseness of statement are also important considerations. The head curator's experience has led him to doubt the advisability of long explanatory labels for individual specimens, excepting, it may be, in the case of large and striking objects. The name of the object in type sufficiently large and clear to catch the eye, and a few explanatory lines in smaller type, regarding source, etc., are considered the chief essentials. After many trials the form given here, printed on a gray board, which experience has shown to be little affected by exposure, has been adopted in the sections of Geology, Invertebrate Paleontology, and Paleobotany:—

DIAMONDS.—Cape Bort.

KIMBERLY MINES, SOUTH AFRICA. 53,671.

Diamonds of this size and quality are used in making engravers' points and burnishing tools for watch and pencil case makers. Four pieces; weight, three-eighths karats each.

GALENA.—Sulphide of lead. A cluster of crystals showing both cubic and octahedral faces.

JOPLIN MINE, JOPLIN, MISSOURI. 17,590.

Gift of Davis and Murphy.

BASALTIC COLUMNS.

Bennau, near Asbach, Prussia.

FOR DESCRIPTION SEE PAGE 49.

VOLCANIC BOMBS.

FOR DESCRIPTION SEE PAGE 49.

In the Section of Vertebrate Paleontology, where larger materials permit the use of larger type, an herbarium board is used. The drawback to the herbarium board in the small label, it should be stated, lies in the difficulty of getting solid black impressions sufficient to give the desired contrast and easy legibility.

In this connection copy for some 5,000 specimen labels has been prepared and sent to the Government Printing Office during the year, mainly from the sections of Geology and Invertebrate Paleontology. Up to the close of the year some 3,500 of these had been printed. Eleven large, explanatory labels, in black and gold, for the exhibition halls, have also been prepared and are awaiting framing preparatory to being put in place.

Some time has been occupied in revising and bringing up to date the manuscript of a guide to a study of the collections in the Section of Applied Geology. This is now completed, and at the date of writing is at the Government Printing Office.

PRESENT CONDITION OF COLLECTIONS.

The present condition of the exhibition and study series of the department can be in part surmised from what has already been said.

The crowded condition of the exhibition halls has led to the withdrawal of some of the minor and less conspicuous exhibits to give place to larger and more striking forms. Among the recent additions of this class reference may be made to the cluster of basaltic columns from Bennau, near Asbach, Prussia, shown in Plate 3. These occupy the same relative position to one another as when formed, and convey to the public a much better idea of columnar structure and its cause than do the isolated columns. The materials were obtained and set up for the Museum under the direction of Mr. F. W. Crosby, of this city.

The large silicified tree trunks (*Araucarioxylon arizonicum*) from the so-called Fossil Forest or Chalcedony Park, near Holbrook, Arizona, which were exhibited by the department at the Omaha Exposition in 1898, have been returned to the Museum and installed in the east end of the west south range, there being no room for them with the Paleobotanical exhibit on the gallery. Unfortunately, the long trunk was broken in three pieces in process of trans-shipment, but as the fractures are sharp and unabraded, the trunk-like nature of the specimen is still apparent. The exhibit comprises this trunk, 7½ feet long by 20 inches in diameter, with two cross sections each 33 inches in diameter.

The special series illustrating volcanic phenomena, faults, folds, and concretionary structures are now in a very satisfactory condition. Plate 4 shows some of the more striking forms of volcanic bombs from various localities comprised in the first-named exhibit.

From the series of jointed sandstones from the Black Hills collected by Mr. N. H. Darton, of the United States Geological Survey, and mentioned in my last annual report, have been selected for exhibition the typical series shown in Plate 5. The sharpness and clear-cut nature of the faulting, together with the comparatively small amount of displacement, render such blocks almost ideal for the purpose of exhibition. Advantage has been taken of opportunities for procuring examples of the peculiar concretionary forms of granitic rocks known to the Germans as "kugel" granites and otherwise as orbicular or concretionary granites. Such have been studied and described by Krutschoff, who regards them as contact phenomena and as due to the crystallizing of the granitic material about preexisting fragments of other rocks. One of the more striking forms from Sweden is shown in Plate 6.

The meteorite collection, to which reference has already been made, comprises 742 specimens, representing 349 falls. This places it among the large collections of the world, being only excelled, so far as we have knowledge, by those of Paris, London, Vienna, and the private collections of Prof. H. A. Ward and Mr. C. S. Bement.

The collections in the Division of Mineralogy are practically all labeled, and a case at the south end of the hall has been prepared for the reception of the Shepard collection of minerals already noted. The text for a catalogue of the gem collection is well under way.

The question of getting a maximum number of specimens into a case with a minimum amount of interference or shadow has been quite satisfactorily solved, so far as the Section of Vertebrate Paleontology is concerned, by the means shown in Plate 7. As will be noted, shelving is quite done away with, with the exception of that afforded by the bottom of the case and two narrow shelves at the top for large and heavy materials which are often "out of classification" as compared with the rest of the exhibit. The fossils are cemented to encaustic tiles which are of standard sizes, in units of 4-inch width, and which are prevented from falling forward through some sudden jar by an overlapping edge of wood at the top. By actual trial it has been found that, though an apparently wasteful method of installation, so far as space is concerned, more material can be actually put into a case than when the ordinary horizontal or sloping shelf is used, and, moreover, the view of one specimen is never obscured by one in front or shadowed from above. The possibly objectionable features thus far discovered are that it limits the size and weight of the specimen exhibited and necessitates the cementing of the samples to the tiles. The first-mentioned objection has proved thus far mainly theoretical, space for the larger specimens being readily found on the bottom or on the narrow shelves, while the second is avoided by not including in the series materials that would be injured or whose value would be in any way impaired by the cementing process.

FAULTED SANDSTONES.

Black Hills, South Dakota.

FOR DESCRIPTION SEE PAGE 50.

CONCRETIONARY GRANITE.

Slattemösse, Småland Sweden.

FOR DESCRIPTION SEE PAGE 50.

VIEW SHOWING WALL CASE AND INSTALLATION OF INVERTEBRATE FOSSILS ON GALLERY OF SOUTHEAST COURT.

FOR DESCRIPTION SEE PAGE 50.

The view here given (Plate 8) of the gallery in the west south range shows better than words the facilities for storage afforded by the new galleries. The Section of Paleobotany has here some 1,900 drawers, giving 10,000 square feet, and the Division of Geology 180 drawers, giving some 800 square feet of storage space. The table cases around the outer edges of the gallery serve as convenient tables for laying out material for study, while giving at the same time additional storage space beneath.

The paleobotanical series is now fairly well systematized and its value is becoming recognized, as is shown by the following quotation from a recent number of the American Geologist:

> The United States National Museum has already become the great depository of the coal-plant material in this country, and, with its great number of American types, will doubtless remain a center of systematic work in this field.

For the first time in the history of the Museum all the halls devoted to exhibition purposes in geology are open to the public. Much, of course, remains to be done, but the confused and unsightly condition of affairs which has existed for nearly three years has subsided. It should be stated, however, that the work on the exhibition series of the Section of Vertebrate Paleontology has been scarcely begun, and it will require years of labor to bring this up to the standard of those which have been longer in existence.

Tons of material from the Marsh collection are stored in a rented building used as a work and store room of the department, where they must remain until they can be unpacked, sorted, and cleaned, a task which, with the present force, will occupy several years at best.

RESEARCH.

For several years past so large a proportion of the energies of the curators has been consumed in the work of installation, that very little in the way of investigation could be carried on, and almost no work of a systematic and far-reaching nature.

The head curator has devoted considerable time to the meteorite collection, and has published a preliminary paper on the stone which fell at Allegan, Michigan, in July, 1899. He has also devoted some time to the study of the collection of volcanic rocks made by Prof. C. H. Hitchcock in the island of Oahu.

Mr. Tassin has devoted some attention to the subject of hydrolosis of the metallic sulphates, especially those of iron, with particular reference to the origin of the red colors in sedimentary deposits. His work is as yet incomplete. He is also engaged in preparing a handbook on the collection of gems and meteorites.

Mr. Lucas has studied the dentition and general structure of Zeuglodon, and has prepared a paper on the pelvic girdle of the same. He has also described a new fossil from the Miocene of California, and

studied the Miocene Rhinoceros and Titanotherium, and a new Stegosaur from the Lower Cretaceous. He has also devoted some time to the study of the skull of Lepidosteus.

Mr. Schuchert has prepared a preliminary catalogue of Cephalopod genera and has devoted considerable attention to the subject of the Lower Devonian aspect of the Lower Helderberg and Oriskany formations. On this subject he is still engaged. He has also continued his work on a monograph of the American fossil starfishes.

SOURCES OF NEW MATERIAL.

The principal source of material for the Division of Geology, as in years past, has been the United States Geological Survey. In addition, mention should be made of the continued interest shown by Mr. F. W. Crosby, and of the cooperation of Prof. C. H. Hitchcock, in the Hawaiian Islands.

It will be remembered that in 1887 Dr. C. U. Shepard, jr., deposited in the Museum his meteorite collection, numbering at the time 101 specimens. During the past year he has again manifested his interest in the National Museum by depositing the entire series of books, pamphlets, and manuscripts on meteorites, left by his father, the late Prof. C. U. Shepard, and, in addition, his private collection of minerals, consisting of upward of 5,000 carefully selected specimens, many of which are quite rare. The collection is particularly noteworthy for the superb series of Graves Mountain rutiles and lazulites, and also the series of southern phosphates and their associations. The collection, as a whole, forms a most important addition to our crystallographic series, and is of further interest from an historical standpoint, containing many of Prof. Shepard's types and illustrating the classification prevalent during his day. The acquisition of these old collections is a matter of the highest importance, since such often contain materials from localities now exhausted, or which served as types in the original descriptions. Further than this, they serve to keep alive the memory of one who was a pioneer in his line of work, Prof. Shepard's Treatise on Mineralogy, 1832, being the third work on this subject to appear in America from the hands of an American author.

It will be remembered that Prof. O. C. Marsh, of Yale College, served as vertebrate paleontologist to the United States Geological Survey from 1882 to 1892, inclusive. During these ten years of actual service his department received such allotments as enabled him to employ continuously from seven to ten persons in the capacities of collectors, preparators, clerks, etc., and to accumulate a quantity of exceedingly valuable material, a large proportion of which was still at New Haven at the time of his death.

After the death of Professor Marsh it was decided by the Director of the Survey, Dr. C. D. Walcott, to transfer the entire collection to

VIEW SHOWING STORAGE CASES IN SECTION OF PALEOBOTANY ON GALLERY OF WEST SOUTH RANGE.

FOR DESCRIPTION SEE PAGE 51.

the custody of the National Museum, subject only to the usual restrictions. The work of packing and shipping, which fell to the lot of this department, under the immediate supervision of Mr. F. A. Lucas, was begun in April, 1899, as stated in my last report, and completed the following November, the final transfer being made December 8, as will be observed from an abstract of the correspondence here inserted.

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY,
December 8, 1899.

Prof. S. P. LANGLEY,
Secretary, Smithsonian Institution, Washington, D. C.

DEAR SIR: I have the honor to state that all the vertebrate collections of the late Prof. O. C. Marsh, belonging to the Government, have been shipped from New Haven, Conn., and are now transferred to the custody of the United States National Museum, subject only to the use of such material as may be necessary for study and illustration in the completion of the monographs that were in course of preparation by Professor Marsh at the time of his death.

From a statement submitted by Mr. F. A. Lucas, who had charge of the packing of the collections, it appears that there were 1,200 trays (20 by 26 inches) of specimens, 200 unopened boxes as received from the field, 30 blocks, and 90 prepared specimens. To ship this material required 592 boxes, forming 5 carloads, having an aggregate weight of 160,000 pounds. To this there should be added 2 carloads, containing 211 boxes, received from Professor Marsh on deposit in 1891 and 1898.

The actual number of specimens represented in this collection can not be stated. They range in size from minute teeth of fossil mammals to individual specimens weighing from 500 to 2,000 pounds each. The collections are rich in large Dinosauria, especially in examples of *Triceratops* and *Stegosaurus*, while the series of *Titanotherium* skulls is one of the best, if not the best, in existence. It contains fifty or more complete examples cleaned, and a number in the rough, besides many hundred bones.

Among the specimens transferred are the types of forty or more species, including Dinosaurs, and Jurassic, Cretaceous, and Tertiary mammals. Among the types are the following:

DINOSAURS.

Diplodocus longus.
Labrosaurus ferox.
Camptosaurus nanus.
Triceratops sulcatus.
Triceratops calif ornis.
Triceratops obtusa.
Pleorocœlus nanus.
Ceratosaurus nasicornis.
Ceratops montanus.
Ceratops alticornis.

CROCODILES.

Rhytidodon rostratus.

SNAKES.

Coniophis precedens.

JURASSIC MAMMALS.

Paurodon valens.
Manacodon rarus.
Enneodon crassus.
Enneodon affinis.
Laodon venustus.

CRETACEOUS MAMMALS.

Priconodon crassus.
Cimolodon agilis.
Telacodon præstans.
Oracodon cenulus.
Allacodon pumilis.
Batodon tenuis.
Allacodon fortis.

It is to be recalled that these collections were made by Professor Marsh during his connection with the Geological Survey, from 1882 to 1892, inclusive; that prior to his connection with the Survey he made large collections, including the toothed birds,

the *Dinoceratu*, *Brontosaurus*, many Dinosaurs, and the best *Titanotherium* yet discovered. He also purchased numerous collections after the stopping of allotments for his work in 1892. These collections were transferred to Yale University some time prior to his death.

As there has been considerable comment in relation to this matter, I send you a copy of a report on the examination of the collections under Professor Marsh's charge, made by me to the Director of the Geological Survey, in 1892.

I twice visited New Haven while the collections were being packed, and am fully convinced that all material belonging to the Government has been transferred to Washington. Mr. Lucas reports that the trustees of the Peabody Museum in New Haven gave him every facility for packing the collections, and that the records were so complete that no difficulties arose in determining those specimens which belonged to the Government and those which were the property of the Peabody Museum.

The transfer of these great collections to Washington without the loss of any material, either through imperfect recording or through misunderstanding as to the ownership of specimens, reflects the greatest credit on the business-like methods and the integrity of Professor Marsh. The addition of the material to the National Museum places it in the front rank among museums in its collection of vertebrate fossils. It is necessary that some gaps in the collections be filled, and I sincerely trust it will be possible for the Museum to do this at an early date.

Yours respectfully,

CHAS. D. WALCOTT, *Director.*

SMITHSONIAN INSTITUTION, *December 22, 1899.*

DEAR SIR: I take great pleasure in acknowledging the receipt of your letter of the 8th instant, advising me that you have transferred to the National Museum all the vertebrate fossils collected by the late Prof. O. C. Marsh belonging to the United States Government, subject only to the condition that such material as is required may be used for study and illustration in completing the monographs which were in preparation by Professor Marsh at the time of his death.

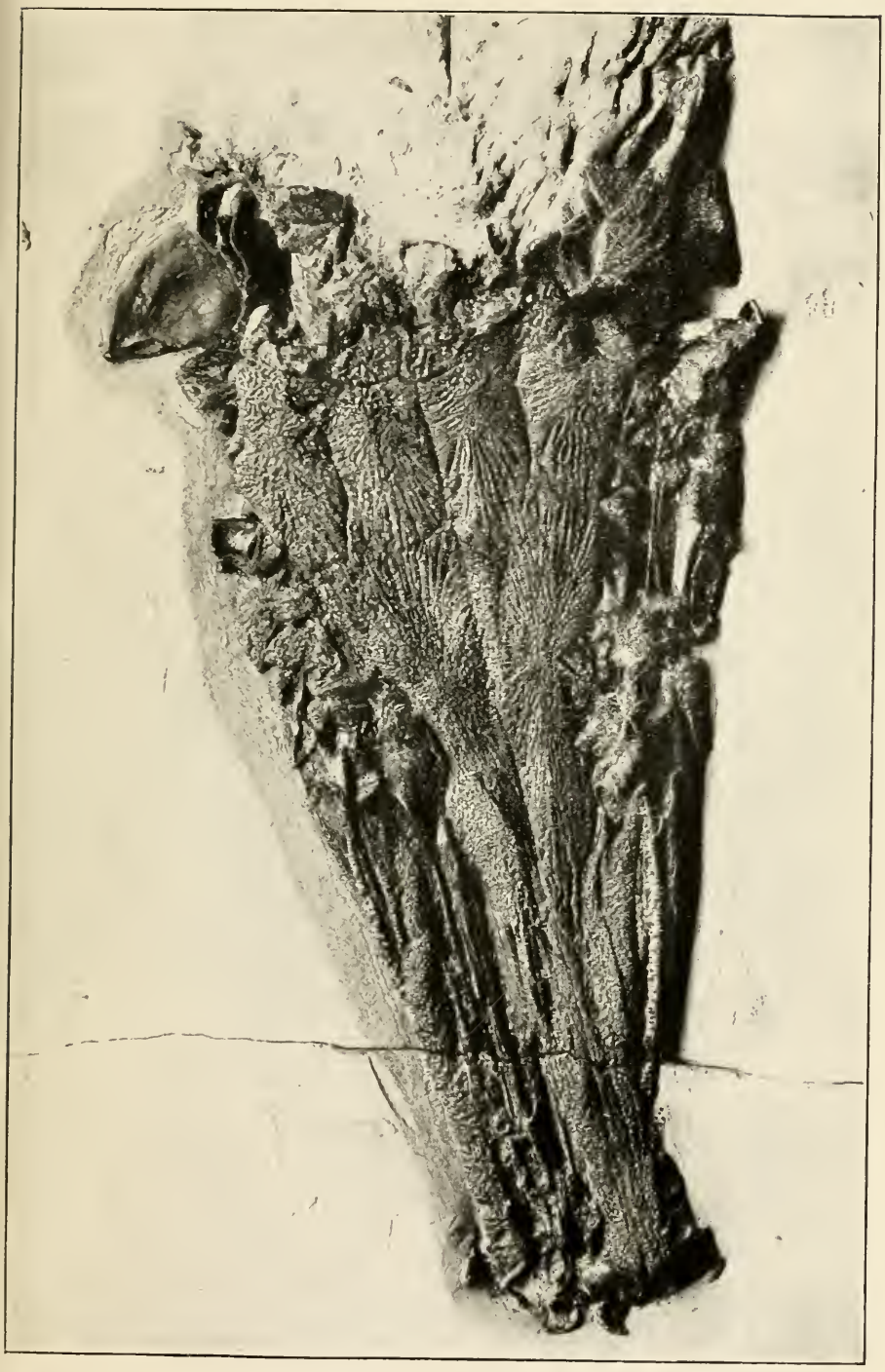
The addition of this immense collection of most important American fossil remains to the treasures already assembled in the National Museum will, I am sure, afford the greatest satisfaction to all workers in the field of paleontology both at home and abroad, and you will permit me to add a personal word in appreciation of your untiring efforts to facilitate in every way possible the great task connected with the removal of the collection from New Haven to Washington.

During the coming year I expect to have two preparators engaged in working out of the matrix specimens still uncleaned, and confidently hope that it may be possible in a few years to have the entire collection made available for study and a selected series for public exhibition. From this latter series the public will be able to form a correct idea as to the number, variety, and great size of these wonderful extinct creatures of the western country, and will undoubtedly be impressed with the extent and importance of the work of the paleontological divisions of the Geological Survey and the marvelous industry and intelligence displayed by Professor Marsh in bringing together this great collection.

Yours respectfully, S. P. LANGLEY, *Secretary.*

Hon. CHARLES D. WALCOTT,
Director United States Geological Survey, Washington, D. C.

As may readily be imagined, the receipt of these enormous collections, many of which were still uncleaned and in the matrix, single specimens in some instances weighing several thousand pounds, taxed the resources of the Department greatly. Fortunately the gallery in the east south range was completed, and, when fitted with standard



SKULL OF LEPIDOSTEUS ATROX.
Fossil, Wyoming.
FOR DESCRIPTION SEE PAGE 55.

storage racks and drawers, furnished room for such of the material as was already cleaned. A very large share of the material could not however, be brought into the Museum building without blocking the exhibition halls, and was, therefore, stored as fast as received, without unpacking, in a rented building, as already noted.

In June, 1899, the Union Pacific Railroad Company extended to the Smithsonian Institution an invitation to send a representative of the Museum to participate in a collecting and exploring tour through the fossil fields of Wyoming. This invitation was accepted, and Mr. Charles Schuchert, assistant curator in the Division of Invertebrate Fossils, was detailed to make the trip. Mr. Schuchert left Washington early in July and returned the last week in September.

During this time, aside from many valuable observations, he collected upward of 1,000 Jurassic invertebrates, and a very complete femur of a large Dinosaur, and purchased and donated to the Museum the particularly fine gar, *Lepidosteus atrox*, shown in Plate 9. He also obtained numerous lithological and mineralogical specimens.

Inasmuch as there is much popular misapprehension regarding the occurrence and mode of procedure in collecting these vertebrate remains, or rather since the public at large has no adequate conception of the skill and expense involved in collecting and so restoring such remains that they may be of value for exhibition and study, I have introduced the following extract from an article published by Mr. Schuchert in Science for November 17, 1899:

> In the very beginning, alarming setbacks are encountered when climbing the hills in any direction for a "bone lead." Having the good fortune to discover one, the real work then begins in the digging, only to find that every bone is cracked into innumerable pieces. These must be bandaged and set in plaster, and when all is hard the bones can be turned to undergo more bandaging. This means that one must have patience, be expert with pick and shovel, with gunny sacking and plaster, and with saw and hammer. However, with all these difficulties to overcome, no less than 6 carloads of bones were shipped this summer from Medicine Bow, a little village on the Union Pacific Railroad in Wyoming, by specially organized parties from the universities of Wyoming and Kansas, and the Field, Carnegie, and American museums of natural history.
>
> In no one place are complete Dinosaur skeletons found. Sometimes a "quarry" will yield a lot of vertebræ, or a number of either hind or fore limbs, or there is a general mixture of parts of animals of different genera. To make an adequate collection of Jurassic Dinosaurs, therefore, requires several successful field seasons. The cost is still further enhanced since in the laboratory the bones must be cleaned, hardened, and restored before they are ready for study and exhibition. On account of these conditions and the further one that Dinosaur skeletons are very large, the work is extremely expensive. We can, therefore, believe that the best skeleton of *Brontosaurus* in Professor Marsh's collection, an imperfect one, cost him $10,000.

No systematic explorations with a view to enriching the collections in paleobotany, mineralogy, or geology were undertaken, though a very considerable amount of material was obtained by exchange.

ASSISTANCE AFFORDED STUDENTS AND INVESTIGATORS.

During the year there have been sent out from the Division of Geology some 18 lots of material, comprising 284 specimens for study and by exchange.

Specimens from the duplicate collection in the Division of Mineralogy have been furnished Dr. F. W. Clarke for use in his work on the composition of the various silicates, noted in the bibliography, and also to other members of the Geological Survey as occasion required. Mention should here be made of a lot of carnotite furnished to Dr. Hillebrand for his investigations, the results of which are not yet published.

The fine specimen of *Lepidosteus simplex* from the Section of Vertebrate Paleontology was lent to Dr. C. R. Eastman, of Cambridge, Massachusetts, and has been returned. The type specimen of *Equus excelsus* and other bones belonging to this genus have been lent to Mr. J. W. Gidley, of the American Museum of Natural History at New York, where they still remain.

From the Section of Invertebrate Paleontology collections were lent for purposes of study to Dr. Anton Fritsch, of Prague; Dr. E. Schellwein, of Königsberg, and Dr. G. Hambach, of St. Louis, Missouri.

In accordance with the usual practice, facilities for study have been afforded to students not officially connected with the institution, when such could be done without too much interference with Museum work. Dr. E. C. E. Lord, as in the year previous, has passed some time in the laboratory of the department engaged in the study of eruptive rocks from the coast of Maine. Mr. M. W. Twitchell, a graduate student of the Columbian University, has utilized the goniometer and other facilities in the Division of Mineralogy in the work of preparing his thesis for an advanced degree. Dr. O. P. Hay has spent some time in the study of the paleozoic fishes, and Dr. C. R. Eastman has utilized Museum material in the preparation of a paper on the fossil gar. Dr. A. S. Woodward, of the British Museum, made a brief examination of the types of various fossil fishes in our collections. Mr. R. B. Rowe, of the Maryland Geological Survey, Prof. John M. Nichols, of Cincinnati, and Mr. E. H. Sellards, of the University of Kansas, have also had access to Museum materials in connection with their own work.

FUTURE WORK.

No radical changes in the plans for the work in any of the divisions of the department are contemplated. There remains yet a large amount of work to be done in the exhibition series in vertebrate paleontology and paleobotany, which will doubtless consume the greater portion of the time of those in charge of these divisions for an indefinite period.

Prior to the reorganization of the Museum in 1897, the catalogues

of the various divisions had been kept quite independently of and without sufficient regard to each other, and in many cases the work was very imperfectly done, owing to lack of sufficient assistance. Under the present administration an attempt is being made to centralize and harmonize the work of cataloguing. This will, however, involve the rewriting of probably 200,000 entries as well as much careful overhauling of the records, and is a work which we can not hope to accomplish within several years. It is the intention of the head curator to give particular attention to this work during the coming year.

The department has now arrived at that stage in the building up of its collections where a proportionately small amount of material of value is received in the form of donations. If, therefore, the collections are to be systematic and well balanced, a considerable amount of money must be available for purposes of purchase. This is a matter which has been repeatedly urged and needs no further mention.

SUMMARY OF THE OPERATIONS OF THE YEAR.

THE MUSEUM STAFF.

The executive curator, Dr. Frederick W. True, continued in direct charge of the administration of the Museum during the year, the Assistant Secretary exercising only a general supervision over its affairs.

There have been but few changes in connection with the scientific staff. In the death of Mr. Frank Hamilton Cushing on April 10, 1900, the Museum, as well as the Bureau of Ethnology, lost one of its most active and distinguished workers during nearly a quarter of a century. Medical Director James M. Flint, U. S. N., under whose supervision the Division of Materia Medica was established in 1881, and who has been its honorary curator, under detail by the Secretary of the Navy, for three separate periods, aggregating about thirteen years, was placed on the retired list of the Navy in February, 1900. Proposing to continue his residence in Washington, however, Doctor Flint has volunteered his further services in the same capacity and they have been gladly accepted.

Mr. W. R. Maxon was appointed an aid in the Division of Plants in November, 1899.

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

APPROPRIATIONS AND EXPENDITURES.

The total amount appropriated by Congress for the maintenance of the Museum during the year ending June 30, 1900, was $238,540, as against $257,000 for the previous year. The only changes in the several items, as compared with 1899, were an increase of $5,000 under preservation of collections and of $2,000 under building repairs, and a decrease of $10,000 under furniture and fixtures and of $460 under rent of workshops. The sundry civil act for 1899 also contained two special items, one of $10,000 for the construction of galleries and one of $5,000 for the purchase of the scientific library of the late Dr. G. Brown Goode, which are mainly accountable for the larger appropriation in that year.

The expenditures actually made from the appropriations for 1900 up to the end of that fiscal year aggregated $224,912.42, leaving a balance of $13,627.58 to meet outstanding liabilities. During the same year $12,284.88 were disbursed from the balance ($12,629.63) of the appropriation for 1899 remaining on July 1, 1899.

The following tables show the expenditures during 1899–1900 from the appropriations for the past two years and the balances on hand on June 30, 1900:

Appropriations and expenditures for the fiscal year ending June 30, 1900.

Object.	Appropriations.	Expenditures.	Balance on hand June 30, 1900.
Preservation of collections	$170,000	$160,866.18	$9,133.82
Furniture and fixtures (including $10,000 for furnishing new galleries)	25,000	24,424.76	575.24
Heating, lighting, and electrical service	14,000	13,438.04	561.96
Books	2,000	1,121.28	878.72
Postage	500	500.00	.....
Building repairs	6,000	5,748.93	251.07
Rent of workshops	4,040	4,039.92	.08
Printing and binding	17,000	14,773.31	2,226.69
Total	238,540	224,912.42	13,627.58

Disbursements from unexpended balances of appropriations for the fiscal year ending June 30, 1899.

Object.	Balance June 30, 1899.	Expenditures.	Balance June 30, 1900.
Preservation of collections	$4,661.94	$4,660.41	$1.53
Furniture and fixtures	995.28	993.93	1.35
Heating and lighting	1,780.02	1,780.01	.01
Books	699.57	674.49	25.08
Building repairs	81.08	80.17	.91
Galleries	4,301.66	4,095.87	205.79
Rent of workshops	110.08	.....	110.08
Total	12,629.63	12,284.88	344.75

Disbursements to the extent of $88 were also made on account of preservation of collections for 1897–98, leaving a balance under that item on June 30, 1900, of $9.28. Other balances remaining from the appropriations for the same year, all of which now revert to the surplus fund of the Treasury, are as follows: Furniture and fixtures, $1.23; heating and lighting, $5.49; building repairs, $4.53; galleries, $8.87; rebuilding sheds, $0.78.

The appropriations for the year ending June 30, 1901, are as follows:

Preservation of collections	$180,000
Furniture and fixtures (including $2,500 for furnishing a new lecture hall)	17,500
Heating, lighting, and electrical service (including $3,500 for electrical installation)	17,500
Postage	500

Books, pamphlets, and periodicals	$2,000
Repairs to buildings, shops, and sheds	15,000
Rent of workshops and temporary storage quarters	4,040
Printing and binding	17,000
Purchase of specimens	10,000
Total	263,540

BUILDINGS.

Skylights have been placed in the roof of the Museum building above the four courts and above the west south, east south, and south east ranges, in all of which the lighting has been poor, especially since the construction of galleries in them. The galleries in the east, west, and south halls and the stairways leading to the galleries from the rotunda have been furnished with iron railings, and the gallery in the south east range has been extended so as to form a complete second story, adding much needed room for laboratory and storage purposes.

The old wooden floor in the main hall of the Smithsonian building, occupied by the exhibition collections of birds and mollusks, has been replaced by a terrazzo pavement, a change long contemplated, which greatly improves the comfort and appearance of the hall.

ACCESSIONS AND REGISTRATION.

The additions to the collections during the year were embraced in 1,467 accessions and numbered 206,617 specimens, which increases the total number of specimens in the Museum to 4,819,836. The following table gives the additions and totals under the Museum classification:

Number of specimens received in 1899–1900, and total number in the several divisions on June 30, 1900.

Division.	Received in 1899–1900.	Total.
Anthropology:		
Ethnology	2,387	456,295
Historic archæology	13	1,989
Prehistoric archæology	29,939	307,957
Technology	156	30,784
Graphic arts	28	7,383
Medicine		6,800
Religions	1	2,367
History and biography	903	38,086
Somatology	7	2,316
Ceramics	118	4,127
Photography	10	1,781
Music	10	1,425
Biology:		
Mammals	4,811	[1] 31,830
Birds	4,988	[1] 120,047
Birds' eggs	159	64,820
Reptiles and batrachians	1,263	40,240

[1] Including material recently added to the Department of Agriculture series.

Number of specimens received in 1899–1900, and total number in the several divisions on June 30, 1900—Continued.

Division.	Received in 1899–1900.	Total.
Biology—Continued.		
Fishes	1,200	152,501
Mollusks	8,854	748,871
Insects	85,000	[1] 1,333,370
Marine invertebrates	3,917	[2] 507,366
Helminthological collections	8	4,953
Comparative anatomy	48	15,633
Plants	45,221	436,462
Forestry		749
Geology:		
Physical and chemical geology	2,830	80,693
Mineralogy	5,623	35,150
Invertebrate paleontology	7,477	385,841
Vertebrate paleontology	243	
Paleobotany	1,400	
Total	206,617	4,819,836

[1] Including Department of Agriculture material.

[2] The apparent decrease since June 30, 1899, is explained by the assignment of a very large number of specimens to purposes of distribution.

The number of entries made in the catalogues of the several divisions was 22,622. In Appendix II will be found a complete list of the accessions for the year.

The number of accessions received annually since 1880 has been as follows:

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

Seventeen thousand nine hundred and seventy packages have been received by the registrar, besides 20,824 volumes of publications. One thousand one hundred and sixty-three packages contained material for the Museum collections, and 1,236 supplies of various kinds. Three thousand six hundred and fourteen packages were sent out.

DISTRIBUTION AND EXCHANGE.

Twenty-six thousand and four specimens have been sent out as gifts or in exchange, and 12,177 specimens have been lent for study. The gifts have consisted chiefly of rocks, minerals, marine invertebrates, and casts of prehistoric implements, presented, in accordance with a long-established practice, to educational institutions in all parts of the United States. The distributions of all kinds are given in detail in Appendix III. The following table shows the number of "lots" of specimens sent to each State and foreign country:

Alabama	4	Tennessee	1
Arizona	1	Texas	3
California	13	Utah	2
Colorado	9	Vermont	4
Connecticut	10	Virginia	3
Delaware	2	Washington	3
District of Columbia	18	West Virginia	2
Florida	1	Wisconsin	4
Georgia	1	Wyoming	2
Illinois	24	Foreign countries:	
Indiana	2	Argentina	1
Iowa	8	Australia	2
Kansas	6	Austria	7
Maine	2	Belgium	1
Maryland	2	Brazil	1
Massachusetts	32	Canada	5
Michigan	5	Denmark	1
Minnesota	5	England	24
Missouri	11	France	9
Nebraska	1	Germany	11
New Hampshire	3	Holland	1
New Jersey	6	India	1
New Mexico	6	Italy	7
Nevada	1	New Zealand	2
New York	46	Norway	1
North Carolina	4	Russia	4
Ohio	5	Scotland	2
Oregon	2	South Africa	1
Pennsylvania	19	Sweden	3
Rhode Island	2	Switzerland	3
South Carolina	1		

Among the more important exchanges received from establishments and individuals abroad were the following: Co-types of *Nectomys garleppi* from the British Museum of Natural History, London, England; a collection of fishes, crustaceans, and echinoderms from

Mr. H. W. Parritt, London, England; a collection of amulets in Bohemian glass, representing teeth of various animals, from Mr. Edward Lovett, Croydon, England; collections of insects and crustaceans from the Museum of Natural History, Paris, France; fishes from the Italian coast and the Red Sea, from the Museum of Natural History, Milan, Italy; invertebrate fossils from Mr. D. Socoloff, Orenburg, Russia; many ethnological objects from islands in the South Seas, and a collection of Moa bones, from Canterbury Museum, Christchurch, New Zealand; natural history and archæological specimens from the Public Museum, Wanganui, New Zealand; specimens of Eocene and Oligocene fossils from Mr. F. K. McK. Grant, Melbourne, Victoria; collections of plants from the Natal Botanic Gardens, Durban, South Africa; specimens of fossil brachiopods from the Museu Paulista, São Paulo, Brazil.

Material, for which return had not been made at the close of the year, was sent abroad, as follows: Specimens of crabs to the Zoological Museum, Turin, Italy; 100 skins and skulls of North American mammals, and several Indian baskets, to the Royal Zoological Museum, Dresden, Germany; 128 specimens of Lower Cretaceous fossils, representing 30 species, to the Geological-Paleontological Institute, Munich, Germany; 900 plants to the Freie Vereinigung Tiroler Botaniker, Dellach in Oberdrauthale, Carinthia, Austria; 97 specimens of Lepidoptera, representing 36 species from North America, Asia, and Africa, to Mr. G. Ruscherveyh, Buenos Ayres, Argentina.

VISITORS.

The number of persons who visited the Museum building was 225,440, and the Smithsonian building 133,147. The following tables show, respectively, the attendance during each month of the past year, and during each year since 1880:

Number of visitors during the fiscal year 1899–1900.

Year and month.	Museum building.	Smithsonian building.
1899.		
July	12,563	5,960
August	17,492	9,364
September	32,374	14,951
October	20,735	12,099
November	12,668	8,021
December	16,223	10,440
1900.		
January	8,988	7,892
February	16,180	8,767
March	15,992	11,472
April	27,385	17,028
May	26,301	14,650
June	18,539	12,503
Total	225,440	133,147
Approximate daily average on a basis of 313 days in the year	720	425

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	45,565
1884–85[1]	205,026	105,993
1885–86	174,225	88,960
1886–87	216,562	98,552
1887–88	249,665	102,863
1888–89[1]	374,843	149,618
1889–90	274,324	120,894
1890–91	286,426	111,669
1891–92	269,825	114,817
1892–93[1]	319,930	174,188
1893–94	195,748	103,910
1894–95	201,744	105,658
1895–96	180,505	103,650
1896–97[1]	229,606	115,709
1897–98	177,254	99,273
1898–99	192,471	116,912
1899–1900	225,440	133,147
Total	4,390,898	2,248,945

[1] Years of Presidential inaugurations.

RESEARCHES.

An account of the researches carried on by members of the Museum staff will be found in the reports of the head curators. A great deal of the work of identifying and monographing the collections is, however, performed by persons not connected with the Museum, but for the most part having relations with other establishments of learning either in this country or abroad. Such services are, with rare exceptions, rendered gratuitously, even though they be directly solicited on the part of the Museum. In very many cases, the use of specimens is given to aid in the preparation of reports undertaken in the interest of the expert himself or in behalf of the institution to which he belongs, the Museum benefiting indirectly. It is arranged, wherever possible, to have these investigations conducted in Washington, and specimens are only sent away for study when their safety can be definitely assured. Considerable progress has been made during the year, under this practice, in the working up of collections.

From the Department of Anthropology, a series of Shoshone and Ute crania was lent to Dr. A. Hrdlicka, of the American Museum of Natural History, New York, and a part of the collection of primitive games to Mr. Stewart Culin, director of the museum of the University of Pennsylvania. It may also be mentioned here that a number of the models of vehicles from the collections illustrating

land transportation were sent for copying to the Carnegie Museum at Pittsburg, and many models from the historical series of electrical apparatus were turned over to the United States Commissioner-General for exhibition at the Paris Exposition.

In zoology, the collections of mammals and birds have been utilized by the Biological Survey of the Department of Agriculture, and those of fishes by the Fish Commission. Studies have been conducted at the Museum by Mr. Outram Bangs, of Boston, Mass., on the birds recently received from the region about Panama; by Dr. Louis B. Bishop, of New Haven, Conn., on Alaskan birds in connection with those collected by him in the Yukon region, and by Dr. A. W. Graham, on the Fusidæ, a family of mollusks. Miss Harriet Richardson has continued her work on the Isopod crustaceans; Mr. T. Wayland Vaughan, of the Geological Survey, his studies of West Indian and other recent corals, and Prof. W. P. Hay, of Howard University, his investigations on crayfishes.

Arrangements for monographing the extensive collection of Holothurians were made with Prof. Hubert Lyman Clark, of Olivet College, Michigan, and Prof. C. L. Edwards, of Trinity College, Hartford, Conn., and the specimens have been sent to them. The Pedata were assigned to Professor Edwards and the Apoda to Professor Clark. Additional specimens of leeches were forwarded to Prof. J. Percy Moore, of the University of Pennsylvania, who has for some time been engaged in working up the Museum's material in this group.

The principal loans of zoological material have been as follows: The collection of lemmings to Mr. Witmer Stone, of the Philadelphia Academy of Natural Sciences; the collection of meadow larks to Mr. F. M. Chapman, of the American Museum of Natural History, who is engaged upon a revision of the genus *Sturnella;* the collection of Japanese and Korean fishes to President David S. Jordan, of Leland Stanford Junior University; the crustaceans of the family Alpheidæ to Dr. H. Coutière, of the Museum of Natural History, Paris, France, and of the genus *Palæmonetes* to Mr. Robert W. Hall, of New Haven, Conn.; a collection of Diptera to Prof. R. W. Doane, of the Museum of Comparative Zoology; a collection of Hymenoptera to Prof. T. D. A. Cockerell, of Mesilla Park, N. Mex., and specimens of the family Saldidæ to Prof. H. E. Summers, of the Iowa Agricultural College. Entomological specimens have also been supplied to Dr. Samuel H. Scudder, of Cambridge, Mass.; Prof. John B. Smith, of Rutgers College, New Brunswick, N. J.; Prof. C. H. Fernald, of the Massachusetts Agricultural College; Rev. George B. Hulst, of Brooklyn, N. Y.; Dr. Herman Strecker, of Reading, Pa., and Mr. William Beutenmüller, of the American Museum of Natural History.

Specimens of plants were lent to a large number of persons, the principal sendings having been to the Gray Herbarium, at Cambridge,

Mass.; Dr. N. L. Britton, of the New York Botanical Gardens; Prof. L. M. Underwood, of Columbia University; Dr. William Trelease, of the Missouri Botanical Garden; Mr. W. W. Ashe, of the North Carolina Geological Survey; Mr. L. F. Henderson, Boston, Mass.; Mr. Alvah A. Eaton, Seabrook, N. H.; Mr. Williard N. Clute, Binghamton, N. Y.; Dr. B. W. Evermann and Theodor Holm, Washington, D. C., and Mr. Anton Heimel, Vienna, Austria.

The facilities afforded by the Department of Geology have been availed of by several persons, including assistants of the United States Geological Survey. The eruptive rocks from the coast of Maine were studied by Dr. E. C. E. Lord. The types of certain fossil fishes were examined by Dr. A. S. Woodward, of the British Museum. The paleozoic fishes were studied by Dr. O. P. Hay, of the American Museum of Natural History, and the fossil gars by Dr. C. R. Eastman, of the Museum of Comparative Zoology. Among others who had access to the collections were Mr. R. B. Rowe, of the Maryland Geological Survey; Mr. E. H. Sellards, of the University of Kansas, and Prof. John M. Nichols, of Cincinnati, Ohio.

Collections of invertebrate fossils were lent to Dr. Anton Fritsch, of Prague, Bohemia; Dr. E. Schellwein, of Königsberg, Prussia, and Dr. G. Hambach, of St. Louis, Mo.; and a number of specimens of fossil horse remains were sent to Mr. J. W. Gidley, of the American Museum of Natural History.

COOPERATION OF THE EXECUTIVE DEPARTMENTS OF THE GOVERNMENT.

The relations of the Museum with the Executive Departments have been greatly extended during the last few years, especially as regards the War and Navy Departments in connection with their operations across the seas, through the cordial assistance rendered by officers of these two services. The historical and ethnological collections were the first to be benefited, but latterly more attention has been given to the natural features of the new possessions, and many interesting contributions in zoology and botany are now being received. It is hoped that the interest thus stimulated will lead to important results in this direction. In European countries the military branches of the governments have done much toward enriching the collections of their national museums, and it would be exceedingly unfortunate were the exceptional opportunities now presented to our own country and our own National Museum to be neglected.

The State Department, through its diplomatic and consular officers, has also been instrumental in securing much valuable material. The receipts from the Fish Commission, consisting mainly of zoological collections obtained on the Porto Rican expedition of the steamer *Fish Hawk*, have been of great interest. The United States Geological Survey has transmitted material from many sources, but of most

importance, and constituting perhaps the largest single accession ever received, was the well-known collection of vertebrate fossils assembled under the direction of the late Prof. O. C. Marsh, of Yale University. The scientific branches of the Department of Agriculture which engage in field collecting, the Biological Survey, the Division of Entomology, and the Division of Botany, have, as in past years, deposited in the Museum the main parts of the material resulting from the year's work. The collections received from the Bureau of American Ethnology have been extensive and noteworthy.

Acknowledgment is due to several of the Departments for courtesies in connection with administrative matters, especially deserving of mention being the facilities afforded for the transportation of collections and assistants by the Quartermaster's Department of the Army.

EXPLORATIONS.

Although having very limited means for field investigations, at least a few members of the Museum staff spend a month or more during every year in adding to the collections, making their trips independently or in connection with expeditions sent out by other Government bureaus or under private auspices. Much important material is obtained in this way.

Dr. F. W. True spent several weeks of the summer of 1899 at the station of the Cabot Steam Whaling Company, in Newfoundland, studying the finback and humpback whales, which are taken along that coast in large numbers.

Anthropological researches were carried on in Cuba and Jamaica during the spring of 1900 by Maj. J. W. Powell, Director of the Bureau of American Ethnology, and Mr. William H. Holmes, head curator of anthropology, who collected many objects illustrating the ancient peoples of those islands.

Extensive zoological and botanical collections were made in Cuba and Porto Rico for the Pan-American Exposition of 1901 by Dr. Leonhard Stejneger, Dr. Charles W. Richmond, Mr. William Palmer, and Mr. J. H. Riley, of the Museum staff. The groups of animals chiefly represented were birds, reptiles and batrachians, fishes, bats, insects, crustaceans and annelids. The Philippine Islands were visited in behalf of the same exposition by Col. H. H. Hilder, of the Bureau of American Ethnology, who secured a large amount of interesting material bearing upon the native tribes and the history of the islands.

The expedition to central and southern Mexico by Dr. J. N. Rose and Dr. Walter Hough, which started in the spring of 1899, as noted in the last report, continued during a part of the summer and was very successful. Its object was the collecting of botanical and ethnobotanical specimens, the latter including plants used in the arts, both ancient and modern, and examples of native handiwork. At the close

of the year Mr. Marcus W. Lyon, jr., was in Venezuela with Lieut. Wirt Robinson, U. S. A., having been detailed to make collections of the higher vertebrates. Mr. Barton A. Bean was in the Vineyard Sound region of Massachusetts during part of the summer of 1899 in the interest of the Division of Fishes.

During the summer of 1899 Mr. Charles Schuchert accompanied an expedition under the auspices of the Union Pacific Railroad Company to the fossil beds of Wyoming, where he obtained many Jurassic invertebrate fossils, the femur of a large Dinosaur, and a large number of lithological and mineralogical specimens. In company with Prof. Lester F. Ward, he also collected an interesting series of fossil cycads in the same State.

On the expedition to Alaska during June and July, 1899, so elaborately equipped and carried out at the expense of Mr. E. H. Harriman, of New York, the National Museum was represented by Mr. William H. Dall, Mr. Robert Ridgway, Dr. C. Hart Merriam, and Mr. F. V. Coville. The birds, insects, mollusks, and plants obtained have been transferred to the Museum, the plants coming through the Department of Agriculture, while the insects, collected by Mr. Trevor Kincaid, of Seattle, Wash., were presented by Mr. Harriman. Before returning to Washington Mr. Dall visited the Hawaiian Islands, where he made an important collection of mollusks.

The Government explorations which contribute most constantly and extensively to the Museum are those conducted by the Geological Survey, the Fish Commission, and the scientific bureaus of the Department of Agriculture, in all of which there was much activity during the past year. The cruise of the Fish Commission steamer *Albatross* to the South Pacific Ocean offered an opportunity for securing ethnological objects from many interesting islands, and through the courtesy of the Commissioner of Fisheries two of the naturalists attached to the expedition, Mr. C. H. Townsend and Mr. H. F. Moore, were authorized to collect in this field. They were successful in obtaining much valuable material. Explorations under the Department of Agriculture have been illustrated by extensive collections of plants made in Alaska by Mr. F. V. Coville and Mr. T. H. Kearney, and in Virginia and North Carolina by Mr. Kearney, and by an interesting collection of insects gathered in Porto Rico by Mr. August Busck, and of crustaceans obtained in Texas and Mexico by Messrs. Vernon Bailey, E. W. Nelson, and E. A. Goldman. Several important accessions have also been received as the result of the field work of the Geological Survey. Interest in the needs of the Museum has been aroused among officers of the Army and Navy and observers of the Weather Bureau stationed in the West Indies and the South Pacific Ocean, and it is expected that valuable contributions will soon be received through these channels. A collection of reptiles, which he made in Texas, has been presented by Dr. E. A. Mearns, U. S. A.

Of private expeditions there have been several which benefited the Museum. As a result of his explorations in the Malay Archipelago and other eastern localities, including Trong, Lower Siam, and Singapore, Dr. William L. Abbott has contributed a large and important collection of zoological and ethnological material, the former comprising 257 mammals, 763 birds, and 125 batrachians, besides many insects and other forms of invertebrates. Among the specimens are many species new to science and numerous others not heretofore represented in the Museum. This is only one of several expeditions through which the Museum has been placed under great indebtedness to Doctor Abbott.

While at the Samoan Islands as the British representative on the joint commission, Sir Charles Eliot found time to bring together an excellent collection of the mollusks and other marine invertebrates, which he has kindly turned over to the National Museum.

Other acquisitions, the results of private explorations, have been as follows: A series of Japanese fishes from the Leland Stanford Junior University; a collection of crustaceans made on the Brazilian coast by Dr. John C. Branner during the Branner-Agassiz expedition; a collection of Hawaiian crustaceans from Mr. H. W. Henshaw; about 300 Colombian birds from Mr. Outram Bangs; over 800 plants of the State of Washington from Mr. Kirk Whited; a valuable series of volcanic rocks and other geological material from the Hawaiian Islands, from Prof. C. H. Hitchcock.

Collecting outfits.—Outfits have been furnished to the following persons who have offered to collect material for the Museum: Prof. Dean C. Worcester, United States commissioner to the Philippine Islands; Capt. H. C. Benson, Manila; Dr. Azel Ames and Mr. L. M. McCormick, San Juan, P. R.; Mr. B. S. Bowdish, Aguadilla, P. R.; Maj. J. H. Hysell, Santiago, Cuba; Capt. O. S. Durfee, Ciego de Ovila, Cuba; Mr. F. G. Gosling, Hamilton, Bermuda; Mr. Charles B. Taylor, Kingston, Jamaica; Mr. Fred Driver, Montserrat, West Indies; Mr. F. C. Holman, United States of Colombia; Rev. Samuel P. Craver, Montevideo, Uruguay; Mr. Paul Narbel, Cour, Lausanne, Switzerland; Dr. E. A. Mearns, U. S. A., Newport, R. I.; Mr. Dane Coolidge, Leland Stanford Junior University, California; Dr. J. Hornung and Mr. M. L. Robb, San Francisco, Cal.; Mr. Robert T. Young, Waring, Tex.; Mr. R. T. Young, Boern, Tex.; Mr. Howard S. Reed, New Orleans, La.; Dr. Adolph Tucheband and Mr. W. A. Schantz, New York City; Mr. Robert Stein, Washington, D. C., leader of an expedition to the North Polar regions; Miss Thora Stejneger, Washington, D. C.; Lieut. John W. Daniel, jr., Lynchburg, Va.; Mr. George C. Lewis, Fort Myer, Va.

INFORMATION FURNISHED.

The Museum long ago came to be regarded by the public at large as a place where information might be sought on many scientific topics. Specimens are sent for identification and analysis, and inquiries are received bearing upon every subject within its scope, as well as upon many with which it has no relation. Every communication is answered, and so far as possible the writer's wishes are complied with, though requests for chemical analyses can not be met, as the Museum is not equipped for work of that kind.

During the past year the demands in this direction were much greater than ever before. Over seven hundred lots of objects were received for examination, while of letters asking information there was an average of not less than one hundred weekly. As will be realized, the time of both the scientific and the clerical staff was heavily drawn upon in preparing the necessary replies. Very few of the specimens which come in this way are of any value to the Museum, while those that might be profitably added to the collections have generally to be returned to the owners, so that the Museum derives little benefit from these sendings.

PUBLICATIONS.

Volume 1 of the Annual Report for 1897 was received from the Government Printing Office in December. The several papers composing it have also been issued in separate pamphlet form and distributed in the usual manner. The second volume of this report, still in course of printing, will contain a biographical account of Dr. George Brown Goode, the late assistant secretary of the Smithsonian Institution in charge of the National Museum, and reprints of several of his most important papers on museums and on the history of scientific progress in the United States. It is expected that the Annual Report for 1898 will be ready for distribution early in the next fiscal year. The appendix to this report will consist of only one paper—a monographic treatise on the "Crocodilians, Lizards, and Snakes of North America," by the late Prof. Edward Drinker Cope.

Volume 21 of the Proceedings was issued in August, 1899, and 24 papers of volume 22 were printed and distributed during the year.

Part 4 of Bulletin No. 47, entitled "The Fishes of North and Middle America," by Dr. David Starr Jordan and Dr. Barton Warren Evermann, was printed just before the close of the year. This volume, consisting of some additions to the text, 392 plates with their explanations, and a general table of contents, completes one of the most important works thus far published by the Museum. Parts M, N, and O have also been added to Bulletin No. 39. They are entitled, respectively, "The methods employed at the Naples Zoological Station for the preservation of marine animals," by Dr. Salvatore Lo Bianco; "Directions for

preparing study specimens of small mammals," by Gerrit S. Miller, jr.; and "Directions for collecting and rearing dragon flies, stone flies, and may flies," by Dr. James G. Needham.

A list of the publications of the Museum and of the members of its staff, issued during the year, is presented in Appendix IV. The number of authors represented is 66 and the total number of papers cited 276. The following table classifies these papers in accordance with the subjects treated:

Subject.	Papers by Museum officers.	Papers by other investigators.	Total.
Administration	1	.....	1
Archæology	3	.....	3
Birds	27	19	46
Botany	13	.....	13
Ethnology	4	2	6
Exploration	1	.....	1
Fishes	.....	3	3
Fossils	12	6	18
General natural history	2	.....	2
Geology	7	2	9
Helminthology	.....	1	1
Insects	70	29	99
Mammals	22	.....	22
Marine invertebrates	6	10	16
Minerals	5	.....	5
Mollusks	22	.....	22
Religions	1	.....	1
Reptiles and batrachians	2	2	4
Technology	1	.....	1
Miscellaneous	3	.....	3
Total	202	74	276

Twenty-three papers by members of the staff, based upon Museum material, have, with the approval of the Secretary of the Smithsonian Institution, been printed during the year in publications other than those of the Museum. Their titles will be found in the bibliography. The names of the authors are as follows: Dr. George P. Merrill, Mr. Gerrit S. Miller, jr., Dr. J. N. Rose, Mr. William R. Maxon, Mr. Charles Louis Pollard, Dr. C. W. Richmond, Mr. Charles Schuchert, and Mr. Charles T. Simpson.

LIBRARY.

The Museum library now contains over 15,000 bound volumes and 27,000 unbound papers. The additions during the year consisted of 337 books, 728 pamphlets, and 4,298 parts of periodicals. There were catalogued 1,005 books, 2,699 pamphlets, and 4,924 parts of periodicals. The number of books, pamphlets, and periodicals borrowed

from the central library amounted to 18,500, including 7,000 withdrawn for assignment to the sectional libraries, of which there are now 27, as follows:

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

TAXIDERMY AND OSTEOLOGY.

Owing to the absence in Cuba, during several months, of Mr. William Palmer, chief taxidermist, and the detail of his assistant during the last half of the year to the Division of Mammals, the amount of taxidermic work accomplished has been less than usual. Sixty-five specimens in the flesh, including 31 mammals, 23 birds, and 11 reptiles, and also 116 skins of mammals, were received. Many of the fresh specimens came from the National Zoological Park. Twenty-five skins were mounted for the exhibition cases and 93 were prepared for the study series. Many specimens were renovated or remounted for display purposes.

The taxidermists of the Division of Birds have remade a number of old skins, besides preparing and mounting several specimens received in the flesh. They have also reduced some of the mounted specimens to skins and have overhauled a large portion of the extensive exhibition series.

The amount of osteological work has also been smaller than usual, because of the necessity of transferring one of the assistants temporarily to the Department of Geology. One thousand skulls of mammals and the skeletons of several mammals and birds received in the flesh have, however, been cleaned. The large skeleton of the humpback whale which has been displayed in the Osteological Hall was removed, and in its place has been substituted the specimen formerly suspended in the south hall, showing both the skeleton and the exterior.

PHOTOGRAPHY.

Mr. T. W. Smillie, the photographer, reports having made for the Museum during the year 435 negatives, 644 platinum prints, 175 silver prints, 1,841 blue prints, and 67 transparencies. In a museum of the

scope and character of this one a great diversity of photographic work is called for, and it is quite essential that the highest standard of the art be attained. In this respect the National Museum has been very fortunate from the beginning, and the results accomplished have been all that could be desired, as testified by the many illustrations scattered through its publications which have been produced through this means. Mr. Smillie's time is also partly shared with other branches of the Institution; and on the Smithsonian eclipse expedition to Wadesboro, N. C., in May, 1900, he was in immediate charge of the photographic branch.

EXPOSITIONS.

Pan-American Exposition, Buffalo.—By act of Congress approved March 3, 1899, the sum of $300,000 was appropriated for a Government exhibit at the Pan-American Exposition to be held at Buffalo, N. Y., in 1901, besides an additional sum of $200,000 for the erection of a building. Dr. Frederick W. True, executive curator, has been designated as the representative of the Smithsonian Institution and its bureaus on the Government board of management, and Mr. W. V. Cox as chief special agent. By the close of the past year the plans for the display on the part of the Museum had been essentially completed, and the work of bringing together and preparing the necessary collections was being rapidly pushed.

A series of models and original pieces of electrical apparatus belonging to the Henry, Morse, and Farmer collections was sent to the Paris Exposition of 1900, and several series of exhibits from the Division of Graphic Arts to the Printing Exposition held in New York City during the month of May, 1900.

NECROLOGY.

Frank Hamilton Cushing, one of the collaborators in the Division of Ethnology in the National Museum, died April 10, 1900. He was born in the village of Northeast, Erie County, Pa., July 22, 1857. He took a deep interest in the study of ethnology and archæology, and began making collections when but a boy. At the age of 18 he went to Cornell University for the purpose of pursuing a special course in anthropology. In 1876 he was given charge of a portion of the exhibit of the Smithsonian Institution at the Centennial Exposition in Philadelphia, and in 1879 he entered the service of the Smithsonian Bureau of Ethnology. Mr. Cushing lived for many years among the Indians of the Southwest, during which time he acquired a thorough knowledge of their customs, arts, language, religion, and tribal history. In 1887 he organized and conducted important archæological explorations in the Salado and Gila valleys of Arizona under the auspices of the Hemenway Southwestern Archæological Expedition. In 1896 he was placed

in charge of an expedition sent out by the Bureau of Ethnology, in conjunction with the University of Pennsylvania, to explore the antiquities of the west coast of Florida. This work resulted in most important discoveries, partially reported upon in the Proceedings of the American Philosophical Society, Philadelphia, for 1896. Among the works bearing on his explorations in Arizona that entitled "Outlines of Zuñi Creation Myths," published in the Thirteenth Annual Report of the Bureau of Ethnology, is one of the most important. In the second annual report an interesting paper on "Zuñi Fetiches" appeared. Many of the articles on various phases of his explorations were published in periodicals from time to time, but it is a matter of regret that his early death precludes the possibility of publishing a large amount of material which he had brought together.

Mr. A. Zeno Shindler, who died August 18, 1899, was connected with the National Museum for many years as an artist. He was engaged largely upon ethnological work and produced a number of portrait studies of the peoples of the world, but his most notable service was in painting casts of fishes, reptiles, and other natural history specimens.

APPENDIX I.

The Museum Staff.

[June 30, 1900.]

S. P. Langley, Secretary of the Smithsonian Institution, Keeper Ex-Officio.
Richard Rathbun, Assistant Secretary.
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 Archæology:* Paul Haupt, Honorary Curator; Cyrus Adler, Honorary Assistant Curator; I. M. Casanowicz, Aid.

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

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

Section of Electricity: G. C. Maynard, Custodian.

(*e*) *Division of Graphic Arts:* S. R. Koehler, Honorary Curator.

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, Custodian.

(*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.
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.

DEPARTMENT OF BIOLOGY—Continued.

(*g*) *Division of Marine Invertebrates:* Richard Rathbun, Honorary Curator; J. E. Benedict, First Assistant Curator; Miss M. J. Rathbun, Second Assistant Curator.

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.

(*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 Assistant 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, Master George, Soldier, Idaho: Two specimens of Cecropia moths. 35269.

Abbott, Miss Nellie, Vineland, N. J.: Plant. 35256.

Abbott, Dr. W. L., Singapore, Straits Settlements: A large and valuable collection of natural-history specimens, including mammal skins, birds' skins and eggs, reptiles and batrachians, mollusks, insects, skeletons of birds, mammals, and a reptile, also ethnological objects, from Trong, Lower Siam (35322); 80 birds' skins, mammal skins, insects, and ethnological objects from Selitar, Singapore Island (35505); mammals, birds' skins, reptiles, shells, insects, fishes, marine invertebrates, mammal skeletons, ethnological objects, and a canoe obtained from islands in the China Sea (36053).

Abel, J. C., Lancaster, Pa.: Stone implements from the Conestoga Hills, near Lancaster (35323); arrow-points, scrapers, and flint chips (35552); stone implements (35735); rude chipped implements and arrow-points of white quartz (35840); rude pieces of white quartz, etc. (35955); arrow-points and spearheads and two unfinished banner stones (36219); 81 archæological objects from the Conestoga Hills and a copper implement from an island in the Susquehanna River, near Blue Rock (36369).

Adams, C. F., Kansas City, Mo.: Insects (35367, 35750, 36009).

Admiral Dewey Reception Committee. Received through W. H. Moses, chairman: Bronze badge made from metal captured at Manila and struck in honor of the Admiral's return to Washington, October 2, 1899, and a complete set of buttons worn by members of the committee. 35878.

Agriculture, Department of. Hon. James Wilson, Secretary: Collection of insects from Texas (35708); 6 specimens of rare dragonflies from Cory, Maine, collected by Mr. F. L. Harvey (35826); large collection of Odonata from Maine obtained by Mr. Harvey (35828); large collection of insects obtained by August Busck in Porto Rico (36240); 2 crabs from Texas collected by Vernon Bailey (36504); land and fresh-water shells obtained by E. W. Nelson in Mexico (36531); 2 specimens of crabs (*Pseudothelphusa*) collected in Mexico by Messrs. Nelson and Goldman (36547); about 5,000 insects collected in Porto Rico by August Busck (36620).

Material deposited in the National Herbarium: Forty-six plants (35315); specimen of *Sarcobatus baileyi* Coville, collected by H. W. Turner (35440); 2,300 plants collected by T. H. Kearney in Virginia and North Carolina (35441); 100 plants collected by F. V. Coville and T. H. Kearney (35442); 107 plants obtained by Professor Flahault (35758); 2 plants collected by Mrs. E. P. McGowan (35776); 2,500 plants of the Harriman Alaska expedition, collected chiefly by Messrs. Coville and Kearney (36866); 132 plants obtained by Aven Nelson (35934); received through Prof. F. Lamson-Scribner, 25 forage plants (36104); 19 plants from Kansas collected by F. V. Coville (36257); 153 plants from North Carolina and Virginia collected by F. V. Coville (36258); 60 plants from Maryland collected by Mr. Coville (36259); 123 plants from the District of Columbia collected by Mr. Coville (36260); 3 plants from Connecticut collected by

AGRICULTURE, DEPARTMENT OF—Cont'd.

Material deposited in the National Herbarium—Continued.

C. G. Bissell (36263); 88 plants collected by David Griffiths, T. A. Williams, and P. A. Rydberg (36328); 34 plants collected by Kirk Whited in Washington (36397); 3 specimens of grasses from Florida (36427); received through L. H. Dewey, specimen of *Grewia* from South Australia (36444); received through Lieut. B. H. Dutcher, Fort Grant, Ariz., 19 plants from Arizona (36445); 817 plants from Washington collected by Kirk Whited (36472); specimen of *Arctostaphylos canescens* from California (36543); 1,126 plants collected in Oregon by E. P. Sheldon (36665).

(See under Anderson, A. P.; Austin, S. W.; Bailey, Vernon; Bissell, C. G.; Boardman, C. A.; Brown, Herbert; Busck, August; California Academy of Sciences; Campbell, A. J.; Coville, F. V.; Cusick, W. C.; Dewey, L. H.; Dutcher, B. H.; Eby, Mrs. A. F.; Engman, E. J.; Fay, John; Flahault, Prof.; Fitzgerald, Margaret P.; Flett, J. B.; Fyles, T. W.; Godbug, T. K.; Goldman, E. A.; Graham, G. A.; Griffiths, David; Harvey, F. L.; Hitchcock, A. S.; Kearney, T. H.; Lamson-Scribner, F.; McGowan, Mrs. E. P.; Miller, F. J. X.; Nelson, Aven; Nelson, E. W.; Noble, S. W.; Oakman, Miss; Olds, H. W.; Piper, C. V.; Plitt, C. C.; Rydberg, P. A.; Sheldon, E. P.; Spencer, Mr.; Steele, W. C.; Tracy, S. M.; Turner, H. W.; Waghorne, A.; Way, P. N.; Werckle, C.; Wheeler, Maj. Gen. Joseph; Whited, Kirk; Williams, T. A.; Wilson, J. M.)

ALASKA COMMERCIAL COMPANY, San Francisco, Cal.: Specimen of *Ursus middendorffi*, from Kadiak Island, Alaska. Purchase. 35884.

ALDRICH, Prof. J. M., Moscow, Idaho: Sixty-seven specimens of Coleoptera, including the rare Cerambycid genus *Piodes*, new to the Museum collection. 35424.

ALEXANDER, W. H., Basseterre, St. Kitts, West Indies: Collection of natural history specimens. 35370.

ALLEN, A. J. (See under Cambridge Botanical Supply Company.)

ALLEN, GLOVER M., Intervale, N. H.: Three snakes (*Thamnophis sirtalis pallidula*), topotypes, from Bartlett, N. H. 35587.

ALLEN, Mrs. L. P., Dunedin, Fla.: Four starfishes. 35654.

AMERICAN ELECTRICAL WORKS, Providence, R. I.: Thirty-two electrical conductors. 35807.

ANDERSON, A. P., Clemson College, S. C. Received through Department of Agriculture: Ninety-four plants. Exchange. 35401.

ANDERSON, R. T., West Aylmer, Ontario, Canada: Specimen of *Callimorpha clymene* Brown. 36129.

ANDRUS, F. H., Elkton, Oreg.: Thirteen specimens of *Vertigo andrusiana* Pilsbry (35331); land and marine shells (36391).

ANGEL, Miss LILLIE, Orange, N. J.: Three specimens of violets. Exchange. 36514.

ANTHONY, A. W., Portland, Oreg.: Shrew (*Sorex* (*Atophyrax*) *bendirei*), from Taylorsville, Cal. 36669.

APPLEGATE, E. I., Klamath Falls, Oreg.: Specimen of *Scirpus*, from Oregon. 36108.

ARNHEIM, J. S., San Francisco, Cal.: Shell and specimen of *Eunaticina*, from California. 35701.

ARNOLD, Hon. DELOS, San Pedro, Cal.: Type specimen of *Caryophyllia arnoldi* Vaughan. 36621.

ARNOLD, EDWARD, Battlecreek, Mich.: Two skins of *Falco richardsonii*. 36200.

ASBESTOS AND ASBESTIC COMPANY, Danville, Quebec, Canada: Specimens of asbestos and asbestic material. 35557.

ASH, CHARLES E., Newport, R. I. Received through Dr. E. A. Mearns: Lobster weighing 27 pounds. 36684.

ASH, C. J., National Home, Va.: Primitive rat trap. 36596.

ASHE, W. W., Raleigh, N. C.: Three specimens of *Viola* (gift). (36261); 50 specimens of violets (exchange) (36568); 50 specimens of violets (exchange) (36634).

Atkinson, G. E., Portage La Prairie, Manitoba, Canada: Four skulls of moose (*Alces americanus*); skull of elk (*Cervus canadensis*). 36629.

Atkinson, Richiel, Atkinson, Ala.: Cricket (*Gryllotalpa borealis* Burm). 36355.

Attwater, H. P., San Antonio, Tex.: Seventeen birds' eggs and 2 nests from Texas. 36064.

Auringer, Rev. O. C., Troy, N. Y.: Fourteen rude stone implements. Exchange. 36338.

Austin, S. W., Independence, Cal. Received through Department of Agriculture: Plant collected by W. L. Hunter (35794); received through Department of Agriculture: 6 plants from California (36512).

Bachline, John, Washington, D. C.: Marine shells and echinoderms from Cuba. 35251.

Bailey, Gen. G. W., Atchison, Kans. Received through Smithsonian Institution, Bureau of Ethnology: Four pieces of pottery from mounds near Charleston, Mo.: medicine bag obtained from the Sioux Indians, Rosebud, S. Dak.; necklace from the Apaches of Arizona; wolf-skin headdress from the Sioux Indians, and a skin scraper from an Indian tribe located near Perry, Iowa. 35415.

Bailey, Vernon, Washington, D. C. Received through Department of Agriculture: Specimen of *Tillandsia* from Texas. 36536.

Baker, Carl, Washington, D. C.: Sixteen specimens of Umbelliferæ from Colorado. 36082.

Baldwin, D. R., Ravenden Springs, Ark.: Specimen of *Tabanus mexicanus* Linnæus. 35248.

Bangs, Outram, Boston, Mass.: Ninety-two birds' skins from Colombia, South America (35458); 102 birds' skins from the Santa Marta region of Colombia not previously represented in the Museum collection (35655, 35859); 2 skins and skulls of mammals (36171); 100 birds' skins from Loma del Leon, Panama (36579).

Banks, Nathan, Department of Agriculture: One hundred and seventy-eight specimens of Odonata from North America. 35818.

Barber, A. W., Washington, D. C.: Two pieces of broken pottery, 4 pieces of human bones, and part of a flint arrow-point (36270); seed of Coönti plant from a cocoanut grove at Biscatai Bay, Florida (36299). (See under Mrs. H. D. Brainard, and Smithsonian Institution, Bureau of Ethnology.)

Barber, Mrs. A. W., Washington, D. C.: Two skins of snakes. 36011.

Barber, C. M. (See under Wooten, E. O.)

Barber, Herbert, U. S. National Museum: Thirty specimens of Odonata from Washington, D. C., and vicinity. 35821.

Barbour, W. C., Sayre, Pa.: One hundred and twenty specimens of violets. Exchange. 36703.

Bark, James E., Phoenix, Ariz.: Twenty-six small arrow-points found on the Superstition Mountains (36218); pieces of charred yarn found in a ruin on the Verde River (36388).

Barnes, George D., Chattanooga, Tenn.: Three hundred and thirty-five specimens of Lower Carboniferous fossils from Oak Mountain, James County, Tenn. Purchase. 35382.

Barnes, Dr. W., Decatur, Ill.: Twenty-two specimens of rare Lepidoptera, including 4 types of species described by the donor. 35923.

Barnhart Brothers & Spindler, Chicago, Ill. Received through F. J. V. Skiff, director of Field Columbian Museum, and G. A. Dorsey, curator of anthropology: The old Ramage printing press. 35949.

Barrett, O. W., Museo de Comision, Tacubaya, D. F., Mexico: Forty specimens of Coleoptera. 35239.

Barrott, A. F. (See under A. B. Johnson.)

Bartholomew, Elam, Rockport, Kans.: Specimen of Lupinus. 35953.

Bartlett, Mrs. C. H., Kittery, Me.: Thirteen specimens of *Telamona ampelopsides* Harris. 35360.

Bartsch, Paul, U. S. National Museum: Three specimens of Odonata from Washington, D. C. 35832.

Bass, W. L., Brooklyn, N. Y.: Nest of hummingbird (*Mellisuga minima*), from Jamaica. 36650.

Bateson, N. Maine, Norfolk, Va.: Piece of Fiji tapa cloth. 35969.

Bather, F. A. (See under London, England, British Museum of Natural History.)

Batty, J. H., Jersey City, N. J.: Seventeen skins of Trogons from South America (purchase) (35326); 2 skins of Trogons (gift) (35327).

Beach, Jay, Oakland, Cal.: Two photographs of a mammoth tusk. 36233.

Bean, B. A., U. S. National Museum: Fishes collected at Woods Hole, Mass. 35607.

Beaulieu, G. H. (See under Smithsonian Institution, Bureau of Ethnology.)

Becker, Dr. F. L. S., Grahamstown, South Africa: Specimen of *Voluta africana* Reeve, with a photograph showing the specimen in three positions. 36056.

Beckwith, Paul, U. S. National Museum: United States silver 10-cent piece dated 1831 (35333); currency (5 cents) issued by the mayor and common council of Jersey City, November 15, 1862 (35693); silver reals (9) of Ferdinand VII, King of Spain, dated 1802; 2 machetes obtained during the Cuban campaign (purchase) (35835); 3 silver coins (35856); money belt from Ponce, Porto Rico (35948); 2 coins of the Ottoman Empire (35967).

Beecher, Dr. C. E. (See under Peabody Museum; Yale University Museum.)

Bell, George, Denver, Colo.: Piece of gold-bearing breccia from Sheba Mine, Johannesburg, Africa. 35502.

Bellotti, Dr. C. (See under Milan, Italy, Museum of Natural History.)

Benedict, J. E., U. S. National Museum: Collection of dragonflies (35355); dragonflies and other insects (35405); marine invertebrates and mollusks (35463); 1900 microscopic slides illustrating annelids (purchase) (35738).

Benedict, J. E., Jr., Woodside, Md.: Collection of dragonflies from Provincetown, Mass. 35453.

Benjamin, Mrs. Marcus, Washington, D. C.: Badge and ribbon commemorating the forty-eighth meeting at Columbus, Ohio, of the American Association for the Advancement of Science (gift) (35562); ribbon badge of the American Chemical Society, December, 1897 (gift) (35582); 2 baskets made by Klamath Indians (exchange) (35912).

Bennett, Rev. William, S. J., St. John's College, Belize, British Honduras: Collection of reptiles and insects from Honduras. 35768.

Bennetts, W. J., Milwaukee, Wis.: Three plants. 35621.

Berea, Durban, Natal, Africa, Natal Botanic Gardens. Received through J. Medley Wood: One hundred and sixteen plants (36256); 100 plants (35680). Exchange.

Bessey, Prof. C. E., Lincoln, Nebr.: Plant from Black Hills, South Dakota. 36425.

Bethel, E., Denver, Colo.: Forty specimens of violets. (35400, 35524.)

Biascoechea, Henry, Aguadilla, P. R.: Collection of shells from Porto Rico. 36500.

Biederman, C. R., Gold Hill, Oreg.: Moths, butterflies, and other insects. (35619, 35501.)

Bien, W. H., Los Angeles, Cal.: Two species of land shells from California. 35879.

Bigelow, E. F., Stamford, Conn.: Coccinellid larvæ. 36577.

Billups, A. C., Concord, N. C.: Unios. 35632.

Bishop Memorial Museum. (See under Honolulu, H. I.)

Bissell, C. G. (See under Agriculture, Department of.)

Blackburn, Joseph, Hickman, Tenn.: Dobson fly, *Corydalus cornutus* Linnæus. 35283.

Blackford, Dr. C. M., Jr., East Orland, Me.: Pupa of *Acronycta americana*. 35980.

Blaisdell, Dr. F. E., Mokelumne Hill, Cal.: Two skins and skeletons of gophers (*Thomomys*). 36179.

Blake, O. P. (See under Evens & Howard Fire Brick Company.)

Blanchard, Walter. Boulder, Colo.: Fourteen birds' eggs from Colorado. 35358.

Blasdale, W. C. (See under J. B. Davy.)

Blood, C. H., Los Angeles, Cal.: Two specimens of *Amphissa*, from White Point, Los Angeles County. 36217.

Boardman, C. A., Rimouski, Quebec. Received through the Department of Agriculture: Specimen of *Castalia tetragona*. Exchange. 35398.

Boepple, J. F., Muscatine, Iowa. Received through U. S. Fish Commission: Valves of colored and distorted Unionidæ. 36679.

Boettcher, F. L., Washington, D. C.: Plant. 35573.

Bogue, Prof. E. E., Stillwater, Okla.: Five galls and 2 specimens of *Aulax gleditomæ* Linnæus. 35683.

Bohm, J., Berlin, Germany: Thirty-eight species of fossil corals from Italy and Egypt. Exchange. 35546.

Booth, John, Coalville, Utah: Agates. 35686.

Bosworth, J. S., Sedalia, Mo.: Glass snake, *Opheosaurus centralis*, from Missouri. 35462.

Botanical Garden, Washington, D. C.: Two specimens of *Polypodium*, from the greenhouse. 36406.

Bousch, M., Buffalo City, N. C.: Ash beetle, *Dynastes tityus* Linnæus. 35321.

Boutwell, J. M., Montpelier, Vt.: Dark barre granite from Dark Barre Granite Quarries, Montpelier. 35388.

Bowdish, B. S., San Juan, P. R.: Bird skin (*Seiurus motacilla*) from Vieques, P. R. (36202); 10 birds' skins from Porto Rico (36488); specimen of *Dendroica adelaidæ*, from Porto Rico (36578).

Bowers, Stephen, Los Angeles, Cal.: Thirty-three specimens of Post-pliocene fossils, from Borax Lake, San Bernardino County, Cal. (36125); distorted salt crystals (36197); 2 specimens of cinnabar and hydrocarbon compound (36364).

Boynton, A. G., Biltmore, N. C.: Stone implement found near Asheville. 36449.

Boynton, Miss Laura E., Biltmore, N. C.: Forty specimens of violets. Exchange. 36633.

Brainard, Mrs. H. D., Wulfert, Fla. Received through A. W. Barber: Shell hatchet and a shell ornament from Buck Key near Sanibel Island, Florida. 36269.

Branch, H. Selwyn, Antrim Valley, Dominica, West Indies: Six skins of Imperial Parrot, *Amazona imperialis*. Purchase. 36483.

Branner, Dr. J. C., Stanford University, Cal.: Crustaceans collected in Brazil by the Agassiz Expedition in 1899. 36636.

Brannerman, Francis, New York City, N. Y.: Piece of cable from the U. S. battle ship *Maine*. 35261.

Bray, Prof. W. L., University of Texas, Austin, Tex.: Four hundred and forty-eight plants. Exchange. 35451.

Briggs, Dr. A. A., East Andover, N. H.: Specimen of sedge (*Carex conoidea*) (35297); plant (35674); 2 plants (36581);

Brigham, Dr. W. T. (See under Honolulu, H. I.: Bishop Memorial Museum).

Brill, J. A., Philadelphia, Pa.: Indian pipe made of soapstone and polished. 36024.

Brimley, H. H. and C. S., Raleigh, N. C.: Fifteen snakes (35616); reptiles and batrachians from Mexico (36058). Purchase.

Brisbin, Edward, Boise, Idaho.: Diatomaceous earth. 35634.

Britton, Dr. N. L., New York City, N. Y.: Specimen of *Sedum mexicanum* Britton (35645); 9 plants from Yukon Territory (35898). Exchange. (See under New York Botanical Garden).

Britts, Dr. J. H., Clinton, Mo.: Specimens of fresh-water mussels from Missouri. 35756.

Brodie, Dr. William, Toronto, Canada. Received through Dr. L. O. Howard: Collection of insects. 36522.

Brodnax, Dr. B. H., Brodnax, La.: Two stone celts. 36595.

Brooks, A. H., U. S. Geological Survey: Fossil shells and corals from Russell Springs, Flint River, Georgia. 36505.

Brooks, Louis, Santiago, Cuba: Ancient Arawack bowl from a cave near Santiago, collected by Mr. W. H. Holmes. 36682.

Brown, C. F., Hot Springs, Ark.: Two quartz crystals. 36591.

Brown, E. J., Lemon City, Fla.: Mammal skins, insects, and reptiles from Florida (35452); butterfly (36615).

Brown, Herbert, Yuma, Ariz. Received through Department of Agriculture: Two specimens of snakes (*Contia episcopa* and *Rena humilis*). 35383.

Brown, Mrs. J. Crosby, New York City, N. Y.: Four musical instruments (purchase) (35344); military serpent (gift) (35721).

Brown, Mrs. N. M., Ashtabula, Ohio: One hundred and sixty-three plants, collected by E. A. Goldman in Mexico (purchase) (35713); 965 plants, collected by E. W. Nelson in Mexico (35759); 470 plants, collected in Mexico by Mr. Nelson (35842, 35841).

Brown, Philip F., Blue Ridge Springs, Va.: Specimen of maple-tree aphids. 36610.

Brown, W. L., San Francisco, Cal.: Five specimens of minerals (36309); received through B. L. Hasseltine, 5 specimens of minerals (36490).

Brown, W. P., Washington, D. C.: Copy of Welsh crwth. Purchase. 36525.

Brown, W. Q., Riddles, Oreg. Received through Mr. J. S. Diller: Nickel ore. 35723.

Bruce, R. E., Stanford University, Cal. Received through Dr. T. W. Stanton: Twenty-five specimens of Miocene fossils from Los Angeles County, Cal. 36020.

Bryant, F. W., Winchester, Cal.: Specimens of *Epiphragmophora indioensis*, from California (36132); 2 species of shells from California (35611).

Buckland Mineral Water Company, Washington, D. C.: Forty bottles of mineral waters. Purchase. 36613.

Buffalo Botanical Garden, Seneca, N. Y.: One hundred specimens of violets. Exchange. 35375.

Burnham, S. H., Vaughns, N. Y.: One hundred and twenty specimens of violets (35581); specimen of *Viola emarginata* (35963); 59 plants (36304).

Burns, Frank. (See under J. H. Early.)

Burnside, J. M., Hyattsville, Md.: Salamander (*Ambystoma opacum*) from Maryland. 35848.

Burrelle, F. A., New York City: Reduced reproduction of title page of the album presented to Admiral Dewey by the shipping merchants. 36502.

Busck, August. (See under Agriculture, Department of.)

Bush, B. F., Courtney, Mo.: One hundred and thirty-five plants (purchase) (36300); 121 specimens of mosses from the United States (exchange) (36186); 200 plants from Texas and Missouri (purchase) (36226).

Bush, Palmer, Craig, Colo.: Two plants. 36352.

Butler, Dr. C. M., Morenci, Mich.: Skin of Northern Phalarope, *Phalaropus lobatus*, from Michigan. 35550.

Button, F. L., Oakland, Cal.: Four specimens of land shells from California and Lower California (36144); 2 specimens of *Polygyra hindsii*, from Mexico (36220); 4 specimens of land shells from California (36532); marine and land shells (36607).

Butts, E., Kansas City, Mo.: Specimens of *Peripristis semicircularis* and *Philipsia major*. 35929.

Cadle, Col. Cornelius, Cincinnati, Ohio: Four photographs of a stone pipe. 36147.

Cahill, E. J., Boonton, N. J.: Four fossil fishes. 36374.

Calcutta, India, Indian Museum. Received through Frank Finn, deputy superintendent: Four birds' skins. Exchange. 35395.

Calcutta, India, Royal Botanical Garden: One hundred and nine plants. Exchange. 35915.

California Academy of Sciences, San Francisco, Cal. Received through Department of Agriculture: Forty-four species of Coleoptera from Baja, Cal., including many cotypes described by Dr. Horn. 36310.

Cambridge Botanical Supply Company, Boston, Mass.: One hundred and forty-seven specimens of mosses from the Cascade Mountains collected by A. J. Allen. Purchase. 36704.

Camp, J. H., Lima, Ohio: Specimens of miscellaneous insects (36478); beetle (*Calosoma scrutator* Fabr.). (36658).

Campbell, A. J., Luray, Va. Received through Department of Agriculture: Plant. 35572.

Candlin, H., Greeley, Colo.: Four snakes from Texas. 35806.

Canterbury Museum. (See under Christchurch, New Zealand.)

Carpenter, Miss Anna, Jersey Shore, Pa.: Specimens of Thripsidæ. 35845.

Carrico, E. T., Stithton, Ky. Received through Smithsonian Institution, Bureau of Ethnology: Five arrowpoints. 36440.

Carroll, Patrick, Hospital Corps, Dumaguete, Isle of Negros, Philippine Islands: Large beetle. 35977.

Cary, Merritt, Neligh, Nebr.: Birds' skins. Exchange. 36509.

Case School of Applied Science, Cleveland, Ohio. Received through F. W. Comstock: Five hundred and eighteen plants from Ohio. Exchange. 36585.

Casey, T. L., Vicksburg, Miss.: Fossil land shells. 36451.

Casper, A. B., Lowell, Mich.: Two specimens of parasitic flies (*Olfersia americana* Leach). 35425.

Cendoya, Julian, Santiago, Cuba: Torpedo shell from the Spanish war ship *Oquendo*, collected by Mr. W. H. Holmes. 36672.

Chamberlain, Dr. L. T. (See under Smithsonian Institution.)

Chamberlain, Mrs. M. A., Washington, D. C.: Five-dollar gold piece dated 1809. 36627.

Chapin, S. B., Tallahassee, Fla.: Specimen of Tachinid fly, *Jurinia metallica* Desv. 35601.

Chapman, Mrs. C. B., Macon, Ga. Received through U. S. Fish Commission: Specimens of recent and fossil shells. 35594.

Chapman, Frank M. (See under F. W. Urich.)

Chesser, John, Anthony, Tex.: Stone hatchet. 36450.

Chester, A. H., New Brunswick, N. J.: Specimen of hydrozincite from Bethlehem, Pa. 36281.

Chicago Colortype Company, Chicago, Ill.: Large assortment of sheets of flowers, animals, etc., printed in colortype. 35475.

Chickering, Prof. J. W., Kendall Green, Washington, D. C.: Three plants. Exchange. 35641.

Christchurch, New Zealand, Canterbury Museum. Received through F. W. Hutton, curator: Ethnological objects from the South Sea Islands, and a collection of Moa bones. 36389. Exchange.

Christensen, Hans, Conway, Wash.: Five specimens of lichens. 35351.

Clark, J. H., Paterson, N. J.: Nest and 2 eggs of Blue-throated Hummingbird, *Cyligena clemenciæ*, from Las Minas, Vera Cruz, Mexico. 36393.

Clark, Prof. William B. (See under Maryland Geological Survey.)

Clarke, Prof. F. W. (See under William Glenn.)

Clarkson, Frederick, New York City, N. Y.: Willow gall (*Cecidomyia ænigma* Welch) and parasites (*Cirrospelus flavicinctus* Riley). 35430.

Clearfield Coal Company, Tyler, Pa. Received through David White: Coke made from supposed Dugus coal in beehive ovens. 35801.

Clements, Mrs. J. C., Pewee Valley, Ky.: Snout-beetle (*Balaninus caryatrypes* Boh.). 35420.

Clough, L., East Concord, N. H.: Graphite from Deering, N. H. Exchange. 35962.

Clute, Willard N., Binghamton, N. Y.: Two hundred and ninety-three plants from Jamaica. Purchase. 36566.

Cobb, J. L., Lincolnton, N. C. Specimen of woolly aphids. 36603.

Cochrane, M. H., Madison, Ind.: Beetle (*Dynastes tityus* L.). 36115.

Cockerell, Prof. T. D. A. (See under New Mexico Agricultural Experiment Station.)

Cohn, A., Carson City, Nev.: Three photographs of Washoe Indian basketry. 36120.

Colburn, A. E., Washington, D. C.: Skeleton of an otter. 35731.

Cole, Mary A., Washington, D. C.: Specimen of Triton (*Spelerpes ruber*). 35855.

COLEMAN, RICHARD. (See under Smithsonian Institution.)

COLES, Mrs. C. S., Washington, D. C.: Sandal from San Juan River, Nicaragua. (35481); Turkey "call." (36368.)

COLLETT, Prof. ROBERT, Zoological Museum, Christiania, Norway: Fifteen microtine rodents from Norway. 35816.

COLLINS, F. S., Malden, Mass.: Seventy-five plants. Purchase. (35598, 36110, 36422.)

COLLINS, G. N., Department of Agriculture: Collection of Odonata, from the District of Columbia and vicinity (35822); 8 specimens of Odonata from the same vicinity (35823); 245 specimens of miscellaneous insects from Miami County, Fla. (35262); plant (35267); 60 specimens of *Viola tenella*, from Maryland (36402); specimen of Alamanda (36570.)

COLLINS, H. F., Barroteran, Coah, Mexico: Larvæ of 2 beetles. 36550.

COLLINS, J. F., Brown University, Providence, R. I.: Thirty specimens of violets. Exchange. 35796.

COLQUITT, G. D., Washington, D. C.: Specimen of Cowkiller (*Mutilla occidentalis* Linnæus). 35397.

COLVILL, W., Point Bleue, Lake St. John, Canada. Received through Dr. D. W. Prentiss: Skin of an albino muskrat (*Fiber zibethicus*). 35667.

COMSTOCK, F. W. (See under Case School of Applied Science, Cleveland, Ohio.)

CONGRESS, LIBRARY OF. Received through Hon. Herbert Putnam, librarian: Thirty-three fragments of flags captured during the war of the Revolution and the war of 1812. Loan. 35989.

CONNELL, G. W., Ponce, P. R.: Specimen of Spider wasp, *Pepsis speciosa*. 36421.

CONZATTI, C., Oaxaca, Mexico: Plant. 36379.

COOK, J. B., Los Angeles, Cal.: Quartz containing sulphides of copper and molybdenum. 36653.

COOK, Prof. O. F., U. S. National Museum: Three plants from Porto Rico (gift) (35930); 400 specimens of cryptogams from the vicinity of the District of Columbia (gift) (36015); basket made of "Poma rosa," *Eugenis jambos*,

COOK, Prof. O. F.—Continued.
from Porto Rico (exchange) (36349); 5 cryptogams from Maryland and the District of Columbia (gift) (36628).

COPELAND, E. B., Morgantown, W. Va.: Sixty-three plants from California, Colorado, and other localities. 36101.

COPPER QUEEN CONSOLIDATED MINING COMPANY, New York City. Received through George Notman, secretary: Stalactites from the Copper Queen mines at Bisbee, Ariz. 36470.

COQUILLETT, D. W., Department of Agriculture: Four hundred specimens of Diptera, including 46 species, types of 3 new genera and 29 new species (36042); 610 specimens of dipterous insects belonging to the family Anthomyidæ (36551).

CORY, ERNEST, Takoma Park, D. C.: Two specimens of a species of *Mitromyces*. 36380.

COTHEAL, Miss E. H. (See under Smithsonian Institution.)

COUBEAUX, EUGENE, Prince Albert, Saskatchewan, Canada: Four birds' skins (35535); 9 birds' skins (36394). Exchange.

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

COX, EMERY, Brightwood, D. C.: Two specimens of Star-nosed Mole, *Condylura cristata*. 36387.

CRAGIN, F. W. (See under Charles Schuchert.)

CRANMER, Dr. C. C., New York City: Seed of an euphorbiaceous plant known as the Mexican "Jumping Bean," *Carpocarpa saltitans* Westro. 35503.

CRAVER, Rev. SAMUEL P. (See under William T. Foster.)

CRAWFORD, Dr. JOSEPH, Philadelphia, Pa.: Specimens of *Carex umbellata* (exchange) (35340); specimen of *Isoetes dodgei* (exchange) (35868); specimen of *Viola* (exchange) (35464); 50 specimens of violets (exchange) (36513); 15 specimens of *Viola brittoniana* from Pennsylvania (gift) (36542).

CREVECŒUR, F. F., Onaga, Kans.: Bones, fossil plants, and mollusks from Kansas. 36546.

Crockett, Dr. J. G., Pulaski, Va.: Royal Horned Caterpillar, *Citheronia regalis* Fabr. 35403.

Crosby, F. W., Washington, D. C. Received through C. Droop: Specimens of pitchstone and kapper quartz from Saxony (purchase) (35511); 3 pieces of orbicular granite from Quonochontaug, R. I. (purchase) (35626, 35959); 2 specimens of sphalerite in chert (gift) (36135); galenite in stalactitic form (purchase) (36432); specimen of sphalerite in gangue (gift) (36696).

Crosby, F. W. (See under James Roach.)

Crosby, W. O., Massachusetts Institute of Technology, Boston, Mass.: Specimens of corundum from North Carolina and Georgia. Exchange. 35338.

Cross, F. J., Keystone, S. Dak.: Specimen of gold ore from the Cross mine (35614); geological specimen from the Silver Queen lode claim (35783).

Cross, Whitman, U. S. Geological Survey: Fifty-eight specimens of rocks from Saxony. 35336. (See under Interior Department, U. S. Geological Survey.)

Culin, Stewart, University of Pennsylvania, Philadelphia, Pa.: Plaster cast of a stone object. 35549.

Currie, R. P., U. S. National Museum: One hundred and twenty-six specimens of Odonata, from the District of Columbia and vicinity (35825); 16 species of Odonata, from Essex County, Va. (35826).

Curtis, W. E., Ladner, British Columbia: Two stone hammers and two stone mortars obtained from the Kit Kahtla Indians. 35737.

Curtiss, A. H., Jacksonville, Fla.: Two hundred and twenty plants from the Southern States (purchase) (36160); 205 plants (exchange) (36165). (See under estate of Mrs. Floretta A. Curtiss.)

Curtiss, Estate of Mrs. Floretta A. Received through A. H. Curtiss, Jacksonville, Fla.: One thousand one hundred and sixty plants, consisting of *Algæ curtissianæ* 35364. Bequeathed to the National Museum.

Cushing, E. M. (See under Smithsonian Institution, Bureau of Ethnology.)

Cusick, W. C., Union, Oreg. Received through the Department of Agriculture: Three hundred and forty-four plants (purchase) (35978); 7 specimens of Umbelliferæ (gift) (36062); 244 plants from Oregon (purchase) (36423).

Cutler, J. E., Denver, Colo.: Specimens of Phyllopoda. Exchange. 36416.

Daggett, Hon. John, Blackbear, Cal.: Unfinished Klamath basket, with specimens of all the materials used in making it; photographs of finished examples and descriptions of the work. 36156.

Dall, W. H., U. S. Geological Survey: Tertiary fossils (35518); collection of Tertiary fossils from various localities in Alaska, collected during the Harriman Expedition (35740); mollusks collected during the Harriman Expedition at Shoshone and Blue Lake, near Shoshone Falls, Idaho, Lowe Inlet, British Columbia, Biorka Island, Sitka Sound, English Bay, Kadiak, Dutch Harbor, Unalaska and St. Matthews Island, Bering Sea (35771); fossils of bowlder clay (Pleistocene) from Douglas Island, Alaska, from 75 to 200 feet above tide, on the line of the water pipe by which the village is supplied (35772); insects from Glacier Bay, Alaska, and from the moraine in front of the Grewingk Glacier, Kachekmak Bay, Cook's Inlet, Alaska, collected during the Harriman Expedition; also beetle and spiders from Biorka Island, Sitka Sound, Alaska (35773); wooden spoon carved by Chilkat Indians of Alaska (35982); 200 land shells, principally from Alaska and California (36077).

Daniel, Lieut. J. W., U. S. A., Lynchburg, Va.: Mammal skins from Matanzas, Cuba (35747); hummingbird (*Sporadinus riccordi*) from Cuba (35894); collection of birds from Cuba (36038); skin of a passenger pigeon, *Ectopistes migratorius* (36039).

Daniels, L. E., Brookston, Ind.: Unionidæ (35760, 35810, 36063); crayfishes (36637).

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

Davenport, H. C., East Orange, N. J.: Vulturine Guinea fowl (36164); Pheasant, *Thaumalea obscura* (36230.)

Davidson, Dr. Anstruther, Clifton, Ariz.: Collection of insects. 36065.

Davis, C. G., Punta Gorda, Fla.: Larvæ of flannel moths (*Megalopyge opercularis*), and puparia of dipteron. 35921.

Davis, T. C., Marion, S. C.: An ear of corn of abnormal growth. 35570.

Davis, W. T., New Brighton, N. Y.: Forty specimens of violets (35313); 100 specimens of *Viola* and one specimen of *Rudbeckia* (35413). Exchange.

Davison, Mrs. L. P., Fort Myer, Va.: Decoration from the cap of a Spanish officer, Porto Rico. 35508.

Davy, J. B., Berkeley, Cal.: One hundred and ten plants collected in California by Messrs. Davy and W. C. Blasdale. Purchase. 36376.

Dawson, Mrs. Caroline, Washington, D. C.: Specimen of *Stagmomantis carolina* L. 35620.

Dean, S. B., Arlington, Mass.: Five specimens of European heating and illuminating apparatus. Purchase. 36437.

Deane, Walter, Cambridge, Mass.: Seventy-eight plants. Exchange. 35867.

Deisher, H. K., Kutztown, Pa. Received through Smithsonian Institution, Bureau of Ethnology: Thirteen arrowheads. 36170.

De Nyse, W. I., Gravesend Beach, Brooklyn, N. Y.: Specimen of *Chloroscombrus chrysurus*. 35688.

Devlin, E., jr., U. S. National Museum: Common mole (*Scalops aquaticus*). 36465.

DeWeese, Dall, Canon City, Colo.: Skin, skull, and leg bones of a calf moose, *Alces gigas*. 35627.

Dewey, L. H., Department of Agriculture: Specimen of *Shortia*. 36446. (See under Agriculture, Department of.)

Dewhurst, Miss Bessie L., Worcester, Mass.: Chrysomelid beetles. 36576.

Dickerson, F. B., Detroit, Mich.: Dog-day Locust (*Cicada canicularis* Harris). 35467.

Dickie, W. W., Richmond, Va.: Wheel bug (*Prionidus cristatus* Linnæus). 35711.

Dickinson, John, Estate of, New York City: Carbon, diamond dust, etc. Purchase. 36614.

Dietz, Dr. W. G., Hazelton, Pa.: Six specimens of Microlepidoptera. 36420.

Diller, J. S. (See under Brown, W. Q., and Interior Department, U. S. Geological Survey.)

Dingus, H. H., Nasbie, Va.: Fossil plants. 36370.

Doane, Prof. R. W., Pullman, Wash.: Eighty-three specimens of Diptera. 36199. (See under Washington Agricultural College, Pullman, Wash.)

Dodge, B. E., Richfield, Mich.: Walking-stick, *Diapheromera femorata* Say. 35404.

Dodge, G. M., Louisiana, Mo.: Four specimens of *Catocales*, including one type specimen (36212); 30 specimens of Microlepidoptera and living larvæ of a Catocala (36535).

Dodge, Mrs. Katherine T., Washington, D. C.: Collection of photographs of American Indians. Purchase. 35966.

Dodson, Dr. W. P., Flatbush, N. Y.: Seventy ethnological objects from Africa. 36436.

Dolan, J. J., U. S. National Museum: Brown Bat (*Vespertilio fuscus*). 36347.

Donovan, Steve, Glenns Ferry, Idaho: Neck vertebra of a camel found in a sandstone concretion. 35671.

Doran, Charles, Washington, D. C.: Collection of Spanish stamps made during the Spanish-American war. 36273.

Dorsey, G. A. (See under Barnhart Bros. & Spindler.)

Drake, C. M., Gorda, Cal.: Marine shells and a starfish. 35466.

Drew, S. H. (See under Wanganui, New Zealand, Public Museum.)

Droop, C. (See under F. W. Crosby.)

Druery, C. T., London, England: Three specimens of ferns. Exchange. 35477.

Du Bose, G. M., Lisbon, Ga.: Unio shells (exchange) (35469); fossils from Iowa (gift) (35513); land shells (gift) (35720); 4 species of fresh-water mussels and a shell of a box turtle from Georgia (36533).

Du Bose, J. H., Huguenot, Ga.: Fragments of pottery, arrow-heads, and other archæological objects. 35353.

Du Buisson, G. H., New York City: Seven specimens of Silver fish moths (*Lepisma saccharina* Linnæus). 35473.

Duckworth, C. L., Arden, W. Va.: Perforated stone tablet. 36080.

Dudley, J. H., Tacoma, Wash.: Specimens of *Platarctia caja* Linnæus. 35484.

Duerden, J. E. (See under Kingston, Jamaica, Institute of Jamaica.)

Dugès, Prof. A., Guanajuato, Mexico. Six birds' skins, specimens of *Sphæroma dugesi* Dollfus, and dipterous larvæ (35285); 2 plants (35574); Coppery-tailed Trogon, *Trogon ambiguus;* specimens of lichens and a moth from the galls of *Tecoma mollis* (35714); 37 plants (35916); large oak gall (35944); nest and larvæ of *Eucheira socialis* Westw., and 2 specimens of lichens (36010); 4 plants from Mexico (36054); 3 birds' skins (36342).

Dutcher, Lieut. B. H. (See under Agriculture, Department of.)

Dyar, Dr. H. G., Department of Agriculture: Small collection of Hymenoptera from Maryland (35538); miscellaneous collection of insects from Southern Florida (36237).

Dysart, Miss Annie E., H. Matamoras, Mexico: Six plants from Mexico (36471); 2 water lilies (*Nymphæa elegans*) (36526).

Eames, Dr. E. H., Bridgeport, Conn.: One hundred and sixty specimens of violets. Exchange. 35414.

Earle, F. S., Agricultural Experiment Station, Auburn, Ala.: Three hundred and twenty-seven plants (exchange) (35380); 112 plants from New Mexico (purchase) (35517); 19 plants (exchange) (36301).

Early, J. H., Darlington, S. C. Received through Frank Burns: Bird-shaped ornament of brown slate from South Carolina. 36476.

Easterbrook, William, Camden, N. J.: Countersigned pass dated March 6, 1862; piece of a Confederate flag supposed to have been carried by General Morgan in Kentucky. 35449.

Eastwood, Miss Alice, San Francisco, Cal.: One hundred and seventy plants (35374); 96 plants (35399). Exchange.

Eaton, A. A., Seabrook, N. H.: Two ferns (35624); 160 specimens of violets (35712); 18 plants (35775); 6 plants, principally type specimens of the genus *Isætes* (36130). Exchange.

Eaton, J. M. C., Irvington, N. J.: Six eggs of a snapping turtle. 35324.

Eaton, Misses, Boston, Mass.: Five photographs of baskets. 35981.

Eby, Mrs. A. F., Lancaster, Pa. Received through Department of Agriculture: Eight plants from Pennsylvania. 36075.

Edison, T. A., Orange, N. J.: Model of "Spectacle type" phonograph, the first pattern used after the tin-foil record machines. 35337.

Eggleston, W. W., Rutland, Vt.: Four hundred and twenty-two plants (36255); 20 plants from Vermont (35873). Exchange.

Ehrhorn, E. M., Mountain View, Cal. Received through Dr. L. O. Howard: Small collection of Myriapods, etc. 35728.

Ehrmann, G. A., Pittsburg, Pa.: Seventeen specimens of Diptera. Exchange. 35769.

Eigenmann, Dr. C. H., Bloomington, Ind.: Type specimens of *Brackenridgia carernarum*, from Yzel's Cave, San Marcos, Tex. (35984); land shells from Beaver Cave, near San Marcos, Tex. (35925).

Eliot, Sir Charles, British Embassy, Washington, D. C.: Collection of marine invertebrates from Samoa (35615); insects from Samoa (36292). (See under H. Suter.)

Elliott, J. D., Dale, Idaho: Specimen of alum. 35478.

Elrod, Dr. M. N., Columbus, Ind.: Twenty-five specimens of *Seminula cazona* from the St. Louis and Kaskaskia formations of Indiana. 36241.

Emmons, Lieut. G. T., U. S. N., Princeton, N. J.: Collection of ethnological objects from Alaska. Exchange. 36189.

Emmons, S. F., U. S. Geological Survey: Specimens of Peruvian copper-bearing rocks. 36188.

English, G. L. & Co., New York City: Fifteen specimens of minerals. Purchase. 35529.

Engman, E. J. Received through Department of Agriculture: Two plants from Louisiana. 35951.

Enos, H. C., Porters Station, Del.: Specimen of neuropteroid insect. 35310.

Evans, Glen W., Olivet, Mich.: Effigy pipe. Purchase. 36469.

Evans, J. M., Maitland, Ala.: Ethnological objects. Purchase. 36148.

Evens and Howard Fire Brick Company, St. Louis, Mo. Received through O. P. Blake: Terra-cotta model of the battle ship *Maine*. 35258.

Evermann, B. W. (See under Fish Commission, U. S.)

Faile, M., Washington, D. C.: Plants (35266, 36185, 36262).

Fant, A. L., U. S. National Museum: Copper coin of Russia (35902); 2 specimens of State script (parish of Concordia, La., April 15, 1862, and county of Fluvanna, Va., February 23, 1863) (36059).

Farrington, Prof. O. C. (See under Field Columbian Museum, Chicago, Ill.)

Faville, G. C., Norfolk, Va.: Specimen of silica from Chalk Creek, Wayne County, Tenn. 35559.

Faxon, Dr. Walter. (See under Museum of Comparative Zoology, Cambridge, Mass.)

Fay, H. W., De Kalb, Ill.: Four photographs illustrating archæological objects. 36390.

Fay, John, Mineral Point, Kans. Received through Department of Agriculture: Plant from Kansas. 36583.

Fearn, Dr. J. B., Yazoo, Miss.: Six Japanese coins. 35468.

Featherstonhaugh, Thomas, Washington, D. C.: Five watch movements. 35514.

Ferriss, James H., Joliet, Ill.: Three unios from Arkansas. 35913.

Fewkes, J. Walter, U. S. National Museum: Loom (35265); feathers used in the Soyaluna ceremony in 1899 among the Moki Indians of Arizona (36098). (See under Smithsonian Institution, Bureau of Ethnology.)

Field Columbian Museum, Chicago, Ill.: Received through Prof. O. C. Farrington: Specimen of Bjelokrynitschie meteorite and a specimen of Schönenberg meteorite. 35892.

Finn, Frank. (See under Calcutta, India, Indian Museum.)

Finn, John, Washington, D. C.: Kissing-bug, *Melanolestes picipes* H. Schp. 35329.

Fischer, V. G., & Co., Washington, D. C.: Five pieces of Delft ware. Purchase. 36023.

Fish Commission, U. S., Hon. G. M. Bowers, Commissioner: Marine shells and insects in alcohol collected in Porto Rico during the cruise of the steamer *Fish Hawk* in 1898–99 (35421); 51 plants collected by Dr. W. C. Kendall at Sebago Lake, Cobbosseecontee Lake, Rattlesnake Pond, and Panther Pond, Maine, in 1899 (35576); received through Dr. H. M. Smith, 2 species of unios from Georgia (35670); received through Prof. B. W. Evermann, 7 specimens of Odonata from Indiana (35820); plants from the Wabash Basin (35852); 2 specimens of Atlantic salmon, *Salmo salar*, from the Penobscot River, Maine (35857); 2 specimens of land-locked salmon, *Salmo salar sebago*, from Grand Lake, Maine (35910); specimen of *Callinectes sapidus* with a white claw, from Hampton Bar, obtained by N. Raynor and transferred to the Museum by Dr. H. M. Smith (35957); specimen of *Lysiosquilla scabricauda*, from the Gulf of Mexico (36308); 16 specimens of coral from Porto Rico (36448); crayfishes from Cape Henry, Virginia, collected by Dr. H. M. Smith (36553); 7 specimens of Porto Rico corals (36618); specimens of Japanese, Alaskan, Hawaiian, and Californian fishes collected by the steamer *Albatross* (36693). (See under Boepple, J. F.; Mrs. C. B. Chapman.)

Fisher, H. L., Califon, N. J.: Specimen of *Callimorpha clymene* Brown. 35349.

Fisher, W. H., Baltimore, Md.: Six photographs of snakes. 35648.

Fiske, W. F., Durham, N. H.: Sixteen specimens of Lepidoptera. Exchange. 35952.

Fitzgerald, Margaret P., Kneeland, Cal. Received through Department of Agriculture: Specimen of *Viola hallii*, from California. 36405.

Flahault, Professor. (See under Agriculture, Department of.)

Fleming, J. H., Toronto, Ontario, Canada: Two skulls of moose (*Alces americanus*). 36392.

Fletcher, James, Ottawa, Canada. Received through Dr. L. O. Howard: Collection of Diptera and other insects from Mount Cheam, British Columbia, and Canada. 35707.

Flett, J. B., Tacoma, Wash. Received through Department of Agriculture: One hundred and thirty-two plants (35961); 6 plants (36072); 10 specimens of ferns (36479). (See under Maxon, W. R.)

Foote, Dr. A. E., Philadelphia, Pa.: Ninety-three specimens of minerals. Purchase (35533, 36287).

Forepaugh, Adam, and Sells Brothers Circus: Rhinoceros (*Rhinoceros bicornis*), in the flesh. 36410.

Forney, A. H., U. S. National Museum: Specimen of *Diadophis punctatus*, from Virginia. 35491.

Foster, W. T., Sapucay, Paraguay. Received through Rev. S. P. Craver: Collection of moths, butterflies, beetles, and a frog from Paraguay (35692, 35813).

Fowler, Prof. James, Kingston, Ontario, Canada: Twenty-four specimens of Canadian violets. Exchange. 35888.

Fox, Dr. B. F., New Smyrna, Fla.: Three-tailed snake, *Eumeces fasciatus*. 35465.

Foxlee, E. W., Acton, London, England: Ten photo-enamels, Lafinde Carmarsaes process, 1864. Purchase. 36375.

Frazar, Everett M., Yokohama, Japan. Received through George B. Frazar: Specimens of sulphur from Moyoro, Island of Etorfu, Kurile Islands. 36187.

Frazar, G. B. (See under E. W. Frazar.)

French, Capt. F. H., U. S. A., Manila, P. I.: Six amulets of stamped paper used by the Filipinos as a protection against American bullets, and taken from a Filipino prisoner at Logod, Cebu. 36429.

Frierson, L. S., Frierson, La.: Three specimens of flies (*Oscinis trigramma* Low) (35296); crayfish (*Cambarus diogenes ludovicianus* Faxon) (35288); specimens of *Unio amphichænus* (35596); 5 species of unios (35664); unios from Alabama (35809); crayfish (*Cambarus argillicola* Faxon) (36435); 2 crayfishes

Frierson, L. S.—Continued. (36554); 10 specimens of crayfishes (*Cambarus diogenes* and *Cambarus blandingii acutus*) (36592); specimen of *Cornus planorbis*, from Zanzibar (36675).

Frishmuth, Mrs. S. E., Philadelphia, Pa.: French bagpipe. Purchase. 35877.

Fritsch, Dr. Anton. (See under Prague, Bohemia; K. K. Böhmische, Karl-Ferdinand-Universität; Prague, Bohemia, Museum des Konigreichs Bohmen.)

Fritz, C. D., Sellersville, Pa.: Five plants. 35876.

Frobenius, L., Leipzig, Germany: Collection of spears and stone implements from islands in the Indo-Pacific Ocean and from Western Africa. Exchange. 35240.

Froggatt, Prof. Walter W., Department of Agriculture, Sydney, New South Wales: Collection of parasitic Hymenoptera from New Zealand. 36673.

Fuller, C. V., Lansing, Mich.: Casts of bird amulet and banner stone. 35988.

Fuller, J. J., Weiser, Idaho: Fossil leaf impression from the foothills of Bitter Root range, southwestern portion of Washington County, Idaho. 35497.

Fyles, Rev. T. W., Levis, Quebec, Canada. Received through Department of Agriculture: Miscellaneous collection of insects from Quebec. 36236. (See under Agriculture, Department of.)

Gadsden, J. B. (See under Treasury Department, Light-House Board.)

Gann, T., Corozal, Colombia, South America: Plaster cast of a flint implement. 36611.

Gates, Dr. W. A., Rockland, Mich.: Three pieces of native copper used by American Indians. 35479.

Gestro, Dr. R., Museo Civico di Storia Naturale, Genoa, Italy: Three Burmese rats. Exchange. 36052.

Giers, F. T., Port of Spain, Trinidad, West Indies: Twenty-eight bats from Trinidad; (35330) 61 bats from Trinidad (36322.)

Gies, A. J., chief inspector streets and drainage, Manila, P. I.: Ethnological, historical, and technological objects, and four horns of mammals. Purchase. 36555.

GILBERT, Hon. B. D., Clayville, N. Y.: Two specimens of ferns (35860); 9 specimens of *Asplenium* (36048). Exchange.

GILBERT, Prof. C. H. (See under Leland Stanford Junior University.)

GILL, Dr. THEODORE, Smithsonian Institution: Specimens of *Mus musculus* (35941, 36323.)

GILLIAN, Rev. J. D., Pocatello, Idaho: Lumbar vertebra of a camel. 35275.

GLASSFORD, Maj. WILLIAM, U. S. A., Chief Signal Officer, San Juan, P. R.: Three birds' skins. Deposit. 36489.

GLATFELTER, Dr. N. M., St. Louis, Mo.: Seventy plants (35376); 25 specimens of violets (35494). Exchange.

GLEN ISLAND MUSEUM, New Rochelle, N. Y.: Fossil Gar Pike. Exchange. 36126.

GLENN, Capt. E. F., U. S. A., Vancouver Barracks, Wash.: Rocky Mountain goat. 36090.

GLENN, WILLIAM, Baltimore, Md. Received through Prof. F. W. Clarke: Sand chrome and chrome salt. 35743.

GODBUG, T. K., Waldo, Fla. Received through Department of Agriculture: Specimen of *Rhineura floridana*, from Waldo. 35286.

GODING, Hon. F. W., U. S. Consul, Newcastle, New South Wales: Collection of aboriginal weapons and utensils. 35704.

GOLDMAN, E. A. (See under Agriculture, Department of, and Mrs. N. M. Brown.)

GOLL, G. P., Washington, D. C.: Plants from Porto Rico. (36018, 36055.) Purchase.

GORDON, R. H., Cumberland, Md.: Nine specimens of Lower Helderberg fossils. 35725.

GOWARD, GUSTAVUS, Washington, D. C.: Collection of Korean pottery (36044); intaglio drawing on ivory; carved bamboo brush holder; hot-iron etching on paper; fan umbrella; lacquer twine holder; Korean measure; 2 Korean key holders; pocket looking-glass; twine winder; pipe bowl inlaid with silver (36499); 2 Etruscan vases, 3 Chinese vases, Korean vase, 2 Japanese vases, and a Chinese teapot (36350). Purchase.

GRAENICHER, Dr. SIGMUND, Milwaukee, Wis.: Twelve specimens of Diptera (two species new to the collection). 35926.

GRAHAM, G. A., Graham, Tex. Received through Department of Agriculture: Specimen of *Daucus pusillus*, from Texas. 36661.

GRANT, F. H. McK., Melbourne, Victoria, Australia: Three hundred and eighty-nine specimens of Eocene and Oligocene fossils from Hamilton, Victoria, Australia. Exchange. 36095.

GRAVES, J. A., Susquehanna, Pa.: Two plants. Exchange. 36175.

GRAY HERBARIUM, Boston, Mass.: Plants. (35933, 36401, 36138.) Exchange.

GRAY, R. P., East Orland, Me.: Specimen of parasitic copepod. 36073.

GREBNITSKI, N. A., St. Petersburg, Russia: Four skins of fur seals (*Callotaria ursina*). 35901.

GREENE, Prof. E. L., Catholic University, Washington, D. C.: Specimen of *Solidago monticola* (gift) (35972); specimen of *Ribes menziesii*, from California (exchange). 36443.

GREENE, W. MAXWELL, U. S. Consul, Hamilton, Bermudas: Specimens of hard, fine-grained limestone found near Shelly Bay, Bermuda. 36501.

GREENE, Hon. W. MAXWELL. (See under J. Brooks Hunt.)

GRESLEY, W. S., Erie, Pa. Received through F. H. Knowlton: Fossil plants. 36314.

GREYSON, T. B., Waghorn, Alberta, Northwest Territory: Nine specimens of *Erebia discordalis*. 35537.

GRICE, FRANK, San Antonio, Tex.: Four fossil teeth of the Southern Mammoth, *Elephas colombi*. 36455.

GRIFFIN, W., Somerset, Ky.: Fossil crinoid. 35564.

GRIFFITH, H. K., Washington, D. C.: Old-style bicycle. 35291.

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

GRINNELL, JOSEPH, Pasadena, Cal.: Eight birds' skins from Alaska (35986, 36438).

GROSS, J. MASON. (See under Rhode Island Graphite Company.)

GROUT, A. J., Plymouth, N. H.: Thirty-six specimens of mosses. Exchange. 35373.

Gunn, Calvin, St. Louis, Mo.: Stone club head found on an ancient Indian camp site near Mississinawa River, Wabash County, Ind. 36078.

Guthrie, Leon J., Willemstad, Curaçao, West Indies: Bats from the West Indies (36111, 36524). Purchase.

Haley, C. B., Oklahoma City, Okla. T.: Specimen of Wheel bug, *Prionidus cristatus* Linnæus. 35754.

Hall, R. J., Fort Plain, N. Y.: Fragments of pottery from an Indian burial site, Minden, N. Y. 36548.

Hallock, Charles, Washington, D. C.: Fourteen specimens of fossils from various localities. 35774.

Hamilton, J. A., Chambersburg, Pa.: Larva of *Photinus pyralis* Linnæus. 35245.

Hammell, P. J., Bellevue, Iowa: Five arrow-points. 36128.

Hammond, J. B. (See under Smithsonian Institution.)

Hampson, Sir George. (See under London, England; British Museum.)

Handwerk, J. H., Joliet, Ill.: Three specimens of *Pisidium handwerki* Sterki, from a type lot obtained in Joliet. 36067.

Hansard, A. C., Luguillo, P. R.: Nests of trapdoor ants from Porto Rico. 35318.

Hard, W. M., Colon, Colombia, South America: Twenty specimens of Lepidoptera. Purchase. 36639.

Haring, A. B., Frenchtown, N. J.: Two insects. 35553.

Harper, M. L., & Co., Washington, D. C.: Specimens of mineral waters. Purchase. 36574.

Harr, Miss Alice, Forest Glen, Md.: Specimens of *Diemyctylus miniatus*, from Maryland. 36655.

Harriman, A. S., Bucksport, Me.; Two collections of insects. (35281, 35455.)

Harriman, Edward H., Harriman Expedition. Received through Dr. C. Hart Merriam: Large collection of Alaskan insects and arachnids. 36670.

Harris, Graham H., Chicago, Ill.: Trout (*Salvelinus marstoni*), from Lake Tourilli, Quebec. 35656.

Harrison, Benjamin, Jacksonville, Fla.: Jaws of a tiger shark from Nassau Sound. 35871.

Harrison, Miss Carrie, Department of Agriculture: Five plants. 35660.

Harrison, W. H., Petersburg, Va.: Hawk-moth. 36477.

Hart, C. A., Urbana, Ill.: Two specimens of Sawflies (*Schizocerus zabriskei* Ashm.). 35943.

Harvey, F. L. (See under Agriculture, Department of.)

Harward, Miss Winnie, Albuquerque, N. Mex.: Two plants. 36537.

Harwood, Dr. George, Johnson City, Tex.; Larva of Texas Screw-worm, *Chrysomyia* (*Lucilia*) *macellaria* Fabr. 36144.

Hasbrouck, Dr. E. M., Washington, D. C.: Skin of Brown Pelican, *Pelecanus fuscus*, from Florida (exchange) (36040); 2 Crossbills (*Loxia curvirsotris minor*) (gift) (36167).

Hassall, Dr. Albert, Department of Agriculture: Plant from the District of Columbia (35571); bat (*Vespertilio fuscus*) (35927).

Hasseltine, B. L. (See under Brown, W. L.)

Hatcher, J. B., Princeton, N. J.: Collection of reptiles, batrachians, and fishes from South America. 35802.

Hause, H. D., Syracuse, N. Y.: Fifteen plants (35516); specimen of *Pyrola secunda* (35450); 2 violets (36539); 35 specimens of *Viola selkirki* (36527); 5 violets from central New York (36625). Exchange.

Havens, Capt. J. G. W., U. S. Life-Saving Service, Point Pleasant, N. J.: Cutlassfish (*Trichiurus lepturus*). 35798.

Hawks, A. McL., Tacoma, Wash.: Marine shells from Washington. 35528.

Hay, Prof. W. P., Washington, D. C.: Triton (*Spelerpes ruber*), from the District of Columbia. 35706. (See under Williamson, E. B.)

Haymond, Mrs. Dorcas, Morgantown, W. Va.: Six pieces of pottery. 36307.

Hazzard, David, Milton, Del.: Samples of iron ore. 36152.

Heath, Harold, Pacific Crove, Cal.: Two specimens of Anomuran crabs (35299); Isopods from Monterey Bay (35332).

Heidemann, O., Department of Agriculture: Ten specimens representing two species of Hemiptera, new to the col-

Heidemann, O.—Continued.
lection (35563); specimen of *Euphorbia adenoptera* Bertol (35599); 4 specimens of *Aradus niger* Stal (35628); cotypes of *Aphrophora irrorata* Ball, and a specimen of *Aphrophora annulata* Ball, from Utah and Nebraska (35964).

Heller, A. A., Lancaster, Pa.: Plants from Porto Rico. Purchase. (36354, 36473.)

Hemphill, Henry, San Diego, Cal.: Specimen of selenites from San Diego (35427); land-shells (35456).

Henderson, L. F., Gray Herbarium, Cambridge, Mass.: Type specimen of plants (*Downingia*) (gift) (36103); 4 plants from Idaho (exchange) (36377, 36400); plant from Idaho (exchange) (36586).

Henshaw, H. W., Hilo, Hawaii: Bat (*Lasiurus semota*) (gift) (35316); 469 birds' skins from Hawaii (purchase) (35325); crustaceans (gift) (35464, 35540); crab (*Calappa gallus*) (gift) (35694); shrimp (gift) (36235); 3 specimens of shrimps (*Atyoida*), from Kaiwiki, Hawaii (36528).

Herrera, Prof. A. L., Museo Nacional, Mexico: Memorandum concerning the imitation of protoplasm by oleates, with preparations illustrating the same. 36037.

Hess, L. L., Marathon, Tex.: Received through R. T. Hill: Specimen of cinnabar from Terlinga, Brewster County, Tex. 35560.

Hesseltine, T. B. (See under Wilfred L. Brown.)

Hill, Hon. David J. (See under State Department.)

Hill, R. T., U. S. Geological Survey: Flint chips from Peña, Colorado Springs, Tex. 35646. (See under L. L. Hess.)

Hill, Mrs. W. E., Fort Bliss Station, El Paso, Tex.: Kissing bug (*Melanolestes abdominalis* H. Schaff). 35365.

Hillebrand, Dr. W. F., U. S. Geological Survey: Vanadium and carnotite-bearing sands from San Miguel River, Placerville, near Telluride, Colo. 35359.

Hilliard, G. B., Urbana, Ohio: Kissing-bug (*Melanolestes picipes* H. Schf). 35418.

Hills, R. C., Denver, Colo.: Eocene fossils. 35586.

Hinds, J. E., Brooklyn, N. Y.: Electrical apparatus. 36642.

Hine, Prof. J. S., Ohio State University, Columbus, Ohio: Forty specimens of dragonflies (35423); 2 specimens of dragonflies (*Lepthemis gravida* Calvert) (35817).

Hitchcock, Prof. A. S., Manhattan, Kans. Received through Department of Agriculture: Plant (gift) (35777); 90 violets (exchange) (35886).

Hitchcock, C. H., Hanover, N. H.: Geological material from the Hawaiian Islands (35600, 36124). Purchase.

Holland, Dr. J., Pahala Kau, H. I.: Cranium, celt, and a piece of lava from a lava cave, Hawaii. 36146.

Holman, F. C., Cali, Colombia, South America: Two specimens of Torrent Ducks (*Merganetta columbiana*). 36025.

Holmes, J. H., Dunedin, Fla.: Marine shells from Florida (35253, 35566).

Holmes, W. H., U. S. National Museum. (See under Brooks, Louis; Cendoya, Julian, and Martine, Dr. José.)

Holzinger, J. M., Winona, Minn.: Fifty-six specimens of mosses (exchange) (35377); specimen of *Talinum rugospermum* (gift) (35973); 5 plants (exchange) (36051); specimen of moss (exchange) (36358).

Honolulu, Hawaiian Islands; Bishop Memorial Museum. Received through Dr. W. T. Brigham, director: Land-shells from the Hawaiian and other islands in the Pacific Ocean. 35767.

Hopkins, Rev. A. C., Charlestown, W. Va.: Luna moth (*Actias luna* Linnæus). 35368.

Horan, Joseph, U. S. National Museum: Three Remington and Spencer cartridges, said to have been used during the Cuban campaign. 35319.

Horgan, E. J., U. S. National Museum: Two skins and skull of *Mus decumanus*. 35854.

Horniman Museum. (See under London, England.)

Hough, Mrs. Myrtle Zuck, Washington, D. C.: One hundred and seventy-four plants from Arizona. Purchase. 35579.

HOUGH, Dr. WALTER, U. S. National Museum: A hat worn by a member of Ringo's artillery company, one of the early military organizations of Washington, D. C. (35485); land-shells from Mexico (35932). (See under Smithsonian Institution, Bureau of Ethnology.)

HOUTZ, Mrs. E. T. (See under Smithsonian Institution, Bureau of Ethnology.)

HOWARD, Dr. L. O. (See under Agriculture, Department of; Ehrhorn, E. M.; Fletcher, James; Brodie, Dr. William.)

HOWE, C. F., Bridgetown, Barbados, West Indies: Reptiles and batrachians (36045); large specimen of Manjak from Chalky Mountain Mine, Barbados, received through Mr. P. McDonough (36113).

HOWELL, A. H., Washington, D. C.: Plants from Vermont (35272); plant (35661); 2 plants from Duke, Va. (36569).

HOWELL, E. E., Washington, D. C.: Specimen of sulphur crystals; specimen of fluorite crystals; 2 specimens of agates; specimen of lodestone; models of the Great Mogul diamond and a fossil fish (purchase) (36647); specimen of lodestone (presented to the Smithsonian Institution) (36648).

HUBBARD, H. G., and SCHWARZ, E. A., Department of Agriculture. Received through E. A. Schwarz: Three thousand specimens of North American insects. 35819. (See under E. A. Schwarz.)

HUDSON, Dr. J. W. (See under Smithsonian Institution, Bureau of Ethnology.)

HUNT, J. BROOKS, Hamilton, Bermuda. Received through Hon. W. Maxwell Greene: Geological material. 36134.

HUNTER, WILLIAM, Washington, D. C.: Five plants (35575); specimen of *Lasiurus borealis* (35657).

HUNTER, W. L. (See under Austin, S. W.)

HUSE, T. W., Fort Benton, Mont.: Two specimens of Sphinx-moth. 35356.

HUTCHENS, J. F. (See under Robert Scott.)

HUTCHINSON, Dr. W. T., Winchester, Va.: Spotted skunk (*Spilogale*) (35716); 7 eggs (one set) of *Rallus virginianus*, from Virginia (35719).

HUTTON, F. W. (See under Christchurch, New Zealand, Canterbury Museum.)

IHERING, VON, Dr. H. (See under Sao Paulo, Brazil, Museu Paulista.)

INDIA MUSEUM. (See under Calcutta, India.)

INTERIOR DEPARTMENT, *United States Geological Survey:* Five hundred and ninety boxes and crates containing a collection of fossil vertebrates and trays transferred from New Haven, Conn.; stone implement (35249); igneous and sedimentary rocks and ores from Little Belt Mountains, Montana, obtained by Walter H. Weed (35263); fossil fishes and fossil leaves, collected by H. W. Turner from the Big Smoky formation, California (35264); 5 stone implements from Umatilla, Oreg., and a pair of seal-skin boots from Port Clarence, Alaska (35672); 366 specimens of Lower Cambrian brachiopods from Troy, N. Y. (35734); kaolin from the line of the Georgia Railroad near Augusta, Ga. (35800); coals and clays from Pennsylvania (35907); 740 specimens of Ordovician, Silurian, and Devonian fossils (35935); series of drawings of fossil vertebrates for comparison with the fossils constituting accession 35249 (35956); geological specimens from Big Tree quadrangle, California, collected by H. W. Turner (36003); geological specimens from Uvalde quadrangle, Texas, collected by T. Wayland Vaughan (36030); 28 specimens of Middle Devonian fossil plants from Mapleton, Aroostook County, Me., collected by Prof. H. S. Williams (36060); series of Dinosaur bones, collected in the Black Hills by N. H. Darton (36114); 750 specimens of rocks, collected in the Anthracite and Crested Butte quadrangles of Colorado by Whitman Cross (36181); series of fossil fishes from the Jurassic of Colorado (36183); received through David White, 5 specimens of Paleozoic insects, collected by Mr. White (36210); 388 specimens of rocks from Silver Cliff, Rosita district,

INTERIOR DEPARTMENT—Continued.
Colorado (36274); 11 specimens of minerals principally tellurides from Calaveras County, Cal. (36288); 413 plants collected by J. B. Leiberg in Oregon (36317); 10 specimens of blue hornblende schist from Oregon, collected under the direction of J. S. Diller (36456); gold quartz vein from Swank mining district, Kittitas County, Wash. (36475), 2 specimens of *Cancer proavitus* Pack (type) from the Miocene green sand of Gayhead, Mass. (36588); well-core from a deep drilling at Hubbard City, Tex. (36608); 3 fossils plants from Michigan consisting of one specimen of *Stigmaria verrucosa* (Mort) Mill, from Owasso, and 2 specimens of *Neuropteris* n. sp., from the Standard Mine, near East Saginaw (36589); fossil plants associated with the lavas of the Cascade Range; fossil plants of the Montana formation; fossil plants of the Payette formation; plants from the Cascades of Columbia River, made by F. H. Knowlton, G. K. Gilbert, and others, fossil plants from Esmeralda County, Nev., made by H. W. Turner (36534); specimen of orbicular amphibole-gabbro from Yosemite Valley, obtained by H. W. Turner (36685). (See also under Lucas, T. and Socoloff, D.)

D'INVILLIERS, EDWARD V., Philadelphia, Pa.: Specimens of sulphur from Mexico. 35700.

IRELAND, W. J., Arapahoe, Nebr.: Specimen of beetle (*Harpalus*). 35665.

IVY, JESSE W., Mount Pleasant, Miss.: Beetle, *Calosoma scrutator* Fabr. 36549.

JACKSON, Miss VICTORIA, Bowling Green, Ky.: Fresh-water shells from Kentucky. (35651, 35814.)

JAMAICA, INSTITUTE OF. (See under Kingston, Jamaica.)

JASCENSKI, Prof. LEONARD V., St. Petersburg, Russia. Received through Mr. G. F. Kunz, New York City: Three specimens of nephrite from Siberia. 35554.

JENNINGS, FOSTER H., Washington, D. C.: Fourteen Korean hats. Exchange. 35448.

JERMEY, W. P., St. Louis, Mo. Four plants from the Great Bend region of the Rio Grande in Texas. 36378.

JOHNSON, A. B., Linnæus, Oreg. Received through A. F. Barrott: Archæological objects from Oregon. (35999, 36241.) See under Treasury Department, Light-House Board.)

JOHNSON, C. F., Freeport, Ill.: Fifty-three plants, principally from Illinois. Exchange. 36139.

JOHNSON, Prof. C. W., Wagner Free Institute of Science, Philadelphia, Pa.: Collection of fossil corals from the Pliocene of the Caloosahatchie River, Florida. Purchase. 35585.

JOHNSON, H. W., Habana, Cuba: Specimen of carbonate of lime. 35488.

JOHNSON, W. R., Rossland, British Columbia: Collection of butterflies and moths. 35350.

JOHNSTON, J. W., Midlothian, Va.: Pupa case of a fossorial wasp. 36598.

JONDEZ, A., San José, Costa Rica, Central America: One hundred plants from Costa Rica. Purchase. 35623.

JONES, C. W. Battersea, S. W., London, England: Small clay pipe (36094); 2 clay pipes (36646).

JONES, MCDUFFEE, AND STRATTON COMPANY, Boston, Mass.: Twenty-five pottery plates depicting American historical scenes. 36697.

JONES, MARCUS E., Salt Lake City, Utah: Thirty specimens of violets and specimens of Umbelliferæ (36033); type specimen of plant (36381). Exchange.

JORDAN, R. B., Carrollton, Va.: Bald eagle. 36247.

JUDD, S. D., Department of Agriculture: Five specimens of bats (*Vespertilio fuscus*), from Georgetown, D. C. 35343.

JUDGE, JAMES, Columbus, Ohio: Specimen of Hair seal (*Phoca*). 35669.

JUDSON, Mrs. ISABELLA FIELD, Ardsley on Hudson, N. Y.: Pennant from the U. S. frigate *Niagara* used during 1857 and 1858, and also on the steamer *Great Eastern* in 1865 and 1866, while engaged in laying telegraph cables across the Atlantic Ocean. 35547.

JUETT, J. S., Orlando, Fla.: Crab spider. 35790.

KARIGER, CURTIS, Kendallville, Ind.: Specimen of *Chalchophora campestris* Say. 36008.

KATZENBERGER, G. A., Greenville, Ohio: Photograph of a collection of archæological objects. 36313.

KEARNEY, T. H., Washington, D. C.: Twenty plants from Maryland and the District of Columbia. 36587. (See under Agriculture, Department of.)

KELSEY, F. W., San Diego, Cal.: Specimens of Diplodonta in alcohol from San Diego (35992); mollusk (36047); 60 specimens of marine shells from California, representing 19 species (36068); 3 specimens of Myoforceps (36166).

KENDALL, W. C. (See under Fish Commission, U. S.)

KENNEDY, Dr. HARRIS, Roxbury, Mass.: Seventeen specimens of bats (*Phyllonycteris planifrons*). 36321.

KEPLER, FRANK, Clifton, Ariz.: Obsidian pebbles. 35470.

KESEL, JOSEPH, Sabra, Mont.: Cocoon of a Cecropia moth. 36333.

KEW, LONDON, ROYAL BOTANIC GARDENS: Seven hundred and twenty-three plants from the Philippine Islands. Exchange. 35273.

KIEFFER, Prof. J. J., Bitche, Deutsch-Lothringer, Germany: Specimens of parasitic Hymenoptera from Europe and Africa. 36604.

KIMBALL, Miss LAURA F., National City, Cal.: Six specimens of *Asplenium blepharodes* (36149); 15 specimens of ferns (36204). Exchange.

KINCAID, T., University of Washington, Seattle, Wash.: Seventeen specimens of crustaceans. 36594.

KINGSBURY, GEORGE, care Gerrit S. Miller, U. S. National Museum: Batfish (*Cephalacanthus volitans*), from St. Kitts, West Indies. 35294.

KINGSTON, JAMAICA, Institute of Jamaica. Received through J. E. Duerden: Eight specimens of crustaceans representing 4 species. 35447.

KIRKLAND, Dr. R. J., Grand Rapids, Mich.: Ten specimens of *Pisidium medianum* Sterki, and 6 specimens of *Pisidium kirklandi* Sterki, from type lots collected in Michigan. 36066.

K. K. BÖHMISCHE Karl-Ferdinand Universität. (See under Prague, Bohemia.)

K. K. NATURHISTORISCHEN HOFMUSEUM. (See under Vienna, Austria.)

KLEIN, E., Mace, Ind.: Volcanic dust (35595); nest of a hornet (*Vespa*) 35732.

KNIGHT, Prof. W. C., University of Wyoming, Laramie, Wyo.: Forty specimens of fossil leaves from Rock Creek, near Harpers Station, Union Pacific Railroad, Albany County, Wyo. (35905); specimen of *Microtus mordax* (36283).

KNOWLES, F. E., San Francisco, Cal.: Granite from Raymond Quarries, Madera County, Cal. 35335.

KNOWLES, W. A., U. S. National Museum: Four specimens of dragonflies from Havre de Grace, Md. 35827.

KNOWLTON, F. H., U. S. Geological Survey: Fifteen plants (35849); Star-nosed mole (*Condylura cristata*), from Laurel, Md. (36486). (See also under Gresley, W. S.; Interior Department, U. S. Geological Survey.)

KOENIG, Dr. ADOLPH, Pittsburg, Pa.: Twenty-seven plants from Pennsylvania (gift) (36177); 80 plants (exchange) (36624) 8 photographs of violets (gift) (36690); 50 specimens of violets (gift) (36705).

KOFOID, Dr. C. A., Urbana, Ill.: Type specimens of *Platydorina caudata*, a new genus and species of Volvocidæ. 36026.

KRANTZ, F., Bonn, Germany: Specimen of Bischtube meteorite. Exchange. 36494.

KREITE, R., Kansas City, Mo.: Twenty-five specimens of Upper coal measure fossils from Kansas City. Exchange. 35652.

KRUEGER, P. W., Cleveland, Ohio: Seven specimens of insects. 36088.

KUNZ, G. F., New York City: Nephrite from Russia, China, and Silesia. Exchange. 35786. (See under Jascenski, Prof. Leonard V.)

LACOE, R. D., Pittston, Pa.: Twenty-two specimens of Upper Carboniferous fossils (36231); 47 specimens of *Naiadites ostheria*, from the Upper Carboniferous of Pennsylvania (36462).

LADBURY, Miss EMMA, Gallatin, N. Dak.: Moth (*Attacus cecropia*). 36671.

LAMBERT, W. M., Tampa, Fla. Received through H. S. Ray: Portions of the carapace of a large tortoise. 35689.

Lamson-Scribner, Prof. F. (See under Agriculture, Department of.)

Langley, Hon. S. P., Smithsonian Institution: Model of a wave-propelled boat invented by Mr. Herm. Linden, Naples, Italy. Deposit. 36282.

Latto, A. P., Southampton, N. Y.: Specimen of Bonito (*Sarda sarda*). 35691.

Lauer, R. C., Milwaukee, Wis.: Small porcelain doll with an oyster attached, found on the beach at Bedloe Island, New York. 36222.

Leasure, W. A., Ludlow, via Bagdad, Cal.: Solphugid (*Datames formidabilis* Simon). 36657.

Lee, Mrs. Elizabeth Lloyd, Alexandria, Va. Received through Charles Schafer: Lock of hair said to have been taken from the head of George Washington. 36022.

Leiberg, J. B., Athol, Idaho: Seeds of a new Umbellifer from Crater Lake, Oregon. 35788. (See under Interior Department, U. S. Geological Survey.)

Lejeune, Dr. Adolf, Galveston, Tex.: Ninety-five specimens of Devonian fossils representing 35 species; 65 specimens of Cretaceous fossils (19 species), and 70 specimens of Tertiary fossils (32 species), from Europe. Exchange. 35965.

Leland Stanford Junior University, Stanford University, Cal. Received through Prof. C. H. Gilbert: Skeleton of Harris' Cormorant (exchange) (36069); land-shells from Cocos and the Galapagos islands (gift) (36158); Japanese fishes, including types of 14 species obtained principally by K. Otaki (36692).

Levering, T. J., Lafayette, Ind.: Proof from steel plate entitled "Abolishing Slavery," engraved by Walter Shirlaw. 35752.

Lewis, Corp. George C., U. S. A., Fort Myer, Va.: Skin and skull of bat (*Lasiurus borealis*) (35392); collection of mammals, insects, and reptiles from the Philippine Islands (35896).

Lewis, J. B., Petaluma, Cal.: Eleven ceremonial objects of stone and 2 specimens of chalcedony geode in lava. Exchange. 36561.

Limbach & Welch, Victor, Colo.: Ten crystals of calaverite. Purchase. 35504.

Linthicum, Dr. T. W., Savage, Md. Received through J. D. McGuire: Two flaked spear-points found on a farm near the Patuxent River. 36498.

Liston, H. F., U. S. Indian service, Covelo, Cal.: Pitt River Indian basket (Po-num-chaw). 36336.

Locker, H. C., Lafayette, Ky.: Fungus growth from the bladder of a hog. 35942.

London, England, British Museum. Received through Sir George Hampson: Collection of Hymenoptera including about 1,000 specimens from St. Vincent and Granada (35715). Received through Mr. Oldfield Thomas: Two topotypes of *Nectomys garleppii* (35843); 2 squirrels, *Sciurus*, specimens of *Mus messorius*, a cricetine rodent belonging to the genus *Rhipidomys*, and a hedgehog (35844). Received through F. A. Bather: twenty-three wax and paraffin casts of British fossil starfishes (36294).

London (Forest Hill), England, Horniman Museum. Received through Richard Quick, curator: Two old-style pig-scrapers made of bullock's hoofs with a piece of iron for a scraper, from St. Neot's, Hunts. Exchange. 35279.

Lorenz, Master R. M., Piscataway, Md.: Nest of *Vespa maculata* Fabr. 36057.

Loring, J. Alden, New York City. Eight mammal skins and skulls. Exchange. 36327.

Lounsbury, C. P., Natal, South Africa: Vial containing alcoholic larva (*Lophostethus*). 36214.

Lovett, Edward, Croydon, England: Collection of amulets in Bohemian glass representing teeth of animals, etc. Exchange. 36162.

Lowe, H. N., Long Beach, Cal.: Crustaceans, jellyfishes, etc. Exchange. 35378.

Lowe, Prof. V. H., Geneva, N. Y.: Eleven specimens of chalcids. 35568.

Lucas, T., Passaic, N. J.: Received through Interior Department, U. S. Geological Survey: Four fossils and a photograph of the locality where they were found. 35381.

Ludlow, S., & Co., Spring Lake, N. J.: Specimen of Leather-jacket, *Oligoplites occidentalis*. 35391.

Lugenbeel, H. G., U. S. National Museum: Specimens of *Mus musculus*. (35604, 36441.)

Luther, Dr. R. M., South Orange, N. J.: Two Burmese dahs, 2 Zulu spears with native handles, and 2 Naga spears. 35729.

Lyon, M. W., jr., U. S. National Museum: Specimen of Cassis (35445); 3 skins and skulls of *Mus musculus* (35612); 4 fox squirrels (*Sciurus niger*) (purchase) (36325).

McAllister, J. T., Hot Springs, Va.: Tooth of a mastodon. 36407.

McClatchie, Prof. A. J., Phoenix, Ariz.: Specimen of *Asplenium resportinum* Maxon, from California. 36538.

McClure, S. S., New York, N. Y.: Colored sketch of Mammoth restored. 35985.

MacClure, William. (See under L. V. Pirsson.)

MacCormick, R. C. (See under Smithsonian Institution, Bureau of Ethnology.)

McCormick, L. M., Glen Island Museum, New Rochelle, N. Y.: Small collection of bats from the Philippine Islands. (36001); bats and a crab from Porto Rico, West Indies (36663).

McDonough, P., Bridgetown, Barbados, West Indies: Bats from the vicinity of Bridgetown (purchase) (35998); reptiles and batrachians (gift) (36045). (See under C. F. Howe.)

McGee, Dr. Anita Newcomb, Washington, D. C. Received through Smithsonian Institution, Bureau of Ethnology: Sun-dried brick from a shell mound near Hampton, Va. 35548.

McGee, W J, Bureau of Ethnology, Washington, D. C.: Musquaki loom. Exchange. 36385.

McGinnis, W. H., Youngstown, Ohio: Thirteen specimens of selenite crystals. 35834.

McGowan, Mrs. E. P., Washington, D. C. Received through Department of Agriculture: Plant from California. 36582. (See under Agriculture, Department of.)

McGregor, R. C., Palo Alto, Cal.: Ten birds' skins from California (deposit) (35490); 2 birds' skins (*Tringa minutilla*) (gift) (35605); 75 birds' skins from California (exchange) (35869); crustaceans and mollusks from the Hawaiian Islands (gift) (36562).

McGrew, Morris, Plainville, Ohio: Fine siliceous mud from Florida. 35590.

McGuire, J. D. (See under Linthicum, Dr. T. W.)

McIntosh, W., St. John's, New Brunswick, Canada: Six specimens of Lepidoptera. 36419.

McIntyre, Frank, Bohemia, Oreg.; Crystals from Oregon (35993); specimens of cerussite, from Musick Mine, Bohemia Peak, Calipooha Range. (36173); specimens of cerussite (36221.)

McKinney, M. B., Estatoe, N. C.: Soapstone carving from Mitchell County. 35947.

MacMillan, Prof. Conway, University of Minnesota, Minneapolis, Minn.: Ninety-six specimens of violets. Exchange. 36085.

McMillan, P. A., Banyan, Fla.: Waterbug, *Belostoma uhleri* Montandon. 35797.

McNally, Major V. (See under War Department.)

McNulty, Dr. L., Laurel, Md.: Skin and skull of a fox. Exchange. 36339.

Macalester, C., Wytheville, Va.: Mounted albino Summer Duck (*Aix sponsa*), from New Jersey. 35872.

Macoun, Prof. John, Geological Survey, Ottawa, Canada: Six hundred and forty-one specimens of mosses from St. Paul Island, Bering Sea (purchase) (36029); 586 plants (purchase) (36356); 100 specimens of violets from Canada (exchange) (36515).

Madsen, Serg. O. J., U. S. A., Puerto Principe, Cuba: Sphinx-moth. 35954.

Magretti, Dr. Paola, Milan, Italy: Four hundred and ninety-four specimens of Hymenoptera. Exchange. 36372.

Mahler, Miss A. L., Chelan, Wash.: Cricket (*Stenopelmatus talpa* Burm.). 35718.

Maier, Jacob, Philadelphia, Pa.: Homopterous insect (*Telamona ampelopsidis* Harris). 35246.

Manning, Mrs. E. G., Washington, D. C.: Crab-spider, *Acrosoma spinea* Hentz. 35472.

Marbury, Miss E. M., U. S. National Museum: Two music boxes of French manufacture. 36046.

Markley, E. M., Bainbridge, Pa.: Grooved axe. 36654.

Markley, R. C., Hatboro, Pa.: Beetle and larvæ. 36699.

Marshall, Ernest. (See under George Marshall, Henry Marshall, and Henry Marshall, jr.)

Marshall, George, U. S. National Museum: Skull of a Red Fox, *Vulpes fulvus;* skin and skull of a common mole, *Scalops aquaticus,* and skin and skull of a Shrew mole, *Blarina brevicauda* (35919); 3 snakes from Maryland (36205); 4 bats (*Lasiurus borealis*) (36324); skull of Red Fox *Vulpes fulvus* (36341); Short-Tailed Shrew *Blarina brevicauda* (36466; leeches and crayfishes collected in Laurel by Henry and Ernest Marshall (36497). (See under Ernest and Henry Marshall.)

Marshall, Henry, U. S. National Museum: Gray squirrel, *Sciurus carolinensis,* from Laurel, Md. 36417.

Marshall, Henry and Ernest, Laurel, Md.: Three bull-frogs (35506); Red squirrel, *Sciurus hudsonicus loquax* (36485); fishes, including *Lepomis auritus; Lepomis gibbosus; Micropterus salmoides; Aphredoderus sayanys,* and *Notropis megalops* (35289); 2 flying squirrels (*Sciuropterus volucella*) and a bat (*Vespertilio fuscus*) (35366); mole, *Scalops aquaticus,* from Laurel (36454).

Marshall, Henry, jr., and Ernest, Laurel, Md. Received through George Marshall: Collection of fishes from Patuxent River. 36360.

Marshall, J. Rush. (See under Settle, Dr. Thomas L.)

Martin, Charles, Atlanta, Ga.: Specimen of Wheel-bug, *Prionidus cristatus,* Linné. 35346.

Martin, D. S., Presbyterian College for Women, Columbia, S. C.: Fragments of pottery. 36606.

Martine, Dr. Louis, Santiago, Cuba: Ancient Arawak bowl from Santo Domingo, collected by Mr. W. H. Holmes. 36683.

Marx, Mrs. M. D., Washington, D. C.: Collection of Arachnida and Acarina belonging to the late Dr. George Marx. Purchase. 35293.

Maryland Geological Survey, Baltimore, Md. Received through Prof. William B. Clark: Five specimens of *Terebratula harlani,* from the Eocene of Maryland. 36140.

Mason, Prof. O. T., U. S. National Museum: Baskets of the Abenaki Indians, collected by Professor Mason. 35583.

Mason, V. L., War Department, Washington, D. C.: Stirrups used by General Torral, commanding the Spanish troops at Santiago. 35357.

Mason, W. M., Washington, D. C.: Haircomb worn by native women of the Philippine Islands. 36092.

Massachusetts Commission, New Orleans Exposition, New Orleans, La.: Collection of Gay Head Indian pottery unbaked. 35486.

Matthews, J. T., Armour, S. Dak.: Upper and lower tooth of an elk. 36316.

Maxon, Mrs. S. A., Oneida, N. Y.: Plants and fruits (gift and exchange) (35307, 35390, 35412, 35531); 100 specimens of violets (exchange) (36563).

Maxon, W. R., U. S. National Museum: Two hundred plants from West Virginia and Virginia (35580); 9 birds' skins from New York (35591) (exchange); 120 plants from New York and the District of Columbia (35643); collection of Odonata, from the District of Columbia and vicinity (35822); 44 specimens of Odonata, from Lowell, West Virginia, and Mountain Lake, Virginia (35824); 55 specimens of mosses from Washington State, collected by J. B. Flett (35887); 400 plants from the vicinity of the District of Columbia (36015); 21 plants from Washington, D. C. (36118); 30 plants from Maryland (36119); 60 specimens of *Viola tenella,* from Maryland (36402); 50 specimens of *Viola cucullata,* from the District of Columbia (36403); 45 specimens of *Viola sagittata* (36447); snake from the District of Columbia (36460); 2 birds (36521); 30 plants from Virginia (36571); 20 plants from Maryland and the District of Columbia (36587); 35 specimens of Odonata, etc. (36662).

Maucк, C. H., Memphis, Tenn.: Cranium found near West Memphis. 36652.

Mayer, Sergt. Maj. Casper, Fort Meade, S. Dak.: Larva of a golden-eyed insect (*Chrysopa*). 35482.

Mead, C. H., Ponce, P. R.: Fossils from the southern side of Porto Rico. 36503.

Mead, Eugene. (See under Smithsonian Institution, Bureau of Ethnology.)

Mearns, Dr. E. A., U. S. A., Fort Adams, Newport, R. I.: Collection of mammal skins and skulls, skeleton of a dolphin, fish-bones, bird's head, crabs, sponges, and birds' skins (gift) (36089); specimens of rocks showing weathering (purchase) (36508); collection of mammals, crabs, dry fish and fish-bones and a porpoise skeleton (gift) (36645). (See under Ash, C. E.)

Mearns, Master Louis di Zerega, Newport, R. I.: Two mammal skins and 4 birds' skins. Deposit. 36091.

Meehan, J. V., U. S. National Museum: Copy of the New York Herald of April 15, 1865, containing an illustrated notice of the death of President Lincoln. 36238.

Melnikof, M., Musée d' Institut des Mines, St. Petersburg, Russia: Specimens of meteorites (Indarka and Augustinowka). Exchange. 36296.

Melville, J. C., Prestwick, West Manchester, England: Two abyssal shells. 35584.

Melville, W. P., Sault Ste. Marie, Mich.: Reptiles, insects, a mammal, and a bird from Angola, West Africa. 35784.

Merriam, Dr. C. H. (See under Harriman, E. H.)

Merriam, J. C., University of California, Berkeley, Cal.: Two specimens of *Trochocyathus californianus* Vaughan (35805); 12 specimens of fossil corals from California (36632).

Merrihew, Mrs. E. L., Long Beach, Cal.: Shells. 35697.

Merrill, Dr. George P., U. S. National Museum: Slate and associated rocks from Brownville, Me. (35341); geological material from Maine, New Hampshire, and Vermont (35342); fresh-water mollusks from Penobscot County, Me. (35428); slates from Granville, Washington County, N. Y. (35510); meteoric stone from Duruma, East Africa (35815); minerals and associations from Mitchell County, N. C. (35880); skin of a lynx from Mitchell County, N. C. (35918); fresh and weathered rocks from Chatham, Va. (35983); specimen of turquoise from New Mexico (purchase) (36006); 10 photographs of quarries fossil vertebrates from Freezeout Hills, Wyoming (purchase) (36007); fragments of Veramin meteorite (36028).

Merrill, L. B., Paris, Me.: Geological material. Purchase. 35558.

Metz & Schloerb, Oshkosh, Wis. Received through C. A. Woodruff: Two pairs of snowshoes and two pairs of moccasins. 36275.

Mexico, Mexico, National Museum. Received through Dr. Manuel Urbina, director: Type specimen of *Cornus urbinai*, from Mexico. Exchange. 36540.

Miguel, Jean, Barrubio, Hérault, France: Collection of Cretaceous and Tertiary fossils, vertebrate fossils, and 36 prehistoric implements. Exchange. 36097.

Milan, Italy, Museum of Natural History. Received through Dr. C. Bellotti: Collection of fishes from the Red Sea and Italy. Exchange. 36396.

Miller, B. D., Peterboro, N. Y.: Two shrews. 36267.

Miller, Mrs. E. P., Atlantic City, N. J.: Specimen of Hippa and one of Libinia (36346); fiddler-crabs and Hippas from Atlantic City (36492).

Miller, F. J. X., Washington, D. C. Received through Department of Agriculture: Plant. 35675.

Miller, Gerrit S., Jr., U. S. National Museum: Specimen (topotype) of *Lepus bachmani ubericolor* (35317); tree-frog from New York (35320); type specimen of *Hyla evittata*, from Four Mile Run, Virginia (35436); mammals from Prince George County, Md. (35748); snake from Maryland (35780); bat, *Pipistrellus subflavus*, from Forest Glen, Md. (35928); frog (*Hyla versicolor*), from Massachusetts (35994); Fox Sparrow, *Passerella iliaca* (36265); collection of fishes made in the tributaries of Red Creek (36359); parasitic fungus from Virginia (36544).

Miller, Dr. M. G., Philadelphia, Pa.: Lizard-fish, *Synodus fœtens*, from Pine Island Sound, Florida. 36412.

Milligan, Dr. John D., U. S. Fish Commission: Skin of a Merganser. 35903.

Milner, A. N., Webb City, Mo.: Crystals of sphalerite and marcasite on chert. 36433.

Minnesota, University of, Minneapolis, Minn.: Fifty-seven plants from various localities. Exchange. 36357.

Minor, Lucian, Galveston, Tex.: Specimen of fulgurite found in the white sand hills in Ward County, N. Dak. 35498.

Missouri Botanical Garden, St. Louis, Mo.: One hundred and seventy-five specimens of violets collected by J. B. S. Norton (35577); specimen of *Viola viarum* (36519). Exchange.

Mitchell, Hon. J. D., Victoria, Tex.: Deformed carapace and claw of a crab (*Callinectes sapidus*) (35749); 4 specimens of *Dentalium disparile* from Texas (35779).

Mock, M. G., Muncie, Ind.: Sixteen spearheads, stone hatchets, drilled tablets, etc., from near Muncie. 35551.

Moe, Rev. P., Coon Valley, Wis.: Two fossil teeth of mammals. 35653.

Mooney, James. (See under Smithsonian Institution, Bureau of Ethnology.)

Moore, Clarence B., Philadelphia, Pa., and Pine Key, Fla.: Four shell hammers (36163); shell hatchet found on the surface of Mound Island, or Johnsons Key, Estew Bay, Lee County, Fla. (36250); shell implement from Goodland Point, Marco Island, Lee County, Fla. (36320); 27 perforated shell implements from the Ten Thousand Islands on the southeastern coast of Florida (36590).

Morris, E. L., Washington, D. C.: Six plants. Exchange. 35678.

Moses, W. H. (See under Admiral Dewey Reception Committee.)

Motter, Dr. Murray Galt, Washington, D. C.: Insects from Mountain Lake, Maryland. 35567.

Münch, Prof. Herman, San Cristobal, Mexico: Two species of ferns from San Cristobal (35384); fern from Mexico (35753).

Murphy, Rev. J. W., Washington, D. C.: Nest of Yellow-throated Vireo (*Vireo flavifrons*). 35471.

Musée d'Histoire Naturelle (Laboratoire d'Entomologie), Paris, France. (See under Paris, France.)

Museo Civico di Storia Naturale. (See under Milan, Italy.)

Museo Nacional. (See under San José, Costa Rica.)

Museu Paulista. (See under São Paulo, Brazil.)

Museum des Konigreichs Böhmen. (See under Prague, Bohemia.)

Museum of Comparative Zoology, Cambridge, Mass. Received through Dr. Walter Faxon: Six specimen of crabs representing 3 species. Exchange. 35906.

Musser, F. P., Millheim, Pa.: Crab-spider (*Gasteracantha cancer* Hentz). 35426.

Myer, S. N., Washington, D. C.: Peace Jubilee medal struck in Washington, D. C., May 23, 1899 (35864); forah pointer or "yad" made of olive wood (35881); bronze medal conferred by the city of Brooklyn on her citizen soldiers who participated in the war with Spain; badge of white metal of Company B, Thirteenth Infantry, Fifth Army Corps, who participated in the Spanish-American war (35960); plaque given to participants in the war with Spain, belonging to members of the First Brigade, Pennsylvania Volunteers (36000).

Mytinger, C., Navy Department, Washington, D. C.: Minerals, botanical specimens, fossil plants, fossils, tooth of a shark, and a sturgeon plate. 36609.

Narbel, Paul, Cour, Lausanne, Switzerland: Four skulls of mammals. Purchase. 36031.

Natal Botanic Garden. (See under Berea, Durban, Natal, Africa.)

National Museum of Mexico. (See under Mexico, Mexico.)

Navy Department, Washington, D. C., Hon. John D. Long, Secretary. Received from the Norfolk Navy-Yard, Norfolk, Va.: Collection of relics of the Spanish-American war (35459); collection of Spanish-American relics and a lens from a porthole of the U. S. S.

NAVY DEPARTMENT—Continued.
Cumberland in use during the civil war, 1861–1865 (35460); four 24-inch search lights and mounts captured from the Spanish fleet at Manila (35509); ribbons used with the floral decorations of the graves of the *Maine* dead in Habana, February, 1899 (35968). Deposit.

NEBRASKA, UNIVERSITY OF, Lincoln, Nebr.: Six specimens of invertebrate fossils from the Upper Cretaceous (Dakota formation), near Glasco, Kans., and Jackson, Nebr. 36266.

NELSON, AVEN, Laramie, Wyo.: Two hundred and eighty plants (exchange) (35515); 87 plants from the western section of the United States (exchange) (35874); 40 specimens of violets (exchange) (36034); 840 plants from the Yellowstone National Park (purchase) (36520). (See under Agriculture, Department of.)

NELSON, E. W. (See under Agriculture, Department of; Brown, Mrs. N. M.)

NEVE, Miss A. M., Tampa, Fla.: Larva of a beetle (*Coptocycla aurichalcea* Fabr.). 35705.

NEWCOMB, W., Tenafly, N. J.: Specimen of butterfly mosaic work. 36363.

NEWCOMBE, Dr. C. F., Victoria, British Columbia: Starfish (*Pteraster*). 36386.

NEWMAN, Rev. S. M., Washington, D. C.: Two specimens of *Dryopteris* from New York. 36463.

NEW MEXICO AGRICULTURAL EXPERIMENT STATION, Mesilla Park, N. Mex. Received through Prof. T. D. A. Cockerell: Collection of insects (35242); blind snake (*Leptotyphlops dulcis*) (35257); topotype of *Eremopedes scudderi*, variety *bicolor* Cockerell (35446); 2 plants from Arizona and New Mexico (36013); specimen of *Eutamyas borealis* Coquillett (36121); 7 specimens of bees (36176); 6 specimens of Diptera (36198); 11 plants principally from New Mexico (exchange) (36398); land isopods from New Mexico and Arizona (36208); 22 specimens of Hymenoptera, including several type specimens; 3 plants and 5 species of land shells (36312); 35 specimens of insects containing types and cotypes (36523); 23 plants from New Mexico (exchange) (36541); insects, including Coleoptera, Diptera, Hymenoptera, etc. (36602).

NEW YORK AQUARIUM, New York City: Specimens of *Angelichthys ciliaris* and Trunk-fish, *Lectophrys triqueter*, from Bermuda, 35588.

NEW YORK BOTANICAL GARDEN, New York City. Received through Dr. N. L. Britton: One thousand and seventy-one plants from Montana. Exchange. 36150.

NICKEL, C. L., Cleveland, Ohio: Fossil plants and a concretion. 36691.

NIMS, CHARLES S. (See under United States Marble Company.)

NIXON, S. D., Baltimore, Md.: Three eggs of Chipping Sparrow, *Spizella socialis*, with abnormal coloration (36530); nest of Chipping Sparrow (36449).

NOBLE, S. W., Wilmington, N. C. Received through Department of Agriculture: Two plants representing the species *Stuartia malachodendron* L. 36565.

NORFOLK NAVY-YARD. (See under Navy Department.)

NORTHRUP, Mrs. A. R., Yonkers, N. Y.: Specimen of Cassia from the Bahamas (36116); plant from the Bahamas (36223).

NORTHRUP, C. H., San José, Cal.: Specimen of Vivipara shell from California (35625); 3 specimens of Japanese Vivipara from San José (36249).

NORTON, Dr. C. A. Q., Hartford, Conn.: Eight lamps. Exchange. 36182.

NORTON, J. B. S. (See under Missouri Botanical Garden.)

NOTMAN, GEORGE. (See under Copper Queen Consolidated Mining Company.)

NOWLAN, Mrs. O. F., Janesville, Wis.: Specimens of minerals. Exchange. 36190.

NOYES, Miss C. E., U. S. National Museum: Proclamation issued from Headquarters Department of the Pacific, August 4, 1899; proclamation, military governor, Philippine Islands, Manila, January 4, 1899; proclamation, Philippine Commission, April 4, 1899. 35726.

NYE, WILLARD, jr., New Bedford, Mass.: Indian skull exhumed from the western bank of Acushnet River, New

NYE, WILLARD, jr.—Continued.
Bedford (36272); 2 balls of bristles from the stomach of an alligator (36351).

O'NEILL, Mrs. S. C., Day, Mo.: Larva of a Lampyrid (*Phengodes*). 35495.

OAKMAN, Miss, Edenton, N. C. Received through Department of Agriculture: Three specimens of violets from North Carolina. 36330.

ODELL, W. S., Ottawa, Canada: Two salamanders (*Spelerpes bilineatus*). 35990.

OGLESBY, W. J., Krebs, Ind.: Cases of common caseworms (*Thyridopteryx ephemeræformis*). 35311.

OHLEN, EMANUEL. (See under Smithsonian Institution, Société de Numismatique et d'Archéologie de Montréal.)

OLDROYD, Mrs. T. S., Los Angeles, Cal.: Marine shells from San Pedro, Cal. 35924.

OLDS, H. W., Department of Agriculture. Received through the Department: Thirty plants (35659); specimen of *Nitromyces lutescens* (35889); 5 plants from Maryland (36117).

OÖHNER, TEODOR, Zoological Institute, University, Upsala, Sweden: Four specimens of helminths. 35858.

OSBORN, Prof. H. F., American Museum of Natural History, New York City: Two restorations of extinct reptiles (*Agathaumas* and *Nanosaurus*). 36207.

OSBORNE AND MARSELLIS COMPANY, Upper Montclair, N. J.: Trap rock used for macadam and street paving. 36043.

OSTERHOUT, G. E., New Windsor, Colo.: Forty specimens of violets (exchange) (33312); 56 plants (exchange) (35389); plant (gift) (36353).

OTAKI, K. (See under Leland Stanford Junior University.)

OTIS, ISAAC. (See under Smithsonian Institution, Bureau of Ethnology.)

OWEN, Mrs. NARCISSA, Washington, D. C.: Relics of Gen. George Washington. 36137.

PALESTINE EXPLORATION FUND, Cambridge, Mass. Received through Rev. T. F. Wright: Cast of Lachish tablet; cast of seal of Haggai; cast of Wright bead; cast of Chaplin weight. Purchase. 35833.

PALMER, EDWARD, Washington, D. C.: Two hundred and fifteen plants from Kentucky (35255); 112 plants (35569); 225 plants from Durango and Saltillo, Mexico (purchase) (36459); 40 photographs of plants, etc. (36584).

PALMER, GROVER, Barrow, Suffolk, England: Collection of British Lepidoptera. 35727.

PALMER, H. D., Olivet, Pa.: Beetle (*Alaus oculatus L.*) 36529.

PALMER, WILLIAM, U. S. National Museum: Specimen of Queen snake, *Natrix leberis*, from Great Falls, Md. (35260); type specimen of *Dryopteris goldieana celsa* (35476); 65 plants (35658); Garter snake from Virginia (35882); Virginia deer, *Odocoileus americanus* (35920); muskrat (*Fiber zibethicus*), from Little River, Va. (35939); 35 birds' skins and 3 birds' eggs (36264, 36302); collection of insects and 48 birds' skins from Cuba (36415); reptiles and batrachians (36457); natural history specimens and geological material from western Cuba (36484); 5 specimens of fossil corals from Cuba (36491); 35 specimens of Odonata (36662); large collections of plants from Cuba (36253, 36254, 36271, 36289, 36297, 36298, 36318 36319, 36329, 36337, 36382, 36424, 36487, 36573, 36641, 36660, 36701).

PARIS, FRANCE, MUSÉE D'HISTOIRE NATURELLE (Laboratoire d'Etomologie): Six vials containing insects. Exchange. 35971.

PARISH, S. B., San Bernardino, Cal.: Six plants from California and Arizona. 36225.

PARKE, G. H., Williamsport, Pa.: Specimen of Carabid beetle, *Calosoma scrutator* Fabr. 36552.

PARKER, A. T., Jersey Shore, Pa.: Specimen of *Epeira domiciliana* Hentz. 35673.

PARKER, C. LE ROY. (See under Phelps, Dr. Albert.)

PARLIN, J. C. (no address given): Plant from Maine. 36081.

PARMELEE, H. P., Charlevoix, Mich.: Type specimen of *Pecten parmeleii* Dall, from the Pliocene of California. 36076.

PARRITT, H. W., London, England: Echinoderms, crustaceans and 2 specimens of fishes. Exchange. 35695.

Parsons, Dr. W. B., Missoula, Mont.: Specimen of fungus (*Mycelium*) from Montana. 36191.

Patcanof, S. (See under Smithsonian Institution.)

Patten, Col. W. S., U. S. A. (See under War Department, Quartermaster-General's Office.)

Paxton, Rev. J. W., Danville, Va.: Two pieces of Chinese money. 36246.

Payne, E. J., Olympia, Wash.: Volcanic dust from near Mount Ranier, Thurston County, Wash. (35396); specimen of copper ore from Washington (35685); specimen of gold-bearing quartz (35761); 2 specimens of marble from Alaska (36384).

Peabody Museum, New Haven, Conn. Received through Dr. C. E. Beecher: Specimen of Iceland spar. Exchange. 35555.

Pearse, A. S., Lincoln, Nebr.: Batrachians and a hair worm from Montana. 36667.

Peck, Prof. C. H., Albany, N. Y.: Specimen of *Viola communis*. 35900.

Petersen, H. P., Washington, D. C.: Forty-six Mexican opals and an onyx paper knife. 36277.

Peterson, D., Lima, Mont.: Two specimens of impure graphite and a specimen of clay colored by graphite. 35987.

Phelps, Dr. Albert, Glens Falls, N. Y. Received through C. Le Roy Parker: Tooth of a fossil shark with perforations. 36133.

Phelps, G. B., Chicago, Ill.: U. S. Army belt buckle, found in one of the public buildings, Habana, Cuba. 36141.

Philadelphia Academy of Sciences, Philadelphia, Pa.: Two bats (*Phyllonycteris*). Exchange. 36326.

Philadelphia Museums, Philadelphia, Pa.: Fifty-four specimens of violets. Exchange. 36084.

Pierson, Mrs. D. L., East Northfield, Mass.: Katydid, *Scudderia curricauda* Serv.; tree-crickets, *Œcanthus niveus* De Geer, and the Alder woolly aphid, *Pemphigus tesselata* Fitch. 35520.

Pike, G. H., Glens Falls, N. Y.: Eight fragments of pottery. 35304.

Pillsbury, D. S., New York, N. Y.: Elbow melodeon. Purchase. 36196.

Piper, C. V., Cambridge, Mass.: Received through Department of Agriculture: Plant from Washington, D. C. (36507); plants (36689, 36702). Exchange.

Pirsson, Prof. L. V., Yale University, New Haven, Conn.: Collection of rocks made in central France, around Clermont-Ferrand, obtained by William MacClure. 36004.

Pittier, Henri R., San José, Costa Rica: One hundred plants from Costa Rica (35597); 152 plants from Costa Rica (36564). Purchase.

Plitt, C. C., Baltimore, Md. Received through Department of Agriculture: Three plants. Exchange. 35642.

Pollard, C. L., U. S. National Museum: Two hundred and forty-five specimens of insects from Miami County, Fla. (35262); bat (*Vespertiliofuscus*) (35363); 200 plants from West Virginia and Virginia (35580); 8 specimens of Odonata from Washington, D. C., and vicinity (35823); 44 specimens (10 species of Odonata), from Lowell, W. Va., and Mountain Lake, Va. (35824); 20 specimens of *Lygodium palmatum* (35850); 15 cryptogams from the District of Columbia (36016); 30 plants from Maryland (36119); 3 plants from Maryland (36481); 200 plants (35644); 30 plants from Virginia (36571); specimen of *Arabis* from Maryland (36572); 35 specimens of Odonata, etc. (36662);

Pou, José, Ponce, P. R.: Specimen of coffee from Porto Rico. 35354.

Powell, W. F. (See under State, Department of.)

Prague, Bohemia, K. K. Böhmische Karl-Ferdinand Universität. Received through Dr. Anton Fritsch: Twenty specimens illustrating the development of *Sao hirsuta;* 3 trilobites; 12 species of cystidæ; hammer used by Barrande in geological work (35609); 9 specimens of Cambrian brachiopods from Bohemia (35690). Exchange.

Prague, Bohemia, Museum des Konigreichs Böhmen. Received through Dr. Anton Fritsch, director: Collection of fresh-water sponges from Germany. Exchange. 35543.

Pratt, F. C., Department of Agriculture: Ten specimens of insects. 35803.

Pratt, H. A., Washington, D. C.: Rain cloak, hat, brushes, and model of a Filipino hut. 36556.

Preble, E. A., Department of Agriculture: Five frogs from the District of Columbia (36431); 2 frogs from Maryland (36495).

Prentiss, Dr. D. W. (See under W. Colvill.)

Preston, H. L., Rochester, N. Y.: Meteoric stone from Bohemia, and a specimen of meteoric stone from France. Purchase. 36676.

Price, Miss S. F., Bowling Green, Ky.: Plants and fresh-water shells (35526, 35698, 36102, 36404).

Price, W. W., Nordhoff, Cal.: Five skins and skulls of mammals. 35997.

Pringle, C. G., Charlotte, Vt.: Four hundred plants from Mexico (35271, 35897). Purchase.

Proudfit, Robert, Washington, D. C.: Collection of stone implements from an Indian village site near Chain Bridge. 36340.

Public Museum. (See under Wanganui, New Zealand.)

Puffer, R., Dorchester, Mass.: Two specimens of native copper from Central Mine, Keweenaw County, Mich. 35474.

Purcell, N. J., Hillsboro, Va.: Roseate Spoonbill from Southern Florida. 35290.

Putnam, Hon. Herbert. (See under Congress, Library of.)

Putnam, Mrs. J. D., Davenport, Iowa: Basket from Aleutian Island. Exchange. 36136.

Quick, Richard. (See under London, England, Horniman Museum.)

Ralph, Dr. W. L., U. S. National Museum: Sixteen mammals from New York. 35853.

Ramsdell, Dr. F. R., Lampasas, Tex.: Cell of an Odynerid wasp. 35280.

Randall, C. W., Austinburg, Ohio: (Elaterid) (*Asaphes memnonius* Hbst.) and several specimens of insects (*Psocids*) (*Psocus venosus* Burm.). 35379.

Randolph, N. & Son, Houston, Tex.: Case-bug worms (*Thyridopteryx ephemeraformis* Haworth). 35431.

Randolph, P. B., Seattle, Wash.: Seven fragments of pottery from Kitchen Middens, near the junction of Nauvaranok River and Yukon, Alaska. 35521.

Raymond, W. H., East Orange, N. J.: Copalite containing insects. 35846.

Raynor, N. (See under Fish Commission, U. S.)

Ray, H. S. (See under Lambert, W. M.)

Reading, H. G., Franklin, Pa.: Worm case (35541); alcoholic specimens of *Bipalium kewense* (35739).

Reed, Walter D., Adelaide, South Australia. Shells from South Australia. Exchange. 35492.

Reeder, J. T., Calumet, Mich.: Specimen of domeykite in quartz (35282); 2 specimens of mohawkite (36345).

Reverchon, J., Dallas, Tex.: Twelve plants (gift) (36224); 100 specimens of Umbelliferæ from Texas (purchase) (36442).

Reynolds, Dr. E. R., Pension Office, Washington, D. C.: Three ferns (35622); specimen of *Viola brittoniana*, from Maryland (36518).

Rhode Island Graphite Company, Providence, R. I. Received through J. M. Gross, vice-president: Graphite from Cranston, R. I. 36036.

Richardson, C. H., Hanover, N. H.: Two specimens of rhodonite from Waits River, Vermont. 35556.

Richardson, James, Alamogordo, N. Mex.: Specimen of iron ore found in the San Adreas Mountains. 36413.

Richardson, W. W., Cooman, Manitoba, Canada: Luna moth, *Actias luna* Linnæus. 36599.

Richmond, Dr. C. W., U. S. National Museum: Eleven species of land shells from Porto Rico (36192); 7 birds' skins, a mouse, and a small collection of shells from San Juan, P. R. (36201); insects, shells, crustaceans from Porto Rico (36232); collection of mammals, birds, reptiles, insects, crustaceans, worms, and mollusks from Cuba and Porto Rico (36467); natural-history specimens from Porto Rico (36559).

Ridgway, Robert, U. S. National Museum: Three hundred and nineteen birds' skins from Alaska. 35457.

Riley, J. H., U. S. National Museum: Thirteen mammals from Franklin, W. Va. (35259); 30 mammal skins from the same place (35309); snake and 8 salamanders from West Virginia (35328); 14 mammal skins from Franklin, W. Va. (35362); land and fresh-water shells from West Virginia (35429); 11 birds' skins (35995); 3 eggs of *Ampelis cedrorum*, from West Virginia (36027); 6 mammals (36086); Pine Mouse (*Microtus pinetorum*) (36093); 35 birds' skins and 3 bird's eggs (36264, 36302); collection of insects and 48 birds' skins from Cuba (36415); reptiles and batrachians from Cuba (36457); collection of natural-history specimens and geological material from western Cuba (36484); 5 specimens of fossil corals (36491); large collections of plants from Cuba (36253, 36254, 36271, 36289, 36297, 36298, 36318, 36319, 36329, 36337, 36382, 36424, 36487, 36573, 36641, 36660, 36701).

Roach, James, Joplin, Mo. Received through F. W. Crosby: Calcite crystals. 36434.

Robbins, Dr. H. A., Washington, D. C.: Shells (*Physas*) from Burkartsville, Md. 35277.

Rockhill, Hon. W. W., Bureau of American Republics, Washington, D. C.: Greek musical instrument. 35565.

Roe, W. C., Colony, Okla. T.: Arapaho dance outfit. Purchase. 35699.

Rose, J. N., U. S. National Museum: Collection of Mexican plants (35950); land shells from Mexico (36019); 216 plants from Mexico (36157).

Rosenberg, W. F. H., London, England: Seven hundred and fifty specimens of Lepidoptera from Colombia and Ecuador. Purchase. 35633.

Ross, C., Howard, Kans.: One hundred and twenty specimens of Upper Carboniferous fossils from Kansas (35243); 195 specimens of fossils from the Upper Coal Measures of Elk County, Kans. (35649).

Rostel, C. B., Medford, Oreg.: Specimen of coleopterous larvæ. 36575.

Rowles, Prof. W. W., Cornell University, Ithaca, N. Y.: Eighteen plants from New York and North Carolina. Exchange. 35875.

Royal Botanic Garden. (See under Calcutta, India.)

Royal Botanic Gardens. (See under Kew, England.)

Rubin, C. A., Soldiers' Home, Washington, D. C.: Three moths. 36677.

Russell, Prof. I. C., Ann Arbor, Mich.: Calcareous marl used in making cement. 36017.

Rust, Dr. R. C., Hudson, Ohio: Shells. 35991.

Ruth, A., Knoxville, Tenn.: One hundred and thirty-three plants. Purchase. 35270.

Rydberg, P. A., Bronx Park, N. Y.: Plant from Big Horn Mountains, Montana. 36362. (See under Agriculture, Department of.)

Sabin, J. F., New York City: Oil portrait of an Indian. Purchase. 35241.

Samaha, M., Washington, D. C.: Twenty-four pieces of Bedouin jewelry. Purchase. 36211.

Samson, H. W., Washington, D. C.: Engraved portrait of General and Mrs. Washington, by Stuart. 36383.

San José, Costa Rica, Museo Nacional. Received through José C. Zeledon: Sixteen birds' skins from Costa Rica. Gift. 36665.

Santos, Mrs. T. Alejandro, Shorthills, N. J. Received through Julio R. Santos: Stone figure from Ecuador. 36286.

Santos, Julio R. (See under Mrs. Alejandro Santos.)

Sao Paulo, Brazil, Museu Paulista. Received through Dr. H. von Ihering, director: Twenty-seven specimens of South American brachiopods. Exchange. 35911.

Saunders, D. A., Brookings, S. Dak.: Ninety plants. Purchase. 35865.

Schafer, Charles. (See under Mrs. Elizabeth Lloyd Lee.)

Scheol, J. C., San Juan, P. R.: Mole cricket. 35789.

Schiller, Miss Bertha, La Salle, Ill.: Beetle (*Coptocycla aurichalcea* Fabr.). 35618.

Schuchert, Charles, U. S. National Museum: Pair of summer kamicks used by natives of Niakomat, Noursoak Peninsula, North Greenland (35303); 34 specimens of fossils from Baffin Land

Schuchert, Charles—Continued.
and 868 specimens of fossils from Guelph (purchase) (35702); collection of fossils (35778); 50 specimens of Triassic and Jurassic and 225 specimens of Cretaceous invertebrate fossils and 200 lithological specimens from Wyoming (35863); plants from Wyoming (35870); 2 specimens of fossil wood from Bates Hole, Wyo.; a specimen of *Equisetum*, from Freezeout Mountain, Wyoming, and a specimen of *Halymenites major*, from Cooper County, Wyo. (35917); 1,322 specimens of Jurassic fossils, representing 76 species, collected near Malone, Tex., by F. W. Cragin (purchase) (36601); 2 fossil corals and an echinoid spine from the Eocene of Marlboro, Md. (36622).

Schwarz, E. A., Department of Agriculture: Reptiles from Arizona and California, obtained by H. G. Hubbard (35782); snake (*Tantilla nigriceps*) from Arizona (35838).

Schwarz, E. A., and H. G. Hubbard. Received through Mr. Schwarz: 3,000 specimens of North American insects. 35819.

Scisco, L. D., Baldwinsville, N. Y.: Bowl-shaped stone. 36688.

Scott, J. R., Petros, Tenn.: Night-flying Moth, *Triptogon modesta* Harris. 35433.

Scott, Robert, Pioneer, Mo. Received through J. F. Hutchens: Tooth of a bison. 36229.

Seal, W. P., Delair, N. J.: Specimen of *Ophibolus doliatus triangulus* and a young turtle (35284); fishes from North Carolina (36361).

Seegear, G. A., U. S. National Museum: Specimen of *Spelerpes ruber*, from Maryland. 36496.

Seuon, E., Huntington, W. Va.: Tooth of a mammoth. 36409.

Sells Brothers Circus. (See under Adam Forepaugh.)

Settle, Dr. T. L., Paris, Va. Received through J. Rush Marshall: Coiled taper and stand known as "Confederate Candle." 35958.

Seward, Miss Risley, Washington, D. C.: English hunting knife. 35407.

Sharp, Dr. David, Cambridge University, Cambridge, England: Six cotypes of Hawaiian Hymenoptera. 36619.

Shaw, C. P., Alberene, Va.: Wheel-bug, *Prionidus cristatus* Linnæus. 35755.

Shaw, R. E., Alberene, Va.: Ground snake, or Worm snake *Carphophiops amoenus*. 36227.

Sheahan, Thomas, Herring, N. Y. (home address, Geneva, Ill.): Fossil found in Lewis County, N. Y. 36593.

Shear, C. L., Department of Agriculture: Collection of insects (35710); 8 plants from Oregon (36291).

Sheldon, E. P. (See under Agriculture, Department of.)

Sheley, O. C., Independence, Mo.: Skin of Loggerhead Shrike, *Lanius ludovicianus*, from Missouri. 35393.

Shepard, Dr. C. U., Summerville, S. C.: Shepard collection of minerals; meteoric papers; paper trays; bound catalogue of mineral collection; autograph of Adams's "Classification of Minerals" (loan) (35914); specimen of Bishopville meteorite (exchange) (36278).

Shepherd, R. S., Kensington, Md.: Specimen of Brunnich's Murre, *Uria lomvia* 35883.

Shindler, A. Z. (estate of): Collection of stone implements, arrow-points, etc., principally from the District of Columbia and vicinity. 35617.

Shufeldt, Miss Katherine, Washington, D. C.: Beetle (*Purpuricenus humeralis* Fabr.). 36638.

Shufeldt, Percy W., Washington, D. C.: Natural-history specimens from Smiths Island, Virginia, and Maryland (35696); 2 lizards from Chesapeake Beach, Maryland (36510).

Simpson, W. W., Manchester, N. H.: Five birds' skins from Tibet. Purchase. 36474.

Singley, J. A., Giddings, Tex.: Five specimens of Eocene corals, including types of *Oculina singleyi* Vaughan, and a figured specimen of *Turbinolia pluretra* Lea. Exchange. 36630.

Sisson, D. C., Port Angeles, Wash.: Elk (*Cervus canadensis*). Purchase. 36344.

Skiff, F. J. V. (See under Barnhart Brothers & Spindler.)

Skinner, F. B., Greene, N. Y.: Egg of a Pekin duck. 36411.

Skinner, Dr. Henry, Academy of Natural Sciences, Philadelphia, Pa.: Two Noctuid moths from Point Barrow, Alaska. 36306.

Slack, Rev. W. S., Musson, La.: Walking-stick, *Diapheromera denticus* Stäl. 35519.

Sloan, C. G., Washington, D. C.: Burmah drum and a fetish god from Africa. Purchase. 36348.

Slocum, Capt. Joshua, Larchmont, N. Y.: Gorgonian from near the island of Rodriquez, section of limb of *Psiadia rotendifolia*, and a stone ax from New Guinea. 36605.

Slosson, Mrs. A. T., New York City: Eleven specimens of Hymenoptera (new to the collection) (35687); 6 specimens of Diptera (36293); 58 specimens of Diptera (36418).

Smart, Dr. E. N., Madison, Nebr.: Right humerus of a Trumpeter Swan. *Olor buccinator*. 36070.

Smith, D. Wilmot, Breckenridge, Minn.: Indian drinking cup made of birch bark, from Leach Lake, Cass County, Minn. 36276.

Smith, Dr. H. M., U. S. Fish Commission: Land and fresh-water shells from Lake Erie. 35416. (See under Fish Commission, U. S.)

Smith, Prof. J. B., New Brunswick, N. J.: Seven type species of Noctuidæ (35348); pupa, larva, and imago of an Ant-lion, *Myrmeleon immaculatus* De Geer (36234); 45 specimens of Noctuid moths of which 43 are type specimens (36311); 301 types and cotypes of Noctuid moths (36511).

Smith, Capt. John Donnell, Baltimore, Md.: Plants from Central America. 35904.

Smith, Mrs. Rosa Wright, Washington, D. C.: A copy of "Freedom," May 25, 1899, a newspaper printed at Manila. 35394.

Smithsonian Institution, Mr. S. P. Langley, Secretary.

Collection of Japanese theatrical masks from Japan. Received from Prof. Alexander Graham Bell. 35254.

Collection of volcanic formations from the Canary Islands and Spanish possession of Rio del Oro, on the western coast of Africa; sample of cake or bread found in an ancient tomb; ear bones of a whale. 36695. Received from Mr. Solomon Berliner, U. S. Consul, Teneriffe, Canary Islands.

Two cut sapphires from Yogo Gulch, Montana, and a cut opal from Mexico. Received from Dr. L. T. Chamberlin. 35244.

Moro dagger of native manufacture from Mindanao. Received from Mr. Richard Coleman, Manila, P. I. 36558.

Articles belong to the late General Swords, consisting of a coat, U. S. A. (1838); pompon; 4 epauletts; complete set of aiguilettes; regulation sword (1838); yellow silk sash; patent leather sword belt; chapeau and plume; blue feathers (1838); regulation chapeau of 1860; forage cap (1860); dispatch belt with pocket; military saddle valise; photograph of General Swords; plan of West Point Military Academy, drawn by Cadet Swords; commissions from 1829–1865; 3 newspaper clippings and a map; 4 insignia (3 eagles and a star). Received from Miss E. H. Cotheal. 36367.

Collection of plants belonging to the late Dr. G. De Chalmot. Received from Mrs. De Chalmot. 36032.

Stone chair (complete); stone chair (broken); stone pillar from the summit of "Cerro de Hojas," Province of Manibi, Republic of Ecuador. Received from Hon. Perry M. de Leon, Consul-general of the United States, Guayaquil, Ecuador. 36285.

One of the earliest forms and one of the latest improved Hammond typewriters. Received from the Hammond Typewriter Company, through Mr. J. B. Hammond, president. 36557.

Bronze medal of the Diamond Jubilee of Queen Victoria, 1897, struck by the order of the corporation of the city of London. Received from the corporation of the city of London. 35970.

Three thousand two hundred and eighty-eight cryptogams. Received from Dr. Charles Mohr. 36105.

SMITHSONIAN INSTITUTION—Continued.

Bronze medal in commemoration of the civic library inaugurated by H. J. Tiffic, in 1896. Received from the Société de Numismatique et d'Archæologie de Montreal, through Emanuel Ohlen, corresponding secretary of the society. 35287.

Collection of casts of seals. Received from Mr. S. Patcanof, St. Petersburg, Russia. 36461.

A set of eggs of Stephen's Whippoorwill, *Antrostomus macromyctax*, and a set of eggs of the Western Nighthawk, *Chordeilis virginianus henryi*. Received from Dr. William L. Ralph. 36123.

Mummy from Cuzco, Peru. Received from Dr. A. H. C. Russell, U. S. N. 36836.

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

Collection of Indian baskets from California, obtained through Dr. J. W. Hudson, Ukiak, Cal. (35435); collection of Carib implements from the West Indies, obtained through M. Louis Guesde, Pointe à Pitre, Guadeloupe, West Indies (35724); 4 ancient copper implements, received through Isaac Otis (35787); collection of ethnological objects from the Wasco and other tribes of the Warm Spring Indians, obtained through Mrs. E. T. Houtz (35837); collection of ethnological objects from Terra del Fuego, obtained by J. B. Hatcher (35895); collection of Indian ethnological objects, obtained through James Mooney (36021); Kutenai canoe and 2 pairs of Kutenai snowshoes, received through A. W. Barber, General Land Office (36096); collection of ethnological objects from Mexico, New Mexico, and Arizona, obtained by Dr. Walter Hough (36143); Zuñi and Navajo blankets, received through E. M. Cushing (36174); collection of Washoe baskets, etc., received through Eugene Mead (36244); collection of Ojibwa ethnological objects, received through G. H. Beaulieu (36315); 3 pottery bowls, pottery cup, from Black Falls

SMITHSONIAN INSTITUTION—Continued.

ruins, Wukoki, 40 miles northeast of Flagstaff, Ariz.; turquoise mosaic earring, from the same location, received through Dr. J. Walter Fewkes (36468); collection of stone implements and other objects from Jamaica, West Indies, received through R. C. MacCormick (36678); collection of ethnological, archæological, and historical objects, collected by W. H. Holmes. 36681. (See under Bailey, G. W.; Deisher, H. K.; McGee, Dr. Anita Newcomb; Hudson, J. W.; Carrico, E. T.).

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

Specimen of *Auchenia huanacos* (35352); cormorant and anhinga (35409) Lemur (*Lemur mongoz*) (35410); specimen of *Lagothrix humboldti* and 2 specimens of Coati-mundi (*Nasua rufa*) (35487); 2 specimens of iguana from Mexico and Honduras (35496); cockatoo in flesh (35522); specimen of *Ctenosaura teres*, from Mexico (35592); 2 birds in the flesh (35606); black bear (*Ursus americanus*) and a lion (*Felis leo*) (35608); snake (*Pituophis melanoleucus*), from Florida (35663), 2 flamingoes and a spotted hyena (35730); specimen of *Ctenosaura teres*, from Mexico (35745); flamingo and a Cuban parrot (35861); puma (*Felis concolor*) (35940); kangaroo (36049); puma (*Felis concolor*), Mexican Coati, *Nasua narica* (36127); snake (36142); gray parrot (*Psittacus erithacus*) (36155); swan (*Cygnus olor*) (36155); green monkey (*Cercopithecus cynosurus*) and a zebu (*Bos indicus*) (36184); American buffalo (*Bison americanus*) (36193); iguana from Honduras (36194); snake from Florida (36195); flamingo, chachalaca and wild turkey (36284); snake (*Crotalus horridus*), from West Virginia (36335); monkey (*Macacus*) (36366); bear (*Ursus*) (36303); Squirrel-Monkey, *Chrysothrix sciurus* (36545); 2 gray wolves (*Canis lupus griseoalbus*), black bear (*Ursus americanus*) (36560); snake (*Ophisaurus ventralis*), from Georgia (36666).

Snowdon, R. P., Bordentown, N. J.: Two pieces of the original rail over which the engine "John Bull" was run. 35630.

Snyder, Prof. A. J., Belvidere, Ill.: Thirty-three specimens of Lepidoptera (36213); 48 specimens of Lepidoptera containing species new to the collection (36012).

Socoloff, D., Taschla, Government of Orenburg, Russia: Twenty-three specimens of Jurassic invertebrate fossils (5 species and 4 varieties) of *Aucella* from Russia. Received through the U. S. Geological Survey. Exchange. 36002.

Soltau, Hugo, estate of. Received through Otto Soltau, New York City: Collection of Coleoptera obtained in the southern and western sections of the United States. Bequest. 35536.

Soltau, Otto. (See under Soltau, estate of Hugo.)

Sorrell, S. N., Farmers, Ky.: Ash beetle, *Dynastes tityus* Linnæus. 35308.

Sorrels, C. M., U. S. National Museum: Old-style English weight, found in Prince George County, Md. 35408.

Soule, Mrs. C. G., Brandon, Vt.: Two rose galls (*Rhodites*). 35298.

Spainhour, Dr. J. M., Lenoir, N. C.: Moth (*Ecpantheria scribonia* Stoll). 35361.

Spencer, Mr. Received through Department of Agriculture: Photograph and a seed from Central America. 35936.

Spier, G. W., Washington, D. C.: English watch movement. 35808.

Stahl, Dr. A., Bayamon, P. R.: Freshwater crabs from Porto Rico. 36643.

Stangl, Paul L., acting hospital steward, brigade hospital, Bacoor, P. I.: Collection of insects from Bacoor (36087); geological specimens (36516); collection of insects (36430).

Stanton, T. W. (See under Bruce, Robert E.)

Stanton, Rev. W. A., S. J., Belize, British Honduras. Received through Dr. L. O. Howard: Insects. 36151.

Stapler, R. L., Jasper, Fla.: Moth (*Chaerocampa tersa* Linnæus). 35709.

Staples, C. H., Nashville Tenn.: Pupa case of an Ephemerid. 36597.

State, Department of: Specimen of cinnabar obtained through Hon. W. F. Powell (35247). Received through Assistant Secretary David J. Hill: Chinese flag used upon the occasion of the appearance of the first American embassy in Chinese waters (35766).

Stearns, Dr. R. E. C., Los Angeles, Cal.: Thirty-seven specimens of *Tivela crassatelloides* from California (35252); 6 species of shells introduced into the Californian fauna and apparently acclimated (35785); 3 specimens of *Epiphragmophora* (36268).

Steele, E. S., Washington, D. C.: One thousand three hundred plants (35443); 3 plants (36242); plant (36331); plant from Maryland (36506).

Steele, W. C., Switzerland, Fla. Received through Department of Agriculture: Four plants (35851); 4 bulbs (35945); 20 bulbs of *Amaryllis treatea* (35974).

Stejneger, Dr. L., U. S. National Museum: Collection of natural history specimens from Cuba and Porto Rico (36467); natural history specimens from Porto Rico (36559).

Stephens, J. H., Jacksonville, Fla.: Decomposed chert. 35387.

Stephens, Hon. J. H., M. C., House of Representatives: Volcanic ash from Wilbarger County, Tex. (35996, 36616).

Stepp, F. E., Warrenton, Va.: Luna Moth, *Actias luna* Linnæus. 35347.

Stern, H., & Co., Allegan, Mich. Meteorite. Purchase. 35742.

Stewart, Capt. John, Washington, D. C.: Piece of cloth from the Lincoln catafalque. 35909.

Stickney, R. H., jr., Anniston, Ala.: Moth (*Attacus polyphemus*). 35432.

Stilwell, L. W., Deadwood, S. Dak.: Skull and jaw of a fossil rhinoceros (*Diceratherium*) (purchase) (36159); skull of a fossil pig representing the genus *Elotherium* (36295).

Stone, A. J., New York City: Skin, skull, and leg bones of a Caribou. Purchase. 36107.

Stranahan, J. W., Everglade, Fla.: Suit of Seminole Indian. Purchase. 36168.

Straus, Hon. Oscar S. (See under Turkey, Sultan of.)

Strecker, Dr. H., Reading, Pa.: Seven specimens of Lepidoptera. 36228.

Strickland, F. P., Kansas City, Kans.: Twenty coins (foreign and domestic); 2 Confederate notes and fragments of notes (35305); arrow-head or spear-head from Wyandotte County (35438); foreign coin (35530).

Stringer, C. A., Munnsville, N.Y.: Larva of *Thyreus abbottii* Swainson. 36700.

Strong, Mrs. W. W., Kenosha, Wis.: Species of fungus (*Mitromyces*) from Virginia. 36408.

Strother, W. L., Vicksburg, Miss.: Moth (*Attacus polyphemus*) (35300); specimens of *Actias luna* Linnæus. (36305).

Sumpter, J. W., Elliston, Va.: Two eggs of a Hog-nose Snake (*Heterodon platirhinus*). 35434.

Suter, H., Christchurch, New Zealand. Received through Sir Charles Eliot: Unios from New Zealand. 35650.

Swain, C. O., Roslyn, Wash.: Six specimens of fossil leaves. 35406.

Swain, Thomas, Paradox, Colo.: Specimen of uranium ore and associations of clay and sandstone. 35334.

Sweetser, A. R., Forest Grove, Oreg.: Twenty-four plants. Exchange. 36623.

Swift, F. W., Alden, N. Y.: Nine specimens of *Meloe angusticollis* Say. 35527.

Switzer, Mrs. M., Vesuvius, Va.: Larvæ of a moth (*Hemileuca maia* Drury). 36600.

Tait, J. S., Phoenix, Ariz.: Collection of beetles. 35717.

Talbott, Henry (no address given): Specimen of Brunnich's Murre, *Uria lomvia* from Four Mile Run Bay, Virginia. 35862.

Talmage, Dr. J. E., Deseret Museum, Salt Lake City, Utah: Specimens of crude and refined salt from Great Salt Lake. Exchange. 35339.

Tanner, S. R., Brightwood, Va.: Specimen of *Dynastes tityus* Linnæus, and a specimen of *Orthosoma brunneum* Forster. 35419.

Tarbox, Mrs. J. H., Westport, Me.: Sphinx moth. 35269.

Tarleton, J. B., Seattle, Wash.: One hundred and seventy-one plants from Yukon, Alaska. Purchase. 36079.

Tassin, Wirt, U. S. National Museum: Canvas canoe. 35461.

Taylor, C. B., Kingston, Jamaica: Collection of insects from Jamaica (36239); 2 bats from Jamaica (*Nyctinomus*) (36698).

Taylor, Rev. G. W., Nanaimo, British Columbia: Two specimens of sponges (new species). 36145.

Taylor, Capt. J. R. M., U. S. A., Manila, P. I.: Set of stamped paper used by the insurgent government for deeds, transfers, petitions, and documents of record. 36439.

Taylor, Mrs. W. L., Welch, W. Va.: Crab spider (*Acrosoma rugosa* Hentz). 35483.

Thomas, Oldfield, British Museum, Cromwell road, London, England: Forty-six skins and skulls of mammals. 36216. (See under London, England, British Museum.)

Thompson, D'Arcy W., University College, Dundee, Scotland: Specimen of *Notoryctes typhlops*. Exchange. 35931.

Thompson, J. W., Philadelphia, Pa.: Plaster cast of rattlesnake from Texas. Purchase. 35733.

Thorn, Maj. Walter, Brooklyn, N. Y.: Medal of the Society of War Veterans and Sons. 35302.

Thorne, Mrs. S. C., Buffalo, N. Y.: Four hundred and sixty-six birds' skins collected by the late Capt. P. M. Thorne. Purchased. 36517.

Tiffany & Co., New York City: Twenty-one watches. Purchase. 35489.

Tilden, Miss Josephine, Minneapolis, Minn.: One hundred specimens of Algæ of North America. Purchase. 36290.

Tilden, Dr. W. C., Washington, D. C.: Snake (*Ophibolus doliatus*). 35561.

Todd, Commander C. C., U. S. N., Rio Janeiro, Brazil: Specimen of fossil wood from Brazil. 35306.

Topping, D. L., Washington, D. C.: Plant. Exchange. 35578.

Townes, William, Cuscowilla, Va.: Snake (*Ophibolus doliatus syspilus*). 35278.

Townsend, C. H., U. S. Fish Commission: Collection of objects from Tokelan, Solomon Island, New Britain, Samoa,

Townsend, C. H.—Continued.
and New Guinea (36122); ethnological objects from Easter, Solomon, Tonga, and Fiji Islands (36365); 6 skins of Birds of Paradise (36651). Purchase. (See under Wooton, E. O.)

Townsend, Prof. C. H. Tyler, Las Cruces, N. Mex.: Eight hundred and seventy-five specimens of Mexican Hymenoptera. Purchase. 35681.

Tracy, Prof. S. M., Biloxi, Miss.: One hundred and six plants (35679, 35757, 36109); received through the Department of Agriculture, 91 plants (36480), 3 specimens of *Hydrocotyle* and *Chamæcrista* from Florida (36567); plants (36640).

Traphagen, Prof. F. W., Bozeman, Mont.: Corundum in crystals and in gangue from Gallatin County, Mont. 36245.

Travers, S. H., Richmond, Va.: Two specimens of Digger-wasp, *Sphecius speciosus* Drury. 35542.

Treasury Department, Light-House Board. Received through A. B. Johnson: Specimen of bryozoan from the bottom of light-vessel No. 53, Charleston, S. C., in 1894, by John B. Gadsden. 35762.

True, Dr. F. W., U. S. National Museum: Specimens of *Mallotus villosus* taken from the stomach of a whale (*Balænoptera physalus*) from Snooks Arm, Newfoundland; marine invertebrates, specimens of sulphur and copper ores, and the pelvic bones of whales, from Newfoundland. 36050.

Tskamoto, Yasusi, Imperial University, Tokyo, Japan: Japanese copper coin, Temps-tzuho issued in 1840. 35682.

Turkey, Sultan of. Received through Hon. Oscar S. Strauss: Two vases and a hand-painted box containing porcelain products of the Imperial Ottoman potteries. 36373.

Turner, A. P., Roswell, N. Mex.: Caterpillar. 35454.

Turner, H. W., Fish Lake Valley, Nevada. Received through Department of Agriculture: Plant (*Sarcobatus baileyi* Coville). 36332. (See under Agriculture, Department of; Interior Department, U. S. Geological Survey.)

Twist, E. M., Norfolk, Va.: Fragments of pottery from Columbus Island, Republic of Colombia. 36280.

Tyler, A. A., Easton, Pa.: Forty specimens of violets. Exchange. 35314.

Ulmer, I. M., Butler, Ala.: Eleven arrow-points. 36686.

Umbach, L. M., Naperville, Ill.: Two hundred and fifty-four plants. Exchange. 35532.

Underwood, C. F., Museo Nacional, San José, Costa Rica. Received through José C. Zeledon: Hummingbird, *Microchera parvirostris* from Costa Rica. Gift. 36664.

Underwood, L. M., Columbia University, New York City: Twenty plants. Purchase. 35946.

United States Marble Company, Spokane, Wash. Received through Charles S. Nims, president: Five specimens of marble from Stevens County, Wash. 35741.

United States National Museum. The following models were made in the Anthropological Laboratory: Five plaster casts of stone relics (35371); model of an Indian village (35386); game board and dice from Korea; lamp stand (model natural size) from Korea (35493); small model of locomotive "Stourbridge Lion" (35602); model of a primitive log raft (35635); model of a primitive dugout (35636); model of an open dugout made to illustrate early experiments with paddle wheels by Roosevelt (35637); model of the U. S. gunboat *Monitor*, single turret (35638); model of Rumsey's steamboat (35639); model of John Fitch's steamboat (35640); cast of a copper celt lent to the Museum by Arthur Bibbins, of the Woman's College of Baltimore (35908); model of the locomotive "Tom Thumb" (36074); cast of a Seneca Indian pipe (36172); model of a Japanese Jinrikshaw (36206); 5 models of musical instruments (36482); 2 plaster casts of "Patu Patu" from New Zealand (36659).

Urba, Dr. K., Prague, Bohemia, Austria: Specimen of Lissa meteorite. Exchange. 36493.

URBAN, I., Botanical Museum, Berlin, Germany: Nine hundred and ninety-three plants from Porto Rico. Purchase. 36131.

URBINA, Dr. MANUEL. (See under Mexico, Mexico, National Museum.)

URICH, F. W., Port-of-Spain, Trinidad. Received through F. M. Chapman: Eleven birds' skins from Venezuela. 36071.

VAN DEUSEN, R. F., Mahopac, N. Y.: Moth (*Attacus promethea* Dr.). 35385.

VAN HORNE, C. F., Glen, N. Y.: Specimen of *Xylaria polymorpha*. 35345.

VANETTA, E. G., Academy of Natural Sciences, Philadelphia, Pa.: Specimens of *Zonitoides nummus* from Texas. 36203.

VAUGHAN, T. WAYLAND, U. S. Geological Survey: Land snails and shells from Eglon, W. Va. (35544); 6 specimens of *Balanophyllia* (?) *cornu* Socoloff, from Jekaterinoslaw, Russia (Oligocene fossil corals); topotypes and a part of the original type material received from Dr. Socoloff. (36631.) (See under Interior Department, U. S. Geological Survey.)

VELIE, J. W., St. Joseph, Mich.: Crustaceans from the western coast of Florida (35610); cast of a pin made from the column of "*Fulgur perversa.*" (35703.)

VERNER, Rev. SAMUEL P., Washington, D. C.: Collection of objects illustrating the arts of the people of the Upper Kassai River region in South Africa; also natural history specimens from the same locality. Purchase. 35839.

VERNON, Dr. J. B., New Boston, Ill.: Pathologic mussel shells and pearls from the Mississippi River (gift) (36248); 3 specimens of opals (purchase) (36279).

VERNON, J. B., Batesville, Ark.: Specimen of black marble from near Batesville. 36668.

VIENNA, AUSTRIA, K. K. NATURHISTORISCHEN HOFMUSEUM: One hundred cryptogams. Exchange. 35422.

VOLKMAR, Lieut. W. S., U. S. A., Fort McHenry, Baltimore, Md.: Mole Cricket, *Gryllotalpa borealis* Burm. 35647.

VRIERE, Baron RAOUL DE, Chateau du Baes-Veld, Phem, Zedelghem, Belgium; Collection of Belgian beetles. Exchange. 35792.

WADMOND, S. C., Racine, Wis.: Eighty specimens of violets from Wisconsin. Exchange. 36061.

WAGHORNE, ARTHUR, Bay of Islands, Newfoundland. Received through the Department of Agriculture: Seven plants. 35677.

WAGNER PALACE CAR COMPANY, New York City. Received through W. S. Webb, president: Models of sleeping cars. 35751.

WALCOTT, CHARLES D., jr., Washington, D. C.: Spotted salamander, *Ambystoma punctatum*, from Quebec, Canada. 35603.

WALKER, Maj. E. P., Washington, D. C.: Beetle (*Harpalus ruficornis*). 35268.

WALKER, H. P., Washington, D. C.: Specimen of *Pogonia pendula*, from New Hampshire. 36014.

WANGANUI, NEW ZEALAND, PUBLIC MUSEUM. Received through S. H. Drew: Fishes in alcohol, large lizard, crustaceans, and cuttlefish, 2 birds' skins and obsidian flakes. 35437.

WAR DEPARTMENT, Army Medical Museum: Collection of human bones made during the Hemenway Expedition (35301); transmitted by Maj. V. McNally, Ordnance Department: Two U. S. magazine rifles and two U. S. magazine carbines (35500). Received through Col. William S. Patten, Quartermaster-General's Office: Book of uniforms of the U. S. Army from 1774 to 1889 (36099).

WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N. Y.: Specimen of orbicular granite from Finland (purchase) (35512); specimen of heulandite (purchase) (35534); skeleton of porpoise (purchase) (35770); jaw of a small shark (purchase) (35799); specimen of Missouri meteorite and a specimen of Magdalena meteorite (exchange) (35890); cast of a human-headed winged lion and a cast of a human-headed winged bull (purchase) (35893); mounted skeleton of an Aye-Aye and 2 lemurs (purchase) (35938); 7 squir-

WARD'S NATURAL SCIENCE ESTABLISHMENT—Continued.
rels and 2 bats (purchase) (36112); 6 mammals from Como River, Africa (purchase) (36153); 13 mammal skins (purchase) (36458); 90 bats (purchase) (36687).

WARD, F. A., Rochester, N. Y.: Eleven birds' skins. Purchase. 36674.

WARD, Prof. L. F., U. S. Geological Survey: One hundred and twenty-two plants from Oregon (35631); 25 plants from the Grand Canyon of Colorado River (35847).

WASHINGTON AGRICULTURAL COLLEGE, Pullman, Wash. Received through R. W. Doane: Snake and a salamander. 36453.

WAUGH, F. W., Toronto, Canada: Ojibway sugar camp outfit. Purchase. 35744.

WAY, P. N., Tallapoosa, Ga. Received through Department of Agriculture: Two plants (35676); 38 plants (36680).

WEAST, H. H., East Ashford, N. Y.: Sphinx moth, *Protoparce carolina* Linnæus. 35746.

WEBB, J. G., Osprey, Fla.: Moth (*Ecpantheria scribonia* Stoll). 36106.

WEBB, W. S. (See under Wagner Palace Car Company.)

WEBBER, H. J., Washington, D. C.: Ten specimens of palm (*Serenoa*) from Florida. 36395.

WEED, W. H. (See under Interior Department, U. S. Geological Survey.)

WEEDEN, Mrs. THOMAS, Florence, Ariz.: Two specimens of Kissing bug (*Conorhinus sanguisugus* Lex.). 35439.

WEEDEN, W. C., U. S. National Museum: Turtle (35411); brown bat, *Vespertilio fuscus* (36180).

WEEKS, A. G., Jr., Boston, Mass.: Sixty specimens of Lepidoptera representing 33 species. Exchange. 36041.

WEHRLE, R. W., Indiana, Pa.: Beetle (*Coptocycla purpurata* Boheman). 35539.

WEINHEIMER, Lieut. CHARLES, U. S. A., Manila, P. I.: A species of *Capsicum* from the Philippine Islands. 36161.

WELLS, J. G., Carriacou, Grenada, West Indies: Pair of Cowbirds (*Molothrus*). 35402.

WERCKLE, C., San José, Costa Rica. Received through Department of Agriculture: Five plants. 35795.

WHEELER, J. A., Milford, N. H.: Seven specimens of violets from New Hampshire. Exchange. 35899.

WHEELER, Gen. JOSEPH, U. S. A., Paniqua, Luzon, P. I. Received through Department of Agriculture: Specimen of *Ceiba casearia* Medic from the Philippine Islands. 36083.

WHITE, DAVID, U. S. Geological Survey: Plant (*Camptosorus*) (35545). (See under Clearfield Charcoal Company; Interior Department, U. S. Geological Survey; Wood, James.)

WHITE, JAMES, Norfolk, Va.: Forty caliber revolver from the wreck of the *Reina Mercedes* and cartridges for the same (purchase) (35369); 1-pound cartridge and a china platter recovered from the wreck of the *Cristobal Colon;* also specimens of smokeless powder (35372).

WHITE, Dr. LEONARD, Washington, D. C.: Gun made by the Joslyn Erie Fire Arms Company, Stonington, Conn. 35722.

WHITED, KIRK. (See under Agriculture, Department of.)

WHITEHEAD, B., Jackson, Mont.: Ball of cast copper. 36343.

WICKHAM, G. M., Chicago, Ill.: Water bug (*Belostoma americanum*). 35292.

WIDRIG, R. G., Gerry, N. Y.: Specimen of Upper Devonian glass sponge. Exchange. 36100.

WILDER, B. G., Ithaca, N. Y.: Seventeen bats. 35922.

WILLIAMS, A. B., Greenville, S. C.: Carabid beetle, *Harpalus pennsylvanicus* De Geer. 35507.

WILLIAMS, Prof. H. S. (See under Interior Department, U. S. Geological Survey.)

WILLIAMS, J. O., Catoosa, Ind. T.: Chrysalis of a diurnal butterfly (*Danais archippus* Fabr.). 35295.

WILLIAMS, T. A., Takoma, D. C.: Dragon fly (*Aeschna*) (35589); 2 specimens of *Amanita strobiliformis* (35613); 10 specimens of *Myxomycetes* from South Dakota (exchange) (36426). (See under Agriculture, Department of.)

Williamson, C. P., Philadelphia, Pa.: Specimen of *Limoscila* (35417); specimen of *Viola pedata* (35525).

Williamson, E. B., Salem, Ohio. Received through W. P. Hay: Crayfish (*Cambarus argillicola*) from Bluffton, Ind. 36452.

Willis, Mrs. Ida G., Luray, Va.: Bat (*Myotis subulatus*) (36371); Jumping-mouse (*Zapus*) from Page County, Va. (36428.)

Willis, Capt. M. A., Riverton, Va.: Two specimens of Roach or Golden Shiner, *Notemigonous chrysoleucus*. 36694.

Willson, J. M., Kissimmee, Fla. Received through Department of Agriculture: Plant. 35274.

Wilson, J. H., Yonkers, N. Y.: Specimen of *Terebratella hemphillii*, from California. 36005.

Wilson, W. W., Sumner, Wash.: Specimens of aluminous silicate. 35763.

Winchell, N. H., University of Minnesota, Minneapolis, Minn.: Six hundred and seventeen specimens of New York Helderberg fossils. Exchange. 35736.

Wing, F. B., Norfolk, Va.: Beetle. 36252.

Winlock, W. C. (deceased), Smithsonian Institution: Metal model of the orbit of the comet of 1682. 36169.

Winston, Isaac, Washington, D. C.: Concretions from Colorado. 35885.

Wolcott, Mrs. H. L., Dedham, Mass.: Land and fresh-water shells from Hawaii (35979); specimens of the seed of *Cæsalpinia* (36035); fossils from the Silurian, Devonian, and Carboniferous systems (36334).

Woldrich, Dr. J. N., K. K. Bohemian National University, Prague, Bohemia: Eight pieces of moldavite. Exchange. 36215.

Wood, D. W., Washington, D. C.: Regulation sword carried by Gen. James B. McPherson, U. S. A., during the civil war, 1861–1865. 35765.

Wood, James, Anita, Pa. Received through David White: Fossil plant and fossil wood. 35791.

Wood, J. Medley. (See under Berea, Durban, Natal, Africa.)

Wood, N. R., U. S. National Museum: Specimen of *Geothlypis trichas* in unusual plumage from the District of Columbia, and a blue mountain duck from New Zealand (35793); 147 specimens of Odonata from Clyde, N. Y. (35830); 379 specimens of Odonata from the District of Columbia and vicinity (35831).

Woodruff, C. A. (See under Metz and Schloerb.)

Woods, W. L., Washington, D. C.: Fossil. 35480.

Woolson, G. A., Pittsford Mills, Vt.: Specimen of *Phyllachora pteridis*. 35444.

Wooton, E. O., Mesilla Park, N. Mex.: Eighteen plants from Mexico (gift) (36243); 250 plants collected by C. H. Townsend and C. M. Barber in Chihuahua, Mexico (purchase) (36644).

Worthen, C. R., Warsaw, Ill.: Tortoise from the Galapagos Islands. Purchase. 36626.

Wright, B. H., Penn Yan, N. Y.: Type specimen of *Unio danielsi* B. H. W. and 4 specimens of *Unio polymorphus* B. H. W. (from type lot), Georgia (35276); type specimens of *Unio dispalans* (35499); types of 2 species of southern unios (35666); 2 species of unios (35684); shell, type of *Unio conjugans* (35781); Unionidæ from the Southern States (35937); shells (35975); Unionidæ (36178).

Wright, Rev. T. F. (See under Palestine Exploration Fund.)

Yale University, New Haven, Conn. Received through Dr. C. E. Beecher: Model of *Stylonurus* restored to life size (gift) (35811); collection of Utica shale from Rome, N. Y., containing *Triarthrus* preserving limbs (exchange) (35812); Jerome meteorite (exchange) (35891); specimen of *Dalmanites limulurus*, 12 specimens of *Caryocrinus ornatus* and 2 specimens of *Ptychoparia kingi* (protaspis stage) (exchange) (36399).

Yates, J. W., Jr., Markham, Va.: Three specimens of limonite pseudomorph after pyrite from near Lexington, Va. 36580.

Young, C. G., Berbice, Sea Roads, Bexhill-on-Sea, England: Thirteen bats from Berbice, British Guiana (35662); 2 specimens of crab (*Dilocarinus dentatus*), from Guiana (35764).

Young, R. T., Boerne, Tex.: One hundred and three mammals from Europe (purchase) (35668); reptiles and batrachians (gift) (36617); reptiles, batrachians, and an insect from Texas (36656).

Young, Mrs. Susannah Holt, Washington, D. C.: Complete wedding dress of colonial times worn in 1784. 36612.

Zehnder, G. N., Arcata, Cal. (present address, Washington, D. C.): Basket hat from the Klamath Indians; 2 model cradles or baskets for carrying children and a small box of beads found in an Indian grave near Arcata. 35804.

Zeledon, José C. (See under San José, Costa Rica, Museo Nacional; Underwood, C. F.)

Zollikofer, E. H., St. Gallen, Switzerland: One hundred and eighty-two bats, shrews, and mice from Italy, Sardinia, and Switzerland. Purchase. 35250.

APPENDIX III.

Distribution of Specimens.

AFRICA.

Albany Museum, Grahamstown, South Africa: Fur seals (2 specimens). Exchange. (D. 13345.)

AMERICA.

North America.

CANADA.

Ontario.

Fowler, James, Kingston: Plants (10 specimens). Exchange. (D. 13085.)

Geological Survey of Canada, Ottawa: Fossil medusæ (15 specimens). Gift. (D. 13448.)

Lambe, Lawrence M., Ottawa: Fossil coral (1 specimen). Exchange. (D. 13385.)

Macoun, J. M., Ottawa: Plants (204 specimens). Exchange. (D. 12860, 13091.)

UNITED STATES.

Alabama.

Earle, F. S., Auburn: Plants (381 specimens). Exchange. Plant (1 specimen). Lent for study. (D. 12853, 13083, 13227.)

University of Alabama, Tuscaloosa: Fossil medusæ (13 specimens). Gift. (D. 13455.)

Arizona.

Blake, W. P., Tucson: Rocks (3 specimens and 1 thin section). Exchange. (D. 13383.)

California.

Brown, H. E., Santa Rosa: Plants (11 specimens). Lent for study. (D. 13208.)

California Academy of Sciences, San Francisco: Plants (10 specimens); bird skins (7 specimens). Exchange. (D. 13079, 13318.)

California—Continued.

Eastwood, Miss Alice, San Francisco: Plants (109 specimens). Exchange. (D. 12873.)

Gilbert, C. H., Stanford University: Lizards (2 specimens). Lent for study. (D. 13286.)

Grinnell, Joseph, Pasadena: Bird skins (104 specimens). Lent for study. (D. 13203, 13302.)

Hemphill, Henry, Oakland: Shells (10 specimens). Exchange. (D. 13027.)

Leland Stanford Junior University, Stanford University: Skeleton of great auk. Exchange. Fossil medusæ (15 specimens). Gift. Japanese fishes (3 boxes). Lent for study. (D. 13330, 13452, 13590.)

Parish, S. B., San Bernardino: Plants (45 specimens). Lent for study. (D. 13207.)

University of California, Berkeley: Plant (1 specimen). Exchange. (D. 13540.)

Colorado.

Bethel, E., Denver: Plants (81 specimens.) Exchange. (D. 12880, 13063.)

Cutler, J. E., Denver: *Apus equalis* (1 specimen). Exchange. (D. 13610.)

Hills, R. C., Denver: Meteorites (2 specimens). Exchange. (D. 13601.)

Osterhout, George E., New Windsor: Plants (10 specimens). Exchange. (D. 13113.)

Public School, Denver: Minerals (57 specimens, set 199). Gift. (D. 13642.)

State Historical and Natural History Society, Denver: Marine invertebrates (288 specimens, Series VI, set 93); insects (2,122 specimens); fishes (82 specimens); casts of pre-

Colorado—Continued.
historic implements (98 specimens); bird skins (67 specimens). Gift. (D. 13232, 13351, 13352.)

Connecticut.
Dana, E. S., New Haven: Portion of the Allegan meteorite. Exchange. (D. 13170.)
Eames, E. H., Bridgeport: Plants (10 specimens). Exchange. (D. 13080.)
Hall, Robert W., New Haven: *Palæmonetes* (980 specimens). Lent for study. (D. 13075, 13659.)
Norton, C. A. Q., Hartford: Lamps (9 specimens). Exchange. (D. 13526.)
Peabody Museum, New Haven: Fossil medusæ (26 specimens). Gift. (D. 13450.)
State Normal School, New Haven: Marine invertebrates (288 specimens, Series VI, set 92). Gift. (D. 13164.)
Wortman, J. L., New Haven: Skull of fur seal (1 specimen). Lent for study. (D. 13411.)
Yale University Museum, New Haven: Fossils (710 specimens). Exchange. (D. 13653.)

Delaware.
Canby, W. M., Wilmington: Plants (21 specimens). Exchange. (D. 13359, 13068.)

District of Columbia.
Ashe, W. W., Washington: Plates illustrating turpentine industry. Lent for study. (D. 13197.)
Benjamin, Mrs. Marcus, Washington: Pomo Indian baskets (2 specimens). Exchange. (D. 13042.)
Buffington, A. R., Washington: Arkansas novaculite (1 specimen). Lent for study. (D. 13643.)
Columbian University, Washington: Marine invertebrates (291 specimens, Series VI, set 90). Gift. (D. 13088.)
Greene, E. L., Washington: Plants (133 specimens). Exchange. Plants (30 specimens). Lent for study. (D. 12862, 13109, 13502, 13604.)
Hasbrouck, Dr. E. M., Washington: Peacock (1 specimen). Exchange. (D. 13312.)
Jennings, Foster H., Washington: Navajo basket (1 specimen); Indian pipe (1 specimen). Exchange. (D. 12901.)
Maxon, W. R., Washington: Bird skins (2 specimens). Exchange. (D. 12951.)
Morris, E. L., Washington: Plants (151 specimens). Exchange. (D. 12874, 13138.)
Pollard, Edward, Washington: Arrows (6 specimens). Exchange. (D. 12792.)
Ridgway, Robert, Brookland: Bird skins (430 specimens). Lent for study. (D. 13634, 13712.)
U. S. Fish Commission, Washington: Shells (8 specimens). Gift. (D. 13436.)
Wood, N. R., Washington: Bird skins (4 specimens). Exchange. (D. 13272.)

Florida.
Curtiss, A. H., Jacksonville: Fossil medusæ (385 specimens). Exchange. (D. 13481.)

Georgia.
Gilbert, B. D., Thomasville: Plants (10 specimens). Exchange. (D. 13501.)

Illinois.
Barnes, C. R., Chicago: Plants (157 specimens). Exchange. (D. 12865.)
Coulter, J. M., Chicago: Plants (3 specimens). Exchange. (D. 13611.)
Dorsey, George A., Chicago: Skull from Calaveras County, Cal. (1 specimen). Lent for study. (D. 13086.)
Elliot, D. G., Chicago: Skulls of seals (2 specimens); skulls of mammals (2 specimens); skulls of bats (2 specimens). Lent for study. (D. 13487, 13548, 13714, 13555.)
Field Columbian Museum, Chicago: Portion of meteorite. Exchange. Fossil medusæ (13 specimens). Gift. Alcoholic fishes (3 specimens). Lent for study. (D. 13180, 13454, 13530.)
Herbarium of Chicago University, Chicago: Plant (1 specimen). Gift. (D. 13288.)
High School, Muncie: Marine invertebrates (288 specimens, Series VI, set 91). Gift. (D. 13163.)
Iddings, J. F., Chicago: Rocks (3 specimens). Exchange. (D. 12834.)
Johnson, Charles F., Freeport: Plants

Illinois—Continued.
(82 specimens). Exchange. (D. 13368.)
Jones, C. H., Springfield: Rocks (30 specimens). For examination. (D. 13016.)
Millspaugh, C. F., Chicago: Plants (291 specimens). Exchange. Plants (49 specimens). Lent for study. (D. 12882, 13137, 13693.)
Smallwood, Miss Mabel E., Chicago: Marine invertebrates (10 specimens). For study. (D. 13557.)
St. Francis Solanus College, Quincy: Minerals (57 specimens, set 197). Gift. (D. 13381.)
Umbach, L. M., Naperville: Plants (632 specimens). Exchange. (D. 12852, 13105.)
University of Chicago, Chicago: Fossil medusæ (14 specimens). Gift. (D. 13451.)
Ward, H. A., Chicago: Section of meteoric iron. Exchange. (D. 13124.)

Indiana.
Ethington, Ernest L., Terre Haute: Geological material (11 specimens). For examination. (D. 13228.)
Public schools, Jonesboro: Marine invertebrates (291 specimens, Series VI, set 89). Gift. (D. 13074.)

Iowa.
Ellsworth College, Iowa Falls: Minerals (57 specimens, set 196); marine invertebrates (288 specimens, Series VI, set 96). Gift. (D. 13363.)
Historical Department of Iowa, Des Moines: Baskets and models (21 specimens). Gift. (D. 13165.)
Pammell, L. H., Ames: Plants (204 specimens). Exchange. (D. 12871.)
Public school, Odebolt: Casts of stone implements (98 specimens, set 69). Gift. (D. 13261.)
Putnam, Mrs. Charles E., Davenport: Ethnological material (4 specimens); Strike-a-light candlestick. Exchange. (D. 13697, 13534.)
Simpson College, Indianola: Marine invertebrates (10 specimens). Gift. (D. 13593.)
Summer, H. E., Ames: Hemiptera (131 specimens). Lent for study. (D. 12809.)

Kansas.
City Schools, Burlington: Marine invertebrates (294 specimens, Series VI, set 86); marine invertebrates (Series VI, set 88). Gift. (D. 12974, 13051.)
Fairmount College, Wichita: Marine invertebrates (320 specimens, Series V, set 100). Gift. (D. 13598.)
Hitchcock, A. S., Manhattan: Plants (627 specimens). Exchange. (D. 12856, 13090.)
Strickland, Frank P., Kansas City: Birds' eggs (7 specimens). Exchange. (D. 12934.)

Maine.
Cushing, Frank H., Haven: Plaster casts of stone pipes and carvings (6 specimens). Lent for study. (D. 12830.)
Good Will Home for Boys, East Fairfield: Marine invertebrates (300 specimens, Series VI, set 84). Gift. (D. 12828.)

Maryland.
McNulty, D. L., Laurel: Wolf skin (1 specimen). Exchange. (D. 13535.)
Woman's College, Baltimore: Mounted specimen of young polar bear and seal; casts of stone implements (98 specimens, set 68). Gift. Mounted mammals (23 specimens). Exchange. (D. 13556, 12804, 13335.)

Massachusetts.
Atwater, W. O., Boston: Materials showing the composition of the human body. Lent for study. (D. 13026.)
Bangs, Outram, Boston: Bird skins (62 specimens). Lent for study. (D. 13245, 13246, 13595.)
Bigelow School, Marlboro: Geological material (5 specimens). Gift. (D. 13060.)
Cummings, Miss Clara E., Wellesley: Plants (31 specimens). Exchange. (D. 13343.)
Deane, Walter, Cambridge: Plants (82 specimens). Exchange. (D. 12857, 13064, 13630.)
Doane, R. W., Cambridge: Insects (324 specimens). Lent for study and exchange. (D. 12922.)
Eastman, C. R., Cambridge: Fossil (1 specimen); negative of Gar skull. Lent for study. (D. 13482, 13532.)

Massachusetts—Continued.

Fernald, C. H., Amherst: Moths (25 specimens). Lent for study. (D. 13529.)

Fernald, M. L., Cambridge: Plants (10 specimens). Exchange. Plants (55 specimens). Lent for study. (D. 13081, 13539.)

Frazer, George B., West Medford: Magnetic sand. Exchange. (D. 13434.)

Gray, G. M., Woods Hole: Crinoids. Exchange. (D. 13315.)

Gray Herbarium, Cambridge: Plants (1,097 specimens). Exchange. Plants (788 specimens). Lent for study. (D. 13216, 13344, 13408, 13605, 13692, 13698.)

Greenman, J. M., Cambridge: Plants (5 specimens). Lent for study. (D. 12825.)

Henderson, L. F., Boston: Plants (12 specimens). Lent for study. (D. 13299, 13682.)

High School, Brookline: Casts of stone implements (set 71). Gift. (D. 13446.)

Howe, Reginald H., jr., Cambridge: Bird skins (29 specimens). Lent for study. (D. 13006, 13597.)

Hyatt, Alpheus, Boston: Shells (1,005 specimens). Lent for study. (D. 13491.)

Massachusetts Institute of Technology, Boston: Ores (43 specimens). Exchange. (D. 13134.)

Museum of Comparative Zoology, Cambridge: Crabs (6 specimens). Exchange. (D. 13049.)

Robinson, B. L., Cambridge: Plants (68 specimens). Exchange. Plants (9 specimens). Lent for study. (D. 12867, 13136, 13558.)

Vaughan, A. K., Boston: Infusorial earth (11 samples). For examination. (D. 13476.)

Weeks, A. G., jr., Boston: Lepidoptera (32 specimens). Exchange. (D. 13499.)

Michigan.

Clark, Hubert Lyman, Olivet: Marine invertebrates (3 specimens); Holothurians (609 specimens). Lent for study. (D. 13001, 13517.)

Michigan—Continued.

Holmes, S. J., Ann Arbor: Crabs (3 specimens). Lent for study. (D. 12975.)

Reeder, John T., Calumet: Minerals (11 specimens). Exchange. (D. 12816.)

Wheeler, C. F., Agricultural College: Plants (52 specimens). Exchange. (D. 12851.)

Minnesota.

Heatwole, J. P., Northfield: Pottery (60 specimens); Indian basketry (7 specimens). Exchange. (D. 13723.)

Holzinger, J. M., Winona: Mosses (146 specimens). Exchange. (D. 12888.)

MacMillan, Conway, Minneapolis: Plants (75 specimens). Exchange. (D. 12883, 13110.)

University of Minnesota, Minneapolis: Fossils (758 specimens). Exchange. (D. 12171.)

Missouri.

Bush, B. F., Courtney: Plants (87 specimens). Exchange. (D. 12876.)

Glatfelter, N. M., St. Louis: Plants (10 specimens). Exchange. (D. 13082.)

Hambach, G., St. Louis: Blastoids (1,138 specimens). Lent for study. (D. 13009.)

Kreite, R., Kansas City: Fossils (126 specimens). Exchange. (D. 13010.)

Missouri Botanical Garden, St. Louis: Living plant. Gift. Seeds (57 packets); three photographs; plants (3 specimens). Exchange. (D. 13166, 13641.)

Trelease, William, St. Louis: Plants (236 specimens). Exchange. Plants (125 specimens). Lent for study. (D. 12866, 13111, 13429, 13640.)

Nebraska.

Bessey, C. E., Lincoln: Plants (59 specimens). Exchange. (D. 12877.)

Nevada.

Grout, A. J., Plymouth: Mosses (183 specimens). Exchange. (D. 12887.)

New Hampshire.

Clough, L., East Concord: Rocks (11 specimens). Exchange. (D. 13371.)

Hitchcock, C. H., Hanover: Ores and rocks (51 specimens). Exchange. (D. 13293.)

New Hampshire—Continued.

Richardson, C. H., Hanover: Blow pipe material (30 pounds). Exchange. (D. 13057.)

New Jersey.

Emmons, Lieut. G. T., Princeton: Ethnological material (6 specimens). Exchange. (D. 13235.)

Mann, Albert, Belmar: Diatomaceous deposits. Lent for study. (D. 13464.)

Princeton University, Princeton: Fossil medusæ (13 specimens). Gift. Skull of tapir, teeth of mastodon and rhinoceros. Exchange. (D. 13453, 13521.)

Scott, W. B., Princeton: Bird skins (40 specimens). Lent for study. (D. 13387.)

Rusby, H. H., Newark: Plants (16 specimens). Lent for study. (D. 12785.)

New Mexico.

Cockerell, Theodore D. A., Mesilla Park: Plants (3 specimens). Exchange. (D. 13238.)

New York.

American Museum of Natural History, New York: Crania of Utah, Navajo, and Apache Indians (45 specimens). Lent for study. (D. 13215.)

Allen, J. A., New York: *Glossophaga elongata* (2 specimens). Exchange. Bird skins (10 specimens). Lent for study. (D. 13632, 13702.)

Arnold, Mrs. Francis B., New York: Foraminifera (5 lots). Lent for study. (D. 13579.)

Bicknell, E. P., Riverdale-on-Hudson: Plants (10 specimens). Exchange. (D. 13107.)

Britton, Mrs. E. G., New York: Plants (47 specimens). Exchange. (D. 12861, 12912.)

Britton, N. L., Bronx Park: Plants (17 specimens.) Exchange. Plants (271 specimens). Lent for study. (D. 13067, 13472, 13512.)

Burnham, Stewart H., Vaughns: Plants (10 specimens). Exchange. (D. 13069.)

Chapman, Frank M., New York: Bird skins (320 specimens). Lent for study. (D. 12906, 13267.)

New York—Continued.

Clute, Willard N., Bronx Park: Plants (126 specimens). Lent for study. (D. 13115.)

Cowell, John F., Buffalo: Plants (10 specimens). Exchange. (D. 13065.)

Dwight, Jonathan, jr., New York: Birds (7 specimens). Lent for study. (D. 13614.)

Eaton, A. A., Seabrook: Plants (134 specimens). Exchange. Plants (191 specimens). Lent for study. (D. 12879, 12948, 13084, 13264, 13304, 13406, 13463.)

Ethical Culture Schools, New York: Marine invertebrates (300 specimens, Series VI, set 55). Gift. (D. 13724.)

George Junior Republic, Freeville: Ethnological material (235 specimens); marine invertebrates (51 specimens). Gift. (D. 13054.)

Glen Island Museum, New Rochelle: Casts of fossils (2 specimens). Exchange. (D. 13364.)

Hay, O. P., New York: Scale of fossil fish. Lent for study. (D. 13382.)

Heller, A. A., New York: Plants (10 specimens). Exchange. (D. 13135.)

Hulst, Rev. George D., Brooklyn: Moths (220 specimens). Lent for study. (D. 13527, 13633.)

Kunz, George F., New York: Ores (56 specimens). Exchange. (D. 12999.)

Manual Training High School, Brooklyn: Marine invertebrates (291 specimens, Series VI, set 98); casts of stone implements (98 specimens, set 73). Gift. (D. 13573.)

New York Botanical Garden, Bronx Park: Plants (2 specimens); plants from Philippine Islands (92 specimens). Exchange. Plants (29 specimens). Lent for study. (D. 13152, 13369, 13580.)

Osborn, H. F., New York: Teeth of fossil horse (27 specimens). Lent for study. (D. 13639.)

Public School No. 3, Yonkers: Marine invertebrates (288 specimens, Series VI, set 97). Gift. (D. 13433.)

Rowlee, W. W., Ithaca: Plants (116 specimens). Exchange. (D. 12859, 13106.)

New York—Continued.

Small, John K., New York: Plants (589 specimens). Exchange. Plants (2 specimens). Lent for study. (D. 12870, 13305.)

Rydberg, P. A., Bronx Park: Plants (2 specimens). Lent for study. (D. 12979.)

Underwood, L. M., New York: Plants (671 specimens). Lent for study. (D. 12813, 12994, 13117, 13409.)

Widrig, Robert G., Gerry: Fossils (9 specimens). Exchange. (D. 13339.)

North Carolina.

Ashe, W. W., Raleigh: Plants (130 specimens). Lent for study. (D. 13503.)

Beadle, C. D., Biltmore: Plants (927 specimens). Exchange. (D. 12869, 13070.)

Ohio.

Comstock, F. M., Cleveland: Plants (121 specimens). Exchange. (D. 12881, 13108.)

Edwards, Charles L., Cincinnati: Holothurians (1,672 specimens). Lent for study. (D. 13563.)

Matlack, Mr., Columbus: One transparency. Exchange. (D. 13717.)

Public schools, Tiffin: Marine invertebrates (316 specimens, Series V, set 99); casts of stone implements (96 specimens, set 72). Gift. (D. 13566.)

Oregon.

Cusick, William C., Union: Plant (1 specimen). Exchange. (D. 13362.)

Sweetzer, Albert R., Forest Grove: Plants (11 specimens). Exchange. (D. 12970.)

Pennsylvania.

Carnegie Institute, Pittsburg: One model each of Conestoga wagon, American stage coach, American colonial chaise, John Bull locomotive and one car, Japanese jinrikisha, Mexican cart and Korean chair. Lent for examination. (D. 12932, 12942, 12992, 13181, 13600, 13670.)

Crawford, Joseph D., Philadelphia: Plants (46 specimens). Exchange. (D. 13139.)

Culin, Stewart, Philadelphia: Collection of Indian games. Lent for study. (D. 13416.)

Pennsylvania—Continued.

Ehrmann, George A., Pittsburg: Beetles and diptera (17 specimens). Exchange. (D. 13101.)

High School, Bradford: Geological and paleontological material (28 specimens). Gift. (D. 13420.)

MacElwee, Ellis, Philadelphia: Plants (10 specimens). Exchange. (D. 13112.)

Moore, J. Percy, Philadelphia: Leeches (55 specimens). Lent for study. (D. 13358.)

Philadelphia Academy of Sciences, Philadelphia: Plants (22 specimens). Exchange. (D. 13493.)

Stone, Witmer, Philadelphia: Bird skins (8 specimens); mammals (124 specimens). Lent for study. Bats (2 specimens). Exchange. (D. 12930, 12950, 13609, 13234, 13095.)

University of Pennsylvania, Philadelphia: Plant (1 specimen). Gift. (D. 13291.)

Rhode Island.

Collin, J. Franklin, Providence: Plants (10 specimens). Exchange. (D. 13066.)

Museum of Natural History, Providence: Marine invertebrates (288 specimens, Series VI, set 94). Gift. (D. 13334.)

South Carolina.

Anderson, Alexander P., Clemson College: Plants (66 specimens). Exchange. (D. 12875.)

Tennessee.

University of Tennessee, Knoxville: Fossil medusæ (15 specimens). Gift. (D. 13439.)

Texas.

Bray, W. L., Austin: Plants (70 specimens). Exchange. (D. 12858.)

Marble Falls Academy, Marble Falls: Minerals (57 specimens, set 198). Gift. (D. 13488.)

Price, R. H., College Station: Plants (14 specimens). Exchange. (D. 12872.)

Utah.

Jones, Marcus E., Salt Lake City: Plants (11 specimens). Exchange. (D. 13092, 13386.)

Vermont.

Hitchcock Library and Museum, Westfield: Marine invertebrates (297 specimens, Series VI, set 87). Gift. (D. 13032.)

Jones, L. R., Burlington: Plants (34 specimens). Exchange. (D. 12878.)

Pringle, C. G., Charlotte: Plants (2 specimens). Exchange. (D. 13116.)

Waugh, F. A., Burlington: Plants (25 specimens). Lent for study. (D. 12955.)

Virginia.

Daniel, Joseph W., jr., Lynchburg: Birds' eggs (43 specimens). Exchange. (D. 13204.)

Riley, J. H., Falls Church. Bird skins (6 specimens). Exchange. (D. 12928.)

University of Virginia, Charlottesville: Pottery (32 specimens). Exchange. (D. 12943.)

Washington.

Allen, O. D., Ashford: Plant (1 specimen). Exchange. (D. 13361.)

Flett, J. B., Tacoma: Plant (1 specimen). Exchange. (D. 13360.)

University of Washington, Seattle: Fish (1 specimen). Gift. (D. 13157.)

West Virginia.

Pollock, W. M., Buckhannon: Plants (95 specimens). Exchange. (D. 12868.)

State Normal School, Shepherdstown: Marine invertebrates (291 specimens, Series VI, set 95). Gift. (D. 13346.)

Wisconsin.

La Crosse High School, La Crosse: Marine invertebrates (303 specimens, Series VI, set 83). Gift. (D. 12817.)

Nowlan, Mrs. Oscar F., Jaynesville: Minerals (30 specimens). Exchange. (D. 13474.)

Public School, Eau Claire: Marine invertebrates (297 specimens, Series VI, set 85). Gift. (D. 12908.)

University of Wisconsin, Madison: Plant (1 specimen). Gift. (D. 13289.)

Wyoming.

Nelson, Aven, Laramie: Plants (10 specimens). Exchange. (D. 13089.)

University of Wyoming, Laramie: Plant (1 specimen). Gift. (D. 13290.)

SOUTH AMERICA.

ARGENTINA.

Ruscherveyh, G., Buenos Ayres: Lepidoptera (97 specimens). Exchange. (D. 12794.)

BRAZIL.

Museu Paulista, São Paulo: Fossils (172 specimens). Exchange. (D. 13438.)

ASIA.

INDIA.

Prain, David, Bengal: Plants (406 specimens). Exchange. (D. 12896.)

EUROPE.

AUSTRIA.

Beck, G. von, Vienna: Plants (115 specimens). Exchange. (D. 12895.)

Heimerl, Anton, Vienna: Plants (518 specimens). Lent for study. (D. 13314.)

Imperial Royal Geological Establishment, Vienna: Fossil medusæ (18 specimens). Gift. (D. 13471.)

Royal Bohemian Museum, Prague: Fossils (266 specimens); rocks (4 specimens). Exchange. (D. 13182.)

Simmer, Hans, Carinthia: Plants (960 specimens). Exchange. (D. 12864.)

Vrba, K., Prague: Meteorites (2 specimens). Exchange. (D. 13538.)

Woldrich, J. N., Prague: Geological material (6 specimens). Exchange. (D. 13509.)

BELGIUM.

Royal Museum of Natural History, Brussels: Fossil medusæ (13 specimens). Gift. (D. 13462.)

DENMARK.

Warming, Eug., Copenhagen: Plants (159 specimens). Exchange. (D. 12863.)

FRANCE.

André, Ernest, Haute-Saône: Insects (140 specimens). Exchange. (D. 13591.)

Coutiere, H., Paris: Alpheidæ (1,263 specimens). Lent for study. (D. 13524.)

Edwards, Prof. A. Milne, Paris: Cave insects (11 specimens). Exchange. (D. 13048.)

Gandoger, Michel, Villefranche: Plants (135 specimens). Exchange. (D. 12892.)

Mecernier, Stanislaus, Paris: Meteorite (1 specimen). Exchange. (D. 13574.)

Miguel, Jean, Barrubio, Hérault: Fossils (681 specimens); stone implements, shell beans and fragments of pottery (59 specimens). Exchange. (D. 13528.)

Sayeux, L., Paris: Geological material (5 specimens). Lent for study. (D. 13034.)

GERMANY.

Engler, A., Berlin: Plants (152 specimens). Exchange. (D. 12891.)

Geological and Paleontological Institute, Munich: Fossils (128 specimens). Exchange. (D. 13470.)

Haeckel, Ernst, Jena: Fossil medusæ (20 specimens). For study. (D. 13458.)

Huene, F. von, Tubingen: Fossils (28 specimens). Exchange. (D. 13423.)

Kleinschmidt, Otto, Nierstein-on-Rhine: Bird skins (2 specimens). Exchange. (D. 13055.)

Krantz, F., Bonn: Meteorites (4 specimens). Exchange. (D. 13627.)

Lejeune, Adolf, Frankfort: Fossils (226 specimens). Exchange. (D. 13417.)

Rosenbusch, H., Heidelberg: Rocks (3 specimens). Exchange. (D. 13313.)

Royal Zoological Museum, Dresden: Skins and skulls of North American animals (100 specimens); Indian baskets (8 specimens). Exchange. (D. 13374, 13720.)

Schellwein, Ernst, Königsberg: Fossils (709 specimens). Lent for study. (D. 13419.)

GREAT BRITAIN.

England.

Baker, E. G., London: Plants (24 specimens). Lent for study. (D. 13425.)

Barrett-Hamilton, G. E. H., London: Co-types *Mus arianus griseus* (2 specimens). Lent for study. (D. 13375.)

England—Continued.

British Museum (Natural History), London: Plants (344 specimens). Exchange. Fossil medusæ (16 specimens). Gift. Plants (26 specimens); moth (1 specimen). Lent for study. (D. 12894, 13644, 13456, 13645, 13686.)

Cambridge University, Cambridge: Fossil medusæ (16 specimens). Gift. (D. 13461.)

Doyle, W. E., Manchester: Octopus (1 specimen). Lent for study. (D. 13596.)

Druery, Charles T., London: Plant (1 specimen). Exchange. (D. 12788.)

Horniman Museum, London: Plaster casts of stone pipes (9 specimens). Exchange. (D. 12855.)

Lankester, Prof. E. Ray, London: Star-nosed mole (1 specimen). For study. (D. 13087.)

Lovett, Edward, Croydon: Pottery (12 specimens). Exchange. (D. 12803.)

Manchester Museum, Manchester: Casts (3 specimens); fossils (6 specimens). Gift. (D. 13422.)

Mason, G. E., London: Shells (6 specimens). Exchange. (D. 13205.)

Parritt, H. W., London: Echinoderms and crustacea (38 specimens). Exchange. (D. 13114.)

Royal Gardens, Kew: Plants (32 specimens). Lent for study. Three photographs; plants (7 specimens); seeds (55 packets). Exchange. (D. 13143, 13646, 12836, 13647.)

Sharpe, R. Bowdler, London: Bird skins (48 specimens). Lent for study. (D. 12940.)

Thomas, Oldfield, London: Red-backed mice (30 specimens); mammal (1 specimen). Lent for study. Skin and skull of opossum. Exchange. (D. 12964, 13002, 13148.)

Scotland.

Balfour, Isaac Bayley, Edinburgh: Plants (149 specimens). Exchange. (D. 12893.)

University College, Dundee: Alcoholic fishes (26 specimens). Exchange. (D. 13377.)

HOLLAND.

Jentink, F. A., Leyden: Bats (4 specimens). Exchange. Bat (1 specimen). Lent for study. (D. 13196.)

ITALY.

Civic Museum of Natural History, Milan: Fishes (40 specimens). Exchange. (D. 12799.)

Gestro, R., Genoa: *Zapus* (4 specimens). Exchange. (D. 13149.)

Magretti, Paolo, Milan: Hymenoptera (518 specimens). Exchange. (D. 13581.)

Mayer, P., Naples: Caprellidæ (14 specimens.) Lent for study. (D. 13511.)

Zoological Museum, Turin: Crabs (3 specimens); crustacea (86 specimens). Exchange. (D. 13295, 13522.)

NORWAY.

Zoological Museum, Christiana: Small mammals (15 specimens). Exchange. (D. 13154.)

RUSSIA.

Imperial Academy of Sciences, St. Petersburg: Fossil medusæ (16 specimens). Gift. (D. 13460.)

Klinge, J., St. Petersburg: Plants (43 specimens). Lent for study. (D. 13281.)

Museum of the Academy of Sciences, St. Petersburg: Meadow mice (10 specimens). Exchange. (D. 13297.)

Socoloff, D., Taschla: Cretaceous fossils (19 specimens). Exchange. (D. 13276.)

SWEDEN.

Botanical Garden, Upsala: Plants (10 specimens). Exchange. (D. 12824.)

Cohner, Teodor, Upsala: Alcoholic worms (3 specimens); one slide. Lent for study. (D. 13186.)

Royal Natural History Museum, Stockholm: Fossil medusæ (17 specimens). Gift. (D. 13457.)

SWITZERLAND.

Kathariner, L., Freiburg: Snake (1 specimen). For study. (D. 13301.)

Narbel, Paul, Cour, Lausanne: Mammals (4 specimens); mammal skins and skulls (12 specimens). Exchange. (D. 13287, 13687.)

OCEANICA.

AUSTRALASIA.

AUSTRALIA.

Reed, Walter D., Adelaide, South Australia: Shells (907 specimens). Exchange. (D. 13132.)

Grant, F. H. McK., Melbourne, Victoria: Stone implements (9 specimens). Exchange. (D. 13569.)

NEW ZEALAND.

Canterbury Museum, Christchurch: Ethnological material (68 specimens). Exchange. (D. 13721.)

Public Museum, Wanganui: Mounted mammals (18 specimens). Exchange. (D. 13046.)

APPENDIX IV.

Bibliography.

PUBLICATIONS OF THE MUSEUM.[1]

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 1. | — | Washington: | Government Printing Office. | 1899. |

8vo, pp. I–XXVII, 1–1021, pls. 150.

PROCEEDINGS.

Smithsonian Institution. | United States National Museum. | — | Proceedings | of the | United States National Museum. | — | Volume XXI. | — | Published under the direction of the Smithsonian Institution. | — | Washington: | Government Printing Office. | 1899. |

8vo pp. I–XIII, 1–933, pls. 1–89.

BULLETIN.

Smithsonian Institution. | United States National Museum. | — | Bulletin | of the | United States National Museum.— No. 47. | — | The Fishes | of | North and Middle America: | A descriptive catalogue of the species of fish-like vertebrates found in | the waters of North America, north of the Isthmus of Panama. | By | David Starr Jordan, Ph. D., | President of the Leland Stanford Junior University and of the | California Academy of Sciences, | and | Barton Warren Evermann, Ph. D., | Ichthyologist of the United States Fish Commission. | Part IV. | Washington: | Government Printing Office. | 1900. |

8vo, pp. I–CI, 3137–3313, pls. 1–392.

Smithsonian Institution. | United States National Museum. | — | The Methods Employed at the Naples | Zoological Station for the Pres- | ervation of Marine Animals. | By | Dr. Salvatore Lo Bianco. | Translated from the original Italian | by | Edmund Otis Hovey. | — | Part M of Bulletin of the United States National Museum, No. 39. | — | Washington: | Government Printing Office. | 1899. |

8vo, pp. [1]–[42], 1 plate.

Smithsonian Institution. | United States National Museum. | — | Directions for Preparing Study | Specimens of Small | Mammals. | By | Gerrit S. Miller, Jr., | Assistant Curator, Division of Mammals. | — | Part N of Bulletin of the United States National Museum, No. 39. | — | Washington: | Government Printing Office. | 1899.

8vo, pp. [1]–[10], 1 fig.

Smithsonian Institution. | United States National Museum. | — | Directions for Collecting and Rearing | Dragon Flies, Stone Flies, and | May Flies. | By | James G. Needham, Ph. D., | Lake Forest College, Lake Forest, Illinois. | — | Part O of Bulletin of the United States National Museum, No. 39. | — | Washington: | Government Printing Office. | 1899.

8vo, pp. [1]–[9], figs. 1–4.

[1] The titles of the papers from the Report and Proceedings which were published in separate form during the year are given in Appendix V.

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

ADLER, CYRUS. The Hebrew collection in the National Museum.

Jewish Comment (Baltimore), X, No. 13, Jan. 12, 1900, p. 1.

ASHMEAD, WILLIAM H. Description of the type of *Polyodontoscelis* Ashmead.

Psyche, VIII, No. 279, July, 1899, pp. 387, 388.

Described *Polyodontoscelis cinctifrons*, from Florida.

——— Classification of the Entomophilous Wasps, or the superfamily Sphegoidea. (Paper No. 2.)

Canadian Entomologist, XXXI, No. 7, July, 1899, pp. 161–174.

Treats of the family Oxybelidæ and part of the Crabronidæ. Twenty-two genera are tabulated, of which 7 are new. The family Crabronidæ is divided into 5 subfamilies. A list of the North American species, arranged under their respective genera, as proposed in this paper, is also given.

——— Classification of the Entomophilous Wasps, or the superfamily Sphegoidea. (Paper No. 3.)

Canadian Entomologist, XXXI, No. 8, Aug., 1899, pp. 212–225.

Treats of the remaining subfamilies and genera of the Crabronidæ and of the family Pemphredonidæ. Thirty-two genera are tabulated, of which 7 are new. The Pemphredonidæ are divided into 2 subfamilies, the Pemphredoninæ and the Pseninæ.

——— Classification of the Entomophilous Wasps, or the superfamily Sphegoidea. (Paper No. 4.)

Canadian Entomologist, XXXI, No. 9, Sept., 1899, pp. 238–251.

Treats of the families Bembicidæ and Larridæ. In the former 5 genera are tabulated, while in the latter 4 subfamilies and 38 genera are tabulated. *Pscudohelioyetes*, new genus, is described from Africa. All the North American species falling in these families are listed.

——— Classification of the Entomophilous Wasps, or the superfamily Sphegoidea. (Paper No. 5.)

Canadian Entomologist, XXXI, No, 10, Oct., 1899, pp. 291–300.

Treats of the families Philanthidæ, Trypoxylidæ, and Mellinidæ. The Philanthidæ are divided into two subfamilies, the Cercerinæ and the Philanthinæ. In the former 5 genera are recognized; in the latter 9, of which 2 are new, *Epiphilanthus* and *Pscudanthophilus*. In the Trypoxylidæ only 2 genera are noted. The family Mellinidæ, as here defined, contains 8 genera, 4 being new, viz, *Harpactostigma*, *Hypomellinus*, *Mellinogastra*, and *Hapalomellinus*. The paper terminates with a list of the North American species.

ASHMEAD, WILLIAM H. Classification of the Entomophilous Wasps, or the superfamily Sphegoidæ. (Paper No. 6.)

Canadian Entomologist, XXXI, No. 11, Nov., 1899, pp. 322–330.

Treats of the family Nyssonidæ, which is divided into 4 subfamilies, Gorytinæ, Alysoninæ, Nyssoninæ, and Astatinæ. In all, 26 genera are tabulated, of which 3 are new, viz, *Pseudoplisus*, *Argogorytes*, and *Metanysson*. All the North American species are listed.

——— Classification of the Entomophilous Wasps, or the superfamily Sphegoidæ. (Paper No. 7, conclusion.)

Canadian Entomologist, XXXI, No. 12, Dec., 1899, pp. 345–357.

Treats of the families Stizidæ, Sphegidæ, and Ampulicidæ. In the Sphegidæ 4 subfamilies have been recognized, while in the Ampulicidæ but 2 subfamilies are defined. In all, 38 genera are tabulated. A list of all the North American species is also given.

——— The largest Oak-gall in the world and its parasites.

Entomological News, X, No. 7, Sept., 1899, pp. 193–196.

Describes the gall and gall-maker, *Andricus* (*Cynips*) *championi* Cameron, from Mexico, its inquiline, *Synergus dugesii*, new species, and a parasite, *Torymus mexicanus*, new species.

——— On the genera of the chalcid-flies belonging to the subfamily Encyrtinæ.

Proc. U. S. Nat. Mus., XXII, No. 1202, June 5, 1900, pp. 323–412.

Defines the family Encyrtidæ and divides it into 3 subfamilies, Eupelminæ, Encyrtinæ, and Signiphorinæ. After a brief historical sketch of the genera of the Encyrtinæ, which are divided into 4 tribes, viz, Ectromini, Encyrtini, Mirini, and Arrhenophagini, the author gives tables for recognizing the genera, 90 of which are tabulated, 24 being new. The paper terminates with a bibliographical and synonymical catalogue of 292 species, 38 of which are new and are described here for the first time.

——— Classification of the fossorial, predaceous, and parasitic wasps, or the superfamily Vespoidea. (Paper No. 1.)

Canadian Entomologist, XXXII, No. 5, May, 1900, pp. 145–155.

In this great complex, the author recognizes and tabulates 15 distinct families. The first of these, the family Pompilidæ, is then taken up, and after a brief historical sketch of the genera, he gives his view in regard to its classification and divides it into 6 subfamilies, viz, the Pepsinæ, Agenioinæ, Pompilinæ, Planicepinæ Notocyphinæ, and Ceropalinæ.

ASHMEAD, William H. Classification of the fossorial, predaceous, and parasitic wasps, or the superfamily Vespoidea. (Paper No. 2.)

Canadian Entomologist, xxxii, No. 6, June, 1900, pp. 185–188.

In this paper the genera of the subfamily Pepsinæ are tabulated. Fifteen genera have been recognized, 3 being new, viz, *Tetraodontonyx*, *Calopompilus*, and *Ferrcolomorpha*.

ASHMEAD, William H., and SMITH, John B. Order Hymenoptera.

Smith's Insects of New Jersey, 8vo, Trenton, N. J., 1900, pp. 501–613.

The paper contains a list of 1,718 species of these insects found in the State of New Jersey: the arrangement of the superfamilies, families, and tribes being in accordance with Mr. Ashmead's views on the classification of these insects.

BANGS, Outram. On some new or rare birds from the Sierra Nevada de Santa Marta, Colombia.

Proc. Biol. Soc. Wash., xiii, Nov. 11, 1890, pp. 91–108.

An annotated list of 68 species, of which the following are new: *Pharomachrus festatus*, p. 92; *Metallura districta*, p. 94; *Ochthodiæta pernix*, p. 95; *Hapalocercus paulus*, p. 96; *Myiopatis montensis*, p. 97; *Piprcola aureipectus decora*, p. 98; *Sclerurus albigularis propinquus*, p. 99; *Conopophaga browni*, p. 100; *Scytalopus latebricola*, p. 101; *Haplospiza nivaria*, p. 102; *Cinclus rivularis*, p. 105; *Troglodytes monticola*, p. 106, and *Merula albiventris fusa*, p. 107.

——— The Gray-breasted Wood Wrens of the Sierra Nevada de Santa Marta.

Proc. N. E. Zool. Club, i, Dec. 27, 1899, pp. 83, 84.

Two species are here compared, *Henicorhina leucophrys* (Tsch.) and *H. anachoreta*, a new form.

——— On a small collection of birds from San Sebastian, Colombia.

Proc. N. E. Zool. Club, i, Dec. 27, 1899, pp. 75–80.

A list of 29 species, with notes. *Accstrura astreans*, p. 76, is new.

——— A review of the Three-toed Woodpeckers of North America.

Auk, xvii, No. 2, Apr., 1900, pp. 126–142.

A synopsis of the North American species of *Picoides*. Six forms are recognized, of which 3 are new, viz, *Picoides arcticus tenuirostris*, p. 131; *P. americanus bacatus*, p. 136, and *P. a. labradorius*, p. 138.

——— Description of a new Rice Grackle.

Proc. N. E. Zool. Club, ii, June 30, 1900, pp. 11, 12.

Cassidix oryzivora violæ is described as new.

BANKS, Nathan. The Smynthuridæ of Long Island, N. Y.

Journ. N. Y. Ent. Soc., vii, No. 3, Sept., 1899, pp. 193–197.

A synopsis of 13 species occurring on Long Island, of which 6 are new.

——— The Psocids from an old snake fence.

Entomological News, x, No. 9, Nov., 1899, pp. 260, 261.

Notes on 4 species.

——— On two genera of Mites.

Canadian Entomologist, xxxii, No. 2, Feb., 1900, pp. 30–33.

Notes on *Rhagidia* and *Lucasiella*.

——— A new genus of Atropidæ.

Entomological News, xi, No. 4, Apr., 1900, pp. 431, 432, 1 fig.

Description of *Psocinella stossonæ*.

——— Some new North American spiders.

Canadian Entomologist, xxxii, No. 4, Apr., 1900, pp. 431, 432, 1 fig.

Description of 12 new species.

——— The Scorpions, Solpugids, and Pedipalpi. Synopses of North American invertebrates. ix.

Am. Naturalist, xxxiv, No. 401, May, 1900, pp. 421–427, 4 figs.

Tables for the species occurring in the United States.

——— The red spiders of the United States (*Tetranychus* and *Stigmæus*).

Bull. Div. Ent., U. S. Dept. Agric. (Technical Series) No. 8, June, 1900, pp. 65–77, 16 figs.

A revision of the group.

——— New genera and species of Nearctic neuropteroid insects.

Trans. Am. Ent. Soc., xxvi, June, 1900, pp. 239–259.

Descriptions of 6 new genera and 44 new species.

BARTSCH, Paul. *Ammodromus nelsoni* in Iowa.

Auk, xvi, July, 1899, pp. 276, 277.

Recording Nelson's Sparrow for the first time for the State of Iowa, the specimen having been collected by the writer.

——— An ambitious Hummer.

Osprey, iv, No. 1, Sept., 1899, p. 14.

This is the first record of the Ruby-throated Humming bird laying three eggs. The nest was found in the District of Columbia by the writer.

BARTSCH, PAUL. [Review of] Butler's Birds of Indiana.

Osprey, IV, No. 1, Sept., 1899, p. 16.

——— The first record of *Turdus swainsoni* in Russia.

Osprey, IV, No. 5, Jan., 1900, p. 79.

A translation from the German of N. von Ssomaw.

——— [Review of] On the Birds' Highway. By R. Weber Howe.

Osprey, IV, No. 5, Jan., 1900, p. 80.

——— A note on birds observed on women's hats in a street car.

Osprey, IV, No. 7, Mar., 1900, p. 111.

——— [Review of] Birds Afield. By Keeler.

Osprey, IV, No. 7, Mar., 1900, p. 112.

——— [Review of] Bird Studies with a Camera. By F. M. Chapman.

Osprey, IV, No. 10, June, 1900, p. 157.

——— Birds of the road.

Osprey, IV, No. 5, Jan., 1900, pp. 65–67, 2 figs.; No. 6, Feb., 1900, pp. 81–83, 2 figs.; No. 7, Mar., 1900, pp. 99–101, 2 figs.; No. 8, Apr., 1900, pp. 114–118, 4 figs.; No. 9, May, 1900, pp. 131–134, 3 figs.; No. 10, June, 1900, pp. 145–149, 7 figs.

This series of popular articles discusses the birds of Washington and its vicinity. Figures of the common forms and photographs of nests with eggs and young accompany the articles.

BEAN, BARTON A. (See under H. M. SMITH.)

BISHOP, LOUIS B. Descriptions of three new birds from Alaska.

Auk, XVII, No. 2, Apr., 1900, pp. 113–120.

Canachites canadensis osgoodi, p. 114; *Sayornis saya yukonensis*, p. 115, and *Contopus richardsonii saturatus*, p. 116, are described as new. Critical notes on *Parus hudsonicus cvura* and *Hylocichla ustulatus almæ* are added.

CAUDELL, ANDREW N. A new species of *Sinea*.

Canadian Entomologist, XXXII, No. 3, Mar., 1900, pp. 67, 68.

Describes *Sinea complexa*, from California.

CHITTENDEN, FRANK H. Insect enemies of the white pine.

Bull. Div. Forestry, U. S. Dept. Agric., No. 22; reprint, Sept. 23, 1899, pp. 55–61, figs. 5–15.

A short general account of the more important insects affecting *Pinus strobus*, including a list of others known to attack this tree. Two of the illustrations are original.

CHITTENDEN, FRANK H. The Bronze Apple-tree Weevil (*Magdalis æneascens* Lec.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 37–44, figs. 25, 26.

General account in connection with recent injury to trees in Washington State, including approximate life history with biologic notes by C. V. Piper, and the relation of attack to that of *Macrophoma curvispora*, the conclusion being that the fungus is probably the primary cause of injury. Two original illustrations.

——— Insects and the weather: Observations during the season of 1899.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 51–64.

A consideration of the effects of weather upon the increase and decrease of injurious insects, with particular reference to results following the cold winter of 1898–99. The paper includes a consideration of the life zones about the District of Columbia; a list of species, indicating the southern character of its insect fauna; lists of southern species which were appreciably lessened as a consequence of cold snaps, and of the corresponding increase of northern species in the same latitude; observations on species common to both North and South which were, as a rule, not materially affected; comparisons with results of the cold on insects in other States, and speculations as to the probable increase or decrease of certain of these insects during following seasons, etc.

——— Food plants and injury of North American species of *Agrilus*.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 64–68.

Special mention of *Agrilus anxius*, *A. otiosus*, and *A. bilineatus*, with list of 22 species, with food plants and references.

——— On the recent spread of the Mediterranean Flour Moth (*Ephestia kuehniella*).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 97, 98.

A brief review of reported invasion of flour mills by *Ephestia kuehniella* in North America, with account of outbreak at St. Paul, Minn.

——— Note on two species of Lightning Hoppers.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 98, 99.

Biological observations on *Ormenis* (*Pecitoptera*) *pruinosa* and *Chlorochroa* (*Flata*) *conica*, with mention of new food plants for both species.

CHITTENDEN, FRANK H. Biologic observations on *Harpalus pennsylvanicus* De G.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 100–104.

——— A note on the Cocklebur Bill-bug.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 104, 105.

A review of food plants of *Rhodobænus 13-punctatus* Ill., with additions and biologic notes.

——— A new vine borer of lima beans (*Monoptilota nubilella* Hulst).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 9–17, fig. 1.

A general account of this species, with technical descriptions of the genus and species (after Hulst) and of the earlier stages by the writer. One original illustration.

——— The Smaller Corn-stalk Borer (*Elasmopalpus lignosellus* Zell.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 17–22, figs. 2–4.

A general account, including mention of new food plants, new localities, and one original and two adapted illustrations.

——— The Pale-striped Flea-beetle (*Systena blanda* Mels.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 22–29, figs. 5, 6.

A full, general account of this species, with original records, other observations, and two original illustrations.

——— Observations of the Bean Leaf-beetle (*Ceratoma trifurcata* Forst.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 30, 31.

Additional notes on injuries, etc.

——— Notes on the Imbricated Snout-beetle (*Epicærus imbricatus* Say).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 31, 32, fig. 7.

Supplementary observations to a former paper, with an original illustration of a fungus-infected beetle.

——— A new Tingitid on bean (*Gargaphia angulata* Heid.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 32, 33, fig. 8.

A short account, with one original illustration.

CHITTENDEN, FRANK H. The destructive Green-pea Louse (*Nectarophora destructor* Johns.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 33–37, fig. 9.

A general account, with particular reference to reported injuries supplementary to those reported by Johnson in Bulletin No. 20, pp. 94–99. One original illustration.

——— A note on the Mexican Bean Weevil (*Spermophagus pectoralis* Sharp).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 37, 38, fig. 10.

Notes supplementary to two former papers, with a quotation from a publication of 1858, showing the probability of this species being synonymous with *S. semifasciatus*.

——— The Cabbage Curculio (*Ceutorhynchus rapæ* Gyll.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 39–50, figs. 11, 12.

A general economic article, including a practically complete account of the insect's life history, with two original illustrations. The species is identified as the European *C. rapæ*.

——— Remarks on the food habits of species of *Ceutorhynchus*.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 50–53.

Biologic notes on 5 European and 5 native or introduced American species of the genus.

——— Additional notes on the Imported Cabbage Web-worm (*Hellula undalis* Fab.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 53–61, fig. 13.

Includes a consideration of new localities and additional literature, with other observations looking toward a more complete account of this species.

——— The Common Rhubarb Curculio (*Lixus concavus* Say).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 61–69, figs. 14–16.

A rather full general economic account, with three original figures.

——— The Strawberry Flea-beetle (*Haltica ignita* Ill.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 70–78, figs. 17, 18.

A general economic account of this species with two original illustrations.

CHITTENDEN, FRANK H. The Fall Army worm in 1899 (*Laphygma frugiperda* S. and A.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 78–85, fig. 19.

A preliminary account with particular reference to reported injuries during 1899. One original illustration.

——— The Strawberry Crown Moth (*Sesia rutilans* Hy. Edw.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 85–90, fig. 20.

A general account, with one original figure.

——— The Black Gooseberry Borer (*Xylocrius agassizii* Lec.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 23, May 7, 1900, pp. 90–92, figs. 21–23.

A short general account based on notes received through Dr. James Fletcher, and an account published by him in his report for the year 1898 (pp. 207–210).

CLARKE, FRANK W., and STEIGER, GEORGE. Experiments relative to the constitution of pectolite, pyrophyllite, calamine, and analcite.

Am. Journ. Sci., VIII, 1899, p. 245.

——— The action of ammonium chloride upon analcite and leucite.

Am. Journ. Sci., IX, 1900, p. 117.

——— The action of ammonium chloride upon natrolite, scolecite, prehnite, and pectolite.

Am. Journ. Sci., IX, 1900, p. 345.

CLARKE, JOHN M. The Paleozoic faunas of Para, Brazil. 1. The Silurian fauna of the Rio Trombetas. 2. The Devonian Mollusca of the State of Para.

Archivos de Museu Nacional de Rio de Janeiro, X, 1899. Author's English edition, Albany, N. Y., 1900, pp. 1–127, pls. 1–8.

The Silurian fauna, Dr. Clarke writes, "is a middle Silurian one, though a quite different association of species from that described from the island of Anticosti as middle Silurian by M. Billings."

The second part treats of the Devonian mollusca of the State of Para and completes the description of the Para fauna by Messrs. Ch. Fred Hartt and Richard Rathbun. Some of the illustrated material is in the U. S. National Museum.

CLARKE, JOHN M., and SCHUCHERT, CHARLES. The nomenclature of the New York series of geological formations.

Science (new series), X, Dec. 15, 1899, pp. 874–878.

The American standard Paleozoic section is here redefined and brought up to date.

COOKE, GEORGE H. Te Pito Te Henua, known as Rapa Nui; commonly called Easter Island, South Pacific Ocean.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1899), pp. 689–723.

COQUILLETT, DANIEL W. New genera and species of Nycteribidæ and Hippoboscidæ.

Canadian Entomologist, XXXI, No. 11, Nov., 1899, pp. 333–336.

Describes 2 new genera and 3 new species of Nycteribidæ, gives a synoptic table of the 6 North American genera of the fully winged Hippoboscidæ, 2 of which are new, and describes 1 new species.

——— Notes and descriptions of Trypetidæ.

Journ. N. Y. Ent. Soc., VII, No. 4, Dec., 1899, pp. 259–268.

Describes 1 new genus and 17 new species, gives synonymical notes and generic references of several other species, and concludes with a synoptic table of the 23 genera which occur in the United States.

——— Two new Cecidomyians destructive to the buds of roses.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 44–48.

Gives the habits, distribution, and description of 2 new species, and figures 1 of them, for which a new genus is erected.

——— A new violet pest.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 48–51.

Gives the habits, together with a description and figure, of a new species of *Diplosis*.

——— New genera and species of Ephydridæ.

Canadian Entomologist, XXXII, No. 2, Feb., 1900, pp. 33–36.

Describes 2 new genera and 7 new species.

——— Notes and descriptions of Ortalidæ.

Journ. N. Y. Ent. Soc., VIII, No. 1, March, 1900, pp. 21–25.

Describes 1 new genus and 10 new species, with synonymical notes and generic references of several other species.

COQUILLETT, DANIEL W. Two new genera of Diptera.

Entomological News, XI, No. 4, April, 1900, pp. 429, 430.

Describes 2 new genera and 2 new species, with a figure of the head and wing of one of them.

——— Report on a collection of dipterous insects from Porto Rico.

Proc. U. S. Nat. Mus., XXII, No. 1198, May 12, 1900, pp. 249–270.

Gives a list, with localities, dates of capture, and general distribution, of 117 species of Diptera collected by Mr. August Busck, of the U. S. Department of Agriculture. Three of the genera and 16 of the species are described as new.

——— New Scenopinidæ from the United States.

Entomological News, XI, No. 6, June, 1900, p. 500.

Gives a synoptic table of the 3 genera, 1 of which is new, and describes 2 new species.

——— Description of a new parasitic tachinid fly from Ceylon.

Indian Museum Notes, IV, 1899, p. 279.

Describes and figures a new species of *Exorista*.

COULTER, JOHN M. (See under J. N. ROSE.)

CURRIE, ROLLA PATTESON. New species of North American Myrmeleonidæ V.

Canadian Entomologist, XXXI, No. 12, Dec., 1899, pp. 361–365.

Describes for the first time the male of *Brachynemurus tuberculatus* Banks, and gives descriptions of 2 new species of the same genus, *B. papago* and *B. pusillus*.

DALL, W. H. Synopsis of the Solenidæ of North America and the Antilles.

Proc. U. S. Nat. Mus., XXII, No. 1185, Oct. 9, 1899, pp. 107–112.

This synopsis shows the species of the region referred to and the groups to which they belong, with synonyms.

Ensis minor, *E. californicus*, and *Solen mexicanus* are described as new; *Ensis directus* Conrad is substituted for *Ensatella americana* Beek, a later name in common use, and *Psammosolen* Risso, not Hupé, for the later *Macha* of Oken. Some supplementary notes to the author's Synopsis of the Psammobiidæ, 1898, are added, in which the genus *Novaculina* Benson is redefined, a new section, *Clunaculum* Dall, proposed, and a new species, *Tagelus poeyi* Dall, from Cuba is described.

DALL, W. H. Synopsis of the American species of the family Diplodontidæ.

Journ. Conchology, IX, No. 8, Oct., 1899, pp. 244–246.

This synopsis exhibits the groups into which this family is divided, the genera already described and their synonyms. Section *Felaniella* Dall, based on *Felania usta* Gould, and section *Phlyctiderma* Dall, based on *Diplodonta semiaspera* Philippi, are described as new. *Diplodonia verrillii* Dall is proposed as a new name for *D. turgida* Verrill and Smith, not Conrad; *D. semirugosa* Dall is proposed as a new name for *D. semiaspera* Carpenter, not of Philippi. *Diplodonta platensis*, from Argentina, is described as new.

——— The mollusk fauna of the Pribilof Islands.

The Fur Seals and Fur Seal Islands of the North Pacific Ocean, Part III, 1899 (Nov.), pp. 539–546, and map.

This paper discusses the distribution of mollusks in Bering Sea and vicinity and its causes, the characteristics of the littoral fauna, and those of the very distinct plateau fauna of the offshore shallows of Bering Sea. Lists of the species known to inhabit the Pribilof and Commander islands are given, followed by an enumeration of the fossil mollusks of St. Paul Island. The map shows the summer and winter southern limits of pack ice, and the direction of currents of the sea bearing upon the distribution of animal life in this region.

——— Note on *Sigaretus oldroydii*.

Nautilus, XIII, No. 8, Dec., 1899, p. 85.

Notes the discovery of the adult form of this species, and describes its characters from specimens dredged at Drakes Bay, California, by J. S. Arnheim.

——— Origin of the mutations of *Ostrea*.

Nautilus, XIII, No. 8, Dec., 1899, pp. 91–93.

Reprint of a discussion of this subject in *Transactions of the Wagner Free Institute of Science*, III, part IV, 1898.

——— A new species of *Capulus* from California.

Nautilus, XIII, No. 9, Jan., 1900, p. 100.

Describes *Capulus californicus* as new, from a specimen dredged in 20 fathoms off San Pedro. In a note attention is called to the nepionic shell of *Petricola*.

——— Note on *Petricola denticulata* Sowerby.

Nautilus, XIII, No. 11, Mar., 1900, pp. 121, 122.

Shows that the nepionic shell of *P. denticulata* is identical with Carpenter's *Psephis tellimyalis*, and after growth has taken place and the shell is adult, the dark colors of the larval shell fade out entirely.

DALL, W. H. Notes on the Tertiary geology of Oahu.

Bull. Geol. Soc. Amer., XI, Mar., 1900, pp. 57–60.

Records observations on the raised reefs and terraces of Oahu, and concludes that, with the exception of certain beds very near the sea level, the formations referred to are of Tertiary age.

——— A new species of *Lima*.

Nautilus, XIV, No. 2, June, 1900, pp. 15, 16.

A new species of the type of *Lima excavata*, from clays pierced by the city tunnels of Los Angeles, Cal., is described under the name of *Lima hamlini*. It is probably Pliocene.

——— Alaskan notes.

Nation, LXIX, No. 1781, Aug. 17, 1899, pp. 127, 128.

A summary account of the apparent changes in conditions on the Alaskan coast since 1895.

——— Impressions of Honolulu.

Nation, LXIX, No. 1792, Nov. 2, 1899, pp. 331, 332.

An account of the conditions existing in Oahu during the summer of 1899, and the changes indicated since earlier days, especially in the flora and fauna.

——— Alaska and the Klondike.

Science (new series), No. 260, Dec. 22, 1899, pp. 929, 930.

Review of Heilprin's work of the name cited.

——— [Review of] Preliminary report on the geology of Louisiana.

Science (new series), XI, No. 280, May 11, 1900, pp. 745, 746.

Review of Prof. G. D. Harris's report of the above name.

——— Note on a new abyssal limpet.

Science (new series), XI, No. 284, June 8, 1900, p. 914.

Account of a peculiar deep-sea limpet, *Bathysciadium conicum* D. and F., and its anatomy.

——— Additions to the insular land shell faunas of the Pacific coast, especially of the Galapagos and Cocos islands.

Proc. Acad. Nat. Sci. Phila., 1900, pp. 88–106.

This paper may be regarded as supplementing one on the same subject in the Proceedings of the Academy of Natural Sciences of Philadelphia for 1896, pp. 395–497. It enumerates the species collected by the Stanford expedition to the Galapagos and Cocos islands and by others at various localities along the shore from Panama northward.

Bulimulus snodgrassi, *Bulimulus approximatus*, *Bulimulus hoodensis*, *Vitrea actinophora*, and *Endodonta helleri* (from the Galapagos), are described as new, and a species previously described and figured but not named is now named *Bulimulus indefatigabilis*.

Trochomorpha bauri is changed to *Guppya bauri* and *Leptinaria chathamensis* to *Tornatellina chathamensis*. From Cocos Island *Guppya hopkinsi*, *Leptinaria martensi*, and *Vertigo cocosensis* are described as new. Other new forms are *Epiphragmophora leucanthca* from Cerros Island, *E. crassula* from Natividad Island, *E. guadalupensis* from Guadalupe Island, *Epiphragmophora catalinæ* from Catalina Island, *E. clementina* from San Clemente Island, and *E. orcutti* from Lower California. The new forms are figured on Plate VIII.

DALL, W. H.—Continued.

DYAR, HARRISON G. Life history of *Notodonta georgica*.

Entomological News, X, No. 7, Sept., 1899, pp. 202–204.

——— A new genus of Cochlidiidæ from Virginia.

Journ. N. Y. Ent. Soc., VII, No. 3, Sept., 1899, pp. 208, 209.

Describes the genus *Isochætes*.

——— Life history of a European slug caterpillar, *Cochlidion avellana*.

Journ. N. Y. Ent. Soc., VII, No. 3, Sept., 1899, pp. 202–208, pl. V, figs. 1–13.

——— A new *Plagodis* (*P. approximaria*).

Canadian Entomologist, XXXI, No. 9, Sept., 1899, p. 266.

——— Description of the larva of *Hadena miseloides*.

Canadian Entomologist, XXXI, No. 10, Oct., 1899, p. 286.

——— Life histories of New York slug caterpillars.

Journ. N. Y. Ent. Soc., VII, No. 4, Dec., 1899, pp. 234–253, pls. VI–VIII.

Concluding remarks on the New York Cochlidiidæ.

——— Description of the mature larva of *Acronycta connecta*.

Journ. N. Y. Ent. Soc., VII, No. 4, Dec., 1899, p. 253.

——— A note on African Limacodidæ.

Ent. Tidsk., XX, No. 4, 1899, pp. 231, 232.

——— *Bombyx cunea* Dru.

Canadian Entomologist, XXXII, No. 1, Jan., 1900, p. 16.

Short note in a discussion on this species, started by Rev. Dr. Fyles.

YAR, HARRISON G. A new cochlidian of the palæarctic group.

Entomological News, XI, No. 1, Jan., 1900, pp. 333, 334.

Describes *Tortricidia fiskeana*.

——— Notes on some North American Yponomeutidæ.

Canadian Entomologist, XXXII, No. 2, Feb., 1900, pp. 37–41; No. 3, Mar., 1900, pp. 84–86.

Synoptic tables and bibliography of North American species.

——— On the larvæ of *Atomacera* and some other sawflies.

Journ. N. Y. Ent. Soc., VIII, No. 1, Mar., 1900, pp. 26–31.

——— A new zygænid from Arizona.

Journ. N. Y. Ent. Soc., VIII, No. 1, Mar., 1900, p. 32.

Describes *Gingla lateralis*.

——— Preliminary notes on the larvæ of the genus *Arctia*.

Journ. N. Y. Ent. Soc., VIII, No. 1, Mar., 1900, pp. 34–47.

——— Life history of *Margarodes flegia*.

Canadian Entomologist, XXXII, No. 4, Apr., 1900, p. 117.

——— The larva of *Eustrixia pupula*.

Canadian Entomologist, XXXII, No. 5, May, 1900, p. 155.

——— Larvæ from Hawaii.

Canadian Entomologist, XXXII, No. 5, May, 1900, p. 156.

Notes on 5 larvæ from the Hawaiian Islands.

——— Life histories of North American Geometridæ, II–XII.

Psyche, VIII, No. 279, July, 1899, pp. 386, 387; No. 280, Aug., 1899, pp. 395, 396; No. 281, Sept., 1899, pp. 407, 408; No. 282, Oct., 1899, pp. 415, 416; No. 283, Nov., 1899, p. 429; No. 284, Dec., 1899, p. 438; IX, No. 285, Jan., 1900, pp. 9, 10; No. 285, Jan., 1900, pp. 10, 11; No. 286, Feb., 1900, pp. 21, 22; No. 289, May, 1900, pp. 59, 66; No. 290, June, 1900, pp. 69, 70.

EVERMANN, BARTON WARREN, and MARSH, MILLARD CALEB. Descriptions of new genera and species of fishes from Porto Rico.

Rep. U. S. Fish Com., 1899, pp. 351–362.

In this paper the authors describe as new 3 genera and 20 species of fishes which were obtained in January and February, 1899, by the steamer *Fish Hawk*.

The types are deposited in the National Museum.

FLINT, JAMES M. Recent Foraminifera. A descriptive catalogue of specimens dredged by the U. S. Fish Commission steamer *Albatross*.

Rep. Smithsonian Inst. (*U. S. Nat. Mus.*), 1897 (1899), pp. 249–349, pls. 1–80.

The material here catalogued is chiefly from the North Atlantic Ocean and the Gulf of Mexico. The figures are from photographs of mounted specimens enlarged about fifteen diameters. An analytical key to families and genera is given; also descriptions of families, genera, and species.

GANE, HENRY STEWART. Some Neocene corals of the United States.

Proc. U. S. Nat. Mus., XXII, No. 1193, Apr. 20, 1900, pp. 179–198, pl. XV.

GIRTY, GEORGE H. Devonian and Carboniferous fossils of the Yellowstone National Park.

Monogr. U. S. Geol. Surv., XXXII, Sept., 1899, pp. 479–599, pls. 66–71.

Describes the Devonian and Carboniferous fossils occurring in the Yellowstone National Park. All of the material is in the National Museum.

——— Preliminary report on Paleozoic invertebrate fossils from the region of the McAlester Coal Field, Indian Territory.

19th Ann. Rep. U. S. Geol. Surv., 1899, pp. 539–600, pls. 70–72.

Describes the Lower Helderberg and Carboniferous material and lists the Ordovician species of the McAlester-Lehigh Coal Field, Indian Territory. All of the material is in the National Museum.

HAY, O. P. Descriptions of two new species of tortoises from the Tertiary of the United States.

Proc. U. S. Nat. Mus., XXII, No. 1181, Oct. 7, 1899, pp. 21–24, pls. IV–VI.

——— Description of some vertebrates of the carboniferous age.

Proc. Am. Philosoph. Soc., XXXIX, 1900, No. 161, pp. 96–123, pl. 7.

HAY, W. P. Synopses of North American invertebrates. VI.—The Astacidæ of North America.

Am. Naturalist, XXXIII, No. 396, Dec., 1899 (1900), pp. 957–966, 1 text fig.

The species found on the whole continent of North America are included. Two lists are given, one in which the species are arranged in natural groups with their geographical distribution indicated, and the other an artificial key for the ready determination of species.

HAY, W. P. Description of two new species of crayfish.

Proc. U. S. Nat. Mus., XXII, No. 1187, Oct. 11, 1899, pp. 121–123, 2 text figs.

Two new species of crayfish (*Cambarus pilosus* and *C. clypeatus*) from Kansas and Mississippi, respectively, are described and figured.

HOLMES, WILLIAM H. A preliminary revision of the evidence relating to auriferous gravel man in California.

Am. Anthropologist (new series), I, Part I, Jan., 1899, pp. 107–120; Part II, Oct., 1899, pp. 614–645.

HOUGH, WALTER. Oriental influences in Mexico.

Am. Anthropologist (new series), II, No. 1, Jan.–Mar., 1900, pp. 66–74.

This paper points out the great influx of oriental arts and products into Mexico subsequent to the discovery of the Philippines.

HOWARD, LELAND O. Spider bites and "Kissing bugs."

Appleton's Popular Science Monthly, Nov., 1899, LVI, No. 1, pp. 31–42, 7 figs.

Gives an account of the newspaper scare of the summer of 1899 in regard to the insects popularly known as kissing bugs; describes the habits of 7 species of heteropterous insects concerned in the comparatively small number of bites which gave rise to the scare.

——— A remedy for gadflies; Porchinski's recent discoveries in Russia, with some American observations.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 20, Nov., 1899, pp. 24–28.

Showing how Porchinski has discovered that gadflies (Tabanidæ) frequent pools of water for drinking purposes and are captured and destroyed by a kerosene film on the surface of the water; showing also how the writer had discovered this same drinking habit and mentioned it in his original account of an experiment against mosquitoes, in *Insect Life*, vol. V, p. 13.

——— The present status of the Caprifig experiments in California.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 20, Nov., 1899, pp 28–35. Reprinted in *Scientific American* Supplement, Feb. 3, 1900, pp. 20144, 20145.

An account of the introduction and establishment of *Blastophaga grossorum* at Fresno, Cal., under the auspices of the U. S. Department of Agriculture, together with a brief review of the habits of the insect and the fertilization of the figs in oriental regions.

HOWARD, LELAND O. Report of the entomologist for 1899.

Rep. Secy. Agric., 1899, pp. 43–52 (Dec., 1899).

An account of the work of the Division of Entomology for the fiscal year ending June 30, 1899, with recommendations concerning future work.

——— An interesting case of the use of insects as food.

Scientific American, Feb. 3, 1900, p. 71.

An account of the use of the "Bugong Moth" (*Agrotis infusa* Boisduval) by the natives of Australia.

——— The two most abundant Pulvinarias on maple.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 7–23, 17 figs.

Full biology of *Pulvinaria innumerabilis* Rathvon and *P. acericola* Walsh and Riley.

——— The insects to which the name "Kissing bug" was applied during the summer of 1899.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 24–30, 7 figs.

——— General notes and notes from correspondence.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 22, Feb. 20, 1900, pp. 93–109.

A number of unsigned notes.

——— Progress in economic entomology in the United States.

Yearbook U. S. Dept. Agric., 1899, June 1, 1900, pp. 135–156, 1 pl.

Account of the development of economic entomology during the present century.

——— A new genus of Aphelininæ from Chile.

Canadian Entomologist, XXXII, June, 1900, pp. 167, 168.

Description of *Aphytis* n. g., *chilensis*, n. sp.

HOWARD, LELAND O., and MARLATT, C. L. The original home of the San Jose scale.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 20, Nov., 1899, pp. 36–38.

Discusses the different theories as to the original home of the San Jose scale, and concludes that nothing more definite can be said with certainty than had already been said in Bulletin No. 3 (new series), Division of Entomology, U. S. Department of Agriculture, by the authors.

HOWE, Reginald Heber, Jr. Ranges of *Hylocichla fuscescens*, and *Hylocichla fuscescens salicicola* in North America.

Auk, XVII, No. 1, Jan., 1900, pp. 18–25.

A revision of the geographical distribution of these forms in North America.

——— North American Wood Frogs.

Proc. Boston Soc. Nat. Hist., XXVIII, No. 14, pp. 369–374.

A critical review of the group, based in part upon material belonging to the National Museum.

KELLOGG, Vernon L. A list of the Biting Lice (Mallophaga) taken from birds and mammals of North America.

Proc. U. S. Nat. Mus., XXII, No. 1183, Oct. 9, 1899, pp. 39–100.

KISHINOUYE, K. Contributions to the natural history of the Commander Islands. No. XIII.—A new species of Stalked Medusæ, *Haliclystus stejnegeri*.

Proc. U. S. Nat. Mus., XXII, No. 1188, Dec. 23, 1899, pp. 125–129, 3 text figs.

Based on specimens collected at Nikolski, Bering Island, by Dr. Leonhard Stejneger in 1897.

KNOWLTON, Frank Hall. Report on some fossil wood from the Richmond basin, Virginia.

19th Ann. Rep. U. S. Geol. Surv., 1899, Part II, pp. 516–519, pl. LII.

The specimens examined comprised three forms from the Triassic; one was too much changed for identification; one was identified as *Araucarioxylon* (?) *virginicum;* and the third was a new species, viz, *Araucarioxylon woodworthi*, named for the collector of the specimens.

——— Fossil plants associated with the lavas of the Cascade Range.

20th Ann. Rep. U. S. Geol. Surv., Part III, 1900, pp. 37–64, pls. I–III.

The specimens described in this paper are in the Museum collection. They were collected by Mr. J. S. Diller and Mr. Elmer I. Applegate from six different localities in Oregon, and include 28 forms, 10 of which are regarded as new to science. The characters of the plants indicate the Miocene age of the beds from which they were obtained.

——— Fossil flora of the Yellowstone National Park.

Monogr. U.S. Geol. Surv., XXXII, 1899, Chap. XIV, pp. 651–882, pls. LXXVII–CXXI.

The specimens upon which this paper is based are in the Museum collection. The paper describes 150 species, 76 of which are new. They are distributed among 33 families, of which 19 are not represented in the present flora of the park. A comparison of the Tertiary and living flora renders apparent the great climatic changes that have taken place since the close of the Miocene period.

LO BIANCO, Salvatore. The methods employed at the Naples Zoological Station for the preservation of marine animals.

Bull. U. S. Nat. Mus., No. 39, Part M, Oct. 2, 1899, pp. [1]–[42], 1 plate.

Translated from the original Italian by Edmund Otis Hovey.

LÜTKEN, C. F., and MORTENSEN, Th. Reports on an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer *Albatross*, during 1891; Lieut. Commander Z. L. Tanner, U. S. N., commanding. XXV.—The Ophiuridæ.

Mem. Mus. Comp. Zool. (Harvard College), XXIII, No. 2, Nov., 1899, pp. 97–208, 22 plates and a chart.

Sixty-six species were collected by the *Albatross;* 1 genus and 53 species are new. These are fully described and figured. A list of papers on Ophiurids, published subsequently to Lyman's Monograph, is given, and also a list of the new genera and species contained therein.

McGUIRE, Joseph D. Pipes and smoking customs of the American aborigines, based on material in the U. S. National Museum.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1899), pp. 351–645, pls. 1–4, figs. 1–239.

MARLATT, C. L.

(See under L. O. Howard.)

MARSH, Millard Caleb. (See under B. W. Evermann.)

MASON, Otis Tufton. The man's knife among the North American Indians. A study in the collections of the U. S. National Museum.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1899), pp. 725–745, figs. 1–17.

——— Ethnology and archæology of Mexico.

Handbook of Mexico (Bureau of American Republics), Washington, 1900, Chap. III, pp. 21–43.

A bibliography from 1876 to date is included.

MAXON, William R. A new *Asplenium*, hitherto referred to *A. trichomanes* var. *incisum* Moore.

Bull. Torrey Botan. Club, XXVII, Apr., 1900, pp. 197–199.

MAXON, WILLIAM R. Notes on American ferns. I.

Fern Bulletin, VIII, Apr., 1900, pp. 29–31.

MAYNARD, GEORGE C. The electrical collections in the National Museum.

Electrical Review, New York, XXXVI, Jan. 3, 1900, pp. 10, 11; Mar. 14, pp. 266, 267, and May 16, pp. 507–509.

MERRILL, GEORGE P. A discussion of the terms rockweathering, serpentinization, and hydrometamorphism.

Geol. Mag. (Decade IV), VI, Aug., 1899, p. 422.

Reprinted in *American Geologist*, Oct., 1899.

——— Preliminary note on new meteorites from Allegan, Mich., and Mart, Tex.

Science (new series), XX, Nov. 24, 1899, pp. 770, 771.

——— Nepheline melilite basalt from Oahu, Hawaiian Islands.

Am. Geologist, XXV, May, 1900, pp. 312, 313.

——— Sandstone disintegration through the formation of interstitial gypsum.

Science (new series), XI, June 1, 1900, pp. 850, 851.

MILLER, GERRIT S., Jr. Directions for preparing study specimens of small mammals.

Bull. U. S. Nat. Mus., No. 39, Part N, Aug. 26, 1899, pp. [1]–[10], 1 fig.

——— Jamaica bats. A new genus and species.

Journ. Inst. Jamaica, II, Aug. 31, 1899, pp. 625–627, figs. 2–5.

Reithronycteris aphylla gen. et sp. nov. An abstract of a paper in the Proceedings of the Academy of Natural Sciences of Philadelphia, 1898, pp. 326–337.

——— Descriptions of two new Gray Foxes.

Proc. Acad. Nat. Sci. Phila., 1899 (August), pp. 276–280.

Urocyon parvidens and *U. guatemalæ* are described.

——— The voles collected by Dr. W. L. Abbott in central Asia.

Proc. Acad. Nat. Sci. Phila., 1899 (August), pp. 281–298, pls. XII, XIII.

Ten species are described, of which the following are new: *Microtus ravidulus*, *M. pamirensis*, *M. brachelix*, *M. cricetulus*, and *M. acrophilus*

MILLER, GERRIT S., JR. A new Tree Frog from the District of Columbia.

Proc. Biol. Soc. Wash., XIII, Sept. 28, 1899, pp. 75–78.

Hyla evittata sp. nov.

——— The Dogbanes of the District of Columbia.

Proc. Biol. Soc. Wash., XIII, Sept. 28, 1899, pp. 79–90, pl. II.

Apocynum speciosum sp. nov., *A. urceolifer* sp. nov., and *A. nemorale* sp. nov.

——— Descriptions of six new American rabbits.

Proc. Acad. Nat. Sci. Phila., 1899 (Oct. 8, 1899), pp. 380–390.

Lepus asellus sp. nov., *L. bachmani ubericolor* subsp. nov., *L. floridanus yucatanicus* subsp. nov., *L. floridanus subcinctus* subsp. nov., *L. floridanus caniclunis* subsp. nov., and *L. floridanus sanctidiegi* subsp. nov.

——— Descriptions of three new free-tailed bats.

Bull. Am. Mus. Nat. Hist., XII, Oct. 20, 1899, pp. 173–181.

Nyctinomus minutus, *Saccopteryx perspicillifer* and *Peropteryx trinitatis*.

——— Preliminary list of the mammals of New York.

Bull. N. Y. State Museum, VI, Oct., 1899 (Nov. 18, 1899), pp. 273–390.

——— History and characters of the family Natalidæ.

Bull. Am. Mus. Nat. Hist., XII, Dec. 23, 1899, pp. 245–253.

——— The bats of the genus *Monophyllus*.

Proc. Wash. Acad. Sci., II, Mar. 30, 1900, pp. 31–38.

Monophyllus portoricensis sp. nov., *M. plethodon* sp. nov., and *M. clinedaphus* sp. nov.

——— A new shrew from Eastern Turkestan.

Proc. Wash. Acad. Sci., II, Mar. 30, 1900, pp. 39, 40.

Crocidura lignicolor sp. nov.

——— Three new bats from the island of Curaçao.

Proc. Biol. Soc. Wash., XIII, Apr. 6, 1900, pp. 123–127.

Myotis nesopolus sp. nov., *Leptonycteris curasoæ* sp. nov., and *Glossophaga elongata* sp. nov.

MILLER, GERRIT S., JR. Seven new rats collected by Dr. W. L. Abbott in Siam.

Proc. Biol. Soc. Wash., XIII, Apr. 21, 1900, pp. 137–150, pls. III–V.

Mus vociferans sp. nov., *M. ferreocanus* sp. nov., *M. validus* sp. nov., *M. cremoriventer* sp. nov., *M. asper* sp. nov., *M. pellax* sp. nov., and *M. surifer* sp. nov.

——— The *Vespertilio concinnus* of Harrison Allen.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, p. 154.

Identical with *Myotis nigricans*.

——— The generic name *Evotomys* not invalidated by *Anaptogonia*.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, p. 154.

——— Note on *Micronycteris brachyotis* Dobson and *M. microtis* Miller.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, pp. 154, 155.

——— The systematic name of the Cuban Red Bat.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, p. 155.

Lasiurus blossevillei.

——— Note on the *Vespertilio blythii* of Tomes.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, p. 155.

A valid species which should stand as *Myotis blythii* (Tomes).

——— The *Scotophilus pachyomus* of Tomes a valid species.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, pp. 155, 156.

The proper name for the animal is *Vespertilio pachyomus*.

——— A bat of the genus *Lichonycteris* in South America.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, p. 156.

——— The systematic name of the large Noctule Bat of Europe.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, p. 156.

Pterygistes maximus (Fatio).

——— A new subgenus for *Lepus idahoensis*.

Proc. Biol. Soc. Wash., XIII, June 13, 1900, p. 157.

Brachylagus subgen. nov.

MILLER, GERRIT S., JR. *Antennaria solitaria* near the District of Columbia.

Proc. Biol. Soc. Wash., XII, June 13, 1900, p. 157.

MORTENSEN, TH. (See under C. F. LÜTKEN.)

NEEDHAM, JAMES G. Directions for collecting and rearing dragon flies, stone flies, and may flies.

Bull. U. S. Nat. Mus., No. 39, Part O, Nov. 29, 1899, pp. [1]–[9], figs. 1–4.

NELSON, E. W. Description of a new subspecies of *Meleagris gallopavo* and proposed changes in the nomenclature of certain North American birds.

Auk, XVII, No. 2, Apr., 1900, pp. 120–126.

A new turkey, *Meleagris gallopavo merriami*, is described (p. 120), and nomenclatural changes affecting four species of North American birds are proposed.

NYE, WILLARD, Jr. A Bahaman bird apparently extinct.

Auk, XVI, No. 3, July, 1899, p. 273.

Note on the capture of a single specimen of *Centurus nyeanus*, now in the U. S. National Museum.

OBERHOLSER, HARRY C. Description of a new *Geothlypis*.

Auk, XVI, No. 3, July, 1899, pp. 256–258.

Geothlypis trichas arizela is described as new.

——— Notes on birds from the Cameroons district, West Africa.

Proc. U. S. Nat. Mus., XXII, No. 1180, Oct. 7, 1899, pp. 11–19.

Critical notes on 32 species, involving several changes of nomenclature. *Eurillas* (p. 15) is a new genus belonging to the family Pycnonotidæ.

——— A list of the birds collected by Mr. R. P. Currie in Liberia.

Proc. U. S. Nat. Mus., XXII, No. 1182, Oct. 9, 1899, pp. 25–37, pl. VII.

A list of 39 species, with critical remarks and notes on nomenclature. The following new genera and species are named: *Horizocerus*, p. 28; *Dendromus caroli arizelus*, p. 29; *Stelgidillas*, p. 30; *Anthreptes idius*, p. 33; *Dicrurus modestus atactus*, p. 35, and *Fraseria prosphora*, p. 37.

——— A synopsis of the genus *Contopus* and its allies.

Auk, XVI, No. 4, Oct., 1899, pp. 330–337.

A synopsis of the genera *Nuttallornis*, *Contopus*, and *Blacicus*. *Contopus*, being preoccupied, is renamed *Horizopus*.

OBERHOLSER, HARRY C. Flammulated Screech Owls, *Megascops flammeolus* (Kaup) and *Megascops flammeolus idahoensis* Merriam.

Ornis, X, No. 1, Dec., 1899.

An account of these two forms, with synonymy, geographical distribution, etc.

——— A new wren from Alaska.

Auk, XVIII, No. 1, Jan., 1900, pp. 25, 26.

Anorthura meligera is described as a new species from the Aleutian Islands.

——— Notes on birds collected by Dr. W. L. Abbott in central Asia.

Proc. U. S. Nat. Mus., XXII, No. 1195, Apr. 23, 1900, pp. 205–228.

Notes on 62 species from Ladak and Kashmir. *Totanus totanus eurhinus* (p. 207) is a new subspecies; *Saxicola oreophila* is a new name for *S. montana* Gould (preoccupied), and *Perissospiza* is proposed in place of *Pycnorhamphus* (preoccupied).

——— Notes on some birds from Santa Barbara Islands, California.

Proc. U. S. Nat. Mus., XXII, No. 1196, Apr. 23, 1900, pp. 229–234.

A list, with notes, of 26 species recorded from these islands.

——— Catalogue of a collection of birds from Madagascar.

Proc. U. S. Nat. Mus., XXII, No. 1197, Apr. 24, 1900, pp. 235–248.

A list, with critical notes, on 57 species of birds collected in Madagascar by Rev. James Wills.

PALMER, WILLIAM. The avifauna of the Pribilof Islands.

Fur Seals and Fur Seal Islands of the North Pacific Ocean, Part III, 1899, pp. 355–431, pls. XXXVIII–XLI.

A general account of the birds recorded from the Pribilof Islands. *Arenaria morinella* is treated as distinct from the Old-World Turnstone, and *Hirundo erythrogastra unalaschkensis* (Gmel.) is recognized as the Alaskan representative of the Barn Swallow.

PERGANDE, THEO. A new species of plant-louse injurious to violets.

Canadian Entomologist, XXXII, Feb., 1900, pp. 29, 30. Describes *Rhopalosiphum violæ*, new species.

POLLARD, CHARLES LOUIS. The genus *Achillea* in North America.

Bull. Torrey Botan. Club, 26, July, 1899, pp. 365–372.

A revision of the North American species with notes on their geographical range. *A. californica*, *A. gigantea*, and *A. Pecten-Veneris* are described as new.

POLLARD, CHARLES LOUIS. The families of flowering plants.

Plant World Supplement, Jan. 1, 1900, III, pp. 1–43.

A popular illustrated account of the plant families, based in part on the observation of material in the U. S. National Herbarium.

——— Eight new species of North American plants.

Proc. Biol. Soc. Wash., XIII, Apr. 6, 1900, pp. 129–132.

New species described in *Gentiana*, *Lupinus*, *Viola*, *Chrysopsis*, and *Solidago*.

——— Treatment of the genera *Cassia* and *Chamæcrista* in Millspaugh's Plantæ Utowanæ.

Bull. Field Columbian Mus., Botanical series, II, 1900, pp. 46–48.

RATHBUN, MARY J. Jamaica crustacea.

Journ. Inst. Jamaica, II, No. 6, Aug. 31, 1899, pp. 628, 629.

Consists of lists of crustacea collected by Dr. J. E. Duerden at Port Royal Cays, Kingston Harbor, and Port Antonio, and determined by Miss Rathbun. Several species are added to the Jamaican fauna, and the name *Chloridella* Miers is substituted for the preoccupied name *Squilla* Fabricius, the well-known genus of Stomatopoda.

A portion of the material belongs to the Museum.

——— List of crustacea known to occur on or near the Pribilof Islands.

The Fur Seals and Fur Seal Islands of the North Pacific Ocean, Part III, 1899, pp. 555–558.

The material upon which this list is based consists mainly of specimens dredged by the U. S. Fish Commission steamer *Albatross*, and also of shore specimens collected by Dr. F. W. True and Messrs. F. A. Lucas, William Palmer, and Henry W. Elliott. Four new species of shrimps are described.

——— Synopses of North American invertebrates. VII.—The Cyclometopous or Cancroid crabs of North America.

Am. Naturalist, XXXIV, No. 398, Feb., 1900, pp. 131–143, 5 text figs.

A key to the genera and species of American Cyclometopa occurring north of the southern boundary of the United States, the peninsula of Florida excluded, and from the shore to a depth of 100 fathoms. Four new species are noticed.

RATHBUN, MARY J. The Decapod crustaceans of West Africa.

Proc. U. S. Nat. Mus., XXII, No. 1199, May 12, 1900, pp. 271–316, 2 text figs.

A report prepared at the request of Prof. O. F. Cook for the New York State Colonization Society. The region covered extends from Senegal to the southern boundary of Portuguese West Africa, and not only the coast but the fresh waters tributary to it. The arrangement includes keys to families, genera, and species, a synonymical list of species, their West African habitat, and general distribution. A new species of hermit crab, *Clibanarius cooki*, is described and figured.

——— Synopses of North American invertebrates. X.—The Oxyrhynchous and Oxystomatous crabs of North America.

Am. Naturalist, XXXIV, No. 402, June, 1900, pp. 503–520, 15 text figs.

A key similar to No. VII of the same series. A new species of *Cyclodorippe*, *C. plana*, is described from southern California.

RICHARDSON, HARRIET. Description of a new species of *Idotea* from Hakodate Bay, Japan.

Proc. U. S. Nat. Mus., XXII, No. 1189, Feb. 2, 1900, pp. 131–134, 6 text figs.

The new species, *Idotea japonica*, is compared with *I. ochotensis* and *I. rectilineata*, to which it is nearly related.

——— Synopses of North American invertebrates. VIII.—The Isopoda. Part I. Chelifera, Flabellifera, Valvifera.

Am. Naturalist, XXXIV, No. 399, Mar., 1900, pp. 207–230, 11 text figs.

Includes terrestrial, fresh-water, and marine forms from the shore to the deep sea. Several species are diagnosed here for the first time.

——— Synopses of North American invertebrates. VIII.—The Isopoda. Part II. Asellota, Oniscoidea, Epicaridea.

Am. Naturalist, XXXIV, No. 400, Apr., 1900, pp. 295–309, 16 text figs.

A continuation of the preceding paper.

RICHMOND, CHARLES W. Overlooked descriptions of five humming birds.

Auk, XVI, No. 4, Oct., 1899, pp. 323–325.

Original descriptions of *Trochilus cohuatl*, *T. xicotencal*, *T. tzacatl*, *T. papantzin*, and *T. topiltzin* are here reprinted.

——— On the date of Lacépède's "Tableaux."

Auk, XVI, No. 4, Oct., 1899, pp. 325–329.

Notes on the date of publication of Lacépède's "Tableaux," with a list of the livraisons and dates of publication of the "Didot" edition of Buffon's "Histoire naturelle."

RICHMOND, CHARLES W. Note on the name *Drymophila*.

Auk, XVI, No. 4, Oct., 1899, pp. 353, 354.

Note on the proper use of the name *Drymophila*.

——— Further notes on Lacépède's "Tableaux."

Auk, XVII, No. 2, Apr., 1900, pp. 166, 167.

Additional data regarding this subject, with a list of genera of birds dating from Lacépède's "Tableaux," 1799.

——— The earliest name for the Roadrunner.

Auk, XVII, No. 2, Apr., 1900, pp. 173, 174.

Note regarding the date of Swainson's specific name, *longicauda*, for the Roadrunner.

——— Some necessary changes in nomenclature.

Auk, XVII, No. 2, Apr., 1900, pp. 178, 179.

Notes on some proposed changes in nomenclature. *Semnornis* is a new generic and *Geothlypis nelsoni* a new specific name.

——— Description of a new bird of the genus *Dendrornis*.

Proc. U. S. Nat. Mus., XXII, No. 1200, May 12, 1900, pp. 317, 318.

Dendrornis striatigularis is described as a new species from Mexico.

——— Description of three new birds from Lower Siam.

Proc. U. S. Nat. Mus., XXII, No. 1201, May 12, 1900, pp. 319–321.

Ethopyga anomala, p. 319, *Criniger sordidus*, p. 320, and *Turdinulus granti*, p. 320, are described as new.

RIDGWAY, ROBERT. Descriptions of supposed new genera, species, and subspecies of American birds. IV.—Fringillidæ (concluded); Corvidæ (part).

Auk, XVI, No. 3, July, 1899, pp. 254–256.

The following new species are described: *Pipilo maculatus atratus*, p. 254; *Pipilo fuscus potosinus*, p. 254; *Aimophila rufescens sinaloa*, p. 254; *Cyanocorax affinis zeledoni*, p. 255; *Perisoreus obscurus griseus*, p. 255; *Cyanocitta stelleri azteca*, p. 256. *Cyanolyca mitrata* is a new name (p. 255) for *C. ornata*, preoccupied.

——— Descriptions of supposed new genera, species, and subspecies of American birds. V.—Corvidæ. (Concluded.)

Auk, XVII, No. 1, Jan., 1900, pp. 27–29.

The following species are described as new: *Xanthoura yncas galeata*, p. 27; *X. luxuosa glaucescens*, p. 28; *X. l. vivida*, p. 28.

RIDGWAY, ROBERT. Descriptions of supposed new genera, species, and subspecies of American birds. VI.—Fringillidæ. (Supplement.)

Auk, XVII, No. 1, Jan., 1900, pp. 29, 30.

Melospiza melodia kenaiensis, p. 29; *Passerella iliaca insularis*, p. 30, and *P. i. annectens*, p. 30, are described as new.

ROSE, JOSEPH NELSON. Studies of Mexican and Central American plants.

Contrib. U. S. Nat. Herbarium, V, No. 4, Oct., 1899, pp. 145–200.

——— Three new species of *Tradescantia* from the United States.

Contrib. U. S. Nat. Herbarium, V, No. 4, Oct., 1899, pp. 204–206.

——— *Treleasea*, a new genus of Commelinaceæ.

Contrib. U. S. Nat. Herbarium, V, No. 4, Oct., 1899, pp. 207, 208.

——— Notes on useful plants of Mexico.

Contrib. U. S. Nat. Herbarium, V, No. 4, Oct., 1899, pp. 209–259.

ROSE, JOSEPH NELSON, and COULTER, JOHN M. A synopsis of the Mexican and Central American Umbelliferæ.

Proc. Wash. Acad. Sci., I, Jan. 8, 1900, pp. 111–115, pls. 3–13.

SCHUCHERT, CHARLES. The Fossil Field's Expedition to Wyoming.

Science (new series), X, Nov. 17, 1899, pp. 725–728.

Mr. Schuchert accompanied this expedition as the representative of the National Museum. An account of his trip is given in this paper.

——— On the Lower Silurian (Trenton) fauna of Baffin Land.

Proc. U. S. Nat. Mus., XXII, No. 1192, April 7, 1900, pp. 143–177, pls. XII–XIV, figs. 1, 2.

Descriptions of fossils gathered at the head of Frobisher Bay, southern Baffin Land. This locality was first noticed by Hall and the place named "Silliman's Fossil Mount." Seventy-two species, constituting the most extensive Paleozoic local collection from Arctic American regions, are listed or described.

——— Lower Devonic aspect of the Lower Helderberg and Oriskany formations.

Bull. Geol. Soc. Am., XI, May, 1900, pp. 241–332.

This paper gives reasons for referring these formations to the Devonic system instead of to the Siluric as formerly. The work is largely based on previous literature; the material used belongs to the National Museum.

(See also under JOHN M. CLARKE.)

SIMPSON, CHARLES TORREY. The pearly freshwater mussels of the United States, their habits, enemies, and diseases, with suggestions for their protection.

Bull. U. S. Fish Com., 1898, pp. 279–288, 8 figs.

This paper gives an account of the more obvious shell characters and anatomy of our pearly freshwater mussels, with some account of their embryology, habits, and enemies. Suggestions are offered for their protection and propagation.

——— Protective mimicry of mollusks.

Popular Science, July, 1899, pp. 154, 155, 4 figs.

A brief popular sketch of the way in which certain mollusks are protected from their enemies by resembling their environment or other animals.

——— New and unfamiliar Unionidæ.

Proc. Acad. Nat. Sci. Phila., 1900, pp. 74–86, pls. I–V.

This paper contains descriptions of new species of Unionidæ that have come to light during the preparation of a paper on the "Synopsis of the Naiades." Several new genera are described, and others are established under old names and redefined. Most of the unfigured species of Unionidæ of Messrs. S. H. and B. H. Wright, the types of which are in the National Museum, are figured.

SMITH, HUGH M., and BEAN, BARTON A. List of fishes known to inhabit the waters of the District of Columbia and vicinity.

Bull. U. S. Fish Com., 1898 (1899), pp. 179–187.

This list records 81 species of fishes found in the vicinity of Washington (within a radius of 20 miles). It is based largely upon the collections of the National Museum and U. S. Fish Commission. Both scientific and common names are given, with brief notes on the life histories of the more important species.

SMITH, JOHN B. New species of nocturnal moths of the genus *Camponotra*, and notes.

Proc. U. S. Nat. Mus., XXII, No. 1181, Oct. 9, 1899, pp, 101–105.

(See also under W. H. ASHMEAD.)

STANTON, TIMOTHY W. Mesozoic fossils [of the Yellowstone Park].

Monogr. U. S. Geol. Surv., XXXII, Pt. II, Sept., 1899, pp. 600–650, pls. 72–76.

Describes the Triassic, Jurassic, and Cretaceous fossils occurring in the Yellowstone National Park. Based partly on Museum material.

STARKS, Edwin Chapin. The osteological characters of the fishes of the suborder Percesoces.

Proc. U. S. Nat. Mus., xxii, No. 1179, Oct. 7, 1899, pp. 1–10, pls. i–iii.

In this paper the author gives the results of a study of the skeletons of several representatives of the families Atherinidæ, Mugilidæ, and Sphyrænidæ.

This study leads him to conclude that these families are not so closely allied to each other as their external similarity would lead one to suppose.

——— The osteology and relationship of the Percoidean fish, *Dinolestes lewini*.

Proc. U. S. Nat. Mus., xxii, No. 1186, Oct. 11, 1899, pp. 113–120, pls. viii–xi.

This paper is a comparative study of *Dinolestes* and the Sphyrænidæ and Cheilodipteridæ. The author finds the affinity of *Dinolestes* to be with the Cheilodipteridæ rather than with the Sphyrænidæ.

STEARNS, Robert E. C. *Urosalpinx cinereus* in San Francisco Bay.

Nautilus, xii, No. 10, Feb., 1899, p. 112.

Relates to the appearance of the Atlantic coast species in parts of the bay where it had not previously been noted.

——— *Crepidula convexa* Say var. *glauca* Say.

Nautilus, xiii, No. 1, May, 1899, p. 8.

Notes the occurrence of this Atlantic coast form on the shore of Alameda County, California.

——— Natural history of the Tres Marias islands, Mexico.

Nautilus, xiii, No. 2, June, 1899, pp. 19, 20; *Science* (new series), x, No. 239, July 28, 1899.

Attention is called to the omission by the author of *North American Fauna*, No. 14, U. S. Department of Agriculture, of any mention of the Fisher collection of shells made in 1876. The list of species included in Fisher's collection forms the substance of the paper entitled "The shells of the Tres Marias and other localities along the shores of Lower California and the Gulf of California," in vol. xvii, 1894, *Proc. U. S. Nat. Mus.*, No. 996, pp. 139–204.

——— *Donax stultorum* Mawe=Conrad's species *Cytherea crassatelloides*.

Nautilus, xiii, No. 7, Nov., 1899, pp. 73–75.

In pursuance of a previous paper (*Proc. U. S. Nat. Mus.* xxi, pp. 371–378), the literary history of the species is given.

STEARNS, Robert E. C. Abalone fishery in California. Protective regulation.

Nautilus, xiii, No. 7, Nov., 1899, pp. 81, 82.

Mentions the action of the authorities of Monterey County, Cal., in restricting the persistent and excessive collecting of these mollusks by Japanese and Chinese fishermen.

——— *Modiola plicatula* Lamarck in San Francisco bay.

Nautilus, xiii, No. 8, Dec., 1899, p. 86.

The author mentions the occurrence of this well-known Atlantic coast species in Californian waters as incidentally introduced through the operations of the oyster industry.

——— List of shells collected by Vernon Bailey in Heron and Eagle lakes, Minnesota, with notes.

Proc. U. S. Nat. Mus., xxii, No. 1190, Apr. 7, 1900, pp. 135–138.

Describes variations in form of *Linnæa emarginata* as exhibited in a collection received by the National Museum from the U. S. Department of Agriculture.

——— Description of a new variety of *Haliotis* from California, with faunal and geographic notes.

Proc. U. S. Nat. Mus., xxii, No. 1191, Apr. 7, 1900, pp. 139–142.

H. fulgens Philippi variety *walallensis* is described from Guallala, Mendocino County, and the physiographic features of the coast in that vicinity are indicated. A preliminary description of the foregoing species was published in *Nautilus*, xii, No. 9, Jan., 1899.

——— Exotic mollusca in California.

Science (new series), xi, No. 278, Apr. 27, 1900, pp. 655–659.

The circumstances of the introduction of several foreign forms, either intentionally or otherwise, are herein given. *Helix aspersa* Mull., *Amalia hewstoni* Cp., *Zonites* (*Vitrea*) *cellaria* Mull., *Zonites* (*Vitrea*) *draparnaldi* Beck, *Bulimus ventrosus* Fer., *Helicodiscus lineatus* Say, *Cochlicopa lubrica* Mull., among the terrestrial forms, and *Ostrea virginica* Gmelin, *Mya arenaria* Linn., *Modiola plicatula* Lamarck, *Urosalpinx cinereus* Say, and *Crepidula convexa* var. *glauca* Say, marine species, are cited.

——— Notes on the distribution of and certain characteristics in the Saxidomi of the west coast.

Nautilus, xiv, No. 1, May, 1900, pp. 1–3.

Attention is called to the hinge characters, and the exceeding development of the adductor muscles, as compared with other forms of same size in the Veneridæ.

STEIGER, GEORGE. (See under F. W. CLARKE.)

STEJNEGER, LEONHARD. A new name for the great crested *Anolis* of Jamaica.

Am. Naturalist, XXXIII, July, 1899, pp. 601, 602.

Shows that the name *Anolis edwardsii* has been erroneously attributed to the great crested *Anolis* of Jamaica, and proposes that it be called *A. garmani*.

——— The proper name of the Polar Bear.

Science (new series), X, Sept. 15, 1899, pp. 377, 378.

Contends for *Thalarctos maritimus* (Phipps), 1774, correcting J. A. Rehn, who in a previous number of *Science* states that it is *Thalarctos marinus* (Pallas), 1776.

——— The birds of the Hawaiian Islands.

Osprey, IV, Jan., 1900, pp. 71–73.

A review of Scott Wilson and Evans's *Aves Hawaiienses*, with a discussion of the relationship of the Hawaiian avifauna.

——— The relations of Norway and Sweden.

Conservative Review, II, Part I, Nov., 1899, pp. 317–346; III, Part II, Mar., 1900, pp. 114–141.

An historical review of the political relations from the earliest times to the present.

STONE, WITMER. On a collection of birds from the vicinity of Bogota, with a review of the South American species of *Speotyto* and *Troglodytes*.

Proc. Acad. Nat. Sci. Phila., 1899, pp. 302–313.

An annotated list of 76 species, of which *Speotyto cunicularia tolimæ* is new.

TASSIN, WIRT. Catalogue of the series illustrating the properties of minerals.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1899), pp. 647–688.

——— Classification of the mineral collections in the U. S. National Museum.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1899), pp. 747–810.

VAUGHAN, T. WAYLAND. Geologic notes on the Wichita Mountains, Oklahoma, and the Arbuckle Hills, Indian Territory.

Am. Geologist, XXIV, July, 1899, pp. 44, 55.

VAUGHAN, T. WAYLAND. Some Cretaceous and Eocene corals from Jamaica.

Bull. Mus. Comp. Zool. (Harvard College), XXXIV, No. 1, Sept., 1899, pp. 227–250, pls. XXXVI–XLI.

——— A new fossil species of *Caryophyllia* from California, and a new genus and species of Turbinolid coral from Japan.

Proc. U. S. Nat. Mus., XXII, No. 1194, Apr. 20, 1900, pp. 199–203, pl. XVI.

The fossil species of *Caryophyllia* (*C. arnoldi*) was sent to the National Museum by Mr. Ralph Arnold, of Stanford University. The Turbinolid is a recent species contributed by Rev. H. Loomis, and named by its describer *Levipalifer orientalis*.

——— Reconnaissance in the Rio Grande coal fields of Texas.

Bull. U. S. Geol. Surv., No. 164, 1900, pp. 1–100, pls, I–XI, 9 text figs.

VERRILL, A. E. Revision of certain genera and species of starfishes, with description of new forms.

Trans. Conn. Acad. Arts and Sci., X, Aug., 1899, pp. 145–234, pls. XXIV–XXX.

Includes a revision of the classification of the orders Valvata and Paxillosa of Perrier, and descriptions of many genera and species. Three families, 3 subfamilies, 9 genera, 14 species, and 1 variety are described as new.

The material studied is contained in the U. S. National Museum, the Museum of Comparative Zoology of Harvard University, the Yale University Museum, and the Museum of the University of Iowa.

——— North American Ophiuroidea. Part I. Revision of certain families and genera of West Indian Ophiurans. Part II. A faunal catalogue of the known species of West Indian Ophiurans.

Trans. Conn. Acad. Arts and Sci., X, Part 2, Oct., 1899, pp. 301–386, pls. XLII, XLIII.

This revision and list are based on collections in the Museum of Yale University, the Museum of Comparative Zoology, the Museum of the University of Iowa, and the U. S. National Museum.

Analytical tables are given of many of the genera and species. Three families, 4 subfamilies, 6 genera, 3 species, and 1 variety are described as new.

WALCOTT, CHARLES D. Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1897.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1899), pp. 1–245.

WARD, LESTER F. The Cretaceous formation of the Black Hills as indicated by the fossil plants.

19th Ann. Rep. U. S. Geol. Surv., Part II, 1899, pp. 521–946, pls. LVII–CLXXII.

This paper was prepared in collaboration with Walter P. Jenney, William M. Fontaine, and F. H. Knowlton.

The specimens described are in the Museum collection. They include 86 species, and are from the lower part of the Cretaceous formation, from the beds that extend down from the Dakota group to the upper part of the Jurassic. One new genus and 36 new species are described.

——— Description of a new genus and 20 new species of fossil cycadean trunks from the Jurassic of Wyoming.

Proc. Wash. Acad. Sci., I, 1900, pp. 253–300, pls. XIV–XXI.

This paper is based partly upon Museum material. The locality of the specimens described is given as the Freezeout Hills, north of Medicine Bow, in Carbon County, Wyo. The new genus to which the 20 species are referred is *Cycadella*.

WHITE, DAVID. Report on fossil plants from the McAlester coal field, Indian Territory, collected by Messrs. Taff and Richardson in 1897.

19th Ann. Rep. U. S. Geol. Surv., Part III, 1899, pp. 457–538, pls. LXVII, LXVIII.

The collections, which include about 75 species, were made at thirteen localities. They have been arranged in three groups; First, that from the horizon of the McAlester coal; second, a group from about 2,000 feet above the McAlester coal; and third, a group of localities from which a flora was collected belonging to a coal horizon about 1,500 feet below the McAlester coal. Comparing these with the Carboniferous divisions of the Old World, the McAlester flora is said to be clearly Stephanian and comparable to the flora of the Upper Coal Measures of Great Britain. The upper group belongs to a horizon some distance below the Permian, while the lower flora is plainly Westphalian, having close relations with the Middle or Lower Coal Measures of Great Britain. The fossil floras indicate a very great expansion of the coal measures in Indian Territory.

WHITE, DAVID. Fossil flora of the Lower coal measures of Missouri.

Monogr. U. S. Geol. Surv., XXXVII, 1899, I–XI, 1–467, pls. I–XXXIII.

The greater portion of the specimens described in this paper were derived from two horizons about 45 feet apart. The plants described are concluded to be contemporaneous with the flora of the uppermost zone of the Westphalian of the Franco-Belgian Basin, and other coal fields of Europe.

WILSON, THOMAS. History of the beginnings of the science of prehistoric anthropology. Vice presidential address, Section H, American Association for the Advancement of Science.

Proc. Am. Assoc. Adv. Sci., Columbus Meeting, XLVIII, 1899, pp. 310–353; *Science* (new series), X, No. 252, Oct. 27, pp. 585–601, and No. 253, Nov. 3, 1899, pp. 637–648.

A summary of scientific investigations in Europe and America concerning prehistoric anthropology, beginning in Denmark early in the present century.

——— Arrowpoints, spearheads, and knives of prehistoric times.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1897 (1899), pp. 811–988, pls. 1–65, figs. 1–201.

——— The Arkansas Traveler.

Ohio Archæolog. and Hist. Soc. Pubs., VIII, 1900, p. 296.

Early wagon transportation in eastern Ohio.

WOODWORTH, W. McM. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. Fish Commission steamer *Albatross*, during 1891, Lieut. Commander Z. L. Tanner, U. S. N., commanding. XXVII.—Preliminary account of *Planktonemertes agassizii*, a new pelagic Nemertean.

Bull. Mus. Comp. Zool. (Harvard College), XXXV, No. 1, July, 1899, pp. 1–4, 1 pl.

A new genus and species of Nemertean collected in deep water in the western part of the Pacific Ocean near the Equator. Five specimens were taken, four of which are figured.

LIST OF AUTHORS.

Adler, Cyrus, Smithsonian Institution.
Ashmead, William H., U. S. National Museum.
Bangs, Outram, Boston, Mass.
Banks, Nathan, Falls Church, Va.
Bartsch, Paul, U. S. National Museum.
Bean, Barton A., U. S. National Museum.
Bishop, Louis B., New Haven, Conn.
Caudell, Andrew N., U. S. Department of Agriculture.
Chittenden, Frank H., U. S. Department of Agriculture.
Clarke, Frank W., U. S. Geological Survey.
Clarke, John M., Albany, N. Y.
Coquillett, Daniel W., U. S. Department of Agriculture.
Currie, Rolla P., U. S. National Museum.
Dall, William H., U. S. Geological Survey.
Dyar, Harrison G., U. S. Department of Agriculture.
Flint, James M., U. S. N., U. S. National Museum.
Gane, Henry Stewart, Chicago, Ill.
Girty, George H., U. S. Geological Survey.
Hay, Oliver P., American Museum of Natural History, New York City.
Hay, W. P., Washington, D. C.
Holmes, William H., U. S. National Museum.
Hough, Walter, U. S. National Museum.
Howard, Leland O., U. S. Department of Agriculture.
Kellogg, Vernon L., Leland Stanford Junior University, Stanford University, Cal.
Kishinouye, K., Imperial Fisheries Bureau, Tokyo, Japan.
Knowlton, Frank Hall, U. S. Geological Survey.
Lo Bianco, Salvatore, Naples Zoological Station, Naples, Italy.
Lütken, C. F., University of Copenhagen, Copenhagen, Denmark.
McGuire, Joseph D., Ellicott City, Md.
Marsh, Millard Caleb, Washington, D. C.
Mason, Otis T., U. S. National Museum.
Maxon, William R., U. S. National Museum.
Maynard, George C., U. S. National Museum.
Merrill, George P., U. S. National Museum.
Miller, Gerrit S., Jr., U. S. National Museum.
Mortensen, Th., University Geological Museum, Copenhagen, Denmark.
Needham, James G., Lake Forest, Ill.
Nelson, E. W., U. S. Department of Agriculture.
Nye, Willard, Jr., New Bedford, Mass.
Oberholser, Harry C., U. S. Department of Agriculture.
Palmer, William, U. S. National Museum.
Pergande, Theo., U. S. Department of Agriculture.
Pollard, Charles Louis, U. S. National Museum.
Rathbun, Mary J., U. S. National Museum.

Richardson, Harriet, U. S. National Museum, Washington, D. C.
Richmond, Charles W., U. S. National Museum.
Ridgway, Robert, U. S. National Museum.
Rose, J. N., U. S. National Museum.
Schuchert, Charles, U. S. National Museum.
Simpson, Charles Torrey, U. S. National Museum.
Smith, Hugh M., U. S. Fish Commission.
Smith, John B., Rutgers College, New Brunswick, N. J.
Stanton, Timothy W., U. S. Geological Survey.
Starks, Edwin C., University of Washington, Seattle, Wash.
Stearns, R. E. C., Los Angeles, Cal.
Steiger, George, U. S. Geological Survey.
Stejneger, Leonhard, U. S. National Museum.
Stone, Witmer, Academy of Natural Sciences, Philadelphia, Pa.
Tassin, Wirt, U. S. National Museum.
Vaughan, T. Wayland, U. S. Geological Survey.
Verrill, A. E., Yale University, New Haven, Conn.
Walcott, Charles D., Director U. S. Geological Survey.
Ward, Lester F., U. S. Geological Survey.
White, David, U. S. Geological Survey.
Wilson, Thomas, U. S. National Museum.
Woodworth, W. McM., Museum of Comparative Zoology, Cambridge, Mass.

APPENDIX V.

Papers Published in Separate Form.

FROM THE REPORT FOR 1897.

Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1897. By Charles D. Walcott. pp. 1–245.

Recent Foraminifera. A descriptive catalogue of specimens dredged by the U. S. Fish Commission steamer *Albatross*. By James M. Flint, U. S. N. pp. 249–349, pls. 1–80.

Pipes and smoking customs of the American aborigines, based on material in the U. S. National Museum. By Joseph D. McGuire. pp. 351–645, pls. 1–4, figs. 1–239.

Catalogue of the series illustrating the properties of minerals. By Wirt Tassin. pp. 647–688.

Te Pito Te Henua, known as Rapa Nui; commonly called Easter Island, South Pacific Ocean. By George H. Cooke, U. S. N. pp. 689–723.

The man's knife among the North American Indians. A study in the collections of the U. S. National Museum. By Otis Tufton Mason. pp. 725–745, figs. 1–17.

Classification of the mineral collections in the U. S. National Museum. By Wirt Tassin. pp. 747–810.

Arrowpoints, spearheads, and knives of prehistoric times. By Thomas Wilson. pp. 811–988, pls. 1–65, figs. 1–201.

FROM VOLUME 22, PROCEEDINGS OF THE U. S. NATIONAL MUSEUM.

No. 1179. The osteological characters of the fishes of the suborder Percesoces. By Edwin Chapin Starks. pp. 1–10, pls. I–III.

No. 1180. Notes on birds from the Cameroons District, West Africa. By Harry C. Oberholser. pp. 11–19.

No. 1181. Descriptions of two new species of tortoises from the Tertiary of the United States. By O. P. Hay. pp. 21–24, pls. IV–VI.

No. 1182. A list of the birds collected by Mr. R. P. Currie in Liberia. By Harry C. Oberholser. pp. 25–37, pl. VII.

No. 1183. A list of the Biting Lice (Mallophaga) taken from birds and mammals of North America. By Vernon L. Kellogg. pp. 39–100.

No. 1184. New species of nocturnal moths of the genus *Cumpometra*, and notes. By John B. Smith. pp. 101–105.

No. 1185. Synopsis of the Solenidæ of North America and the Antilles. By William H. Dall. pp. 107–112.

No. 1186. The osteology and relationship of the percoidean fish, *Dinolestes lewini*. By Edwin Chapin Starks. pp. 113–120, pls. VIII–XI.

No. 1187. Description of two new species of crayfish. By W. P. Hay. pp. 121–123, figs. 1, 2.

No. 1188. Contributions to the natural history of the Commander Islands. No. XIII. A new species of stalked medusæ, *Haliclystus stejnegeri*. By K. Kishinouye. pp. 125–129, figs. 1–3.

No. 1189. Description of a new species of *Idotea* from Hakodate Bay, Japan. By Harriet Richardson. pp. 131–134, figs. 1–6.

No. 1190. List of shells collected by Vernon Bailey in Heron and Eagle lakes, Minnesota, with notes. By Robert E. C. Stearns. pp. 135–138.

No. 1191. Description of a new variety of *Haliotis* from California, with faunal and geographical notes. By Robert E. C. Stearns. pp. 139–142.

No. 1192. On the Lower Silurian (Trenton) fauna of Baffin Land. By Charles Schuchert. pp. 143–177, pls. XII–XIV, figs. 1, 2.

No. 1193. Some Neocene corals of the United States. By Henry Stewart Gane. pp. 179–198, pl. XV.

No. 1194. A new fossil species of *Caryophyllia* from California, and a new genus and species of turbinolid coral from Japan. By T. Wayland Vaughan. pp. 199–203, pl. XVI.

No. 1195. Notes on birds collected by Dr. W. L. Abbott in central Asia. By Harry C. Oberholser. pp. 205–228.

No. 1196. Notes on some birds from Santa Barbara Islands, California. By Harry C. Oberholser. pp. 229–234.

No. 1197. Catalogue of a collection of birds from Madagascar. By Harry C. Oberholser. pp. 235–248.

No. 1198. Report on a collection of dipterous insects from Porto Rico. By D. W. Coquillett. pp. 249–270.

No. 1199. The decapod crustaceans of West Africa. By Mary J. Rathbun. pp. 271–316.

No. 1200. Description of a new bird of the genus *Dendrornis*. By Charles W. Richmond. pp. 317, 318.

No. 1201. Description of three new birds from Lower Siam. By Charles W. Richmond. pp. 319–321.

No. 1202. On the genera of the Chalcid-flies belonging to the subfamily Encyrtinæ. By William H. Ashmead. pp. 323–412.

FROM BULLETIN 39.

Part M. The methods employed at the Naples Zoological Station for the preservation of marine animals. By Salvatore Lo Bianco. pp. [1]–[42], 1 plate.

Part N. Directions for preparing study specimens of small mammals. By Gerrit S. Miller, jr. pp. [1]–[10], 1 fig.

Part O. Directions for collecting and rearing dragon flies, stone flies, and may flies. By James G. Needham. pp. [1]–[9], figs. 1–4.