
PART I.

REPORT

UPON THE

CONDITION AND PROGRESS OF THE U. S. NATIONAL MUSEUM
DURING THE YEAR ENDING JUNE 30, 1899.

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, 1899.

BY

RICHARD RATHBUN,

Assistant Secretary of the Smithsonian Institution.

GENERAL CONSIDERATIONS.

Mr. Charles D. Walcott, who, following upon the death of Doctor Goode, had agreed to add to his duties as Director of the Geological Survey those of Acting Assistant Secretary of the Smithsonian Institution in charge of the National Museum, felt obliged to relinquish the latter position with the year ending June 30, 1898. During his incumbency there was a modification in the administration of the Museum, which consisted in gathering the different departments under three heads and placing three scientific men in charge of them as head curators. One, the Head Curator of Biology, Dr. F. W. True, by virtue of his appointment as Executive Curator, took charge of the executive office immediately following the retirement of Mr. Walcott, and administered it with zeal and fidelity. The Secretary, who is by law Keeper of the Museum, has always retained the direction of its policy and attended personally to many of the important acts connected with its administration. His numerous and exacting duties made him feel the necessity of further aid in this direction, and in accordance with a resolution of the Board of Regents removing the restrictions placed upon the appointment of the writer as Assistant Secretary, in 1897, the latter has given a certain oversight to the affairs of the Museum, without, however, being able to spare sufficient time to supervise all of its details.

The Secretary in his own report has expressed his appreciation of the value and efficiency of the services rendered by Mr. Walcott to the Museum during the year and a half in which he was connected with it in an administrative capacity. It should be added that the Museum still has the benefit of Mr. Walcott's services as Honorary Curator of the Division of Stratigraphic Paleontology, and, beyond this, that his advice and his valuable aid have been given to the Museum on many occasions since his official administrative connection with it ceased.

The present National Museum is an integral part and the direct outgrowth of the Smithsonian Institution. In the fundamental law creating the Institution, Congress provided for the erection of a building suitable for natural history collections, including a geological and mineralogical cabinet, and further ordered that—

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

From the results of this legislation sprang the Museum, yet several propositions and institutions antecedent to the establishment of the Smithsonian Institution contributed to the origin and development of the present collections.

To Doctor Goode's careful researches into the history of American scientific institutions the reader desiring to know the history of the National Museum in detail is referred.¹ As far back as 1806 Joel Barlow, the well-known author of *The Columbiad*, put forward a plan for the establishment of a national institution in which a general museum had a prominent part. The early students and public men of the United States fully recognized the importance, at least for natural history studies, of the gathering and preservation of collections, and many such turned toward Philadelphia, which, even after it ceased to be the national capital, continued for a time the scientific and literary center of the country.

The first real scientific collection, both as regards material and arrangement, which came into the possession of the United States Government was the mineralogical cabinet of James Smithson (since unfortunately destroyed by fire), and this, with the results of the policy initiated in furtherance of the act incorporating the Smithsonian Institution, formed the basis of the present national collections.

It is anticipating somewhat, however, to make this statement, since collections began to be brought together in Washington before the Smithsonian Institution was actually founded, although they were directly traceable to the Smithson bequest. Not long after its announcement there was formed in Washington, chiefly through the exertions of the Hon. Joel R. Poinsett, an organization under the title

¹The Genesis of the National Museum. By G. Brown Goode. Report of the U. S. National Museum for 1891, pp. 273-380.

of "National Institution," later changed to "National Institute," which had for its avowed purpose the direction of the Smithsonian bequest and the pursuit of objects in consonance with the terms of that foundation. This organization, ten years before the Smithsonian Institution was prepared to receive collections, gathered together quite a quantity of historical and natural history material, which was kept in the Patent Office, and which in 1862, upon the expiration of the charter of the Institute, was delivered to the National Museum, although a portion of the historical collection was retained at the Patent Office until as late as 1883.

The first exploring expedition affording important collections was that under Lieutenant Wilkes, which started out in 1838. The material from this source was turned over to what was known as the National Cabinet of Curiosities, being a part of the National Institute and located in the Patent Office. Serious conflicts of authority arose, however, between the curator of the collection, the Commissioner of Patents, and the authorities of the National Institute, and in 1857 these collections were transferred to the Smithsonian Institution. As Doctor Goode has aptly put it: "From the marriage of the National Cabinet of Curiosities with the Smithsonian Institution the National Museum of the United States was born."

In 1850 Prof. Spencer F. Baird was appointed Assistant Secretary of the Institution, and, with the approval of Secretary Henry, he at once entered into relations with the numerous surveying parties then exploring throughout the western country to secure through them natural history and ethnological collections. Added to these were the exertions of officers of the Army engaged in similar work, some of whom were themselves experts in natural history or ethnology.

In 1871 a new important avenue for increasing the collections of the National Museum was opened by the establishment of the Fish Commission, under the direction of Professor Baird. Many explorations have been carried on by the Commission with a view to increasing scientific knowledge, in order that results useful to the people might flow therefrom. One of the chief factors in this work has been the steamer *Albatross*, especially built for dredging and for making collections of the fauna of the deep sea.

These and numerous other agencies, whether through surveys or departments of the Government, through industrial and commercial enterprises pushing their way into the little-known regions of the west and north or through the zeal of private individuals, brought together a great mass of valuable, if heterogeneous, material, to which was added at the close of the exposition in 1876, partly by gift of foreign countries and partly from private exhibitors, so great a quantity of specimens as to render imperative the erection of a separate building for the national collections.

This structure, though built at a time when the conditions required for the proper care and display of large collections of natural history were by no means well understood, is yet admirably adapted to museum exhibition purposes, lending itself readily both to arrangement and adjustment, and giving ample light. But though the plan was good, the realization was unworthy. The building is cheap and unenduring, and is, besides, without storage or laboratory facilities. For the area covered, its cost was less than that of any other building ever erected by the Government, and the result is commensurate with that fact. Of its general plan many museum experts have only words of praise; of its unworthiness as the home of the national collections of this great nation there can be no question.

The Museum building was ready for occupancy in 1881, and it was then deemed adequate for years to come. Yet such has not been the case. The additions to the collections have so far exceeded expectations that more than ten years ago it was already overcrowded, although more than three-fourths of the Smithsonian building is still devoted to the same purposes, and houses some of the most important collections.

The number of specimens in the Museum is now nearly four and one-half millions, covering every department of knowledge, although strongest in the fields of natural science and ethnology. It is not possible here to name even the most important collections nor the sources from which they have been derived; nor would such a statement in any way give an adequate picture of the Museum. It is not the possession of collections, but their availability to the public at large and to students which really does credit to an establishment of this kind. Of this fact no one had a keener perception than Doctor Goode, who was associated with Professor Baird directly in the management of the Museum from 1878 to 1887, and from that year, upon his appointment as Assistant Secretary, had complete oversight of all the details of its management. He had the most profound desire to make the collections available to the people, to have them arranged so that they might be seen, and to have them labeled so that they might be instructive. Himself a scientific man and in sympathy with scientific work, he yet regarded the public use of the Museum as its primary object, and well was this policy rewarded by accessions and gifts from this very public, which have gone to enrich not only the exhibition, but the duplicate collections, thus benefiting both classes for which the Museum was intended. So skillful was his handling of this delicate problem that neither interest ever clashed, and the one but served the other.

The writer has presented these few brief statements, not with the idea of giving a history of the Museum, nor any sort of adequate recognition to the men who have had it in charge, but simply to show in outline what the purposes of the Museum have been; how the devo-

tion of its officers has made it grow; how the other Departments of the Government have strengthened it; how private persons all over the country have aided in building up and increasing the importance of the national collections commensurate with the growth of intelligence and the development of research in a country so preëminently devoted to the arts of peace as the United States.

BUILDINGS.

Through the construction of four new galleries and the leasing of three small buildings south of B street, some additional space has been gained during the year, but not more than was required to meet the urgent current demands caused by recent increases in the collections and the needs of the mechanical work. All of the galleries in question were designed for storage purposes, two to receive mainly the Geological Survey collections elsewhere referred to, one in part for the Division of Plants, and one for the overflow from the Library. In this connection it is interesting to note that the ten galleries erected during the past three years have added to the Museum building, which contained originally 140,625 square feet on the ground floor, an area of only about 22,600 feet, equivalent to about 16 per cent, while the collections have increased over twenty-fold since the first occupancy of the building in 1881.

The renting of additional outside quarters has made it possible to remove from the Museum building or from its immediate vicinity all of the shops in which the heavier or more noisy kinds of work are carried on or whose contents constitute an element of danger from fire, such as the carpenter and paint shops, as well as the laboratories for several branches of specimen preparation.

It becomes necessary, unfortunately, to call attention to certain structural weaknesses in the roof of the Museum building, disclosed by the great storm of February, 1899, which caused a number of the main iron girders to buckle badly and gave warning of more serious trouble in the near future unless ample precautions be promptly taken. The small size of the appropriation available for the purpose rendered it impossible to do more at the time than repair the immediate damage, but a thorough inspection will be made to determine what further action may be required. This roof was built some twenty years ago, before the extensive use of iron or steel in such constructions and when the conditions of their use in buildings of so great a width were but imperfectly understood.

THE COLLECTIONS.

Additions.—The scientific collections have been increased during the year to the extent of over 210,000 specimens, comprised in 1,497 accessions. The total number of specimens now in the Museum is

recorded at above 4,355,000, without fully taking into account many hundreds of bottles of small organisms, which, were it possible to enumerate their contents, would swell the total almost incredibly.

As the custodian of all specimens obtained by Government scientific expeditions, both at home and abroad, as the recipient of innumerable gifts and exchanges from private sources, many of which have been of very large size, and by purchase, the National Museum has acquired a greater fund of material than any other similar establishment in this country, while but few in Europe can equal or surpass it in this regard. With adequate and appropriate quarters it would soon take rank with the oldest and best museums of the world.

Among the more important accessions of the year in anthropology have been a collection of about 1,000 pieces representing the costumes, implements, and ceremonial objects of the Plains and Rocky Mountain Indians, brought together a number of years ago by M. E. Granier, now of Paris, France; a second installment of the Steiner collection of prehistoric stone implements and other objects from the Indian mounds near Grovetown, Georgia; and a part of the celebrated basketry collection of Dr. W. J. Hudson, illustrating in much detail the exquisite workmanship of the Pomo Indians of California. The above were acquired by purchase.

In biology the Museum is deeply indebted to Mr. W. H. Ashmead, one of its assistant curators, for the generous gift of his valuable private collection of insects, consisting of over 60,000 specimens and containing a very large number of types. The Division of Insects has now nearly 1,000,000 specimens, of which 125,000 were received the past year. This is the largest numerical showing made by any branch of the Museum, the Division of Mollusks coming next, followed by the Division of Marine Invertebrates.

In geology mention may be made of the large collection of vertebrate fossils acquired by the U. S. Geological Survey, which had been in the custody of Prof. O. C. Marsh, at Yale College. Since the death of this distinguished paleontologist the transfer of this collection to the National Museum has been arranged for by the Director of the Survey, and the work of bringing it to Washington was in progress at the close of the fiscal year. A very large amount of space will be required for its installation.

The Government bureaus to which the Museum has been chiefly indebted for material are the Geological Survey, the Fish Commission, and several divisions of the Department of Agriculture. In addition to the Marsh collection, already referred to, the Geological Survey has turned over during the year several important series of invertebrate and plant fossils described in its recent reports, besides a number of rock specimens and rare minerals. The Fish Commission has contributed a very extensive and valuable collection from the island of

Porto Rico and its vicinity, comprising fishes, marine invertebrates, and land animals, and also much material from other regions. From the Department of Agriculture mammals, insects, and plants have been received.

Exchanges have been extensively carried on with scientific institutions in all parts of the world, and, as the returns have consisted mainly of specimens identified by competent authorities, making them immediately useful for comparison in the study of new material, the Museum has been greatly benefited by these transactions.

Installation.—The display collections in anthropology now occupy 9 halls and 4 galleries, though all of these have not yet been made ready for the public. Much has been accomplished during the year in the way of adding to these exhibits and improving them in every branch of the department and with most effective results. The changes are most conspicuous in the North Hall, or Hall of American History, from which all the cases of small size and odd pattern have been removed, to give place to 30 large cases of uniform and pleasing design, arranged in 4 rows, with roomy aisles between. The most important additions to the historical collections have related to the war with Spain, and these, owing to their number and the large size of some objects, have made it necessary to extend this exhibit into the central rotunda. The Boat Hall, occupying the North East Range, has also been entirely rehabilitated, a terrazzo pavement replacing the old wooden floor, and a very capacious case having been built around the four sides of the room. The boat collection, which has been assembled at the cost of much time and effort, is a very large and comprehensive one, representing by models and actual examples the primitive and modern crafts of all parts of the world, and its rearrangement has been carried out in a systematic and instructive manner.

Although chiefly occupied with the duties of Executive Curator, Doctor True has still been able to make some progress in the reinstallation of the exhibition collections which come under his immediate charge as Head Curator of Biology. The plans for this work, as described in the report for 1898, contemplate a faunal basis for the new arrangement, in which the fauna of North America shall have special prominence. The mounted specimens of mammals have been replaced in the South Hall, though only temporarily, pending the construction of new cases. The American species remain on the ground floor, while those of the Old World have been transferred to the recently constructed gallery above.

The number of birds on display has been greatly reduced, though the space occupied remains the same, thus remedying the overcrowded condition of the cases, improving their appearance, and bringing the exhibit more within the comprehension of the public. Experiments

are also being made to secure an effective lighting of the large central part of the Bird Hall, which the absence of windows has rendered practically valueless for exhibition purposes. A series of the game birds and game fishes of North America has been placed in the entrance hall of the Smithsonian Building, and the exhibition collection of marine invertebrates has been rearranged and relabeled.

In the Department of Geology the reinstallation in new quarters of the systematic series of nonmetallic products, the geographic series, and the building and ornamental stones has been nearly completed. The collection of meteorites has now become very extensive, and that of gems is not surpassed either in numbers or varieties by any public collection in this country.

EXPLORATIONS AND RESEARCHES.

Though having insufficient funds for making field explorations on an extensive scale, some work of this character, to fill in gaps in the collections, has been carried on nearly every year, the direction given it being along lines or into regions not covered by other Government bureaus. Realizing the practical utility of early researches into the natural history of the recently acquired possessions, an appropriation for that purpose was asked of Congress, and its failure of passage at the last session will, it is hoped, only defer the project for a short time. Soon after the close of hostilities an agent was dispatched to Cuba and Porto Rico to obtain material illustrative of the historical phases of the war with Spain. Much success was met both in securing collections and in interesting persons on the ground to add to them.

Important researches in California and Mexico, with reference to prehistoric man as well as the modern Indians, were conducted by Dr. W. H. Holmes, who brought back a large and interesting collection. Mr. J. B. Hatcher is carrying on extensive inquiries in Patagonia for both Princeton University and the National Museum, and one important lot of specimens has already been received from him. Dr. J. N. Rose and Dr. Walter Hough spent some time in Mexico in botanical and ethnological investigations, and a number of other small expeditions were in the field at one time or another during the year, their activities relating to several different subjects.

As before explained, the explorations by which the Museum is mainly benefited are those conducted by the Geological Survey, the Fish Commission, and certain scientific divisions of the Department of Agriculture. Mention should also be made of the numerous contributions received from officers of the Army and Navy, whose opportunities for collecting have been greatly increased by the present activities in the military service. There have been many accessions from these various sources during the year, and references to the field work in connection

with which the specimens were obtained will be found elsewhere in this report.

While the scientific staff is constantly occupied with the routine duties involved in the care and installation of the collections, a number of its members have found time for research work and the preparation of important scientific papers. Persons not belonging to the staff and in part attached to other bureaus of the Government have been given facilities for study, and specimens in many groups have been sent away to specialists, both in this country and abroad, for examination and report. In this way the collections are being worked up and made known through the medium of the Museum publications, though not nearly so fast as they are added to.

PUBLIC BENEFITS OF THE MUSEUM.

The primary object of the Museum is to store and safeguard the Government and other collections confided to its care and to arrange and classify these collections so as to facilitate their study. This has been interpreted to include the display of such parts of the collections as may instruct the general public, the granting to properly qualified students of facilities for working up materials, and the preparation of sets of duplicate specimens for distribution to the educational institutions of higher grade throughout the country.

A public museum is, of course, chiefly known through its accessibility to the visiting public, and a very large part of the work of the National Museum consists in the proper arrangement of carefully selected specimens in attractive cases with suitable labels attached. The force necessary to guard the collections and to keep the building open and in presentable condition uses up a large share of its energy and funds, and the American public is not slow to take advantage of the opportunity offered. During the past year 192,471 persons visited the Museum building and 116,912 the Smithsonian building. It is not possible to fairly institute a comparison between the number of visitors to the National Museum at Washington and to great public museums elsewhere, whether national or municipal, since the latter are usually situated in the very largest cities in each State or country, with vast populations whence visitors may be drawn, while in Washington there is a comparatively small population, and it can be safely estimated that a very large percentage of the visitors to the Museum are from places other than the Capital, so that the influence of the Museum extends to every part of the country.

Of almost equal importance as to results, though restricted to a small number, is the policy of rendering the collections accessible to properly accredited investigators and students. The Smithsonian Institution from the outset never engaged directly in teaching in any form, assuming that the many educational institutions throughout the

country afforded ample facilities for this purpose, but its collections and to a certain extent even the time of the members of its scientific staff have been at the service of students and scholars whose training warranted the expectation that their researches here would be fruitful in the advancement of knowledge. An ever-increasing number of such persons have resorted to the Museum from time to time or have been sent material for examination, no less than 110 having been engaged in studies upon the collections during the past year. Their names and the special studies in which they were engaged will be found recorded elsewhere in this report.

Yet another class of persons have made demands upon the Museum—those who, being unable to come to Washington, ask for information by letter. These are sometimes scientific men engaged in special work; more often the general public desiring answers to some question, wishing to have some specimen which they have picked up identified, or other matters of this sort. All subjects with which the Museum has to deal and, indeed, many which in no way come within its scope have been included in this correspondence. Whenever the requests for information have been at all reasonable or have come within the province of the Museum or the knowledge of any member of its staff, such letters have been answered, although they entail an ever-increasing amount of research and time.

In the collections which reach the Museum there are naturally many duplicates, and these are used for two purposes—first, for exchanges with other museums, thereby furnishing a means for filling gaps in the collections, and secondly, in furtherance of the general plan for the diffusion of knowledge, being prepared in small sets, labeled, and sent to educational institutions of the higher grades throughout the United States.

Since the first international exposition in the United States, held at Philadelphia in 1876, there have been many such, either international in scope or of sufficient importance to receive recognition from Congress. All Congressional acts authorizing and aiding expositions in this country have directed participation by the Smithsonian Institution and its bureaus, and the collections which have been sent to them have invariably been drawn, in the main, from the National Museum. This participation of the Museum has recognized advantages to the country, in rendering public-spirited persons in different localities familiar with museum benefits and methods, and to it are directly traceable the founding of several museums. It has also at times resulted in considerable accessions to the National Museum, although of later years these have been less valuable than formerly.

There are, however, on the other hand, certain disadvantages of which mention should be made. Expositions have followed each other so closely that there is hardly a time when a portion of the Museum staff

is not engaged in planning for or taking part in one or unpacking and replacing the specimens which have been returned. The collections which are sent out necessarily suffer to some extent, and while it has been the policy of the Museum not to exhibit in the perishable structures usually built for such purposes any unique object or one which could not be replaced, many excellent specimens have been displayed at every exposition in which the Museum has been represented, and these have unquestionably deteriorated. Should the holding of expositions in the country continue at such brief intervals as during the past ten years, and the Museum be expected to participate in all of them, it would seem almost necessary that a special duplicate collection for these purposes be kept on hand, since it is not only the injury to the specimens which is to be deplored, but the constant interference with the arrangement of the collections and the great amount of labor expended in removing specimens from their cases and in properly replacing them.

At the Trans-Mississippi and International Exposition held at Omaha during the summer and early autumn of 1898 the several scientific departments of the Museum were extensively represented in connection with the Government display.

The participation of the Government Departments and bureaus in two other expositions has been authorized by Congress during the past year. The first of these, the Pan-American, will be held at Buffalo in 1901, and the second, the Ohio Centennial, at Toledo in 1902 or 1903. In each case \$500,000 has been appropriated, \$200,000 being for the buildings and \$300,000 for the exhibits. The preliminary arrangements for the Pan-American Exposition had so far progressed before the close of the year as to call for the appointment of representatives composing the Government board of management. Dr. Frederick W. True has been designated to act for the Museum in this capacity.

LIBRARY.

Through the purchase, by special act of Congress, of the scientific library of the late Doctor Goode, the Museum has secured a very noteworthy addition. This collection comprises 2,900 bound volumes, 18,000 pamphlets, and 1,800 portraits, autographs, etc., and contains many rare and valuable publications, being especially rich in the literature of museums and of fishes. Its acquisition increases the size of the working library belonging to the Museum to some 15,000 books and 26,500 pamphlets, but besides this, in order to meet the requirements of the scientific work, the Smithsonian collection has at all times to be largely drawn upon, and the accommodations assigned the library have long since been outgrown. A gallery has recently been built across one end of the West North Range to afford relief, but it can only be regarded as a temporary expedient.

PUBLICATIONS.

The publications issued during the year comprise five volumes, namely: The Annual Report for 1896; volume 20 of the Proceedings in bound form, and the separate papers of volume 21; and parts 2 and 3 of the important bulletin entitled "The Fishes of North and Middle America," by Doctors David S. Jordan and Barton W. Evermann. The number of scientific papers based upon Museum collections which have been printed, chiefly in the above volumes though to some extent in outside journals, is 318, representing 75 authors.

REPORTS OF HEAD CURATORS.

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

REPORT ON THE DEPARTMENT OF ANTHROPOLOGY
FOR THE YEAR 1898-99.

By WILLIAM H. HOLMES,
Head Curator.

During the year a number of important changes have been made in the manner of transacting the business of the Department of Anthropology. Some of the changes relate to the abbreviation of the routine, but the most important ones result from the introduction of the card-catalogue system into the work of the Department staff, and the keeping of all the catalogue books by a recording clerk in the office of the head curator. Formerly, separate books were assigned to the several divisions and independent sections. This work is now conducted by a single expert assistant, and the curators and other keepers of the collections make card catalogues for their own use.

FIELD WORK.

No systematic field work is provided for by the Museum, but limited funds are available for use when especially important results are promised. The work for the year has been as follows:

The head curator spent September and part of October in California visiting various Indian tribes and giving particular attention to the question of man's antiquity in the Sierra region. Interesting ethnological collections were made representing the Digger, the Pomo, and the Tulare tribes, and much archaeological material was secured in the auriferous-gravel region, in the San Joaquin Valley, in the vicinity of Los Angeles, and on the island of Santa Catalina. A visit to the Indian tribes of New Mexico and Arizona was planned, but was abandoned because of the epidemic of smallpox which was discovered to be raging among many of the pueblos.

On the breaking out of the war with Spain it was recognized that an important epoch in our national history had been initiated, and measures were taken to secure for the Museum such relics and mementos of the campaign as would be of interest to the people. The War Department and the Navy Department were appealed to, and Mr. Paul Beckwith, assistant in the Section of American History, was sent to Cuba and Porto Rico to act as agent for the Institution. Mr. Beckwith's visit to Cuba was cut short by the breaking out of yellow fever, but in Porto Rico between four and five months were spent, chiefly at Ponce, and many valuable additions were made to the historical series, and, besides, a number of archaeological objects were secured. Unfortunately, a considerable portion of the collections, delivered to transportation agents at San Juan, never reached the Museum.

After returning from Porto Rico, Mr. Beckwith paid visits to Norfolk, Brooklyn, Philadelphia, and other points, for the purpose of examining and securing such objects of interest as had reached the navy-yards from various points, and more especially from the war vessels destroyed by our fleet at Santiago de Cuba.

In April the head curator was invited to be the guest of Mr. George Brackenridge, of San Antonio, Texas, on a trip to various points in Mexico. The journey afforded him an opportunity of revisiting several points of interest, including the valley of Mexico, San Juan Teotihuacan, and Orizaba, and of examining for the first time two of the most interesting archaeological sites in Mexico, namely, the ruins of Xochicalco, near Cuernavaca, state of Morelos, and the obsidian mines of Hidalgo. At the latter place valuable observations were made and many minor relics illustrative of the quarrying and shaping of the obsidian by the ancient Nahuatl tribes were obtained.

Toward the latter part of May, Dr. Walter Hough, assistant curator of the Division of Ethnology, joined Dr. J. N. Rose, of the Division of Botany, in an extended excursion into Mexico. Three months were spent in the field and Doctor Hough was enabled to make the acquaintance of the native peoples at many points and to secure collections of interest in ethnology, ethnobotany, and archaeology.

COLLECTIONS RECEIVED.

The more important collections received through gift, purchase, and exchange during the year may be briefly mentioned:

1. A collection of 121 specimens of Polynesian ethnological objects, brought together mainly by Mr. Henry Adams and acquired through the bequest of Mr. W. H. Phillips, of which the archaeological portions were recorded during the preceding year.

2. Two hundred and thirty-four objects illustrating the potter's art as practiced in early days in Morgantown, West Virginia, presented by Miss Jennie Thompson through Dr. Walter Hough. The period covered extends from 1790-1888.

3. A collection of considerable importance embodying archaeological and ethnological materials from Mexico and Central America, purchased from Mr. E. W. Nelson, who spent a number of years traveling and collecting in these countries.

4. A large number of well-preserved specimens of ancient mound pottery, acquired by purchase from Mr. G. F. Morris, of Memphis, Tennessee.

5. A collection of 18 ancient Peruvian trephined skulls, brought together by Dr. M. A. Munñiz and acquired through the Bureau of American Ethnology.

6. The most important collection received by the Division of Ethnology during the year was purchased from M. Emil Granier, of

Paris. It consists mainly of ethnological materials collected from the Indian tribes of the middle-western section of the United States.

INSTALLATION WORK.

Division of Ethnology.—The installation work of the Division of Ethnology is under the direct supervision of Prof. O. T. Mason, curator, who has been ably supported by Dr. Walter Hough, assistant curator, and T. W. Sweeny, preparator. Dr. J. Walter Fewkes and Mrs. M. C. Stevenson have most generously lent their aid in the Pueblo section, and the head curator has taken an active part in planning and promoting the work. The following halls and galleries are occupied by the division: West North Range, North West Range, North West Court Gallery, West Hall, and West Hall Gallery, north side.

Collections illustrating many of the Indian tribes of the United States and Canada have been assembled in the West North Range whose walls are occupied by the great series of Catlin paintings, an appropriate association, considering that the peoples represented in the collections are in large part those among whom Catlin worked. The principal series of cases have been arranged to form two sets of alcoves, eight on the south side and eight on the north, each alcove devoted to a single ethnographic province.

Although the exhibits are not yet as complete as could be desired, they form undoubtedly the most complete exposition of the great group of tribes represented ever brought together.

Within the alcoves the collections are grouped as to subject-matter, first by tribes and second by industrial or other cultural concepts, such as costume, weapons, and basketry. The installation unit is the case, the half case, and the unit box. The labels are carefully drawn up to serve as a key to the classification and grouping. The alcove labels, standing for ethnic provinces are of generous dimensions and are placed at the back of the alcoves, above the wall cases. The case or section labels, standing for ethnic and industrial subdivisions, are smaller and are placed against the upper edge of the cases or at other points in close connection with the exhibits to which they pertain.

Brief individual labels are employed in connection with the specimens. The system of labeling is carried out, so far as it happens to be applicable, in the other halls of the Department.

The wide aisle extending lengthwise of the hall accommodates a series of large cases occupied mainly by lay-figure groups. It is intended that the floor space in each alcove shall, in time, contain a family group illustrating some typical tribe of the province represented by the alcove; but as this is not practicable at present, house groups on a small scale, showing how the people of the province live, are used, or otherwise miscellaneous exhibits are introduced to fill the spaces.

This hall was until recently occupied for lecture purposes. Its permanent assignment to the Division of Ethnology has enabled the curators to place on exhibition a large body of material not heretofore shown.

The North West Range contains exhibits from the northwest coast Indian tribes and the Eskimo. The only change made during the year had to do with the reinstallation of collections, especially the larger objects, the aim being to enhance the general effect of the hall. The removal of the long-coiled radiators which formerly occupied the floor along the entire west side, and the substitution of a continuous line of cases, was accomplished during the previous year and added greatly to the capacity and effect of the hall.

The geographical order of the exhibits and the peoples represented are kept in mind. In passing from Alcove VIII of the West North Range, where the Yukon-Mackenzie province is shown, are encountered at the north end of the hall a large group of exhibits illustrating the Northwest Coast peoples. These occupy the north and west walls, parts of the east and south walls, and a number of floor cases. Eskimo collections fill most of the floor cases toward the south, and the wall cases and wall spaces in the east and south. In the window spaces are a line of transparencies, the views relating mainly to the peoples represented in the collections of the hall.

The North West Court, which contains the series of exhibits from the Pueblo tribes of the arid region of the Southwest, has received much attention during the year. Doctor Fewkes has arranged an extensive series of Tusayan vases on the west side and Mrs. Stevenson has installed a case illustrating the use of prayer sticks by the Pueblo tribes. The collection of modern pottery has been overhauled and a series of unit boxes containing baskets, textile products, ceremonial objects, etc., has been placed on top of the wall case surrounding the hall.

The Gallery of the North West Court has not yet been opened to the public. The new wall case was finished about the close of the year and the installation of collections from Mexico and Central and South America has been commenced. The case on the west and north sides of the gallery is temporarily occupied by the very extensive collection of basketry which Professor Mason is engaged in studying.

West Hall is occupied mainly by collections illustrating the various peoples of Europe, Asia, and Africa. These have been partially reinstalled during the year. The gallery on the north side has been furnished with alcoved wall cases, and collections from the Indo-Pacific have been placed in them. The work of installation is not yet complete. Professor Mason has prepared a great number of labels during the year and many of these have been typewritten and placed with the

exhibits. Many labels for alcoves, cases, and groups prepared during the year have been submitted to the printer.

Division of History.—In no other section of the Department has such decided advance been made as in that of American history. This branch is under the custodianship of Mr. A. Howard Clark, but as he is necessarily much preoccupied with editorial duties, a great deal of the work has fallen to the share of his assistant, Mr. Paul Beckwith; and the head curator has from the start given all possible aid and encouragement to the work, which he regards as of first importance in the national collection.

At the beginning of the preceding fiscal year the exhibits of the section were confined to a few cases in the North Hall. The floor space then accommodated the collections of ceramics, lacquers, coins, and metal work, besides many things of minor importance. Now, the historic collections occupy the floor space almost exclusively and the Rotunda also is utilized by this section. Mr. Clark's report for the year contains the following paragraphs:

During the last decade general interest in American history has rapidly increased, and to keep pace with this popular demand the Section of American History in the National Museum has been gradually developed until it has become one of the most instructive branches of the Museum.

The year ending June 30, 1899, was an eventful one in American history, and the war with Spain caused public attention to be centered on the military as well as the political history of the country. To illustrate and perpetuate the history of events of the year, the head curator of the Department of Anthropology permitted an extension of the space heretofore allotted to historical relics and encouraged the collection of as many objects as possible that pertained to the war, and in making this special increase in the collection it was found possible to add considerably to the series of objects illustrating earlier events in the nation's history.

The actual number of accessions during the year was 165, which included about 1,027 individual specimens. Among the most important may be mentioned a large number of objects gathered by Mr. Beckwith during a trip to Porto Rico and Cuba, including a very exhaustive series of swords of Toledo steel, representing the various arms of the service, flags, uniforms, and the paraphernalia of military life.

Other very interesting accessions were received from the Navy Department, including numerous relics recovered from the battle ship *Maine*, destroyed in Havana Harbor, bronze cannon captured from the Spanish in Manila by Admiral Dewey, relics from Cervera's fleet destroyed off Santiago, and numerous relics of various battles and events of the war with Spain. The War Department also contributed some Spanish rifles and other objects. Many individuals, particularly Gen. G. H. Harries, Capt. H. C. Wilson, Lieut. J. C. Ord, Capt. Richard P. Leary, Admiral Charles O'Neil, Capt. Robley D. Evans, contributed objects of special interest.

There has been installed in the section a special case devoted to historical objects, loaned by the National Society of the Colonial Dames of America, including personal relics of George Washington, Thomas Jefferson, Patrick Henry, James Madison, Lord Fairfax, and others eminent in American history.

The collection of the Daughters of the American Revolution has been made of added interest by the exhibition of personal relics of Charles Carroll, of Carrollton, and some interesting objects pertaining to the colonial history of Maryland.

Perhaps the most interesting single objects received during the year were the John Paul Jones flag, with a musket and boarding sword, used in the battle between the *Bon Homme Richard* and the *Scrapis*, presented to the Smithsonian Institution by Mrs. Harriet Perry Stafford.

The most striking improvement in the installation of these exhibits has resulted from the removal of all cases of small size and odd patterns from the hall and the assembling of some thirty large cases of the best design. These are arranged in four rows, extending lengthwise of the hall, having roomy aisles between, the whole effect being simplified so that the groupings of furniture and objects conform properly with the architectural lines and proportions of the hall. The exhibits are arranged chronologically. Beginning at the left of the north entrance with the period of discovery the visitor passes down through illustrations of colonial and Revolutionary times to the opening of the civil war in 1861. Returning to the north end of the hall on the east side we have, first, collections relating to the civil war, including seven cases devoted to the relics of General Grant, one case to the meager series pertaining to Lincoln, and six cases to miscellaneous relics. These are followed by cases containing exhibits relating to great American inventors, and at the south end and overflowing into the Rotunda are collections illustrating the late war with Spain.

Division of Mechanical Technology.—This division is in charge of Mr. J. E. Watkins, curator, with Mr. George C. Maynard as aid. The notable feature of the year was the rehabilitation of the North East Range, called also Boat Hall. The east side is devoted to a series of models illustrating the water craft of the world, beginning at the north with the simple raft, and passing step by step through the successive grades of elaboration in hull, propelling devices, and steering apparatus to the modern steamship. This series is continued in the floor cases at the south end of the hall in a very important group of exhibits illustrating the introduction of steam power and the specialization of modern steam navigation. A number of floor cases toward the north end contain models of boats of various semicivilized countries.

The wall case of the west side displays an extensive series of models of fishing craft, mainly those in use in American waters, and the ceiling is hung with primitive boats from many parts of America.

This division occupies also the east half of East Hall, the principal exhibits relating to land transportation and electricity. Much progress has been made, but the work of installation has not yet reached such a degree of completion as to warrant the publication of details.

Section of Graphic Arts.—The Section of Graphic Arts occupies the Northeast Court, and is in charge of the head curator, with Mr. Paul Brockett as assistant. The very complete series of exhibits was brought together by Dr. S. R. Koehler, curator, who retired from active supervision of the work on account of ill health. The cases

have been rebuilt and are arranged in alcoves, six on the east and six on the west side. On the east side exhibits are presented in continuous order, illustrating the technology of the engraver's art; on the west are illustrations of the pictorial product, beginning at the south with early prints and closing at the north with the color printing of to-day. In the aisle which extends from north to south are exhibits illustrating the history of painting.

Division of Religions.—The Division of Religions, Dr. Cyrus Adler, custodian, and I. M. Casanowicz, aid, has been assigned to the South Gallery of the West Hall, where a handsome alcoved wall case has been built. The series of exhibits begin at the east with illustrations of the Jewish religion, and these are followed by Greek, Roman, Mohammedan, and Buddhist groups. Collections of the Division of Historic Archaeology, also in charge of Doctor Adler, are placed in the east end of West Hall and remain about as installed the previous year.

Division of Prehistoric Archaeology.—The exhibits of this division, which are in charge of Dr. Thomas Wilson, assisted by Mr. E. P. Upham, have not undergone any radical change during the year, although the work of installing new material and perfecting the arrangement of the old has gone steadily forward.

RESEARCH AND PUBLICATIONS.

The usual activity has been shown by the anthropological staff in conducting researches germane to the work of the department. Professor Mason, curator of the Division of Ethnology, has prepared and completed a paper on the curved steel knife among the Eskimo and Canadian tribes, in which an attempt is made to show that carving and etching and fine netting for snowshoes are contemporaneous with this knife. Before the steel knife the Eskimo did little creditable carving. Also a paper on a peculiar heddle frame for belt weaving was traced from the Pueblo country to its source in Europe.

The Indians of the Kootenai use a bark canoe, pointed at the water line like a modern ram. It is unique in the Western Hemisphere, but photographs and descriptions have been gathered by Professor Mason to show its nearest congeners on the Amur.

For some time Professor Mason has been gathering material for the study of zootechny among the American aborigines. This has enabled him to divide the continent into certain marked zootechnic areas, in which even the language, social institutions, and beliefs of the peoples are modified. Following up this idea of areas of characterization, he has pursued the subject of geographic distribution of hunting devices associated with the capture of certain species.

It happened during the year that the Spanish-American war suddenly brought into conspicuous attention the ancient history of Porto

Rico, and the Smithsonian Institution has found it advisable to republish Professor Mason's papers on the Latimer and Guesde collections of West Indian antiquities.

Dr. Walter Hough, assistant curator, completed his monograph on Eskimo lamps, and continued his investigation of the utilization of fire and the manufacture of bark textiles.

Mr. J. D. McGuire has been engaged in making an exhaustive study of primitive technology.

Dr. Thomas Wilson has carried on various researches relating in the main to prehistoric archaeology.

In connection with a paper treating of Museum buildings he has conducted studies regarding the amount of light admitted through glass of various kinds, and an extended article on the use of poisoned arrows by primitive peoples has been prepared. Doctor Wilson has also elaborated a paper on the subject of prehistoric trephining, and has continued his investigation relating to arrow points, spear heads, and knives of prehistoric times.

The head curator has been so fully occupied with administrative duties in the Museum that little time has been at his disposal for research work. The trip to California in the interest of the Museum collections gave him the opportunity of visiting the auriferous gravel region, from which a considerable body of testimony has been obtained relating to the antiquity of man. This evidence he has carefully examined, and a paper reviewing the general subject will appear in the *American Anthropologist* for the year 1899. ●

REPORT ON THE DEPARTMENT OF BIOLOGY FOR THE YEAR 1898-99.

By FREDERICK W. TRUE,
Head Curator.

The year covered by the last report was one of great changes, due to reorganization of the scientific staff of the Museum and the erection of galleries in the Museum building. A new plan for the exhibition series in biology was decided upon and a beginning made in carrying it into effect. This plan contemplates the arrangement of the exhibition series on a faunal basis, the fauna of North America being given special prominence. Good progress in this line was made in several divisions during the year covered by the present report.

IMPROVEMENTS IN THE EXHIBITION HALLS.

In the Division of Mammals the old wall cases, which were no longer suitable on the floor, were transferred to the gallery and added to, so as to occupy the whole length of the hall on both sides. In these were installed the series representing the mammal faunas of the Old World, Africa being on the east side, and Eurasia and Australia on the west side. The cases were refitted throughout, the backs being covered with plain burlap and the floor with linoleum. Such shelves as were needed were made of pine and covered with burlap to correspond with the back. This style of fitting is comparatively inexpensive, is pleasing in effect, and has the excellent quality of extreme durability. All the Old World mammals were placed in these cases, but for the small forms—squirrels, mice, bats, etc.—temporary floor cases were brought into use, pending the construction of cases especially adapted for this purpose. The whole series received temporary labels. On the screen at the south end of the gallery, which separates the exhibition space from the paleontological laboratories, the beautiful illustrations of the cat family from Elliot's *Monograph* were displayed. There is not sufficient space at this end of the gallery for mounted specimens.

The floor of the South Hall, as stated in last year's report, is given up exclusively to American mammals. The cases on hand were arranged to give as good an effect as possible, but on account of the galleries some new cases will doubtless have to be erected for the large forms. The seals, sea lions, and walruses, especially, are not satisfactorily installed.

The great progress made in the study of North American mammals during the last decade has rendered it necessary to thoroughly revise the exhibition series representing this fauna, and the taxidermic work was almost entirely restricted to North American species during the past year. The object aimed at is to have on exhibition a perfect specimen of every known species and subspecies inhabiting North America.

The exhibition series of North American fishes, reptiles, and batrachians was considerably improved and completely labeled. It can not, however, be extended, nor can the faunas of other parts of the world be represented without additional space. The present quarters are far from ideal, either as regards lighting or arrangement of space.

The most radical change of the year was in the Division of Birds. On account of the large number of specimens mounted for various expositions, and for other reasons, the exhibition series had become entirely overcrowded, so that nothing could be seen satisfactorily. After long consideration of the matter it seemed impossible to apply any other remedy than to withdraw a large proportion of the birds. This was done under the supervision of the curator and assistant curator, and the result has proved most satisfactory. Although the lighting of the hall is not of the best, the whole exhibition series of single-mounted specimens can now be seen to good advantage, except in the quadrangular space in the center of the hall. No improvement of the lighting is possible at that point without artificial means. Experiments were made in that direction at the close of the year which promise to solve the difficulty.

The groups of birds, which are among the most attractive features of the series, are still poorly provided for. They are chiefly installed in cases made for use in temporary expositions, and are neither dust-tight nor sufficiently uniform in pattern.

The exhibition series of invertebrates (other than mollusks and insects) was very thoroughly revised. The main series, as in other branches, is now North American. A new system of installation was devised for the dry specimens, which are exhibited in flat table cases. The specimens representing each species are placed in a separate shallow tray. All the trays are of equal depth and uniform in size (or a multiple of the unit). When a case has its full complement of trays it has the appearance of being divided into compartments, with a single species in each compartment. The effect is very satisfactory. Temporary typewritten labels were made for the larger part of the series during the year. Certain parts of the series, such as worms, entomostraca, etc., are still incomplete, as the Museum collections do not at present contain specimens in these classes suitable for exhibition purposes.

The synoptic series of invertebrates, formerly in the Division of

Comparative Anatomy, has been placed in the same hall with the other invertebrates, at the west end of the Smithsonian building, in cases specially constructed to receive it. It needs revision and the addition of numerous types.

Nothing of special moment was accomplished toward improving the exhibition series of insects and of mollusks.

Owing to the erection of a gallery in the East-South Range, the whale skeletons suspended from the ceiling near the side walls had to be removed to a position nearer the center of the hall. To protect the roof from collapse and to sustain the skeletons, specially constructed wrought-iron slings were devised by the Chief of Buildings. The hall was necessarily in confusion while these large specimens were being readjusted, but at the close of the year it had been brought again to an orderly condition. The exhibition series of osteological specimens is very full and can not be much expanded in the present quarters.

A special series, comprising the principal North American game birds and game fishes, was placed on exhibition in the hallway of the Smithsonian building, together with a number of mounted heads of large game—the moose, caribou, antelope, etc.

ACCESSIONS.

The accessions of the year, though not equaling those of 1898 in number of specimens, were of at least equal scientific interest and importance.

The U. S. Fish Commission transmitted an extensive zoological collection made during its recent exploration of the island of Porto Rico. It comprised not less than 5,000 mollusks, representing some 400 species (including a number of new forms and other rare and interesting material) and a large series of invertebrates of other classes.

While associated with the representatives of the U. S. Fish Commission in the zoological exploration of Porto Rico, Mr. A. B. Baker collected an extensive series of bats, about 200 reptiles and batrachians (including several undescribed species), and over 100 bird skins.

In the Division of Mammals, on account of the fact that the material was largely collected to supply deficiencies, the additions were of much interest. Some 900 small mammals were collected for the Museum by Mr. Loring in Norway, Germany, and Italy. These were chiefly from localities from which the types of the earlier European mammalogists were derived, and hence of importance in determining the identity of described species. A collection of European bats and an additional lot of small mammals from Norway were also purchased. These are the first collections of European mammals of any moment which have found their way into the Museum. Baron de Selys-

Longchamps, well known as an authority upon the rodentia, presented 25 specimens of small mammals, identified by himself.

A collection of 13 Alaska moose and wild sheep was obtained for the Museum by Mr. Dall DeWeese. One of these specimens has been made the type of a new species of moose—*Alces gigas* Miller.

Among the mammals received from the National Zoological Park were an elephant and a lion.

The additions to the collections of birds, though less in extent than in some previous years, included much important material, among which should be mentioned a collection of 58 specimens of Colombian birds, presented by Mr. Outram Bangs, of Boston, Massachusetts, and 5 skins of the Californian Condor, purchased from Mr. F. H. Holmes, of Berryessa, California.

Doctor Ralph, custodian of the Section of Birds' Eggs, as in past years, made a valuable contribution to the collection under his charge, consisting in this instance of some 200 eggs from various sections of North America. Mr. C. F. Baker, of Alabama, presented 127 eggs from the Western United States.

The U. S. Fish Commission transferred to the Museum a large collection of reptiles and batrachians which had been assembled from time to time by its field agents. This contained many specimens of importance, including unique specimens of a discoglossoid toad, the only representative of this suborder of batrachians which has been found in the Western Hemisphere. It has been described by Doctor Stejneger under the name of *Ascaphus truei*.

A small but interesting collection of reptiles from Java, made by Prof. D. G. Fairchild, was transmitted to the Museum by the Department of Agriculture.

A series of fishes of North and Central Asia, collected by M. Chafanjon, was received from the Musée d'Histoire Naturelle, Paris. The U. S. Fish Commission transmitted fishes from Florida, Lake Superior, Alaska, and Kamchatka, together with the types of *Paraliparis rosaceus*, and *Bathylagus milleri* and *Ulocentra meadia*. Two rare fishes were received from the Pacific coast, a specimen of a *Rhamphocottus*, presented by Mr. O. E. Shaffer, Port Townsend, Washington, and a specimen of *Icosteus enigmaticus*, presented by Mr. John Chapman, of San Diego, California.

Mr. William B. Moss, of Ashton-under-Lyne, England, a valued correspondent and contributor to the Museum, donated two lots of small shells, comprising some 3,000 specimens, collected by Rev. and Mrs. James Hadfield at Lifou Island, Loyalty Group. They belong for the most part to species recently described and hitherto unrepresented in the Museum.

Mr. B. H. Wright, of Penn Yan, New York, continued his donations of river mussels (Unionidæ), including types of species described by

him. Rev. E. H. Ashmun, Mr. T. S. Oldroyd, and Dr. E. A. Mearns, U. S. A., should also be mentioned as contributors of valuable specimens. Miss Mary J. Rathbun collected some 800 mollusks in the waters about Grand Manan, New Brunswick.

Regarding accessions to the Division of Insects, Dr. L. O. Howard, honorary curator, reports as follows:

The last fiscal year was an extraordinary one in the history of the Division of Insects, and it was not expected that such another one would occur again for some time to come. Notwithstanding this, however, the present fiscal year surpasses it not only in the number of accessions, but, it is believed, also in scientific value.

In 1897 the accessions numbered only 139, a large increase over previous years. In 1898 they numbered 246, while this year they reached 285, an increase of 39 over last year.

On account of the vast number of duplicates in the Hubbard and Schwarz collection, it was estimated that over 226,000 specimens were received, while this year they amount to only 125,000. The number of specimens received this year is therefore less than last year, although the number of species is several thousand greater.

This is due principally to the extensive collection of Hemiptera, Hymenoptera, Siphonaptera, and Mallophaga, presented by Prof. Carl F. Baker, and to the addition of the Ashmead collection, both being exceedingly rich in species and containing types and co-types of species described by these entomologists, as well as those of many other authorities. With these two collections the Museum is now well represented in the orders mentioned above and without doubt surpasses all other collections in America.

The gift by Mr. W. H. Ashmead, assistant curator, of his private collection, is a most notable one and deserves especial mention. It was largely made by this indefatigable worker in the State of Florida, and has been greatly added to by a systematic series of exchanges carried on for many years with entomologists in different foreign countries; but perhaps its chief value lies in the large number of types which it contains. Mr. Ashmead's broad entomological knowledge and interest have led him to undertake systematic work in a number of different groups, and the great value of the gift thus becomes apparent.

Numerous invertebrates of other classes were received during the year, among which should be mentioned 40 lots, chiefly crustacea (including a number of type specimens), donated by Mr. W. P. Hay, of Washington, D. C.; a collection of amphipod crustaceans from the New England coast, donated by Dr. S. D. Judd, of Washington, D. C.; 27 species of crustaceans, corals, and echinoderms, donated by Rev. W. A. Stanton, of Balize, British Honduras, and 20 species of crabs, shrimps, and worms, donated by Mr. H. W. Henshaw, of Hilo, Hawaii.

The accessions to the herbarium during the past ten years have been as follows:

1889-90	370	1894-95	670
1890-91	621	1895-96	236
1891-92	511	1896-97	370
1892-93	567	1897-98	307
1893-94	693	1898-99	264

Among the important additions of the past year was a portion of Rugel's Florida collection, comprising 1,049 specimens, donated by the British Museum.

Mr. J. G. Baker, of London, England, presented a large part of his private herbarium. Mr. Louis A. Kengla, of San Francisco, California, presented a hundred specimens of algæ suitable for exhibition. From Maj. H. E. Hasse was received the gift of 233 specimens of California lichens.

A large number of important specimens from Samoa, Mexico, Costa Rica, and from various parts of the United States were purchased during the year.

WORK ON THE STUDY SERIES.

The principal work accomplished in the Division of Mammals, in addition to the usual routine operations and the rearrangement of the exhibition series (already referred to), was the improvement of the collection of small skins and a rearrangement of the study series. A large proportion of the skins of rodents and other small mammals which have been accumulating from year to year have long needed making over on a uniform model, in order to be thoroughly available for purposes of comparison. During the past year it was found possible to assign a taxidermist to this work for about six months, during which time some 800 skins were remodeled. A rearrangement of the whole study series of small skins, based on Troussart's recently published catalogue of mammals, was begun, and the greater part of the rodents were put in order during the year. The collection of skulls of small mammals was also rearranged.

In the Division of Birds the large amount of work done on the exhibition series left little opportunity for other than current routine work. The determination of type specimens was continued, and some 20 were located and separated out from the general collection.

The study collection of birds' eggs is in good condition, but the exhibition series is much in need of revision and renovation. The honorary curator of this section has not only been the largest contributor to the growth of the collection, but has devoted much of his time personally to the current work.

The study series of reptiles and batrachians is much in need of revision, but up to the present time it has not been found possible to supply the large amount of new shelves needed before a rearrangement can be commenced. The curator has devoted his time chiefly to the improvement of the exhibition series and to investigations.

Work was continued on the exhibition series of casts of American fishes under the supervision of the assistant curator.

Much time was occupied in the Division of Mollusks in cleaning, assorting, and naming the very extensive collection of shells presented last year by Prof. R. E. Call. The shells of the family Helicidæ and the Pyramidellidæ of the west coast of America were thoroughly studied and rearranged and many species identified. The important

collection made by the Fish Commission in Porto Rico was also assorted and identified. The whole study series is in excellent condition.

The same remark applies to the collections of insects, which are now almost entirely free from pests. More standard insect drawers are, however, needed. Many thousand insects were pinned and labeled by the preparators during the year, but much of this material is still unidentified. The collections of all orders of insects are now arranged tentatively and are available for study and comparison. Special mention should be made of the Lepidoptera, which has been brought into excellent condition through the unremunerated labor of Dr. H. G. Dyar, custodian. The division has not only had the benefit of the gratuitous services of the honorary curator, Dr. L. O. Howard, but of several other members of the entomological staff of the Department of Agriculture and also of Mr. E. A. Schwarz.

Mr. W. H. Ashmead, assistant curator, arranged and identified most of the African and Asiatic Hymenoptera during the year, together with some material from Central and South America. The dragon flies and Neuropterous insects were rearranged by Mr. Currie, aid.

In the Division of Marine Invertebrates the card catalogue of Brachyuran crustaceans, comprising about 5,000 titles, was revised and transferred to standard library-bureau cards. The collection of Hexactinellid sponges, which has been for some time in the hands of Professor Shulz for study, was catalogued. Dr. J. E. Benedict and Miss Rathbun, assistant curators, identified the crabs collected in Porto Rico by the U. S. Fish Commission.

The rearrangement of the exhibition series, necessitated by the erection of galleries, occupied a large share of the time of the staff of the Department of Comparative Anatomy. In connection with that work, the skeleton of the extinct Arctic sea cow, *Rhytina*, and of the finback whale, were cleaned and remounted. The time of the curator and assistants was divided between this division and that of Vertebrate Paleontology.

The following passage from the report of the honorary curator of the Division of Plants, Mr. F. V. Coville, gives a condensed statement of the work accomplished in that division during the year:

The collection of plants formerly stored on the south balcony of the Museum, which was referred to in the report of last year as having been transferred to the National Herbarium, has greatly taxed the present capacity of our cases, and it is doubtful whether the accumulation of mounted material, Mexican and otherwise, now on hand can be distributed until the new adjoining balcony is fitted up. This collection, when finally arranged, listed, and stamped, numbered over 30,000 specimens, being particularly rich in European material. The work of stamping the general series, with a view to ascertaining the total number of specimens in the herbarium, has been carried forward at intervals. Thus far 21,618 sheets have been stamped.

Three preparators have been engaged in mounting, labeling, and repairing specimens during the year. The total number of specimens is 22,559, of which 13,314 have been stamped and distributed. The large collection presented by Prof. W. H.

Brewer, representing the types described in the Botany of the California Survey, has been most carefully prepared with all the original data mounted with the specimens, which will be determined and distributed as rapidly as possible.

The selection, verification, and marking of type specimens has been delayed, owing to the resignation last December of the preparator employed on this work. The total number of types thus far indicated is 1,619. It is important that this work be continued, both for the advantage it affords to consulting botanists and for the desirability of ascertaining definitely the exact number of types in the collection.

In the rearrangement of and research work on the collection considerable progress has been made. We have introduced genus covers printed in colors to correspond with the larger continental areas, the North American being black, the West Indian, Mexican, and South American red, and the Old World blue. An extension of this scheme is now under consideration.

The herbarium is now in orderly arrangement as far as the Ericaceae, and the work on it will be pushed during the coming year.

The south tower room has been fitted up for the accommodation of the cryptogamic collections by the addition of an iron balcony supporting cases on three sides, with a stairway leading to an attic room provided with cases suitable for storage purposes. For several months Mr. O. F. Cook, now honorary assistant curator in charge of Cryptogamic Botany, very kindly gave his services and those of his two assistants in caring for these collections. Mr. Cook was commissioned to prepare an exhibit of algae for the Trans-Mississippi Exposition at Omaha, and this work was brought to completion in the early part of last summer. A supplementary series has been placed on the exhibition front of the east balcony. It soon became evident that an officer would shortly be required to devote his entire attention to the valuable cryptogamic collections, many of which still remain inaccessible for study. Early in January Mr. William R. Maxon was employed on a six months' contract to put these collections in order, and he is now, after most faithful and painstaking labor, able to report the practical completion of his task. In the three main groups of the lower cryptogams, the mosses, fungi, and lichens, all undetermined material has been sorted out and will be sent to specialists in those groups for identification and return; while the large accumulations of unmounted material have been properly placed in pockets and labeled, ready for distribution on the shelves. Mr. Maxon has also distributed several thousand mounted sheets of ferns and fern allies, readjusting the covers and identifying dubious specimens. During the past few weeks he has been engaged in caring for the large collection of alcoholic material sent in by Messrs. Swingle and Fairchild.

FIELD WORK.

Several members of the scientific staff of the department engaged in field work during the year. The fishes of the State of New York were studied by Dr. T. H. Bean and Mr. B. A. Bean, on Long Island.

Mr. W. H. Dall, Mr. Robert Ridgway, and Mr. F. V. Coville joined the Harriman Alaska expedition and made investigations of the mollusks, birds, and plants of that Territory. Miss M. J. Rathbun spent a month at Grand Manan Island, New Brunswick, studying the shore invertebrates and dredging in shallow water.

INVESTIGATIONS.

A large number of scientific investigations were in progress, the results of some of which were published during the year. Mr. G. S. Miller, jr., published several short papers on mammals and partially

completed a revision of the free-tailed bats. He began also a revision of European mammals and a correlation of the life zones of Europe and North America.

Mr. Robert Ridgway continued work on his extensive manual of North and Middle American birds, completing the family Fringillidae, and entering upon the families Corvidae and Tanagridae. It is anticipated that the first part of this work will be ready for publication next year. Considerable progress was made by Dr. C. W. Richmond in the preparation of a card catalogue of described genera and species of birds.

Mr. Barton A. Bean and Dr. Hugh M. Smith, of the U. S. Fish Commission, prepared a preliminary catalogue of the fishes of the District of Columbia.

Mr. William H. Dall presents the following statement regarding his work on mollusks:

During the year the greater portion of my time given to investigation has been specially occupied by a revision of the species and the classification of bivalve mollusks belonging to the Tertiary beds of the United States, and incidentally of the marine fauna of its shores. Many of our living species are found also in several Tertiary strata, and therefore in studying species which are found in the Tertiary beds it is necessary to compare them with the living species as well as with other fossils in order to make sure that they are undescribed or identify them with already described species. For this reason the investigation of the Tertiary fauna which I have been carrying on for a number of years, and which is now nearly finished, has practically included in nearly all the groups a revision of the classification of the living animals of the same groups common to our coast. During the past year especial attention was given to some of these groups, among which may be mentioned the Leptonacea, the Solens, and some groups of the Lucinidae. Nearly all the time available for special researches has been devoted to this subject, and such other researches as I may have made are comparatively unimportant.

Mr. C. T. Simpson continued his study of the river mussels, or *Naiades*, and reports that he has completed a classification of the group and will soon be prepared to publish the results of his work.

Mr. J. E. Benedict has continued his work on the crustaceans of the family Galatheidae. Miss M. J. Rathbun prepared an article on the Decapod Crustaceans of West Africa for the New York State Colonization Society.

Mr. F. A. Lucas has completed his study of the fossil bisons of North America and continued his investigations on the anatomy of the swifts and the development of the skull of the cormorant.

In addition to his scientific labors as Botanist of the Department of Agriculture, Mr. F. V. Coville entered upon a comprehensive study of the genus *Ribes*. Mr. Rose has continued his monograph of the Agaves, and visited Mexico for the purpose of studying and collecting specimens of the more obscure forms. Mr. Pollard has progressed with his work on the violets, and in that connection has prepared sets of authentic specimens of the various species of *Viola* for distribution.

USE OF THE COLLECTIONS.

The zoological and botanical collections have been made use of to a very large extent during the year by naturalists from all sections of the United States. Some investigators have visited Washington for this purpose, and in other cases collections have been sent out of the Museum temporarily to investigators both at home and abroad.

Among those who made use of the ornithological collections should be mentioned Mr. E. W. Nelson, Mr. H. C. Oberholser, and Mr. W. H. Osgood, of the Department of Agriculture; Mr. Outram Bangs, of Boston, Massachusetts, and Miss Florence Merriam, of Washington, District of Columbia.

Mr. Oberholser, at the request of the Museum, determined the collections of birds recently received from Liberia, the Kameruns, Madagascar, and Kashmir. The committee on nomenclature of the American Ornithologists' Union spent a week in studying new subspecies for the purpose of determining their claims to recognition.

Frequent use was made of the collections of fishes by the officers of the U. S. Fish Commission, especially by Doctors Evermann, Smith, and Kendall.

Sir Charles Elliot, British commissioner to Samoa, prosecuted investigations on the Nudibranch mollusks. Mr. G. A. Drew, of Johns Hopkins University, studied and published on the mollusks of the family Ledidæ.

The collections of insects have been very largely consulted by entomologists throughout the country.

Miss Harriet Richardson continued her study of the isopod crustaceans during the greater part of the year, and prepared a special report on the isopods of the Pacific coast of North America, which has recently been published in the Proceedings of the Museum. Mr. T. Wayland Vaughan, of the U. S. Geological Survey, began an investigation of the West Indian corals, and Dr. H. F. Moore, of the U. S. Fish Commission, studied the isopod crustaceans collected by the Commission in Porto Rico. Mr. W. P. Hay assisted in determining the crayfishes recently received, and described a new form of isopod from a well in Irvington, Ind.

The herbarium has received a good share of attention from botanists. Special mention should be made of the services of Prof. E. L. Greene in determining various specimens for the Museum.

The practice of lending material for study to recognized experts not residing in Washington was continued as heretofore. A large amount of material was sent out, but only the principal loans can be noticed here.

Dr. Howard Ayers, of the University of Missouri, obtained the myxinoid fishes in the collection for use in connection with a monograph of that group which he has in preparation.

Specimens of *Dinolestes*, *Atherinopsis*, *Apogon*, and *Exocetus* were

sent to Mr. E. C. Starks for dissection. Mr. Starks afterwards returned excellently prepared skeletons of these fishes.

A series of specimens of mice was sent to Mr. Barrett-Hamilton, London, England, who is engaged in a revision of the European species of the genus *Mus*.

A series of 76 small shrikes was sent to Mr. R. M. Strong, Cambridge, Massachusetts, to assist him in the determination of the percentage of variation in that group. Dr. Jonathan Dwight, jr., obtained the loan of some 60 specimens for use in his study of the molting of birds. A collection of house wrens was sent to Mr. W. E. Loucks, Peoria, Illinois, for examination. Messrs. Outram Bangs and Arthur Stone obtained the use of Colombian birds. A series of specimens of wrens and sparrows was lent to Mr. William Brewster, Cambridge, Massachusetts.

Mr. F. W. Gamble, of Owens College, Manchester, England, who is monographing certain families of annelids, was furnished the specimens of several genera.

Dr. J. Percy Moore received additional installments of leeches. The Museum collection of geophyreans was sent to Prof. Henry B. Ward, University of Nebraska, who is monographing the group.

The Caprellidæ in the Museum were placed in the hands of Doctor Mayer, of the Naples Biological Station, to assist him in preparing a supplement to his monograph.

Dr. F. Meinert, Zoological Museum, Copenhagen, Denmark, was accorded the use of the collection of Pycnogonida for a monograph of that group.

Loans of insects were made to 12 experts during the year, among whom were the following: Dr. Philip P. Calvert, of the Philadelphia Academy of Sciences, received all the unworked dragon-flies (Odonata), partly for naming and partly in connection with his work on the *Biologia Centrali-America*. In the interest also of this great faunal publication, the Mexican and Central American Acrididæ were sent to Professor Lawrence, University of Nebraska, for study. The specimens of the family Pyralidæ were placed in the hands of Prof. C. H. Fernald, of the Agricultural College, Amherst, Massachusetts, for monographic purposes.

Loans of about 1,800 herbarium specimens were made during the year, chiefly in small lots for purposes of identification.

PERSONNEL.

Mr. Gerrit S. Miller, jr., received a temporary appointment as assistant curator, Division of Mammals, July 13, 1898, and on October 15, 1898, was regularly added to the staff. Mr. J. H. Riley was appointed aid August 8, 1898, and Mr. M. W. Lyon, jr., August 15, 1898. Mr. Riley was assigned to the Section of Birds' Eggs, and Mr. Lyon to the Division of Mammals.

REPORT ON THE DEPARTMENT OF GEOLOGY FOR THE YEAR 1898-99.

By GEORGE P. MERRILL,
Head Curator.

Although the year just closed compares favorably with its predecessors, so far as relates to the acquisition of materials, it has not been possible to advance the work of installation to the extent hoped for in the beginning.

ORGANIZATION.

The department as now organized consists of the following divisions: (1) Physical and Chemical Geology (Systematic and Applied), (2) Mineralogy, and (3) Stratigraphic Paleontology, including the sections of Vertebrate Fossils, Invertebrate Fossils, and Paleobotany.

ACCESSIONS.

In the order given, the number of accessions is as follows:

Divisions.	Regular.	Tem- porary.	Total.	
			1898-99.	1897-98.
Geology	147	132	279	141
Mineralogy	41	75	116	166
Vertebrate Paleontology.....	27	5	.....	.....
Invertebrate Paleontology.....	82	17	99	116
Paleobotany	37	2	39	.....
Total.....	334	231	533	423

In the Division of Geology a very considerable amount of the material received is in itself of slight commercial value. It consists in large part of specimens designed to show the mineral resources of the United States or to fill existing gaps in the systematic series of economic products. Especial mention should, perhaps, be made of a small collection of monazite sands from Brazil; asbestos from Italy; silver-lead-antimony ore from Zaneudo mines in Colombia, South America; a large and miscellaneous assortment of ores and economic products from the Central and Western States, received from the Omaha International Exposition; three fine slabs of onyx marble from Colorado, and a series of 19 specimens of polished spheres of Japanese breccia, the gift of the late Prof. O. C. Marsh.

In the Section of Systematic Geology mention should be made of a

series of rocks illustrating the Upper Cambrian formations of the Lake Superior region, collected by Mr. C. R. Van Hise, of the U. S. Geological Survey; a series of clastic rocks illustrating the geology of the slate regions of eastern New York and western Vermont, collected by Prof. T. N. Dale, of the Geological Survey; a fine series of jointed sandstones from the Black Hills of South Dakota, collected by Mr. N. H. Darton, of the Geological Survey; and a series of volcanic products from Vesuvius and other parts of Italy, collected by Mr. F. W. Crosby.

The Division of Mineralogy has been enriched by the acquisition of samples of 4 new minerals—erionite, wellsite, bixbyite, and clinobehdrite—as well as of 11 other species new to the collection; and of 3 new meteorites from Polk County, Minnesota; Adams County, Pennsylvania, and Mount Osceuro, New Mexico, respectively.

Mention should be made of 6 specimens of roscoelite on auriferous quartz from Eldorado County, California, and 5 specimens of crystallized arsenic from Japan.

The gem collection has received, through the liberality of Dr. L. T. Chamberlain, a fine cut citrine quartz, weighing $139\frac{1}{2}$ carats; 21 cut Montana sapphires, selected to show colors, and 2 cut sapphires, weighing $3\frac{1}{2}$ carats, all from Yogo Gulch, Montana; 1 opal from Mexico, and 2 garnets of the variety rhodolite, from North Carolina. Four opals from Mexico were also obtained by purchase.

In the Section of Vertebrate Fossils the accessions especially worthy of note are a series of mammal skulls from a new locality in the White River Miocene, from the Geological Survey; a fine skull of *Hyracodon nebrascensis*, the gift of Mr. A. W. Barber, and the fossil skull of a new species of bear and a small series of fish remains from the chalk formations of Kansas, collected by Mr. A. B. Baker.

An account of the large series of fossil vertebrates forming the Marsh collection at Yale University, which is in progress of removal from New Haven, will be deferred for the report for next year.

The collection of vertebrate fossils from the Cope estate, mentioned in the last report, was received early in the year. This collection, it will be remembered, was made under the auspices of the Hayden Survey, and comprises over 175 specimens, including many of the types of fishes and reptiles described by Professor Cope in his volume on the Vertebrates of the Tertiary formation of the West and in the Bulletins of the Survey.

The accessions in the section of Invertebrate Fossils are reported by Mr. Schuchert as being neither so large nor so valuable as last year. A large portion of the material received was deposited by the U. S. Geological Survey, and consists of 6,534 Paleozoic fossils, 214 Mesozoic, and 16 Tertiary. Among these the most valuable is a series of 3,990 specimens of Cambrian brachiopods, determined by Prof. Charles

D. Walcott, and the figured specimens, 158 in number, of Lower Cretaceous gryphaeas, described by Messrs. Hill and Vaughan in Bulletin No. 151 of the Geological Survey. A collection comprising some 4,000 specimens of Cincinnati fossils was purchased from Mr. H. E. Dickhaut, of the Survey. This collection is particularly rich in pelecypods.

Three valuable collections of post-Paleozoic fossils were received in exchange from the Geological Museum at Leyden, the University Museum of Natural History at Turin, Italy, and the British Museum of Natural History, London.

As a matter of historical interest, it may be noted that the Troost collection of crinoidea, which, together with the manuscript describing them and drawings for 107 species, was sent by the Smithsonian Institution to Prof. James Hall in 1853, was returned last November by the administrator of the Hall estate.

The Section of Paleobotany, until the opening of the present fiscal year, has been in charge of honorary curators. In order to relieve them of the detailed routine work Dr. A. C. Peale was appointed aid and placed in charge of the collections. Much of the work which he has had to do has been upon material which has been in the Museum collections for many years. The comparatively small number of accessions, therefore, furnishes by no means a measure of the work performed. Among the principal collections which have been received by this section during the fiscal year were: Lower Carboniferous plants from Henry County, Missouri, described in Monograph 37 of the Geological Survey; a series of 900 Carboniferous plants from Indian Territory, described by Mr. David White in the Nineteenth Annual Report of the Survey, and 26 boxes of Carboniferous plants, comprising the Armstrong collection, purchased for the Museum by Mr. R. D. Lacey.

PRESENT CONDITION OF COLLECTIONS

The progress made in caring for the collections has been all that the circumstances permitted. In the Section of Applied Geology the work of installing the systematic series of nonmetallic products in the new rail cases has been nearly completed. The rearrangement of the geographic series on the ground floor of the Southwest Court is also completed, although several thousand labels yet remain to be prepared. The entire collection of building and ornamental stones, comprising between 3,000 and 4,000 specimens, has been moved and installed in the wall cases of the same court.

The collections in systematic geology, occupying the West South Range, are not yet fully arranged, though the series illustrating the materials of the earth's crust is in order, as is also that illustrating folding and faulting and volcanic products. A magnificent group of

basaltic columns, collected for the Museum by Mr. F. W. Crosby, has lately been added to this series. Manuscript for upward of 2,500 labels has been prepared and is ready for the printer. The actual work of arranging these collections, it should be stated, has fallen upon Mr. W. H. Newhall, with such assistance as could be given by Museum laborers.

I might add that in all the work of this department steps are being taken toward a reduction of the number of specimens exhibited and an improvement in the quality. The reduction in number in certain of the collections is necessitated by lack of space, but it is believed that on the whole a careful selection of the specimens exhibited will cause the collections to have more educational value than will an increase in number.

The collections in the Division of Mineralogy, as stated in my last report, have been as well arranged as possible with the present exhibition cases. New cases are needed along the west wall. As the collections in this division are now well systematized, I submit Mr. Tassin's report upon them in full.

The exhibition series is arranged under the following heads: Systematic series; comparative series; gem collection; meteorite collection.

The systematic series is divided into two general classes—native elements and compounds of the elements. The compounds of the elements are further divided and grouped under certain heads according to their more negative constituents, as follows:

Compounds of the halogens, fluorides, chlorides, bromides, and iodides. Compounds of sulphur, selenium, tellurium, arsenic, and antimony, including sulphides, selenides and tellurides, arsenides, antimonides, sulpharsenides, and sulphantimonides; also sulphosalts. Oxygen compounds, including oxides and the oxygen salts, borates, aluminates, chromites, ferrites, manganites, plumbates, arsenites and antimonites, selenites and tellurites, carbonates, silicates, titanates, columbates and tantalates, nitrates, vanadates, phosphates, arsenates and antimonates, sulphates, selenates and tellurates, chromates, molybdates and tungstates, iodates, and uranates. Compounds of organic origin, including salts of organic acids and carbon compounds.

Each of these classes is further separated into groups according to their chemical relationships. Each group is preceded by a general group label stating the class to which it belongs, the group name, a list of the minerals composing that group, together with their chemical formulæ, system of crystallization, and a short description of the occurrence, association, and characteristic form of each member of the group. Following the group label, arranged in order from left to right, are the several members of the group selected to illustrate, as completely as the conditions will permit, their occurrences, associations, color, habit, etc.

Each specimen is mounted on a standard block, in front of which is a small label giving the name, locality, etc., of the individual.

The comparative series.—Here the properties of minerals are defined, illustrated, and compared. In each case the label containing a definition of the property under consideration precedes a series of specimens and, wherever they can be used advantageously, a series of models illustrating that property.

The meteorite collection, including the Shepard and Museum collections, now contains several hundred specimens representing 336 falls. As in the other series, the collections are preceded by introductory labels, on which are noted the more prominent physical and chemical characters of meteorites, together with the classification here adopted. The arrangement of the two collections is somewhat different, that of the Museum being geographic, while the Shepard collection is chronologic.

The gem collection now compares favorably with any other public collection of this kind in the country, both in number and kinds of stones exhibited. It is especially rich in those gems and ornamental stones which occur in the United States, as is shown by the following tabulated statement:

Name.	Locality.	No. of stones.	Color.	Remarks.
Aragonite	Colusa County, California.	1	Brown.....	Cut cabochon.
Beryl.....	Avondale, Pennsylvania.	2	Yellow	2 and 3 carat stones.
Beryl aquamarine.	Paris, Maine.....	1	Colorless.....	Small brilliant.
Do.....	Stoncham, Maine.....	2	Bluish green.....	Good brilliants, 1 and 2 carats.
Do.....	Royalston, Massachusetts.	1	.....do	Fine 8-carat brilliant.
Do.....	Fitchburg, Massachusetts.	3	Yellowish green..	Small stones.
Do.....	Litchfield, Connecticut.	5	.....do	Good 1-carat brilliants.
Do.....	Portland, Connecticut..	1	Bluish green	Fine 14-carat brilliant.
Do.....	Asheville, North Carolina.	1	.....do	2½-carat step-brilliant; good.
Do.....	Mitchells Peak, North Carolina.	1	.....do	Fine 9½-carat brilliant.
Do.....	Mitchell County, North Carolina.	1	Blue.....	7-carat opaque cabochon.
Do.....	Near Ray Mine, North Carolina.	11	Bluish green	Fine brilliants.
Do.....	Ray Mine, North Carolina.	19	.....do	Do.
Beryl emerald.....	Stony Point, North Carolina.	26	Emerald green ...	Small brilliants; color fair.
Do.....	.....do	1	.....do	Largest example found in America.
Beryllonite.....	Stoncham, Maine.....	3	Colorless.....	Weight, 3½ to 5 carats.

Name.	Locality.	No. of stones.	Color.	Remarks.
Cassiterite	Chesterfield, South Carolina.	1	Yellow	Mounted as a scarf pin.
Chrysolite	Arizona	1	Bottle green	2½-carat brilliant.
Do.....	Fort Wingate, New Mexico.	6	.....do	1½-carat brilliants.
Catlinite.....	Pipestone County, Minnesota.	2	Reddish	1 earring and 1 pipe.
Coral (fossil)	Iowa	2	.....	Paper weights.
Do.....	Petowsky, Michigan.....	1	.....	Do.
Cyanite.....	Mitchell County, North Carolina.	1	Blue.....	¾ carat, step-cut.
Corundum ruby ...	Corundum Hill, North Carolina.	1	Blood red.....	Do.
Corundum sa p phire.	.....do	8	Blue and green...	Small stones.
Do.....	Montana	27	Various colors....	Good stones, showing complete range of color.
Do.....	Yogo Gulch, Montana ..	2	Royal blue	¾-carat stones.
Corundum asteria.	Elijay, North Carolina..	3	Bronze	Cut cabochon, good stars.
Diamond	Cabin Fork Creek, Kentucky.	1	Yellowish	¾-carat polished pebble.
Fluorite	Amelia Court-House, Virginia.	1	Brown.....	5-carat stone.
Gadolinite.....	Llano County, Texas ...	1	Black.....	8-carat brilliant.
Garnet var. alman dite.	Delaware County, Pennsylvania.	2	Dark red	4-carat cabochons.
Do.....	Macon County, North Carolina.	3	Cherry red	1 to 5 carat brilliants, good.
Do.....	Fort Defiance, Arizona .	5	Violet red	1 to 2 carat brilliants, good.
Do.....	New Mexico.....	7	.....do	1-carat brilliants.
Garnet pyrope.....	Macon County, North Carolina.	17	Red	Do.
Garnet rhodolite ..	North Carolina	2	Violet red	Good brilliants.
Garnet spessartite.	Amelia Court-House, Virginia.	9	Orange red	Good stones, one 39 carats.
Jade.....	Alaska.....	2	Olive green.....	Labrets or belt buckles.
Malachite	Arizona	6	.....	Slabs and polished pieces.
Microcline .....	.....	.....	.....	.....
Microcline ama zonstone.	Delaware County, Pennsylvania.	2	Green	Cabochon cut.
Do.....	Amelia Court - House, Virginia.	1	.....do	Do.
Do.....	.....do	2	.....do	1 dish and a paper weight.
Do.....	.....do	6	.....do	Balls.
Do.....	Pikes Peak, Colorado...	2	.....do	Cabochon cut.
Obsidian	Yellowstone Park	11	Brown to black...	Do.
Oligoclase	Mitchell County, North Carolina.	2	Colorless.....	2½ to 6 carat brilliants.
Oligoclase moon stone.	Delaware County, Pennsylvania.	3	.....do	Cabochon cut.
Do.....	Hanover County, Virginia.	1	.....do	Do.
Do.....	Amelia Court - House, Virginia.	10	White and colorless.	Polished pieces and cabochon cut.
Oligoclase sunstone	Delaware County, Pennsylvania.	3	.....	Do.

Name.	Locality.	No. of stones.	Color.	Remarks.
Opal.....	Garfield County, Wash- ington.	1	.....	Massive.
Do.....	Douglas City, Washing- ton.	1	.....	Do.
Prehnite.....	Paterson, New Jersey...	3	Light green.....	Cabochon cut.
Prehnite chloro- strolite.	Isle Royale, Lake Su- perior.	10	.....	Do.
Pyroxene.....	Davidson County, North Carolina.	1	.....	Polished slab.
Pyroxene dropside	DeKalb, New York.....	4	Green.....	Cut brilliant and cabochon.
Quartz.....	Paris, Maine.....	1	Opalescent.....	Cabochon.
Do.....	Fairfax Court-House, Virginia.	3	Green banded....	
Quartz, agate.....	Lake Superior.....	1	.....	Polished piece.
Quartz, agatized wood.	Arizona.....	11	.....	Slabs and ornaments.
Quartz, amethyst..	Stow, Maine.....	2	Amethystine.....	13 and 23 carat stones.
Do.....	Upper Providence, Pennsylvania.	1	Deep amethystine	35-carat gem.
Do.....	Warlick, North Carolina	1	Light amethystine	14½-carat gem.
Do.....	Macon County, North Carolina.	2	Amethystine.....	One cut and one massive.
Do.....	Alexander County, North Carolina.	11	.....do.....	All cut from same mass, weights from 2½ to 197 carats.
Quartz, cat's-eye..	Cumberland, Rhode Island.	1	Dark green.....	Cabochon.
Quartz, chalcedony	Yellowstone Park.....	4	Grayish.....	
Quartz, chryso- prase.	Tulare County, Califor- nia.	1	Green.....	Do.
Quartz, citrine.....	Alexander County, North Carolina.	1	Citrine yellow....	
Do.....	Florissant, Colorado...	1	.....do.....	139½-carat top brilliant.
Quartz, moss agate.	Yellowstone Park.....	14	.....	Cabochon and polished pieces.
Quartz roek crys- tal.	Chestnut Hill, North Carolina.	3	Colorless.....	Fine stones.
Do.....	.....do.....	1	.....do.....	Ball 11 cm. in diameter.
Do.....	Red Hill, North Caro- lina.	18	.....do.....	Arrowheads.
Quartz, rose.....	Paris, Maine.....	1	Rose pink.....	Opalescent cabochon.
Do.....	Stoneham, Maine.....	1	.....do.....	Do.
Do.....	McDowell County, North Carolina.	4	Light rose.....	Stick-pin heads.
Quartz, smoky.....	Mount Mica, Paris, Maine.	1	Smoke brown....	Step brilliant, large.
Do.....	Stoneham, Maine.....	1	.....do.....	Do.
Do.....	Fairfax County, Vir- ginia.	3	.....do.....	Small brilliants.
Do.....	Mount Pisgah, North Carolina.	1	.....do.....	Large rose, cut.
Do.....	Tredell Comty, North Carolina.	1	.....do.....	Do.
Do.....	Magnet Cave, Arkansas.	1	.....do.....	Do.
Do.....	Pikes Peak, Colorado...	1	.....do.....	Large top brilliant.
Do.....	Florissant, Colorado...	1	.....do.....	Do.

Name.	Locality.	No. of stones.	Color.	Remarks.
Quartz, with inclusions	Rhode Island.....	1	.....	With actinolite inclusions.
Do.....	Fairfax County, Virginia.	1	.....	With (?) inclusions.
Do.....	Alexander County, North Carolina.	2	.....	With rutile inclusions.
Do.....	Iredell County, North Carolina.	5	.....	Do.
Do.....	Burke County, North Carolina.	1	.....	Crystal, with tourmaline inclusions.
Do.....	Hot Springs, Arkansas.	3	.....	With chlorite inclusions.
Do.....	Colorado.....	2	.....	With Göthite inclusions.
Do.....	Arizona.....	2	.....	With Dumortierite inclusions.
Do.....	California.....	1	.....	With gold inclusions.
Rhodonite.....	Cummington, Massachusetts.	1	Flesh red.....	Polished ellipsoid.
Do.....	Franklin, New Jersey..	1	do.....	Cabochon cut.
Rutile.....	Hiddenite, North Carolina.	5	Red black.....	Small $\frac{1}{2}$ -carat brilliants.
Samarskite.....	Mitchell County, North Carolina.	1	Black.....	$6\frac{1}{2}$ -carat brilliant.
Serpentine.....	Massachusetts.....	2	.....	Necklace and ornaments.
Do.....	United States.....	12	.....	Slabs and ornaments.
Do.....	California.....	1	.....	Flower-shaped ornament.
Serpentine var. bowensite.	Smithfield, Rhode Island.	3	.....	Polished pieces.
Serpentine var. williamsite.	Lancaster, Pennsylvania.	3	.....	Do.
Smithsonite.....	Marion County, Arkansas.	2	Lemon yellow....	Cabochon cut.
Sodalite.....	Litchfield, Maine.....	1	Blue.....	$4\frac{3}{8}$ -carat cabochon.
Spodumene, hiddenite.	Stony Point, North Carolina.	7	Emerald green...	Small brilliants, $\frac{1}{2}$ carat and less.
Thompsonite.....	Grand Marais, Minnesota.	17	.....	.....
Titanite.....	Brewster, New York....	2	Honey yellow....	Step brilliants.
Do.....	Bridgewater, Pennsylvania.	1	Greenish brown..	4-carat stone.
Topaz.....	Stoncham, Maine.....	1	Colorless.....	3-carat brilliant.
Do.....	Chatham, New Hampshire.	1	do.....	12-carat brilliant.
Do.....	Pikes Peak, Colorado...	1	do.....	$17\frac{1}{2}$ -carat step brilliant.
Do.....	do.....	1	Wine red.....	$14\frac{1}{2}$ -carat step brilliant.
Do.....	Utah.....	3	Colorless.....	1-carat brilliant.
Tourmaline.....	Paris, Maine.....	3	Dark green.....	57-carat gem.
Do.....	do.....	1	Wine red.....	18-carat gem.
Do.....	do.....	1	Sherry.....	$16\frac{1}{2}$ -carat gem.
Do.....	do.....	7	Colorless.....	Small brilliants.
Do.....	do.....	2	Smoky and green.	Both cut from same crystal.
Do.....	do.....	5	Green shades....	4 to 7 carat stones.
Do.....	do.....	4	do.....	1 to 3 carat stones.
Do.....	do.....	11	do.....	Less than 1-carat stones.
Do.....	do.....	15	Blue.....	1 to 4 carat stones.
Do.....	do.....	6	Red.....	Do.
Do.....	do.....	1	Black.....	$\frac{1}{2}$ -carat stone.

Name.	Locality.	No. of stones.	Color.	Remarks.
Tourmaline	Paris, Maine.....	3	Particolored.....	
Do.....	Auburn, Maine	10	Colored.....	
Do.....	Middlesex County, Connecticut.	3	Green	Brilliants.
Do.....	Dekalb, New York.....	1	Pale yellow	5½-carat stone.
Do.....	Macomb, New York	2	Brown.....	1-carat stones.
Turquoise	Los Cerillos, New Mexico.	11	.....	Cabochon and ornamental pieces.
Variscite	Candelaria, Nevada	1	Green	
Do.....	Lewiston, Utah	2	.....do	Polished pieces.
Willemite	Franklin, New Jersey ..	3	Greenish yellow..	Small brilliants.

The study series contains the material which appeals exclusively to the specialist. It comprises those specimens which serve to illustrate the occurrence and associations of a mineral in any one locality and which are not needed for the exhibition series, or which are not unnecessary duplicates of material already on hand. Each specimen in this series is numbered, labeled, and contained in a paper tray. The several specimens are then arranged geographically by species; the species are arranged in groups, as in the systematic series, and placed in drawers. This series also includes all the original and type material belonging to the division which is not needed for exhibition. Those types used in the exhibition series are here represented by cards giving the position of the type specimens in the cases.

Little has as yet been done in the way of permanently installing the exhibition series of vertebrate fossils, owing to the construction of new cases and the absence of Mr. F. A. Lucas, the Curator, for several weeks in New Haven. The death of Professor Marsh involved the immediate withdrawal and turning over to the Museum of the vertebrate fossils collected under the direction of the Geological Survey, which work has naturally taken a large share of the time and attention of the Curator since March. This collection will be referred to again in the next report.

The final arrangement of the collection of invertebrate fossils has been delayed by the need of cases. The entire Paleozoic portion has been removed from the floor of the southwest court and placed on the gallery in the same court. This installation is not, however, final. With the completion of the rail cases, it is hoped to remove from the floor of this court the Mesozoic and more recent invertebrate fossils, thereby making room for the collections in vertebrate paleontology. At present, the mounted exhibition series in this section consists only of Cambrian, Upper Carboniferous, and Tertiary forms. Mr. Charles Schuchert has labored most industriously, and reports that, with the assistance of Mr. Williard, he has during the year placed in final Museum form upward of 20,000 specimens and prepared 2,900 cata-

logue cards, as well as manuscript for 1,319 labels. With the present force, however, it will not be possible to complete the installation of the exhibition series for at least two years.

In the Section of Paleobotany I have to report the installation of an exhibition series comprising some 1,000 specimens in the wall cases occupying the south and west galleries of the Southeast Court. Some 1,300 specimens were received and catalogued during the year, and four volumes, comprising 2,000 entries in the old catalogues, have been copied. At least 12,000 entries yet remain to be made of materials now in the Museum. There is need of another assistant in this section.

RESEARCH.

But little opportunity has been offered for special investigation by officers of the Museum. Dr. E. C. E. Lord has occupied a desk in the laboratory of the Division of Geology and has been engaged upon the study of the rocks collected by Dr. E. A. Mearns, U. S. A., of the Mexican Boundary Survey and other rocks collected by himself on the coast of Maine and by Messrs. Schuchert and White in Greenland.

The head curator has partially revised for publication the manuscript for a handbook of the collection of nonmetallic minerals which was begun some three years ago. He has also written sundry other papers, the titles of which, so far as they have yet been published, are given in the Bibliography (Appendix IV). Mr. Wirt Tassin, assistant curator in charge of the mineral collections, has now in press a handbook of the exhibition series, illustrating the characters of minerals, and also a paper showing the classification adopted in the arrangement of the mineral collections under his charge. He announces having in preparation a catalogue of the mineral collections and a handbook of the collection of meteorites. Mr. Schuchert has been engaged, when opportunity offered, in reworking the Lower Helderberg and Oriskany collections, and has prepared two papers for publication. He has practically completed a paper on the Lower Devonian Aspect of the Lower Helderberg and Oriskany, and one on the Lower Silurian Fauna of Baffin Land. He is also continuing his work, begun more than three years ago, on the fossil starfishes of America. Mr. Lucas has completed a study of the fossil bison; identified a series of vertebrates from the White River Miocene, submitted by the Geological Survey, and described a hitherto unknown fossil sauke from the Eocene of Alabama.

SOURCES OF NEW MATERIAL.

With the exception of the collections of Kinderhook fossils made by Mr. Paul Bartsch, of the Division of Mollusks, while at his home in Burlington, Iowa, no geological explorations of consequence have been undertaken by members of the Museum staff. Mr. F. W. Crosby,

of this city, while traveling in Europe, collected many objects of value, including a fine series of Italian asbestos and an exceptionally large cluster of basaltic columns from near Bonn, in Prussia. In like manner, Prof. C. H. Hitchcock, of Hanover, New Hampshire, while in the Hawaiian Islands, made important geological collections. Inasmuch as the materials have not yet arrived at the Museum, further notice concerning them is left for the next report.

Through the kindness of the Geological Survey the Museum was enabled to detail Mr. H. E. Dickhaut, of that bureau, to collect an extensive series of Upper Silurian fossils in the vicinity of Lockport, New York.

Mr. R. D. Lacroe has, by two important donations, continued to exhibit his interest in science and in the National Museum. Through the kindly interest of Mr. Harry Lee, the State Commissioner of Mines, a fine series of telluride ores and other desirable materials from Colorado has been procured.

As in the past, the chief source of accumulation is the Geological Survey, particularly for paleontological, stratigraphical, and lithological material. Dr. L. T. Chamberlain has on three occasions manifested his interest in the gem collection, as noted elsewhere.

ASSISTANCE AFFORDED STUDENTS AND INVESTIGATORS.

The custom of lending collections to workers outside of the Museum has been adhered to. A small collection of Japanese marbles was lent to Prof. O. C. Marsh, and 116 thin sections of granites to Prof. B. K. Emerson. From the Division of Mineralogy a series of silicates and several specimens of chalcidony were turned over to Messrs. Clark and Diller, of the Geological Survey, to be used in special investigations being conducted by them. In like manner teeth of Paleozoic sharks have been lent to Prof. C. R. Eastman, of Cambridge. Invertebrate Paleozoic material has been lent to Mr. J. W. Beede, of the University of Kansas; to Dr. G. F. Girty, of the Geological Survey; to M. M. Cossman, of Paris; and Dr. Anton Fritsch, of Prague.

The study of the collections has not been limited wholly to members of the Museum staff. As already noted, Dr. E. C. E. Lord has continued his studies in the Division of Geology, while Doctor Fritsch, of Bohemia, and Doctor Matthews, of the American Museum of Natural History, have briefly studied methods of installation, and, in the case of Doctor Fritsch, the fossil Myriapoda and Arachnida in the Lacroe collection.

Prof. F. W. Cragin, graduate student of Johns Hopkins University, Baltimore, has passed several weeks in the Museum, working on the collection of Texas Jurassic fossils. In the Section of Vertebrate Paleontology, Dr. O. P. Hay has described two new species of fossil turtles and Mr. Gerrit S. Miller, jr., one new species of Pleistocene bear.

Prof. Atreus Wanner, superintendent of the public schools of York, Pennsylvania, has twice visited the Museum to utilize the Triassic materials in the collections in connection with his work on the Triassic plants from near York, Pennsylvania.

Twenty-six papers bearing upon subjects in the department collections have been prepared during the year, either by the staff of the Museum or by those having access to the collections. These titles are given in the Bibliography and need not be repeated here.

STORAGE AND WORKROOMS.

Much material (several hundred boxes) belonging to the Paleontological collections is still in storage. It is hoped that some time in the near future this, too, may be made available to students.

With the renting of the Emery Building, on Tenth street southwest, the workrooms and all machinery used in preparatory work were removed to that building, thus affording a much-needed space for packing and unpacking material, and such incidental work as could not properly be carried on in the offices and exhibition halls.

In the Section of Systematic Geology there are several special series of exhibits that could be prepared to advantage, such as collections illustrating the geology of special areas, to include maps, sections, and other drawings and photographs, besides the actual specimens. A very attractive exhibit illustrating the geology and physical geography of the Yellowstone Park has also been projected, but not yet carried out.

In the Section of Applied Geology there is need of special exhibits illustrative of various phases of the science. Models of one or more important mines, or relief maps and sections of mining regions, together with samples of the ore and wall rocks, form desirable exhibits, as do also collections showing the origin and derivation of ore, the geological distribution of useful minerals of various kinds, the qualifying conditions for artesian wells, etc.

Several such exhibits have been projected, but are still far from complete.

In my report as curator for 1892 I announced the preparation of 200 sets of rocks and ores, ranging in number from 66 to 104 specimens each. The last of these was sent out during the spring of 1899. Since 1892 other materials have been gradually accumulated, in the line of both geology and invertebrate paleontology, for other sets, but no opportunity has been found to put them in order. The interest at present manifested in the study of soils and the problems connected therewith led the curator to begin, a year or more ago, the preparation of 100 sets of rocks and their decomposition products, as described in his work on rockweathering. This work, too, is still unfinished.

The death of Prof. O. C. Marsh, which occurred on March 18, 1899,

has precipitated the work of transferring to the Museum the collections of vertebrate fossils made by him under the authority of the Geological Survey during the years 1882 to 1893, referred to in the last report. Representatives of the department have been at New Haven since April 10, engaged in the work of packing. The labor of bringing the material here and installing it, together with the incidental work of cataloguing and looking after the records, will tax to the utmost the resources of the section for many months to come. As much of the material is still in the matrix, the services of another preparator are essential. With this additional help, it might be possible to prepare one or more restorations of some of the more striking forms, like *Triceratops*, which would add greatly to the interest and educational value of the display collections.

NAT MUS 99—4

SUMMARY OF THE OPERATIONS OF THE YEAR.

THE MUSEUM STAFF.

Dr. O. C. Marsh, professor of paleontology in Yale University and for many years connected with the staff of the National Museum as honorary curator of Vertebrate Fossils, died on March 18, 1899.

Dr. Frederick W. True has been appointed the Representative of the Smithsonian Institution and National Museum on the Government Board for the Pan-American Exposition to be held in Buffalo in 1901, and Mr. W. V. Cox has been designated as chief special agent in the same connection.

Mr. J. L. Willige continued to act as chief clerk until December 12, when he was relieved by Mr. W. V. Cox, who had then completed his duties away from Washington in connection with the Trans-Mississippi and International Exposition.

Mr. George C. Maynard, custodian of the Electrical Collections, was on August 1, 1898, also designated as aid in the Division of Mechanical Technology.

Mr. J. H. Riley and Mr. Marcus W. Lyon, jr., were appointed aids in the Department of Biology on August 8 and August 15, respectively, and on January 1, 1899, Miss Carrie Harrison, aid in the Division of Plants, was transferred to the Department of Agriculture.

Mr. E. A. Schwarz has been placed in charge of the entire collection of Coleoptera, as custodian, and Mr. Nathan Banks has been made custodian of the Collection of Arachnida.

Prof. O. F. Cook, for some time an assistant curator in the Division of Plants, having accepted a position in the Department of Agriculture, was in March, 1899, made honorary assistant curator in charge of the Cryptogamic collections.

Dr. A. C. Peale was appointed aid in the Section of Paleobotany on July 25, 1898.

Dr. George H. Girty, of the U. S. Geological Survey, was made custodian of the Carboniferous collections in the Section of Invertebrate Fossils on July 29, 1898.

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

APPROPRIATIONS AND EXPENDITURES.

The appropriations by Congress for the past fiscal year aggregated \$257,000, an increase of \$24,000 over the total for the preceding year. There was an increase of \$5,000 in the item for preservation of collec-

tions, which also contained an added provision for the making of illustrations to an extent not exceeding \$5,500 in cost. For furniture and fixtures, including the furnishing of new galleries, \$35,000 were given, being \$5,000 more than the year before. The purchase of books was provided for in a separate appropriation of \$2,000. The amount allowed for the rent of workshops was increased from \$2,000 to \$4,500, and for continuing the construction of galleries, etc., from \$8,000 to \$10,000. For the purchase of the library of the late Dr. G. Brown Goode, \$5,000 were granted, and the appropriation for printing and binding was increased from \$12,000 to \$17,000.

The total expenditures from these appropriations during the year aggregated \$244,368, leaving a balance, subject to outstanding liabilities, of \$12,632. From the appropriation for 1897-98 disbursements amounting to \$5,385.41 were made, leaving a balance of \$118.18, exclusive of small balances from the printing allotment and the appropriation for the rent of workshops. Expenditures to the amount of \$378.69 were made from the appropriation for 1896-97, under the titles of preservation of collections, and heating and lighting.

The following tables show the expenditures during 1898-99 from the appropriations for the past two fiscal years and the balances on hand June 30, 1899:

Appropriations and expenditures for the fiscal year ending June 30, 1899.

Object.	Appropriations.	Expenditures.	Balance on hand June 30, 1899.
Preservation of collections.....	\$165,000	\$160,338.06	\$4,661.94
Furniture and fixtures.....	35,000	34,004.72	995.28
Heating, lighting, and electrical service.....	14,000	12,219.98	1,780.02
Books.....	2,000	1,300.43	699.57
Postage.....	500	500.00	.....
Building repairs.....	4,000	3,918.92	81.08
Rent of workshops.....	4,500	4,389.92	110.08
Galleries.....	10,000	5,698.34	4,301.66
Library of the late G. Brown Goode.....	5,000	5,000.00	.....
Printing.....	17,000	16,997.63	2.37
Total.....	257,000	244,368.00	12,632.00

Disbursements from unexpended balances of appropriations for the fiscal year ending June 30, 1898.

Object.	Balance June 30, 1898.	Expenditures.	Balance June 30, 1899.
Preservation of collections.....	\$2,363.51	\$2,266.23	\$97.28
Furniture and fixtures.....	1,710.46	1,709.23	1.23
Heating and lighting.....	816.87	811.38	5.49
Building repairs.....	31.98	27.45	4.53
Galleries.....	551.87	543.00	8.87
Rebuilding sheds.....	28.90	28.12	.78
Total.....	5,503.59	5,385.41	118.18

The appropriations for the fiscal year ending June 30, 1900, are as follows:

Preservation of collections	\$170,000
Furniture and fixtures (including \$10,000 for furnishing new galleries).....	25,000
Heating, lighting, and electrical service.....	14,000
Postage.....	500
Books, pamphlets, and periodicals.....	2,000
Repairs to buildings, shops, and sheds.....	6,000
Rent of workshops and temporary storage quarters	4,040
Printing and binding	17,000
Total.....	<u>238,540</u>

BUILDINGS.

Iron galleries have been erected in the West North Range, the West South Range, the East South Range, and the South East Range under the item of \$10,000 appropriated for that purpose. The great snow storm of February, 1899, disclosed certain weak places in the roof of the Museum building and caused the buckling of several of the large iron girders. The damaged parts have been repaired and strengthened so far as the appropriation permitted. Two of the old wooden floors have been replaced by terrazzo pavement, and many minor repairs and improvements have been made.

Three additional small buildings have been leased for workshop and storage purposes, thus supplying much-needed space and allowing for the removal of the long frame shed which adjoined the Museum building on the east side.

ACCESSIONS AND REGISTRATION.

The total number of accessions during the year was 1,497, a slight increase over that for the preceding year. The number of specimens embraced in these accessions was 210,323, raising the grand total in the possession of the Museum to 4,355,463. The details are shown in the following table:

Number of specimens received in 1898-99, and total number in the several divisions on June 30, 1899.

Division.	Received in 1898-99.	Total.
Anthropology:		
Ethnology.....	2,253	453,908
Historic archæology.....	104	1,976
Prehistoric archæology.....	3,429	278,018
Technology.....	207	30,628
Graphic arts.....	121	7,355
Medicine.....	19	6,800
Religions.....	508	2,366
History and biography.....	1,027	37,183

Number of specimens received in 1898-99, and total number in the several divisions on June 30, 1899—Continued.

Division.	Received in 1898-99.	Total.
Biology:		
Mammals.....	5,031	<i>a</i> 27,016
Birds.....	2,785	<i>b</i> 115,059
Birds' eggs.....	389	61,661
Reptiles and batrachians.....	855	38,977
Fishes.....	701	151,301
Mollusks.....	14,981	740,017
Insects.....	125,000	994,236
Marine invertebrates.....	7,227	509,331
Helminthological collection.....	<i>c</i> 199	<i>c</i> 4,945
Comparative anatomy.....	94	15,585
Plants.....	23,000	391,241
Forestry.....		749
Geology:		
Physical and chemical geology.....	638	77,863
Mineralogy.....	219	29,527
Stratigraphic paleontology.....	21,536	376,721
Total.....	210,323	4,355,463

a Including the specimens added to the Department of Agriculture series during this and the preceding year.

b Including material recently added to the Department of Agriculture series.

c Number of catalogue entries.

The number of entries made in the catalogues of the different divisions was 26,442. In Appendix II will be found a complete list of the accessions for the year.

The following table shows the number of accessions annually since 1881:

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.....	22179-23310	1,162
1891.....	23311-24527	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

Thirteen thousand seven hundred and twenty-nine packages of various kinds have been received by the registrar, besides 29,628 volumes of publications. Five hundred and fifty-seven of these packages contained specimens for the Museum collections. Three thousand one hundred and seventy-seven packages have been sent out.

DISTRIBUTION AND EXCHANGE.

Twenty-four thousand seven hundred and forty-five specimens were sent out as gifts or in exchange, and 9,850 specimens were lent for study during the year. The gifts have consisted largely of collections of marine invertebrates, rocks, and casts of prehistoric implements, which have been presented to educational institutions in all parts of the country. The distributions are given in detail in Appendix III. The following statement shows the number of "lots" of specimens sent to each State and foreign country:

Alabama.....	6	Tennessee.....	1
Arkansas.....	1	Texas.....	2
California.....	8	Utah.....	1
Colorado.....	2	Virginia.....	1
Connecticut.....	5	Washington.....	2
Delaware.....	3	West Virginia.....	1
District of Columbia.....	16	Wisconsin.....	6
Florida.....	1	Foreign countries:	
Illinois.....	14	Africa.....	2
Indiana.....	3	Argentina.....	2
Iowa.....	9	Australia.....	1
Kansas.....	5	Austria.....	3
Kentucky.....	1	Belgium.....	2
Maine.....	2	Canada.....	6
Maryland.....	1	China.....	2
Massachusetts.....	38	Denmark.....	2
Michigan.....	2	England.....	24
Minnesota.....	11	France.....	2
Mississippi.....	1	Germany.....	3
Missouri.....	8	India.....	4
Montana.....	3	Italy.....	3
Nebraska.....	6	Mexico.....	1
New Hampshire.....	1	Netherlands.....	2
New Jersey.....	3	Peru.....	1
New York.....	35	Scotland.....	1
North Carolina.....	4	Sweden.....	1
North Dakota.....	1	Switzerland.....	2
Ohio.....	7	West Indies.....	2
Pennsylvania.....	16		
Rhode Island.....	1	Total.....	294

Among the more important exchange receipts from foreign establishments and individuals the following may be mentioned: From the British Museum of Natural History, London, England, Set No. 4 of Rugel's Florida plants, and 190 specimens representing 63 species of

fossil corals, in exchange for plants, Tertiary corals, bryozoans, skins and skulls of mammals from Patagonia, and mollusks from the United States and other localities. From the Museum of Natural History, Paris, France, alcoholic fishes from northern and central Asia. From the Geological Survey of Canada, 24 specimens of Trenton fossils in exchange for fossils from Baffin Land. From the Rijks Ethnographic Museum, Leyden, Holland, a collection of ethnological objects in exchange for material of the same character. From the Public Gardens and Plantations, Kingston, Jamaica, 112 plants in exchange for botanical specimens. From the Museum Michoacano, Morelia, Mexico, birds' skins and insects in exchange for publications. From the Albany Museum, Grahamstown, South Africa, 44 birds' skins. From the Riksmuseum, Stockholm, Sweden, 29 species of Actinians in exchange for a similar collection. From Mr. G. Van Roon, Rotterdam, Holland, a collection of beetles from Java and South Africa in exchange for Coleoptera. From Mr. Jean Miguel, Barrubio, Hérault, France, a large collection of fossils from the Paleozoic, Mesozoic, and Cenozoic horizons of Europe in exchange for 272 specimens, representing 147 species, of Paleozoic fossils. From Rev. Paul D. Bergen, Chefoo, China, 48 birds' skins and 2 mammals' skins. From Baron R. de Vrière, Zedelghem, Belgium, a collection of Belgian insects in exchange for 112 specimens of Coleoptera. From Mr. G. Ruscheweyh, Buenos Aires, Argentina, a collection of Argentine Lepidoptera in exchange for material of the same character. From Mr. E. Y. Connell, St. Kitts and Nevis, British West Indies, Carib implements and pieces of pottery in exchange for stone implements. From Mr. C. F. Pavona, Museum of Natural History, University of Turin, 167 specimens of fossil corals, representing 95 species, from the Italian Tertiary deposits, in exchange for fossils. From Prof. M. F. Colunga, Lima, Peru, 24 birds' skins. From Mr. L. Y. Ayson, Masterton, Wellington, New Zealand, 17 birds' skins in exchange for material of the same kind.

Seventy-six specimens of Cambrian fossils have been forwarded to the Geographical-Paleontological Institute, Munich, Germany.

VISITORS.

The number of persons visiting the Museum building was 192,471, and the Smithsonian building, 116,912. The following tables show, respectively, the number of visitors during each month of the past year, and the totals for each year since 1881:

Number of visitors during the fiscal year 1898-99.

Year and month.	Museum building.	Smithsonian building.
1898.		
July	24,489	14,870
August	14,314	8,066
September	14,357	7,964
October	19,510	11,411
November	12,932	7,365
December	10,822	10,281
1899.		
January	11,723	7,191
February	10,394	6,071
March	20,005	10,495
April	16,273	12,761
May	26,417	14,396
June	11,235	6,041
Total	192,471	116,912
Approximate daily average on a basis of 313 days in the year	615	373

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

Year.	Museum building.	Smithsonian building.	Total to both buildings.
1881	150,000	100,000	250,000
1882	167,455	152,744	320,199
1883	202,188	104,823	307,011
1884 (half year)	97,661	45,565	143,226
1884-85 <i>a</i>	205,026	105,993	311,019
1885-86	174,225	88,960	263,185
1886-87	216,562	98,552	315,114
1887-88	249,665	102,863	352,528
1888-89 <i>a</i>	374,843	149,618	524,461
1889-90	274,324	120,894	395,218
1890-91	286,426	111,669	398,095
1891-92	269,825	114,817	384,642
1892-93 <i>a</i>	319,930	174,188	494,118
1893-94	195,748	103,910	299,658
1894-95	201,744	105,658	307,402
1895-96	180,505	103,650	284,155
1896-97 <i>a</i>	229,606	115,709	345,315
1897-98	177,254	99,273	276,527
1898-99	192,471	116,912	309,383
Total	4,165,458	2,115,798	6,281,256

a Year of Presidential inaugurations.

STUDENTS AND INVESTIGATORS.

Investigations upon collections in the Museum by persons not employed upon its staff have been carried on extensively. The Chinese kites were examined by Mr. A. Lawrence Rotch, of Hyde Park, Massachusetts, with reference to the principles of aerial flotation involved in their construction. The extensive collection of aboriginal tobacco pipes has been studied by Mr. J. D. McGuire, of Ellicott City, Maryland, in connection with the preparation of his monograph on that subject published in the Report of the Museum for 1897. Mr. Stewart Culin, of the University of Pennsylvania, has continued his studies on aboriginal and modern games, as illustrated by specimens in the Division of Ethnology.

The collections in the Division of Mammals have been constantly consulted by the members of the staff of the Biological Survey of the Department of Agriculture. The specimens of *Dermochelys*, a genus of turtles, have been studied by Dr. O. P. Hay, with regard to the systematic position of the genus. In the Division of Marine Invertebrates, Miss Harriet Richardson has been engaged in studying certain Isopoda, and in the preparation of a report upon the Isopods of the Pacific coast of North America, which has recently been published in the Proceedings of the Museum. Dr. H. F. Moore, of the U. S. Fish Commission, spent several weeks at the Museum in working up the Isopoda collected by the steamer *Fish Hawk* on the coast of Porto Rico. A study of the very extensive collection of West Indian corals belonging to the Museum has been begun by Mr. T. Wayland Vaughan, of the U. S. Geological Survey, whose previous researches in this field especially qualify him for the work. Prof. W. P. Hay, of the Central High School, has at intervals given attention to the crayfishes in the collection, naming those recently obtained. He has also described a new form of Isopod in a paper printed in the Proceedings of the Museum.

In the Division of Insects the following persons, among others, have consulted the collections: Miss Ella Weeks, of Manhattan, Kansas; Messrs. Snyder and McDade, of the Chicago Entomological Society; Prof. O. S. Westcott, of Chicago, Illinois; Miss Harriet B. Merrill, of Milwaukee, Wisconsin; Mr. O. Reinecke, of Buffalo, New York; Dr. J. Branchont, of the Bergen Museum, Bergen, Norway; Mr. Henry Bird, of Rye, New York; Prof. John B. Smith, of Rutgers College, New Brunswick, New Jersey; Dr. S. C. Shumucker, of Westchester, Pennsylvania; Prof. T. D. A. Cockerell, of Mesilla Park, New Mexico; Prof. James Hine, of Columbus, Ohio; Dr. Herman Strecker, of Reading, Pennsylvania; Mr. Charles E. Burden, of Washington, District of Columbia; Prof. E. Dwight Sanderson, of College Park, Maryland; Dr. W. J. Holland, of Pittsburg, Pennsylvania, and Mr. W. H. Wenzel, of Philadelphia, Pennsylvania.

In the Division of Fishes Dr. B. W. Evermann, Dr. H. M. Smith, and Mr. W. C. Kendall, of the U. S. Fish Commission, have made use of the collections. Mr. E. C. Starks, of the University of Washington, examined certain fishes in working up the osteology of several aberrant forms.

The committee on nomenclature of the American Ornithologists' Union spent several days in the Division of Birds inquiring into the validity of various subspecies described during the previous year. Mr. E. W. Nelson, of the Department of Agriculture, was engaged for some time in a study of Mexican birds in connection with the determination of material collected by him. Mr. H. C. Oberholser named several collections of birds at the request of the curator. Mr. William Palmer studied the small shrikes of North America and the eastern species of *Geothlypis*. Mr. W. H. Osgood, of the Department of Agriculture, examined the wren-tits. Miss Florence Merriam, of Washington, studied various Western birds. Mr. Outram Bangs, of Boston, Massachusetts, gave attention to the rails, meadow larks, etc., for the purpose of ascertaining the status of certain new forms which he was about to describe.

Sir Charles Elliot, second secretary of the British embassy and British Commissioner to Samoa, prosecuted investigations on the Nudibranchs represented in the Division of Mollusks. Mr. G. A. Drew, of Johns Hopkins University, made a study of the family Ledidæ, and has published the results of his work.

In the Division of Plants, Mr. A. M. Ferguson, of St. Louis, Missouri, gave some time to researches on the genus *Croton*; Miss Lewanna Wilkins, of Washington, was engaged during the winter in determining a set of California plants; Mr. J. J. Smith, of Washington, studied the genus *Lophocarpus* and its allies, and Mr. Elmer I. Applegate, of Klamath Falls, Oregon, spent about two months in working up a set of Oregon plants. Mr. J. B. Leiberger, of Hope, Idaho, was occupied during a part of January and February with plants collected in the Western timber reserves. Prof. W. L. Bray has recently carried on extensive studies in the herbarium. Prof. E. L. Greene, of the Catholic University, Washington, has consulted material in various genera and has made determinations for the Museum. Prof. L. M. Underwood, of Columbia University, New York City, visited the herbarium early in the spring for the purpose of examining certain fern groups.

Prof. A. Wanner, who has discovered Triassic plants near York, Pennsylvania, where he resides, has visited the Museum on two occasions for the purpose of comparing his collections with those from the Richmond coal fields of Virginia. Researches on vertebrate fossils have been carried on by Dr. O. P. Hay, of Washington, who has described a new species of fossil turtle. Dr. Anton Fritsch, director

of the National Museum at Prague, Bohemia, studied the fossil Myriapoda and Arachnida in the Lacoe collection, and material has been transmitted to him for further examination. Prof. F. W. Cragin, of Johns Hopkins University, spent considerable time at the Museum in working up a collection of Jurassic fossils from Texas.

Dr. E. C. E. Lord, of Washington, studied the rocks collected on the Mexican border by Dr. E. A. Mearns, U. S. A. The results of Doctor Lord's studies were embodied in a paper which has been published in the Proceedings.

Material has been sent out for examination as follows:

To Mr. F. H. Cushing, of the Bureau of Ethnology, a collection of pipes, gorgets, ceremonial objects, etc. To Mr. Stewart Culin, of the University of Pennsylvania, specimens of Indian gambling implements. To Mr. V. K. Chesnut, of the Department of Agriculture, 27 specimens of Mexican drugs.

From the Division of Mammals the type of *Mictomys innuitus* was lent to Mr. E. A. Preble, of the Department of Agriculture, for use in connection with the determination of species from New Hampshire, and he was also supplied with several specimens belonging to the genus *Zapus*. Ten squirrels and more than 100 mice were furnished to Mr. G. E. H. Barrett-Hamilton, London, England; representatives of the genus *Microtus* to Mr. Vernon Bailey, of the Department of Agriculture, for use in a revision of the genus; about 50 small mammals to Mr. E. W. Nelson, of the Department of Agriculture; 5 pocket mice and 1 gray fox to Mr. W. H. Osgood, of the same Department. The skull of a deer was sent to Mr. Outram Bangs, Boston, Massachusetts.

A specimen of *Desmognathus* was forwarded by the Division of Reptiles and Batrachians to Dr. J. Percy Moore, of the University of Pennsylvania, for comparison; and a specimen of *Amphystoma* to Dr. J. D. Lindahl, of Cincinnati, Ohio. Three double-headed snakes were sent to the Museum of Comparative Zoology, Cambridge, Massachusetts.

From the Division of Fishes a specimen of *Nemichthys scolopaceus* and one of *Chirostoma estor* were sent to Dr. David S. Jordan, of Leland Stanford Junior University; several Myxinoid fishes to Prof. Howard Ayres, of the University of Missouri, and a number of specimens to Mr. E. C. Starks, for use in determining the range of certain genera.

The following sendings were made by the Division of Birds: Thirty-five specimens to Mr. Outram Bangs, Boston, Massachusetts, for use in connection with the determination of material from Colombia; 67 specimens of wrens, sparrows, etc., to Mr. William Brewster, Cambridge, Massachusetts, who was studying the status of these groups in the western part of the United States; 76 specimens of small shrikes to Mr. R. M. Strong, Cambridge, Massachusetts, for study in determining the percentage of variation in that group; 13 specimens of thrushes to Mr. Reginald Heber Howe, jr., Longwood, Massachusetts; 60 bird skins to Dr. Jonathan Dwight, jr., New York City; 62 specimens of House

Wrens to Mr. W. E. Loucks, Peoria, Illinois; 41 specimens of wrens to Mr. Witmer Stone, of the Academy of Natural Sciences, Philadelphia.

The transmissions from the Division of Insects were as follows: A collection of Mexican and Central American Acrididæ to Prof. Lawrence Bruner, of the University of Nebraska; the unworked material in the Odonata to Dr. Philip P. Calvert, of the Academy of Natural Sciences, Philadelphia; miscellaneous material to Prof. F. H. Chittenden, of the U. S. Department of Agriculture, for illustrating work in progress in the Department; specimens of the family Pyralidæ to Prof. C. H. Fernald, of the Agricultural College, Amherst, Massachusetts, for monographic purposes; some wasps and bees to Mr. W. J. Fox, of the Academy of Natural Sciences, Philadelphia, for monographic work; a collection of moths to Sir George F. Hampson, of the British Museum of Natural History, for monographic work; material in the family Chrysomelidæ to Prof. E. Dwight, College Park, Maryland; 15 species of Acrididæ to Prof. Jerome McNeill, of Fayetteville, Arkansas, for use in connection with a synopsis of the species inhabiting Arkansas; a specimen of *Stenopelmatus fasciatus* to Dr. S. H. Scudder, of Cambridge, Massachusetts; and 56 specimens of the genus *Argynnis* to Prof. A. J. Snyder, of Belvidere, Illinois.

From the Division of Marine Invertebrates, annelids of the genera *Ammotrypane*, *Trophonia*, *Ophelia*, etc., were transmitted to Mr. F. W. Gamble, of Owens College, Manchester, England; the collection of leeches was sent to Dr. J. Percy Moore, of the University of Pennsylvania; the collection of Gephyreans to Prof. H. B. Ward, of the University of Nebraska; and the collection of Caprellidæ to Dr. F. Meinert, of the Zoological Museum, Copenhagen, Denmark, all of these having been supplied under arrangement for monographing the several groups.

A small number of specimens were sent from the Division of Mollusks to Dr. V. Sterki, New Philadelphia, Ohio, for examination, and a few slugs to Mr. H. A. Pilsbry, of the Academy of Natural Sciences of Philadelphia.

Material has been supplied by the Division of Plants for special systematic or morphological study to the following: Royal Botanic Gardens, Kew, England, 22 specimens; Dr. T. Maxwell Masters, London, England, 18 specimens; C. De Candolle, Geneva, Switzerland, 23 specimens; Prof. B. L. Robinson, Cambridge, Massachusetts, 537 specimens; Mr. C. S. Sargent, Jamaica Plain, Massachusetts, 59 specimens; Dr. George Davenport, Medford, Massachusetts, 3 specimens; Dr. J. K. Small, Botanical Garden, New York City, 15 specimens; Prof. L. M. Underwood, Columbia University, New York City, 10 specimens; Mr. B. D. Gilbert, Clayville, New York, 88 specimens; Mr. W. Miller, Cornell University, Ithaca, New York, 25 specimens; Mr. F. W. Waugh, University of Vermont, Burlington, Vermont, 5 specimens; Prof. William Trelease, St. Louis, Missouri, 252 speci-

mens; Dr. N. M. Glatfelter, St. Louis, Missouri, 8 specimens; Mr. H. C. Irish, St. Louis, Missouri, 2 specimens; Mr. D. T. MacDougal, Minneapolis, Minnesota, 9 specimens; Prof. E. L. Greene, Catholic University, Washington, District of Columbia, 57 specimens; Mr. H. O. Hall, Army Medical Museum, Washington, District of Columbia, 14 specimens; Mr. Theodor Holm, Washington, District of Columbia, 263 specimens; Mrs. M. R. McConnell, Washington, District of Columbia, 6 specimens.

Several specimens of chalcedony have been sent to Mr. J. S. Diller, of the U. S. Geological Survey, for use in connection with his investigations, and thin sections of rocks have been supplied to Prof. B. K. Emerson, of Amherst College.

Specimens of the teeth of Paleozoic sharks have been lent to Dr. C. R. Eastman, of the Museum of Comparative Zoology, Cambridge, Massachusetts, and a number of fossils to Prof. J. W. Beede, of the University of Kansas, for use in connection with the preparation of a monograph on the fossils of the Upper Carboniferous strata of Nebraska and Kansas.

COOPERATION OF THE EXECUTIVE DEPARTMENTS OF THE GOVERNMENT.

As in past years, much valuable material has been received from several departments and bureaus of the Government, notably the Department of Agriculture, the U. S. Geological Survey, and the U. S. Fish Commission, under all of which extensive explorations into the resources of this country are continuously in progress. The collections derived from this source are enumerated in the List of Accessions (Appendix II), and those of special interest are also discussed in the reports of the head curators.

In this connection reference should be made to the services rendered by those curators and custodians who receive no compensation from the Museum. There are now about thirty of these honorary officers, the majority of whom are in the employ of other branches of the Government, and the assumption of the additional duties which they voluntarily perform in this connection is only rendered possible through the courtesy of the heads of the several departments and bureaus. In accepting the care and development of the collections placed in their charge, they are called upon in most cases to undertake a large amount of arduous routine work for which the Museum has not the means for engaging paid assistants.

INFORMATION FURNISHED.

Temporary accessions, consisting almost entirely of material sent to the Museum for identification, have been received to the number of 518 (numbers 5070 to 5587). Such specimens are usually returned to the senders unless used up in analysis or found desirable for addition to the collections. The amount of time consumed by members of the

scientific staff in making these identifications is necessarily very great, and has proved especially so in the Divisions of Insects and Geology. Many requests for technical information are received daily. When these relate to subjects coming within the scope of the activities of the Museum, as is very generally the case, they are promptly complied with, though the public little realizes the amount of work which this involves.

PUBLICATIONS.

The publications of the Museum issued and distributed during the year were the Annual Report for 1896, together with the separates of the several papers composing the appendix to the same; completed volume 20 of the Proceedings (issued in August, 1898); the separate editions of papers numbered from 1140 to 1178, inclusive, constituting volume 21 of the Proceedings; and parts 2 and 3 of Bulletin 47, entitled *The Fishes of North and Middle America*, by Drs. David Starr Jordan and Barton Warren Evermann. Part 4 of this Bulletin, an atlas of plates of fishes, is well under way.

The Annual Report for 1897 will be in two volumes, the second volume being in the nature of a memorial to the late assistant secretary, Dr. George Brown Goode. The proof reading of the first volume has been finished. The second volume and the Annual Report for 1898 are both in the printer's hands.

The Bibliography, forming Appendix IV of this volume, contains a list of all papers based upon Museum material which have been published during the year. The number of authors represented is 75 and the total number of titles given 318. The following table classifies these papers in accordance with the subjects treated:

Subject.	Papers by Museum officers.	Papers by other investi- gators.	Total.
Administration.....	3	.....	3
Archaeology.....	6	.....	6
Biography.....	1	.....	1
Birds.....	25	21	46
Botany.....	7	3	10
Comparative anatomy.....	1	1	2
Ethnology.....	5	1	6
Fishes.....	7	3	10
Fossils.....	14	4	18
General natural history.....	2	.....	2
Geology.....	5	3	8
Insects.....	122	31	153
Mammals.....	16	1	17
Marine invertebrates.....	3	7	10
Minerals.....	.....	1	1
Mollusks.....	13	.....	13
Reptiles and batrachians.....	7	3	10
Miscellaneous.....	2	.....	2
Total.....	239	79	318

Twenty-two 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: Mr. Robert Ridgway, Dr. C. W. Richmond, Mr. G. S. Miller, jr., Mr. F. A. Lucas, Dr. J. N. Rose, Mr. C. L. Pollard, Mr. Charles Schuchert, and Mr. B. A. Bean.

LIBRARY.

During the past year the Museum library acquired through purchase, under a special act of Congress, the very important scientific library of the late Dr. G. Brown Goode, consisting of about 2,900 bound volumes, 18,000 pamphlets, and 1,800 portraits, autographs, and engravings. This collection, brought together at the expense of much time and labor on the part of Doctor Goode, contains many rare and valuable publications, and is especially rich in the literature of museums and of fishes.

The overcrowded condition of the library has been somewhat, though only temporarily, relieved by building for its use a gallery in the West North Range.

Six hundred and forty books, 965 pamphlets, and 5,196 parts of periodicals, including the regular Museum accessions and a small part of the Goode library, have been catalogued, and progress has been made in the transfer of titles to the new catalogue cards. From the accessions to the Smithsonian library 231 books, 649 pamphlets, and 8,616 parts of periodicals have been temporarily installed in the Museum. About 16,000 books and pamphlets were borrowed during the year, about one-third for the use of the sectional libraries. Among the purchases for the year have been a large number of works relating to the natural history of Cuba, Porto Rico, and the Philippine Islands. The number of books bound at the Government Printing Office was 441.

Three additional sectional libraries have been authorized, the list now standing as follows:

Administration.	Marine invertebrates.
Anthropology.	Medicine.
Biology.	Mesozoic fossils.
Birds.	Mineralogy.
Botany.	Mollusks.
Comparative anatomy.	Oriental antiquities.
Editorial.	Paleobotany
Ethnology.	Parasites.
Fishes.	Photography.
Geology.	Prehistoric archaeology.
History.	Reptiles.
Insects.	Stratigraphic paleontology.
Mammals.	Technology.

EXPLORATIONS.

Explorations yielding materials of much value have been conducted by members of the scientific staff of the Museum and by others. The importance of giving early attention to the investigation of the ethnology and natural history of the territories recently acquired by the United States was fully realized, but the lack of means has prevented any considerable inquiries in that direction.

In the interest of the Department of Anthropology, Mr. W. H. Holmes, head curator, visited California in September, 1898, and secured a valuable series of objects illustrating the ethnology and archaeology of that State. The auriferous gravel region of Calaveras and Tuolumne counties was studied, and many stone implements, supposed to have a bearing upon the occupation of that area by Tertiary man, were obtained. The ancient soapstone quarries and two prehistoric burial places in Santa Catalina Island were examined, and a number of relics were taken from the latter. The ethnological collection brought home by Mr. Holmes consisted in greater part of examples of the basketry, implements, etc., of the Pomo, Digger, and Tulare Indians.

Mr. Holmes also spent the month of April, 1899, in Mexico, where he obtained an important collection from the site of the ancient Aztec obsidian mines in the State of Hidalgo, besides a number of relics from the ancient cities of San Juan Teotihuacan and Xochicalco.

The autumn of 1898 and a part of the following winter were spent in Cuba by Mr. Paul Beckwith, of the Division of History, with the object of gathering material of historical interest relating to the war with Spain. He was successful in obtaining many valuable objects and also in enlisting the cooperation of military men and others in continuing the collecting.

Dr. George F. Becker, of the United States Geological Survey, for which he has been carrying on investigations in the Philippine Islands, has kindly agreed to look after the interests of the Museum in the same region.

Mr. J. B. Hatcher, sent to Patagonia on an extensive scientific mission by Princeton University, has also entered into an arrangement to supply ethnological material to the National Museum, and one important lot has been received from him.

In May, 1899, Dr. Walter Hough was detailed to carry on ethnobotanical researches in Mexico in connection with certain explorations by the Division of Botany in charge of Dr. J. N. Rose. Earlier in the year Doctor Hough had made a collection of potters' tools and several hundred pieces of pottery in West Virginia.

Mr. E. W. Nelson, while on a botanical expedition to Mexico, under the Department of Agriculture, secured a large number of archaeologi-

eal and ethnological objects, which were purchased by the Museum. Dr. Edward Palmer, also exploring in Mexico for the same department, made collections for the Museum. Dr. Roland Steiner, of Grovetown, Georgia, conducted extensive explorations in aboriginal quarries, workshops, and village sites near the mouth of the Little Kiokee River, Georgia, where he obtained many thousands of specimens, which will be included in the collection now being acquired by the Museum.

Among the explorations which yielded important results to the Department of Biology, those carried on in connection with the cruise of the steamer *Fish Hawk* to Porto Rico by the naturalists of the U. S. Fish Commission and by Mr. A. B. Baker, of the National Zoological Park, are especially worthy of mention. Of mollusks the Museum received some 5,000 specimens, representing about 400 species, many of which were rare and some undescribed. There were also large series of other marine and fresh-water invertebrates, about 180 birds, 200 reptiles and batrachians, and 200 bats.

A large and important series of mammals was collected for the Museum in Sweden, Germany, Belgium, and Switzerland by Mr. J. A. Loring, of Owego, New York. Mr. Dall De Weese, who visited Alaska during the summer of 1898, obtained for the Museum several specimens of the Alaska moose and a large number of the wild white sheep of that Territory.

Ornithological collections received at the Museum were made as follows: by Dr. E. A. Mearns, U. S. A., in Texas; by Mr. Paul D. Bergen and Mr. George D. Wilder, in China; by Mr. Outram Bangs, in Colombia; by Mr. J. Hornung, in the Western United States; by Mr. R. C. McGregor, in California; by Mr. Eugene Coubeaux, in the Northwest Territory, Canada.

A large series of reptiles and batrachians collected by field parties of the U. S. Fish Commission has been turned over to the Museum. This collection embraces a great deal of valuable material for the study of geographic distribution and individual variation, and includes a unique specimen of a discoglossoid toad,¹ the first member of this suborder which has been discovered in the Western Hemisphere. Collections of fishes resulting from explorations in the Northern Pacific Ocean, Alaska, Kamchatka, Lake Superior, and Florida have also been transferred by the Fish Commission. Fishes obtained by Mr. Chaffanjon in northern and central Asia were received from the Museum of Natural History at Paris.

The Division of Marine Invertebrates has been enriched by material collected by Dr. T. H. Bean and Mr. B. A. Bean, on Long Island; by Miss Mary J. Rathbun, at Grand Manan, New Brunswick; by Mr.

¹ Described in Proceedings paper No. 1178, by Dr. Leonhard Stejneger.

William Palmer and Mr. Paul Bartsch, in the Dismal Swamp, Virginia; by Mr. Harold Heath, in Monterey Bay, California, and by the Biological Laboratory, at Cold Spring Harbor, New York.

Mr. August Busck, of the Department of Agriculture, who accompanied the Fish Commission expedition to Porto Rico, obtained there a valuable collection of insects, which has been transferred to the Museum. Agents of the Department of Agriculture, collecting in Mexico, have contributed small numbers of mollusks, some of which are valuable in character.

At the close of the year Dr. J. N. Rose was engaged in botanical work in Mexico. Mr. Walter Evans, who visited Alaska for the Department of Agriculture, brought back with him a fine series of plants, which has been transferred to the Museum. The explorations by members of the Biological Survey of the same department, chiefly in the far West, have added much valuable material to the Herbarium. Important collections in botany have been made in Europe by Mr. W. T. Swingle and Mr. D. G. Fairchild. A number of Mexican plants collected by Mr. E. W. Nelson have been obtained by purchase.

The Department of Geology acquired an extensive series of Upper Silurian fossils, collected in the vicinity of Lockport, New York, for the Museum by Mr. H. E. Dickhaut, of the U. S. Geological Survey; and a large lot of Hamilton corals from near Iowa City, and Kinderhook corals from the vicinity of Burlington, in the State of Iowa, collected by Mr. Paul Bartsch.

Explorations by the Geological Survey have been illustrated by two collections of fossil plants, one representing the Lower Coal Measure, of Henry County, Missouri; the other the Carboniferous formation in the vicinity of McAlester, Indian Territory. Both of these lots have been described by Mr. David White, whose papers will be published by the Survey.

Geological material obtained in Europe by Mr. F. W. Crosby has been added to the collection.

Collectors' outfits.—Outfits have been furnished to the following persons, who have undertaken to collect material for the Museum: Mr. J. S. Holmes, Bowmans Bluff, North Carolina; Mr. D. W. Prentiss, jr., Washington, District of Columbia; Dr. E. A. Mearns, U. S. A.; Lieut. J. W. Daniel, Lynchburg, Virginia; Mr. Milton Whitney, Department of Agriculture; Mr. M. C. Long, Kansas City, Missouri; Dr. B. W. Evermann, U. S. Fish Commission; Rev. Paul D. Bergen, Chefoo, China; Mr. A. B. Baker, National Zoological Park; Lieut. H. E. Wetherill, Manila, Philippine Islands; Commander George E. Ide, U. S. N., Brooklyn Navy-Yard, New York; Sir Charles Eliot, British commissioner to Samoa; Commander J. C. Cantwell, U. S. N., Seattle, Washington; Mr. Leon J. Guthrie, Willemstad,

Curaçao, West Indies; Capt. A. C. Hansard, Lonquillo, Porto Rico; Mr. F. J. Tingley, Kingston, Jamaica; Mr. W. B. Stockman, Havana, Cuba; Mr. James H. Kimball, Roseau, Dominica, West Indies; Mr. E. T. Giers, Port of Spain, Trinidad; Mr. P. McDonough, Bridgetown, Barbados; Mr. W. Randall, Santiago, Cuba; Mr. George Kingsbury, Basse-Terre, St. Kitts, West Indies; Mr. Robert Stein, Sydney, Nova Scotia. Outfits were also furnished to the following members of the Museum staff: Dr. F. W. True, Mr. Gerrit S. Miller, jr., Miss M. J. Rathbun, Mr. William Palmer, Mr. Paul Bartsch, Mr. D. G. Fairchild, and Dr. J. N. Rose.

TAXIDERMY AND OSTEOLOGY.

Eighty specimens in the flesh, consisting of 54 mammals, 15 birds, and 11 reptiles, have been received during the year, a large portion having come from the National Zoological Park. The skins of most of these were prepared for the study series, and skeletons were saved of an elephant, a sea lion, a beaver, and several of the birds and reptiles. The accessions also included 94 mammal skins, which came either dry, fresh, or salted. The number of mammal skins mounted for exhibition purposes was 36.

Besides the above the taxidermic work has included the renovation of a large number of specimens in the divisions of mammals, birds, and reptiles, with reference more especially to the exhibition series, which are being rearranged and placed in more acceptable condition for the public use. The collections in these and other divisions of zoology which were displayed at the Trans-Mississippi Exposition, have been unpacked, renovated, and added to the exhibition series.

The total number of osteological specimens prepared was 1,528, consisting of 1,504 mammal skulls and skeletons, the skeletons of 14 birds, 3 reptiles, 3 fishes, and 4 miscellaneous objects.

PHOTOGRAPHY.

Mr. T. W. Smillie, photographer, reports that 473 negatives, 582 platinum prints, 123 silver prints, and 18 cyanotypes have been made during the year. Several collectors have received instruction in the photographic laboratory, and outfits for field work have been furnished them. Mr. Smillie has continued to act as chairman of the United States Civil Service Board on Photography.

EXPOSITIONS.

Trans-Mississippi and International Exposition.—The Exposition opened at Omaha on June 1, 1898, and continued for five months. The Annual Report for 1898 contains a brief reference to the exhibits

displayed by the Museum, while a more extended account will appear in the Smithsonian Report for 1899.

Pan-American Exposition, Buffalo.—By act of Congress approved March 3, 1899, the sum of \$300,000 has been appropriated for a Government exhibit at the Pan-American Exposition to be held at Buffalo in 1901, besides an additional sum of \$200,000 for the erection of a building. Dr. F. W. True, executive curator, has been designated as the representative of the Smithsonian Institution and National Museum on the Government board of management, and Mr. W. V. Cox as chief special agent.

Ohio Centennial Exposition.—An appropriation similar to that for the Pan-American Exposition has also been made by Congress for a Government exhibit and building at the Ohio Centennial Exposition, to be held at Toledo in 1902 or 1903, as may be determined upon hereafter. This appropriation is contingent, however, upon a grant of \$500,000 to the Exposition by the Ohio State legislature and the raising of the same amount by subscription.

Mention may here be made of the National Electric Light Exposition in New York City in 1899, where the Museum was represented by a number of models of electrical apparatus belonging to the Henry collection.

NECROLOGY.

Dr. Othniel Charles Marsh, Honorary Curator of the collection of Vertebrate Fossils in the National Museum, died at his home in New Haven, Connecticut, on March 18, 1899. Dr. Marsh had held the position of professor of paleontology in Yale University since 1866. He was born in Lockport, New York, in 1831. After being graduated from Yale in 1860 he spent five years in further study in the Sheffield Scientific School and in Germany. His explorations of the extensive fossil deposits of the West were begun in 1868. These led him into wholly unknown fields, and the record of his work from the time of his first connection as a professor with Yale University until his death forms a most important part of the history of recent progress in paleontological research.

Many valuable works embodying the results of his investigations have been published, and others were left in an advanced stage.

In 1876 Doctor Marsh was elected president of the American Association for the Advancement of Science, and in 1883 he became president of the National Academy of Sciences, a position which he held during two terms, or until 1895. He was connected with the U. S. Geological Survey, as paleontologist, for many years. In 1877 a medal was granted him by the Geological Society of London for most distinguished researches in geology and paleontology. He was

a member of many scientific societies both in this country and abroad. The University of Heidelberg conferred upon him in 1886 the degree of Doctor of Philosophy, and Harvard University about the same time gave him the degree of Doctor of Laws. He became a correspondent of the Academy of Sciences of the Institute of France in 1898, and as winner of the Cuvier prize he was the recipient of one of the greatest honors ever conferred upon an American scientific man.

Through the influence of Doctor Marsh, his uncle, George Peabody, made gifts to Yale University which resulted in the establishment of the Peabody Museum.

APPENDIX I.

THE MUSEUM STAFF.

[June 30, 1899.]

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; F. H. Cushing, Collaborator; J. W. Fewkes, Collaborator.
- (b) *Division of Historic Archaeology*: Paul Haupt, Honorary Curator; Cyrus Adler, Honorary Assistant Curator; I. M. Casanowicz, Aid.
- (c) *Division of Prehistoric Archaeology*: 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., 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.

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 DURING THE FISCAL YEAR ENDING JUNE 30, 1899.

[All accessions marked "O" indicate material obtained primarily for exhibition at the Omaha Exposition.]

- ABBOTT, Miss MILLIE, Vineland, N. J.: Small collection of medicinal plants. 34270.
- ABEL, J. C., Lancaster, Pa.: Collection of rude chipped implements from the Conestoga Hills near Lancaster (34256); 33 archaeological objects from the same locality (34949).
- ADAMS, HARRY, Mason City, W. Va.: Eighty-seven archaeological objects from Mason County. 33752.
- ADÆR, Dr. CYRUS, Smithsonian Institution: Engraved portraits of Ben Jonson, Ernest Mach, and Ernest Haeckel (34328); pictures of Ramsgate, England, containing views of churches and synagogues (34627).
- AGRICULTURE, DEPARTMENT OF, Hon. James Wilson, Secretary: Two thousand two hundred and twenty-six Mexican insects collected by Prof. Herbert Osborn (33999); 6 specimens of slugs found on tobacco plants (34277); South American insects collected by Prof. L. Bruner (34348); 9 specimens of *Glechhia solanella* (34416); large collection of *Odonata*, representing many species new to the Museum collection (34572); land shells from Mexico (34950); 1,878 specimens of Diptera (35025).
- Deposited in the National Herbarium:*
Three specimens of a rare fungus from Arizona (34152); 130 plants collected by F. V. Coville in Washington (34259); plant from the grounds of the Department of Agriculture (34275); dried plants from Oregon and Washington collected by E. P. Sheldon (34298); 3 specimens of moss from California and Mary-
- AGRICULTURE, DEPARTMENT OF—Cont'd.
Deposited in the National Herbarium—
Continued.
land (34450); 2 type specimens of plants collected by A. B. Eaton in Newburyport, Mass. (34526); 2 plants from Bering Sea and Florida (34877); plants obtained by Dr. A. Koenig, Plum Township, Pa. (34915); 398 plants (34981); specimen of *Ribes divaricatum* collected by W. F. Hebert (35009); received through A. B. Eaton, 2 plants from the conservatory of the Department of Agriculture (35138). (See under G. M. Bradford, B. H. Brodnax, L. Bruner, C. B. Bryan, Frank Burton, F. V. Coville, F. W. Cusack, Dr. W. G. Deitz, Anthony Dignowitz, A. B. Eaton, W. H. Evans, W. W. Harrington, W. F. Heathman, W. F. Hebert, G. Hogan, A. J. Johnson, A. Koenig, N. B. Lukenty, W. W. Norman, Herbert Osborn, J. C. Parlin, C. C. Plitt, E. N. Plank, W. Rosalsky, W. W. Rowles, J. Ford Sempers, C. L. Shear, E. P. Sheldon, Aug. Steinman, F. W. Thurow, S. M. Tracy.)
- AKRON POTTERY COMPANY, Akron, Ohio: Clay. 34174.
- ALBANY MUSEUM. (See under Grahams-town, South Africa.)
- ALEXANDER, E. P., Greytown, Nicaragua: Four bats in alcohol, from Greytown (purchase) (33781); snake (gift) (33782); seeds of *Contre-veneno*, supposed to be an antidote for snake bites (gift) (34631).
- ALLEN, C. H., Hon. (See under Navy Department.)
- ALLEN, Dr. J. A. (See under American Museum of Natural History.)

- ALLEN, J. E., Orlando, Fla.: Specimen of *Lycosa carolina* Hentz. 34265.
- ALLEN, O. D., Ashford, Wash.: One hundred and fifteen plants from Washington. Purchase. 34563.
- AMERICAN MUSEUM OF NATURAL HISTORY, New York City, received through J. H. Winser: Six photographs of Eskimos obtained by Lieutenant Peary in 1896 (gift) (34040); received through Dr. J. A. Allen, 15 mammals from Trinidad (exchange) (34444); collection of ethnological objects obtained from the Northern Eskimos, Port Clarence (exchange) (35098).
- ANDERSON, SAMUEL, White Sulphur Springs, Mont.: Ores, coal, and other material. 34656. (O.)
- ANDRUS, F. J., Elkton, Oreg.: Two species of *Anodonta* from Oregon (33927); 4 species of fresh-water bivalves from Oregon (34135).
- ANGELL, J. P., Pine Bluff, Ark.: Tachinid fly (34022); specimens of *Charocampa tersa* L and *Arctia nais* Say (34163).
- ANGELL, Miss LILLIE, Orange, N. J.: Thirty-five specimens of violets from New Jersey. 35147.
- ANGELL, M., Pine Bluff, Ark.: Cicindelid, *Tetracha carolina* Linné. 33922.
- ANTHONY, A. W., Portland, Oreg.: Eight specimens of *Peromyscus austerus*. 34349.
- ANTHROPOLOGICAL SOCIETY OF WASHINGTON, Washington, D. C., received through F. W. Hodge, Curator: Bronze medal presented to the Society by the Numismatic and Antiquarian Society of Montreal. 33798.
- ARMSTRONG, F. B., Corpus Christi, Tex.: Birdskin, and skin and skull of a skunk, representing the genus *Spilogale*. Purchase. 35111.
- ARMSTRONG, L. K., Spokane, Wash.: Building stones, slate, and talc. 34663. (O.)
- ARMY MEDICAL MUSEUM. (See under War Department.)
- ARNOLD, E., Battle Creek, Mich.: Seven birds' skins from northwestern Canada. 33821.
- ARNOLD, ROBERT, Mathias Point, Va.: Larva or caterpillar of *Citheronia regalis* Fabr. 33961.
- ARNOLD, W., St. Simons Mills, Ga.: Photograph of the skeleton of a whale (*Mesoptodon bidens*). 33971.
- ASHMEAD, W. H., U. S. National Museum: One hundred and two species of Algae from England, Scotland, and Florida (33834); Ashmead collection of insects, consisting of 60,000 specimens. (35236.)
- ASHMUN, Rev. E. H., Albuquerque, N. Mex.: Land shells from New Mexico. 34217, 34646, 35020.
- AVONDALE LIME AND STONE COMPANY, Philadelphia, Pa.: Limestone used for making quicklime. 34144.
- AYRES, Dr., San Juan, Porto Rico: Spanish hand-press. (See under Porto Rico Collection.) 35201.
- AYRES, Mrs. F. D., Peacock, N. C.: Saddle-back caterpillar, *Empretia stimulea* Clemens. 34036.
- AYSON, L. T., Wellington, New Zealand: Seventeen birds' skins. Exchange. 34453.
- AZTEC CLUB, New York City, received through De Lancey Floyd-Jones: Aztec Club medal, in commemoration of the fiftieth anniversary of the Aztec Club. 34598.
- BACHE, RENÉ, Washington, D. C.: Six photographs of Lapp reindeer people, Alaska. 34367.
- BACKUS, CLEO, Port Townsend, Wash., received through O. E. Shaffer: Specimen of *Rhamphocottus richardsoni* from Port Townsend Bay. 34947.
- BAGWELL, G. D., Fort Assiniboine, Mont.: Collection of objects used during the Spanish-American war. 34068.
- BAKER, A. B., National Zoological Park: Vertebrate fossils (34542); collection of natural history specimens, rocks, ores, and a rope slipper from Porto Rico (34779).
- BAKER, Prof. C. F., Auburn, Ala.: Six specimens of Umbelliferae (33817); large collection of insects containing many type specimens (33963); 6 plants from Colorado (34008); large collection of Hymenoptera, consisting of about 24,000 specimens and including many new species (34091); crabs from the Gulf of Mexico (34047); specimen of *Uca minax* (34132); collection of insects

- BAKER, Prof. C. F.—Continued.
representing about 13,000 specimens (34187); a large collection of *Siphonaptera*, consisting of about 234 glass slides mounted in balsam (34228); collection of about 16,000 specimens of Homoptera, birds, and birds' eggs obtained principally from Colorado, and a skin of Spermophile (*Spermophilus elegans*) (34272).
- BAKER, Prof. C. F., St. Croix Falls, Wis.: Crustaceans, mollusks, sea-urchins, and a fish from Santa Marta, Colombia and Haiti. Exchange. 34570.
- BAKER, Dr. FRED., San Diego, Cal.: Two species of land and marine shells from South Coronado Island, Lower California (34630); 13 specimens of mollusks belonging to the genus *Vitriuelia* from California (34720).
- BAKER, J. G., Royal Gardens, Kew, England, received through Dr. W. T. Thiselton-Dyer, director: A large and valuable collection of plants, containing about 5,000 specimens and constituting a part of Mr. Baker's private collection. 34652.
- BAKER, Dr. J. W., U. S. Navy, Erie, Pa.: Imago and pupa cases of May-fly, *Hexagenia limbata* Pictet (33771); Coccinellid beetle, *Anatis 15-punctata* Oliv. (33873).
- BAKER UNIVERSITY, Baldwin, Kans., received through C. S. Parmenter: Forty specimens of insects. 35028.
- BALDWIN, H. O., New Brighton, Pa.: Unfinished arrowhead and a Carboniferous plant found near the junction of Beaver River with the Ohio River. 35013.
- BALDWIN, WALTER, Mount Vernon, Ind.: Badge of the First Brigade, Second Division, Seventh Army Corps, U. S. Volunteers worn by the donor during the Cuban campaign of the Spanish-American war. 34968.
- BALL BROTHERS, Coconut Grove, Fla.: Photograph of a specimen of Lady-fish, *Albula vulpes*, from Biscayne Bay. 34804.
- BALLINGER, R. H., Seattle, Wash.: Sample of diatomaceous earth. 34261.
- BALZER, S. M., New York City: Automobile carriage made in 1894 (gift); extra engine accompanying the carriage (deposit). 35051.
- BANGS, OUTRAM, Boston, Mass.: Four parrot skins from South America (gift) (34014); specimen of *Oryzomys obscurior* (gift) (34078); 54 birds' skins from South America (gift) (34098); 14 small mammals from Colombia (exchange) (34477); 13 mammals (gift) (34784).
- BANGS & GAYNOR, Fayetteville, N. Y.: Cement rock. 34243.
- BANKS, NATHAN, Department of Agriculture: Four named species of Myrmeleonids, new to the Museum collection. Exchange. 34043.
- BANNING, HANCOCK, Los Angeles, Cal.: Soapstone vessels from Avalon, Santa Catalina Island, coast of California. 34715. (O.)
- BANNING & Co., Los Angeles, Cal.: Soapstone and talc. 34336.
- BARBER, Mrs. A. A., Washington, D. C.: Part of a weatherworn skull of a buffalo. 34079.
- BARBER, A. W., Washington, D. C.: Leg bones of *Hippotherium* (34197); large chipped implement of quartzite from the shore of White River, South Dakota, skull from near the Bad Lands, and 6 fragments of a peculiar concretion from Rosebud Indian Reservation (34910).
- BARBER, E. A., Philadelphia, Pa.: Collection of pottery and porcelains (34791); collection of early American pottery (34926). Purchase.
- BARBER, C. M., Ruidoso, N. Mex.: Nineteen specimens of reptiles and batrachians from New Mexico. Purchase. 34617.
- BARBER, HERBERT, Washington, D. C.: Eight species of *Odonata*. 34577.
- BARBOUR, E. H., University of Nebraska, Lincoln, Neb.: Concretions and minerals. 34785.
- BARLOW, Hon. A. D., City of Mexico, Mexico, received through Department of State: Mexican musical instrument. 34889.

- BARLOW, CHESTER, Santa Clara, Cal.: Nine birds' skins from California. 34004.
- BARNHART, Dr. J. H., Tarrytown, N. Y.: Plant, representing a new species of *Utricularia*. 34388.
- BARNUM, Rev. FRANCIS, Georgetown University, Washington, D. C.: Specimens of *Dallia pectoralis* and the Arctic form of Ten-spined Stickleback, *Pygosteus pungitius brachypoda*. 34338.
- BARR, J. A. (See under Smithsonian Institution, Bureau of Ethnology.)
- BARRETT, O. W., Museo de Tacubaya, Tacubaya, D. F., Mexico: One hundred and forty insects. (33897, 34334.)
- BARRETT-HAMILTON, G. E. H., and O. H. Jones: Collection of invertebrates, insects, and other specimens from Petropaulovski and Karaga Village, Kamchatka, and from the island of Karaghinsky, Bering Sea. 34286.
- BARRETT-STRAIT, Miss C., Lancaster, S. C.: Unfinished banner-stone or butterfly ornament from South Carolina. 35230.
- BARTSCH, PAUL, U. S. National Museum: Two specimens of bat (*Lasiurus borealis*) from Missouri (34071); amphipods and isopods from Iowa (34106); 72 specimens of mammals from Burlington, Iowa (34154); mink (*Putorius vison*) from Burlington, Iowa (34281); 4 turtles and 2 frogs from Iowa (34413); natural history specimens and fossils from Burlington and Iowa City (34699); natural history specimens (34756); turtle from Eastern Branch, District of Columbia (35029); collection of isopods, sponges, shells, fishes, and plants from Virginia (35186).
- BARTLETT, C. H., South Bend, Ind.: Inscribed wooden tablet. Deposit. 33980.
- BAWM, H. E., Washington, D. C.: Krag-Jørgensen rifle cartridge issued during Spanish-American war, Santiago de Cuba. 33996.
- BEACH, SUMNER, Denton, Mont.: Four arrow points and a shell bead found in the Judith Basin, Fergus County, Mont. Exchange. 34707.
- BEADLE, C. D., Biltmore, N. C.: Two hundred and ninety-five plants (34412); 4 specimens of violets (34451). Exchange.
- BEALL, Miss FANNIE, Washington, D. C.: Saddle once owned by General Grant and deposited in the National Museum in 1867 by Gen. A. H. Markland. 34665.¹
- BEAM, C. C., Bluffton, Ind.: Two lizards, representing the species *Anolis copi* and *Sceloporus siniferus* from Mexico. 34798.
- BEAN, B. A., U. S. National Museum: Collection of fishes, mammals, reptiles, crustaceans, and insects from Long Island, New York (33975); beetle (34117); Purple Grackle (34213).
- BEAN, Dr. T. H., Washington, D. C.: Amphipods from Caledonia, N. Y., and Carolina, R. I. (33754); shells and cases of caddis-fly larva (33759); collection of lichens from Alaska and Siberia obtained in 1880 (34470); 3 specimens of leeches, representing the genus *Branchellion* taken from a Ray at Southampton, N. Y. (34495). (See under E. D. Merrill.)
- BEAN, Dr. T. H., and B. A. Bean, U. S. National Museum: Collection of natural history specimens from Long Island, obtained during the summer and fall of 1898. 34283.
- BEATTY, H. L., Bainbridge, N. Y.: Cuban fractional currency used during Weyler's régime, 50 centavos, issued in Habana, Cuba, May 15, 1896. 34783.
- BEAUPRÉ, EDWIN, Portsmouth, Ontario, Canada: Two specimens of Yellowthroat, *Geothlypis trichas*, from Canada. 35195.
- BECERRA-MUÑOZ, DIEGO, Aibonito, P. R.: Large idol. (See under Porto Rico Collection, 35201.)
- BECKER, G. F., Manila, P. I.: Skeleton of a male Nigrito; skeleton of a female Nigrito; skull of a Filipino, collected near Nariveles. 34441.
- BECKWITH, C. H., Omaha, Nebr.: Six souvenir medals of the Trans-Mississippi and International Exposition. 34310. (O.)
- BECKWITH, PAUL, U. S. National Museum: Regulation army canteen used during the civil war, 1861-1865 (33853); 10 crabs, representing 2 species from San Juan Bay, Porto Rico, and 20 bats from Porto Rico (34792). (See under Norfolk Collection; Porto Rico Collection.)

¹In view of certain satisfactory evidence submitted by Miss Beall in January, 1899, the ownership of the saddle is now vested in her name.

- BEECHER, Dr. CHARLES E., Yale University, New Haven, Conn.: Model of specimen of *Triarthrus beeki*; cast of specimen of *Arthrolycosa antiqua*; 2 specimens of *Elymocariss siliqua* Beecher; 4 specimens of *Tropidocariss bicarinata* Beecher, and 5 specimens of *Echinocariss socialis* Beecher. 34342.
- BEECHER, W. L., Reading, Pa.: Specimen of *Actias luna* Linnaeus. 34092.
- BEEDE, Prof. J. W., University of Kansas, Lawrence, Kans.: Eight specimens of *Mgalina swallowi* from Turner, Kans. (exchange), (34164); 10 specimens of *Pseudomonotis* from the upper coal measures of Kansas (gift) (34932).
- BEER, WILLIAM, New Orleans, La.: Engraved portrait of Pierre Margry. 34327.
- BELL, Col. JAMES, U. S. A., War Department, Washington, D. C.: Mounted head of *Alces americanus*. Deposit. 34549.
- BENEDICT, J. E., U. S. National Museum: Bat (*Lasiurus borealis*) from Omaha, Nebr. 34584.
- BENJAMIN, Mrs. MARCUS, Washington, D. C.: Ribbon badge of the Grand Commandery, South Dakota, at the grand encampment of the Knights of Pythias, Pittsburg, Pa., October 11-14, 1898; badge of jurors at the Trans-Mississippi and International Exposition; medal worn at the Peace Jubilee, Philadelphia, October 26, 1898, and badge and gilt medal of the Peace Jubilee, Spanish-American war, Philadelphia, 1898 (34721); 3 specimens, in stone, of animals manufactured by the Union Stoneware Company, of Red Wing, Minn. (34973).
- BENNET, Gen. W. T., Ponce, P. R.: Spanish buttons, insignia worn on Spanish summer helmets, and a ditty-bag distributed by the Red Cross Society to the soldiers of the Porto Rican campaign. (See under Porto Rico collection 35201.)
- BENTON LEAD AND ZINC MINING COMPANY, Benton, Wis.: Lead and zinc ore. 34250.
- BERGEN, Rev. P. D., Chefoo, China: Forty-eight birds' skins and 2 mammal skins from China. Exchange. 34573.
- BERKELEY SAND COMPANY, Berkeley Springs, W. Va.: Sand. 34222.
- BERNADOU, Lieut. J. B. (See under Lieut. H. C. Poundstone.)
- BETHEL, E., Denver, Colo.: Ten plants. 33788.
- BETHEL, S., Lewiston, Idaho: Toad (*Bufo columbiensis*) (33852); specimen of *Jayya americana* (34768).
- BEYMER, A. R., Rocky Ford, Colo.: Two rude arrow points and a small stone pendant from near the Apiskapaw River, Colorado. 34946.
- BICKMORE, Prof. A. S., American Museum of Natural History, New York City: Two mounted photographs of a mammoth skeleton in the Museum at St. Petersburg, Russia. 34511.
- BIEDERMAN, C. R., Gold Hill, Oreg.: Grooved implement of sandstone (33751); collection of insects (33772); lizard (33825).
- BIGNELL, G. C., Saltash, Cornwall, England: Pupae of *Pieris rapae* infested with hymenopterous and dipterous parasites. 34888.
- BIGNOLD, L. B., Montesano, Wash.: Specimen of *Epeira trifolium* Hentz. 34303.
- BILTMORE HERBARIUM, Biltmore, N. C.: Sixty-four specimens of violets. Exchange. 35134.
- BINNEY, W. G., Burlington, N. J.: Ten specimens of *Polygyra columbiana* from San Mateo County, Cal. 34517.
- BIOLOGICAL LABORATORY, Cold Spring, N. Y.: Crustaceans. Exchange. 34016.
- BIRD, HENRY, Rye, N. Y.: Thirty-four moths with pupae. 34637.
- BISHOP, Mrs. JOSEPHINE, Albany, N. Y.: Three photographs of the Cohoes mastodon. 34754.
- BISHOP, Dr. L. B., New Haven, Conn.: Song Sparrow from North Dakota. 34033.
- BLACK DIAMOND MINING COMPANY, San Francisco, Cal.: Sample of coal. 34220.
- BLAIR, R. A., Sedalia, Mo., received through Charles Schuchert: Three hundred specimens of Choteau fossils. 33745.
- BLAKE, W. P., Tucson, Ariz.: Rose-colored tuff from Tucson Mountains, Arizona. 35083.
- BLISS, E. W., Childersburg, Ala.: Moth (*Telea polyphemus*). 34991.

- BLISS, MRS. S., Bigbug, Ariz.: Specimen of *Phusiotis gloria* Leconte. 34978.
- BLUE, A., Bureau of Mines, Toronto, Canada: Corundum in granite from eastern Ontario. 34893.
- BOEPPLE, J. F., Muscatine, Iowa: Specimens of Unionidae (gift) (34273); 24 polished valves of shells of Unionidae, and iron concretions (exchange) (34550); buttons manufactured from fresh-water mussels (gift) (34750).
- BOETTGER, DR. O. (See under Frankfurt-am-Main, Museum Senckenbergianum.)
- BONNELL, W. B., Macon, Ga.: Bauxite from Demorest. 35014.
- BOSTON FLINT PAPER COMPANY, Hallowell, Me.: Garnets used for abrasive purposes. 34331.
- BOUGHNER, A. V., Greensboro, Pa.: Salt glaze jar made in 1860 at the Boughner Pottery Works, and obtained by Dr. Walter Hough. 34054.
- BOUGHNER, CLAUDE, Greensboro, Pa.: Glass bottle manufactured at the Albert Gallatin Glass Factory about the year 1803. Purchase. 34208.
- BOUGHNER, WILLIAM, Greensboro, Pa.: Brown glaze jug made at the Boughner Pottery Works in 1849, obtained by Dr. Walter Hough. 34055.
- BOUNDS, J. M., Chepultepec, Ala.: Fossils and fragments of soapstone. 34495.
- BOUVIER, E. L. (See under Paris, France, Musée d'Histoire Naturelle.)
- BOWMAN, N. W., Massanetta Springs, Va.: Specimen of *Dynastes titypus* Linnaeus. 33826.
- BOYLE, W. J., Brooklyn, N. Y.: Sample of diatomaceous earth from Ireland. 34600.
- BRADFORD, Commander R. B., U. S. N. (See under Navy Department.)
- BRADFORD, G. M., Bay City, Mich., received through Department of Agriculture: Plant. 33864.
- BRAENDLE, F. J., Washington, D. C.: Eleven plants (34082); Yellow-bellied Sapsucker, *Sphyrapicus varius* (34850).
- BRAINARD, Lieut. F. R., U. S. N.: Cartridge case of shot fired from the U. S. S. *Uncas* off Maya Point, Matanzas Bay (gift) (34089); received through Mrs. Ellen Brainerd Van Arsdale, flag
- BRAINARD, Lieut. F. R.—Continued.
of truce carried by Lieutenant Brainard into Havana on May 15, 1898 (deposit) (34122).
- BRANDEGEE, T. S., San Diego, Cal.: Type specimen of a plant (exchange) (34087); plant from lower California (gift) (34528); plant from lower California (exchange) (34587); 3 plants (exchange) (34675).
- BRANDT, E. S., Navy Department: Mauser rifle cartridge complete; from El Caney, Santiago de Cuba. 33920.
- BRELSFORD, W. H., U. S. National Museum: Brass number worn on the collar of Spanish uniforms to designate the regiments numerically. 34185.
- BRETON, Miss A. C., Mexico, Mexico: Specimen of pottery, human bones, etc., from a burial place in Mexico (34171); 16 obsidian implements from Cerro de Nabajas, Mexico (34487); small carved stone frog from Mexico (35151).
- BRIGGS, DR. A. A., East Andover, N. H.: Five plants. 33914.
- BRIGGS, C. F. (See under Smithsonian Institution, Bureau of Ethnology.)
- BRIMLEY, H. H. & C. S., Raleigh, N. C.: Reptiles from New Mexico. 34383.
- BRISTOL, DR. C. L. (See under New York University.)
- BRITISH MUSEUM. (See under London, England.)
- BRITTS, DR. J. H., Clinton, Mo.: Unio, representing a new species. 34360.
- BROCKETT, PAUL, U. S. National Museum: "Green's Arctic Lamp," patent. 33978.
- BRODNAX, DR. B. H., Brodnax, La.: Medicinal plants (33809); specimen of Velvet Ant or False Ant, *Mutilla occidentalis* (34062); received through Department of Agriculture, plant (35159).
- BROWER, J. V., St. Paul, Minn.: One hundred and seventy-five chipped flint objects from Kansas; also 2 bound volumes containing descriptions of the same. Exchange. 34670.
- BROWN, A. T., North Bend, Pa.: Rustic cane carried by the donor through the campaign of Santiago de Cuba, and carved and lettered to illustrate events connected with the campaign. 33912. Returned.

- BROWN, H. E., Mendocino, Cal.: Thirteen plants (gift) (34513); 175 plants (purchase) (34761).
- BROWN, Mrs. J. C., New York City: Photograph of a New Guinea shield, and photograph of an African shield. 35117.
- BROWN, Mrs. N. M., Ashtabula, Ohio: One thousand six hundred and eighty-one plants collected by E. W. Nelson in Mexico. (33787, 33929, 34031, 34237). Purchase.
- BROWN, W. L., Corona, Cal.: Four species of insects. 34580.
- BROWNE, H. H. (no address given): Specimen of *Hydrometra lineata* Say. 33747.
- BROWNE, Mrs. William Henry. (See under National Society of the Colonial Dames of America.)
- BRUNER, Prof. L., Lincoln, Nebr., received through Dr. L. O. Howard: Collection of South American Orthoptera and Hymenoptera from Argentina. Purchase. 34229. (See under Agriculture, Department of.)
- BRUNETTI, E., London, England: Two hundred and ninety-six specimens of Diptera. Exchange. 34578.
- BRUSON, C. B., Fort McPherson, Ga.: Moth. 33969.
- BRYAN, Rev. C. B., Hampton, Va., received through Department of Agriculture: Specimen of *Myosurus* sp. 35031.
- BRYANT, F. W., Ramona, Cal.: Specimens of mollusks belonging to the genus *Truncatella*. 34463.
- BRYANT, F. W., Ramona, Cal.: Shell from New Mexico. 35017.
- BUCK, W. T., Freehold, N. J.: Grooved axes, arrow points, and other objects. 34497.
- BULKLEY, E. W., Brooklyn, N. Y.: Medicinal plants. 33810.
- BURDEN, C. E., Mount Pleasant, D. C.: Nineteen specimens of Hymenoptera, etc., including 5 species new to the Museum collection (33774); 19 specimens of Hymenoptera and *Odonata* (33855); 7 dragon flies (33888); 2 specimens of *Libellula plumbea* Ulk and *Fronscolombia rufosa* Say (34552).
- BURTON, FRANK, Berwyn, Md., received through the Department of Agriculture: Two specimens of *Silene dichotoma*. 33790.
- BUSH, Mrs. A. E., San Jose, Cal.: Shells, representing the genera *Anodonta* and *Sigaretus*. 35071.
- BUSH, B. F., Courtney, Mo.: One hundred and twenty-four plants. Purchase. 35179.
- BUTTERWORTH, JOHN, Shaw, near Oldham, England: Sections of coal plants from the Lancashire and Yorkshire coal fields. 34248.
- BUTTS, EDWARD, Kansas City, Mo.: Twenty-seven specimens of Upper Carboniferous fossils, representing 9 species. 34411.
- CALKINS, Lieut. C. G., U. S. N., San Francisco, Cal.: Lacquered case containing several hundred playing-cards from Japan and 2 joints containing gambling sticks from China. Purchase. 35141.
- CALLIS, J. M., Pendleton, Ky., received through Mrs. N. J. Whitesides: Crossed guns: hat ornament of the regulation pattern of the United States Army, worn by the donor during the Santiago campaign and at the assault on the San Juan redoubts, July 1, 1898. 33896.
- CALMORE, C. A., Santa Monica, Cal.: Fifty-one specimens of *Eucalyptus* from California. 34704.
- CAMBRIDGE TILE MANUFACTURING COMPANY, Covington, Ky.: Thirty-five specimens of art tiles. 35090.
- CAMMANN, Dr. D. M., New York City: Specimen of Agrinoid, representing the species *Anomalagrion hastatum*. 34864.
- CAMP, J. H., Lima, Ohio: Specimen of *Corydalis cornutus* Linné (33800); specimens of *Scalops aquaticus macrinus* (34961).
- CAMPBELL, M. R. (See under Interior Department, United States Geological Survey.)
- CANBY, W. M., Wilmington, N. C.: Ninety-nine plants (34410); type specimen of a plant from Georgia (34941). Exchange.
- CARDENAS, AMADOR, received through Prof. F. W. Clarke: Onyx from Jimulco, Coahuila, Mexico. 34657. (O.)

- CARINTHIA, AUSTRIA: Freie Vereinigung Tiroler Botaniker, Dillach im Oberdrauthale, received through Hans Sinner: 1,132 plants collected in Europe. Exchange. 34515.
- CARL GREN, DR. OSCAR. (See under Stockholm, Sweden, Riksmuseum.)
- CARMICHAEL, R. D., Meadow, Ala.: Two hundred rude chipped implements, arrow points and other objects (34433); 77 chipped objects, principally rude arrowheads (34669).
- CARNEGIE MUSEUM, Pittsburg, Pa., received through E. B. Williamson: Two specimens of *Anodonta*. 34404.
- CARSON, MAJ. J. M., San Juan, P. R.: Pair of shoulder straps. (See under Porto Rico Collection. 35201.)
- CARTER, W. A. (See under Dr. W. A. Phillips.)
- CATRELL, W. H., Buffalo, N. Y.: Centavo, Spanish copper coin, recovered from the wreck of the Spanish steamer *Alphonso XII*, sunk in Mariel Harbor, Cuba. 34901.
- CHAFFANJON, M. (See under Paris, France, Musée d'Histoire Naturelle.)
- CHANDLEE, W. E., Washington, D. C.: One hundred and twelve South American photographs and pictures. 35099.
- CHAPMAN, JOHN, San Diego, Cal.: Specimen of Rag-fish, *Icosteus enigmaticus*. 35119.
- CHAPMAN, N. A., Portsmouth, Ohio: Teeth of mammal found in an old Indian village. 34786.
- CHAPPELL, S. B., Northport, N. Y.: Three arrowheads. 34440.
- CHENEY, A. N. (See under Sportsman's Exposition, New York; Quebec exhibit.)
- CHILTON, DR. CHARLES, Edinburg, Scotland: Five species of Amphipods from New Zealand. Exchange. 34757.
- CHISSELL, E. T., Bluefields, Nicaragua: Seven insects. 34504.
- CHITTENDEN, F. H., Department of Agriculture: Specimen of *Xylophilus ater* Lec. 33990.
- CHRISTY FIRE CLAY COMPANY, St. Louis, Mo.: Fire clay. 34240.
- CLAIBORNE, R. S., Washington, D. C.: Badge of the First Division, Second Army Corps, U. S. Volunteers, worn during the Cuban campaign (34848); regulation army belt with three Spanish cartridge boxes; letter head and illustrated card of the San Quentin Regiment of Spanish Infantry, commemorating the action in which the Cuban general Maceo was killed (34861).
- CLAPP, G. H., Pittsburg, Pa.: Thirty-six species of land and fresh-water shells from Java (34326); specimen of *Polygyra christyi* from Tennessee (34585); specimen of *Gastrodonta clappi* from Tennessee (34616); 2 species of North American land shells (34645); 3 land shells from Indian Territory (34767).
- CLARK, G. W., Wyandale, N. Y.: Specimen of "Vital ore." 34836.
- CLARKE, PROF. F. W. (See under Amador Cardenas and Interior Department, U. S. Geological Survey.)
- CLARKE, R. E., Spokane, Wash.: Specimen of mispickel from Idaho. 35003.
- CLAYPOLE, PROF. E. W., Akron, Ohio: Specimens of Carboniferous nodules from Lancashire, England. 33921.
- CLENDANIEL, G., Dover, Del.: Official badge, Grand Army of the Republic, Thirty-fifth Encampment. 33998.
- COBB, J. L., Lincolnton, N. C.: Specimen of *Misumene americana* Keys, 35150.
- COBB LIME COMPANY, Rockland, Me.: Limestone used for making quicklime. 34246.
- COCKERELL, M. D., Mesilla Park, N. Mex.: Three specimens of *Porcellio larvis*. 34957.
- COCKERELL, PROF. T. D. A. (See under New Mexico Agricultural Experiment Station.)
- COCKRELL, ERNEST, Madison, Kans.: Cecropia moth, *Attacus cecropia* Linnaeus. 35072.
- COHUTTA TALC COMPANY, Spring Place, Ga.: Specimens of talc. 34339.
- COLDITZ, M., Allardt, Tenn.: Thirty-four arrow-points and spear-heads. 35075.
- COLE, W. D., Bryn Mawr, Cal.: Fossil vertebre of a whale found on the foothills south of Pomona, southern California. 34892.
- COLEMAN, MRS. CHARLES WASHINGTON. (See under National Society Colonial Dames of America.)

- COLLINS, F. S., Malden, Mass.: Fascicle No. 9 (50 specimens) of *Phycotheca Boreali-Americana* (33789); 50 plants comprising a collection of miscellaneous alge (34403); 50 specimens of North American seaweeds (34624); 50 plants (34988). Purchase.
- COLLINS, G. N., Department of Agriculture: Collection of insects from central New York (34201); black snake from Washington, D. C. (34960).
- COLLINS, J. FRANKLIN, Providence, R. I.: Twenty-two plants. Exchange. 34323.
- COLLINS, Capt. J. W. (See under Hon. Chris Michelsen.)
- COLUMBIA COLLEGE, New York City. (See under Senff Zoological Expedition.)
- COLUMBIAN TALC COMPANY, Gouverneur, N. Y.: Six specimens of crude and ground talc. 35047.
- COLUNGA, Prof. M. F., Lima, Peru: Twenty-four birds' skins from Peru. 34909. Exchange.
- COMMONWEALTH IRON COMPANY, Commonwealth, Wis.: Iron ore. 34300.
- COMSTOCK, F. M., Cleveland, Ohio: Three plants. Exchange. 34828.
- CONNELL, E. Y., St. Kitts and Nevis, British West Indies: Collection of Carib implements from Barbados and West Indies; also a few pieces of pottery. Exchange. 33870.
- COOK, Capt. C. C., U. S. Volunteers, Washington, D. C.: Collection of swords used during the Cuban campaign, Spanish-American war. Deposit. 34741.
- COOK, Dr. E. P., Jr., Chicago, Ill.: Dip-terous larva. 33991.
- COOK, Prof. O. F., U. S. National Museum: Specimen of *Polyspilota validissima* Gerst, from Clay Ashland, Siberia, obtained by Mrs. J. E. D. Sharp (33775); collection of insects from central New York (34201).
- COQUILLET, D. W., U. S. National Museum: One hundred and nineteen specimens of Diptera, including types of 6 species. 34745.
- CORAM, G. M., Utica, N. Y.: Egg cluster of *Clisocampa americana*. 33814.
- CORDEIRA, JOHN, New Bedford, Mass., received through A. C. Hawes: Specimen of *Squilla* from Acushnet River, Massachusetts. 34862.
- CORNELL UNIVERSITY, Ithaca, N. Y. (See under E. C. Townsend.)
- COUBEAUX, EUGENE, St. Louis, Saskatchewan, Northwest Territory, Canada: Thirteen birds' skins; 1 nest and eggs representing the genus *Sturnella* from Northwest Territory. Exchange. 34749.
- COVILLE, F. V. (See under Agriculture, Department of.)
- COWART, S., Cowart, Va.: Set of false teeth with a growing oyster attached. 34347.
- COX, W. V., U. S. National Museum: Peace Jubilee badge and medal of the Trans-Mississippi and International Exposition, Omaha, 1898 (34718); New York Herald, dated February 10, 1887, containing a facsimile of the Herald's account of the funeral of Alexander Hamilton; Daily Graphic, dated September 22, 1886, containing a facsimile of the Constitution of the Confederate States of America, and a picture of the officers of the Cabinet taken at Montgomery, Ala. (35015).
- CRANDALL, Prof. C. S., Fort Collins, Colo.: Three plants. 34564.
- CRAWFORD, Dr. JOSEPH, Philadelphia, Pa.: One hundred and twenty-five plants. Exchange. 34399.
Four specimens of *Viola*. Exchange. 35054.
- CRAWFORD, LAMAR, New York City: Human skull and fragments of pottery found in a mound near New River, Virginia. 34074.
- CRIDLER, Hon. T. W. (See under State, Department of.)
- CROCKETT, JAMES, Irish Lane, Pa., received through Bureau of Ethnology: Two stone hoes, 2 celt-shaped pebbles, 3 fragments of hammer stones, 4 arrow-heads, and 12 pebbles and spalls. 33900.
- CROSBY, F. W., Washington, D. C.: Three photographs of Mount Etna (exchange) (34619); two cases of geological material from Somma and Vesuvius (purchase) (34840). (See under J. B. McCarthy.)
- CROSS, C. W. (See under Interior Department, U. S. Geological Survey.)

- CROSSAS, ANDRES, San Juan, P. R.: Spanish flag from San Cristobal Castle, San Juan. (See under Porto Rico Collection 35201.)
- CUTCHER, PHILIP, Vicksburg, Miss.: One hundred and sixty-two fossils from the Vicksburg Eocene. 34112.
- CUMMINGS, MISS C. E., Wellesley, Mass.: Thirty lichens from North America. Exchange. 34703.
- CURTICE, COOPER. (See under Interior Department, U. S. Geological Survey.)
- CURTIS, C. J., Davidsonville, Md.: Birds' skins, mammal skins, turtles, skull of a bird, and a crustacean. 35057.
- CUSACK, F. W., Westcliff, Colo.: Specimen of *Gentiana barbellata* Engelm. (34086); through Department of Agriculture, specimen of *Gentiana humilis* (35183).
- CUSICK, W. C., Union, Oreg.: Twenty plants. 34512.
- DALE, T. NELSON. (See under Interior Department, U. S. Geological Survey.)
- DALL, MRS. C. H., Washington, D. C.: Piece of calico printed in 1872 with certain designs relating to the life of Horace Greeley. 33777.
- DALL, W. H., U. S. Geological Survey: Forty-two lots of marine shells from California. 35045.
- DALRYMPLE, C. H., Gold Hill, Oreg.: Photograph of interlocked deer antlers. 33938.
- DANIEL, Lieut. J. W., U. S. V., Lynchburg, Va.: Collection of mammals. 34356.
- DANIELS, L. E., Brookston, Ind.: Specimens of *Polygyra profunda* (34114); 3 species of unios (34337); 4 species of shells from Florida (34900); crab (*Uca pugilator*) (35002).
- DANN, RAYMOND, Rochester, N. Y.: Relics from an old Indian cemetery at Honeoye Falls, N. Y. 34397.
- DARTON, N. H. (See under Interior Department, U. S. Geological Survey.)
- DAVIS, MISS C. L., Leesburg, Va.: Caterpillar of a black butterfly (*Papilio troilus* Linnaeus). 34015.
- DAVIS, HOMER SPENCER, Rosa, Idaho: Black sand and gold. 35131.
- DAVIS, JOHN (U. S. S. *Texas*): A clip containing five Mauser rifle cartridges recovered from the wreck of the Spanish ship *Cristobal Colon*. 34103.
- DAVIS, N., IDA, Mich.: Limestone used for making quicklime. 34251.
- DAVIS, W. T., New Brighton, Staten Island, N. Y.: Twenty-two insects. 34826.
- DAY, A. E., Beirut, Syria: One hundred and forty-five specimens of Lepidoptera from Syria. Exchange. 34118.
- DAY, DR. DAVID T. (See under Interior Department, U. S. Geological Survey; Raleigh Scott; W. F. Young.)
- DEAM, C. C., Bluffton, Ind.: Two lizards from Mexico. 34798.
- DEANE, WALTER, Cambridge, Mass.: Twenty-five plants. Exchange. 35180.
- DEITZ, DR. W. G., Hazleton, Pa., received through the Department of Agriculture: Nine specimens of *Tineina*. 34727.
- DE NYSE, W. L., Gravesend Beach, Brooklyn Borough, N. Y.: Two leeches, representing the genus *Branchellion*. 35130.
- DERBY, Prof. O. A., Rio de Janeiro, Brazil: Monazite sand and minerals from Brazil. 33757.
- DERR, H. B., Chicago, Ill.: Specimen of *Fusus marmoratus*. 34123.
- DESHA, MISS M., Washington, D. C.: Two-headed snake. 34484.
- DETROIT GRAPHITE MANUFACTURING COMPANY, Detroit, Mich.: Graphite. 34176.
- DE WEESE, DALL, Canyon, Colo.: Five skins and 4 skulls of moose; 8 skins and 8 skulls of sheep. Purchase. 34402.
- DEWEY, Admiral GEORGE. (See under Navy Department.)
- DEWEY, L. H., Department of Agriculture: Plant (34677); three violets from Michigan (35152).
- DIAL, MRS. M. B., San Luis Obispo, Cal.: Eight species of marine and freshwater shells. 34782.
- DIAZ-HELLIN, MANUEL, Bayamon, P. R.: Carrying bag used in place of a knapsack. (See under Porto Rico Collection 35201.)
- DICKHAUT, H. E., U. S. National Museum: Private collection of Cincinnati group fossils (purchase) (33859); fossils from

DICKHAUT, H. E.—Continued.

Middleport and Lockport, N. Y. (collected) (33949); collection of Cincinnati group fossils, consisting of crinoids, brachiopods, and mollusks (purchase) (34574).

DIGNOWITZ, ANTHONY (no address given): Received through the Department of Agriculture: Plant from San Juan, P. R. 34944.

DILLER, Dr. J. S. (See under Interior Department, U. S. Geological Survey.)

DINGUS, H. H., Nasbie, Va.: Fossil plant. 34390.

DISTRICT OF COLUMBIA VOLUNTEERS, received through Brigadier-General Harries: Spanish bronze cannon, dated 1794, taken from a Spanish trench on San Juan Hill, Santiago de Cuba. 34896.

DODGE, B. E., Richfield, Mich.: Polished stone needle, 2 flint drills, and an arrow-head found in Genesee County. Deposit. 34694.

DOGGETT, J. O., Piedmont, S. C.: Specimens of damourite. 34046.

DOLPH, J. M., Port Jervis, N. Y.: Stone gouge from the building grounds of the Lenni-Lenape Indians, Orange County, New York. 34394.

DOUGLASS, A. E., Flagstaff, Ariz.: Four astronomical and surveying instruments and a bromide copy of a letter written by Gen. George Washington to Andrew Ellicott, dated October 20, 1792. Deposit. 34395.

DRAKE, C. M., Gorda, Cal.: Four species of land shells. 34959.

DRAKE, E. L., Winchester, Tenn.: Sphinx Moth, *Charocampa tersa* Linnaeus. 33936.

DRIGGS-SEABURY GUN AND AMMUNITION COMPANY, Washington, D. C., received through Ordnance Department, War Department: Driggs-Seabury 1-pounder steel shell. 34254.

DU BOIS, E., Bluffton, S. C.: Specimen of *Lycosa carolina* Hentz. 34285.

DU BOSE, J. H., Huguenot, Ga.: Collection of hammer stones and chipped implements. 35058.

DUGÈS, Dr. A., Guanajuato, Mexico: Two photographs of birds and a photograph of a mammal (gift) (33838); fishes, rep-

DUGÈS, Dr. A.—Continued.

tiles and batrachians from Mexico (exchange) (33976); 7 specimens of invertebrates (gift) (34018); specimen of *Vespertilio fuscus miradorenensis* (gift) (34153).

DUERDEN, J. E., Institute of Jamaica, Kingston, Jamaica: Four specimens of *Spartocera batatas* Fabr. and 7 specimens of *Cylas fornicarius* Fab. 34009.

DUMBLE, Prof. E. T., Houston, Tex.: Twelve specimens, representing 3 species, of corals from either the Silurian or Devonian formation, near Cascite, Sonora, Mexico (33851); specimens of hubnerite and mesolite (34333); 2 specimens of Devonian fossils and 2 specimens of Upper Carboniferous fossils from the southeastern part of Arizona (34358).

DUNLAP, ROBERT, & Co., Jamesville, N. Y.: Specimens of gypsum. 34221.

DUBROW, G. W., Salton, Cal.: Specimen of *Rasahus biguttatus* Say. 35050.

DYAR, Dr. H. G., U. S. National Museum: Insects (34417, 34554) (gift); 125 moths from Venezuela (purchase) (34868).

EAKLE, A. E., Cambridge, Mass.: Specimen of erinite from Durkee, Oreg. 34755.

EARLE, J. W., Holland, S. C.: Two specimens of *Melanolestes picipes* H. Schf. 34992.

EARLE, F. S., Auburn, Ala.: Six hundred and seventy-four plants from the Rocky Mountain region (34691); 134 plants (34759). Purchase.

EASTMAN, Dr. C. R. (See under Museum of Comparative Zoology, Cambridge, Mass.)

EATON, A. A., Seabrook, N. H.: Three plants. Exchange. 35231.

EATON, A. B. (See under Agriculture, Department of.)

EDWARDS, Dr. J. J., Charleston, S. C.: Insect larvæ from a cistern in Charleston. 33833.

EDMONDS, WALTER, Norfolk, Va.: Pupa of *Danaus archippus*. 33970.

ELDER, J. H. (See under Smithsonian Institution, Bureau of Ethnology.)

ELIOT, Sir CHARLES, British Embassy, Washington, D. C.: Specimens of invertebrates from Key West, Florida. 35107.

- ELLIS, J. E., San Francisco, Cal.: Limestone used for making quicklime. 34292.
- ELMER, A. D. E., Pullman, Wash.: Five hundred plants from Idaho and Washington (33795); 225 plants from Washington (34931). Purchase. (See under C. V. Piper.)
- ELROD, M. J., Missoula, Mont.: Land and fresh-water shells and mollusks from Montana, representing 9 species. 33926.
- EMME, D. H., Wympsgap, Pa.: Fire clay. 34195.
- EMMONS, S. F., U. S. Geological Survey: Fifty specimens of fossils from Payte, Peru. 35072.
- ENGLISH, G. L., & Co., New York City, N. Y.: Three specimens of jeffersonite with garnet, willemite, franklinite, and calcite, from Franklin, Sussex County, N. J. (34590); 2 specimens of triplite and 1 specimen of lepidolite from Haddam, Conn. (34816).
- ENTWISLE, W. B., U. S. National Museum: Regulation belt and buckle of the U. S. Army, 1861-1865; 2 Minie rifle bullets, from the battlefield of Winchester, Va. 35091.
- ETTINGER, CHARLES S., Jersey City, N. J.: Kaolin from Texas. 34540. (See under Frio Kaolin Mining and Improvement Company, Dallas, Tex.)
- EUSTIS, G. H., Boston, Mass.: A remarkable oyster from Charles River, Massachusetts. 34304.
- EVANS, Capt. R. D., U. S. Navy: Section of plate, chain lockers, from the U. S. S. *Iowa*, perforated by a Spanish shell. 34076.
- EVANS, W. H., Tusiloff, Alaska, received through Department of Agriculture: Small collection of insects, consisting of about 75 specimens from Tusiloff (34182); 2 plants from Alaska (34584).
- EVERETT, WESLEY. (See under Leslie Copper Mining Company.)
- EVERMANN, Prof. B. W. (See under Fish Commission, U. S.)
- EVERMANN, T. B., Washington, D. C.: Thirty dragon flies and butterflies. 34434.
- FABER, JOHN, Dallas, Tex.: Insect. 33918.
- FAIRCHILD, D. G., Department of Agriculture: Five hundred specimens of Algae in alcohol and subtropical plants from the Mediterranean region (33764); collection of Javanese insects, a few lizards and snakes from Buitenzorg, Java, and the skin of a fruit-eating bat from the botanical gardens at Buitenzorg (34330).
- FALL, H. C., Pasadena, Cal.: Three species of *Acanodora*, new to the Museum collection. Exchange. 34692.
- FANNIN, JOHN, curator Provincial Museum, Victoria, British Columbia: Eleven birds' skins. 34093.
- FARMER, Miss S. J., Eliot, Me.: Collection of electrical apparatus. Deposit. 34583.
- FAXON, Dr. WALTER. (See under Museum of Comparative Zoology, Cambridge, Mass.)
- FEATHERSTONHAUGH, THOMAS, Washington, D. C.: John Brown pike and a Sharp's rifle. Deposit. 35097.
- FERRISS, J. H., Joliet, Ill.: Eight species of land shells from Tennessee and other localities (exchange) (34446); 15 species of land shells from Arkansas, Tennessee, and Indian Territory (gift) (34833).
- FEWKES, Dr. WALTER. (See under Smithsonian Institution, Bureau of Ethnology.)
- FIRE DEPARTMENT, FIRE-ALARM BRANCH, Boston, Mass., received through H. S. Russell, Fire Commissioner: Channing & Farmer fire-alarm telegraph signal box used in Boston in 1852; improved fire-alarm telegraph signal box used in Boston in 1867; fire-alarm telegraph repeater used in Boston in 1852. 34714.
- FISCHER, C. F. HERMANN, New Braunfels, Tex.: Specimen of glauconitic marl. 35124.
- FISH COMMISSION, U. S., Hon. George M. Bowers, Commissioner of Fish and Fisheries: Pipe-fish, *Fistularia tabacaria* (33951); seaweeds (33993); mollusks and marine invertebrates collected on the Pacific coast of North America in 1897 and 1898 (34060); Tile-fish (34128); type specimens of fishes, consisting of *Paraliparis rosaceus*, *Bathylagus milleri*, and *Ulocentra meadii* (34148); fishes from Lake Superior,

FISH COMMISSION, U. S.—Continued.

Alaska, Kamchatka, and Florida (34287); aquatic animals, including crawfishes, crabs, shrimps, and other crustaceans, snakes, frogs, lizards, salamanders, turtles, mollusks, insects, and mammals (34316); alcoholic specimens of crustaceans, principally crayfishes, from different sections of the United States (34603); insects and larvæ of beetles from Unalaska (34635); 6 plants from Porto Rico, collected by Prof. B. W. Evermann (34772); reptiles and batrachians, collected in Porto Rico by the steamer *Fish Hawk* (34778); natural history specimens obtained during the expedition of the *Fish Hawk* to Porto Rico (34801); 20 alcoholic reptiles and a bat from Porto Rico and the Bahamas, collected by the *Fish Hawk* (34824); collection of shells, gorgonians, barnacles, bryozoans, sponges, geological specimens, and plants, collected by the Fish Commission steamer *Albatross* in 1887, 1888, 1889, and 1896 (34837); 9 plants collected by B. W. Evermann in Porto Rico (34969); collection of mollusks, brachyurans, anomurans, crustaceans, macrurans, and tectibranchs obtained during the expedition of the *Fish Hawk* to Porto Rico (34984); reptiles and batrachians from the Bahamas and Porto Rico, collected by the *Fish Hawk* (35095).

FISHER, DR. A. K., Department of Agriculture: Two birds' skins from Louisiana, including the type of *Ammodramus m. fisheri* Chapman (33959); plant (35136). (See under H. H. Hindshaw, C. W. Nash.)

FLAISCHMAN, S. F. (no address given): Badge of the Second Army Corps, U. S. Army. 34746.

FLOWERS, E. P., Bolling, Ala.: Specimen of *Lagoa opercularis* Abbott and Smith. 34090.

FLOYD-JONES, DE LANCEY. (See under Aztec Club.)

FLORIDA IRON MINING AND MANUFACTURING COMPANY, Orlando, Fla.: Sample of ocher. 34296.

FOGH, H. P., Roslyn, Wash.: Copper ore from Dutch Miller Mine, King County, Wash. 34773.

FOLSOM, J. W., North Cambridge, Mass.: Collection of Japanese Thysanura, including types of eight species described by Mr. Folsom, all new to the Museum collection. 34509.

FOOTE, DR. A. E., Philadelphia, Pa.: Four specimens of minerals. Purchase. 34191.

FORNEY, A. H., U. S. National Museum: Adult skull of *Odocoileus americanus*. 34582.

FOSTER, DAVIS, Ono, Wyo.: Six specimens of phosphate nodules from Ono. 34985.

FOSTER, L. N., Strickland, Ga.: Specimen of *Citheronia regalis* Fab. 34101. Returned.

FOWLER, DR. S. M., Miami, Fla.: Specimens of *Amisomorpha buprestoides* De Geer. 34199.

FRANKFURT-AM-MAIN, Germany, Museum Senckenbergianum, received through Dr. O. Boettger: Two specimens of *Silybura pulneyensis* from India and 2 specimens of *Phyllodoctylus stumpfi* from Madagascar. 34025.

FREIE VEREINIGUNG TIROLER BOTANIKER. (See under Carinthia, Austria.)

FRENCH, CAPT. F. H., U. S. Army, Washington, D. C.: Clasp knife and a Spanish flag. (See under Porto Rico Collection 35201.)

FRIERSON, L. S., Frierson, La.: Unios from the Southern States (33803); 3 species of Unioniidae from the Southern States (34799).

FRIO KAOLIN MINING AND IMPROVEMENT COMPANY, Dallas, Tex., received through C. S. Ettinger: Kaolin from Edwards County, Tex. 34309.

FRISBIE, W. R., Washington, D. C.: Pair of regulation sandals issued to the Spanish soldiers in Cuba, obtained in Santiago on the day of the surrender. 34312.

GANE, HENRY S. (See under Smithsonian Institution, Bureau of Ethnology.)

GARLAND, C. C., Baltimore, Md.: Specimens of graphite from Shelby, Cleveland County, N. C. 35041.

GARNER, E., Quincy, Cal.: Skin and skull of badger and skin and skull of mole. 34466.

GARNER, R. L. (See under Hon. M. L. Ross.)

- GAYLE AND SEMPLE, Montgomery, Ala.: Sample of ocher. 34295.
- GEOLOGICAL SURVEY OF CANADA. (See under Ottawa, Canada.)
- GEORGESEON, C. C., Washington, D. C.: Five nuggets of Alaskan and Klondike gold. Purchase. 34634.
- GIBSON, J. H., Coney Island, N. Y.: Photograph of a whale. 33843.
- GIBSON, THOMAS J., Scottsburg, Va.: "Moffet bell punch," Alamo knife, and an old saw. 35194.
- GILBERT, G. K. (See under Interior Department, U. S. Geological Survey.)
- GILMÄRTIN, Mr., gunner, U. S. Navy: Dummy cartridge used in target practice by the U. S. Navy. 34108.
- GILMON, W. J. (no address given): Identification medal. (See under Porto Rico Collection 35201.)
- GIRTY, Dr. G. H., U. S. Geological Survey: Fern from Indian Territory. 34622. (See under Interior Department, U. S. Geological Survey.)
- GLATFELTER, Dr. N. M., St. Louis, Mo.: Nine plants. 33955.
- GOERME, LUIS (no address given): Three photographs of the vertebra of a fossil elephant. 34364.
- GOLDMAN, E. A. (no address given): Five hundred and sixty-eight plants from Mexico. Purchase. 34796.
- GOODMAN, R. D., Washington, D. C.: Springfield rifle found in the trenches before Santiago; Spanish belt and cartridge case captured at Santiago; Mauser rifle clip; 2 Remington cartridges; Mauser cartridge; Mauser shell struck by a bullet, and uniform hat belonging to a volunteer from the District of Columbia. Loan. 34039.
- GORDON, R. H., Cumberland, Md.: Six specimens of Clinton and Niagara limestone with Ostracoda. 33816.
- GRAHAM, J. G., Anthony, Fla.: Moth. 34693.
- GRAHAMSTOWN, SOUTH AFRICA: Albany Museum, received through Dr. S. Schönland, director: Forty-four birds' skins from South Africa. Exchange. 34088.
- GRANIER, EMILE. (See under Smithsonian Institution, Bureau of Ethnology.)
- GRANT, Gen. FREDERICK, U. S. V., War Department, Washington, D. C.: Large idol. (See under Porto Rico Collection 35201).
- GRAY HERBARIUM, Cambridge, Mass.: Twenty-four plants (34474); plant from Mexico (34762); 300 plants (35122). Exchange.
- GRAY, Mr. and Mrs. J. D., Washington, D. C.: Three hundred and thirty-five pearls from fresh-water mussels. 34049.
- GREEN, J. D., Seaside, Fla.: Specimen of *Dynastes tityus* Linnaeus. 33801.
- GRIFFIN, W., Somerset, Ky.: Ninety stone implements, fossils, and a specimen of mineral (fossils returned) (33844); 23 archaeological objects from Pulaski County (33886); 25 specimens of Lower Carboniferous brachiopods (33903); 18 fossils from the Lower Carboniferous rocks of Somerset (34500).
- GRIFFITH, BERYL, Clay City, Ind.: Pottery clay. 34293.
- GRIFFITH, Dr. H. G., Manayunk, Pa.: Parasitic Hymenoptera from Arizona. 34636.
- GUERDRUM, Miss S. C., Anacostia, D. C.: Two young box turtles. 35177.
- GUILD, CHARLES, & SONS, Piedmont, Wyo.: Asphaltum. 34196.
- HAFERLANDT and Pippow, Berlin, Germany: Skull of *Ursus arctos*. Exchange. 34820.
- HAGANS, Hon. J. MARSHALL, Morgantown, W. Va.: Brown glazed jar from an early pottery in Morgantown, obtained by Dr. Walter Hough. 34053.
- HAGOOD, J. E., Pickens, S. C.: Mica. 34204.
- HALL, J. A., Morotock, Va.: Specimen of slate-colored silicified wood. 34596.
- HALL, J. S., Westport Point, Mass.: Specimen of *Botrychium linerioides* showing a peculiar division of the fertile frond. 34051.
- HALL, WILLIAM, Greensboro, Pa.: Glass dish made in Washington about the year 1833. 34209.
- HALLE, E. A., Dalton, Mass.: Specimen of *Platyrotera sabalinus* Scudder. 34533.
- HALLOCK, C. H., Fayetteville, N. C.: Guitar. 34639.

- HAMILTON, JAMES M., Marathon, Tex.: Species of *Ethas* belonging to the family *Cymidae*. 33773.
- HAMLIN, HOMER, Los Angeles, Cal.: Fossils, probably from the Miocene formation, Santa Monica Mountains. 34158.
- HAMMERS, J. E., Luray, Va.: Specimen of *Benacus griseus* Say. 34970.
- HAMMOND, E. W., Wimer, Oreg.: Four hundred and thirty-four plants from Oregon. Purchase. 34561.
- HANHAM, A. W., Winnipeg, Manitoba: Thirty-four specimens of Lepidoptera (gift) (34302); 12 specimens of Lepidoptera (gift) (34376); 17 specimens of Lepidoptera (exchange) (34535).
- HANSEN, GEORGE, Berkeley, Cal.: Plants. (34430, 34527). Purchase.
- HARRISON & WALKER COMPANY, Blandburg, Pa.: Fire clay. 34165.
- HARDEN, J. H., Phoenixville, Pa.: Hindu stone image from Mopani, Central provinces of India, and a photograph of the same. Purchase. 33780.
- HARPER, THOMAS, Bellevue, Pa.: Natural white oil from Holden Run, Armstrong County, Pa. 34827.
- HARRIES, Brig. Gen. GEORGE H. (See under District of Columbia Volunteers.)
- HARRINGTON, M. W., Washington, D. C.: Paper money. (See under Porto Rico Collection 35201.)
- HARRINGTON, N. R.: (See under Senff Zoological Expedition of Columbia College.)
- HARRINGTON, W. W., Ottawa, Canada, received through Department of Agriculture: Sixty-two specimens of Diptera, representing 50 species. 34726.
- HARRIS, E. D., New York City: Eighteen specimens of Cicindelas. 34664.
- HARRIS, I. F., Nashua, N. H.: Pewter lamp in use about one hundred years ago. 34313.
- HARRIS, J. C., Debeque, Colo.: Sphinx-moth, *Protoparce celeus* Hübner. 34063.
- HARRISON, Capt. E. B., Ponce, P. R.: Celt. (See under Porto Rico Collection 35001.)
- HARRISON, Mrs. J. T., Pontiac, Mich.: Pupa of a dipterous insect representing the species *Erastalis tenax* Linnaeus. 34865.
- HARTLEY, J. SCOTT, New York City: Plaster cast of the death mask of Cyrus W. Field. Deposit. 35061.
- HARVARD UNIVERSITY, HERBARIUM OF, Cambridge, Mass.: Violets. 33954.
- HASSE, Maj. H. E., U. S. Army, Los Angeles, Cal.: Two hundred and thirty-three plants. 35232.
- HATCHER, J. B., Princeton University, Princeton, N. J.: Specimens, in alcohol, of flying-fishes from South America; specimen of Isopod (*Glossobius linearis* Dana) from the mouth of a flying-fish. 34764. (See under Smithsonian Institution, Bureau of Ethnology.)
- HAVENS, C. B., & Co., Omaha, Nebr.: Specimen of bituminous coal from Indian Territory. 34662. (O.)
- HAWES, A. C. (See under John Cordeira.)
- HAY, W. P., Washington, D. C.: Snakes from Virginia and Maryland (33750, 33940); jelly-fishes, crustaceans, and worms from Chesapeake Bay (34219); crustaceans (34271); 2 type specimens of *Haplophthalmus puteus* Hay, from a well at Irvington, Ind. (34886).
- HAYDEN, Mrs. F. V., Philadelphia, Pa.: Medals presented to Dr. Hayden, consisting of a grand medal of the first class, Société de Topographie, Congrès de Paris en 1875; medal of honor, Société de Topographie, Congrès de Paris en 1875. Deposit. 34885.
- HAYMOND, Mrs. DORCAS, Morgantown, W. Va.: Specimen of glazed ware from the Thompson pottery and a glass from the Albert Gallatin Glass Works, at Greensboro, Pa., obtained through Dr. Walter Hough. 34056.
- HAYS, T. R., Wickham, New South Wales, received through L. O. Howard: Collection of Australian insects. 34922.
- HEATH, E. F., Cartwright, Manitoba, Canada: The type specimen of *Asteroscopus borealis* Smith, new to the Museum collection. 34555.
- HEATH, HAROLD, Pacific Grove, Cal.: Isopods from California (gift) (34216); 100 specimens of crustaceans (purchase) (34872); 15 specimens of crustaceans, representing 3 species (gift) (35016); crustacean (gift) (35185).

- HEATHMAN, W. F., Santa Anna, Cal., received through the Department of Agriculture: Plant. 34530.
- HEATON, L. D., Victoria, Tex.: Luna Moth, *Actias luna* Linnaeus. 34842.
- HEBERT, V. F. (See under Agriculture, Department of.)
- HECKMAN, P. Y., Issaquah, Wash.: Fossil turtle. Exchange. 34819.
- HEIDEMANN, OTTO, Department of Agriculture: Six specimens of *Aradus niger* Stål, representing a rare species, new to the Museum collection. 35035.
- HEIDMAN, MRS. MICA, Washington, D. C.: Bust of Charles Darwin. 34263.
- HEIGHWAY, A. E. (See under Interior Department, U. S. Geological Survey; Old Abe Company.)
- HELLER, A. A., Lancaster, Pa.: Four hundred and seventy plants from Washington and Texas. Purchase. 34353.
- HENDERSON, A., & Co., Dundee, Scotland: Abnormal tooth of a Sperm whale. Purchase. 34732.
- HENDERSON, L. F., University of Idaho, Moscow, Idaho: Six specimens of Umbelliferae. 34340.
- HENNING, A. H., Silver Cliff, Colo.: Four fossil teeth of a mammal. 34427.
- HENNING, C. F., Boone, Iowa: Sennett's Nighthawk, *Chordeiles virginianus sennetti*. 34252.
- HENRY, Miss M. A., Washington, D. C.: Doll made by Mrs. Alexander Hamilton and by her presented to Mrs. Joseph Henry. 34543.
- HENSHAW, H. W., Hilo, Hawaii: Crabs and shrimps from Sandwich Islands (34019); 2 skins of a Flycatcher from Hawaii (34467); 3 specimens of *Leiolopisma noctua* from Hawaii (34653); Weaver-bird from Hawaii (34702); fishes, shells, crabs, shrimps, and worms from Hilo, Hawaii (34843).
- HERMAN, W. W., Boston, Mass.: Twelve specimens of marine shells from the Pacific Ocean and other localities. 34425.
- HEROLD, MRS. JAMES, Washington, D. C.: Two pieces of gun carriage from the U. S. S. *Media*, a participant in the bombardment of Fort Jackson, La., April 23, 1862. 34717.
- HERR, JOHN, Lebanon, Ind.: Specimen of waterbug (*Belostoma americana*). 35088.
- HERSEY, Capt. A. H., Ponce, P. R.: Grape-shot. (See under Porto Rico collection 35201.)
- HEWITT, J. Y. (See under Old Abe Company.)
- HIBBARD, D. R., Sturgis, Mich.: Shells, principally from Florida. 34979.
- HICHBORN, PHILIP, Chief Naval Constructor. (See under Navy Department.)
- HILDEBRANDT, J. J., Logansport, Ind.: Mexican playing cards. 34551.
- HILDER, F. F., Washington, D. C.: Knife obtained from the Icaiche branch of the Chichenas Indians of Yucatan. 34468.
- HILL, Hon. DAVID J. (See under State, Department of.)
- HILL, Lieut. Col. F. A., Ponce, P. R.: Spanish revolver and four cartridges. (See under Porto Rico collection 35201.)
- HILL, F. D., U. S. Consul, Santos, Brazil: Specimen of Walking-stick, an orthopterous insect. 34927.
- HILL, Dr. R. T., U. S. Geological Survey: Two species of land shells from San Juan Hill, Cuba (34648); collection of flint chips from Indian workshops in Travis County, Tex. (34831).
- HILLS, R. C., Denver, Colo.: Meteoric iron from Mount Oseura, New Mexico. Exchange. 34318.
- HINDSHAW, H. H., Baltimore, Md., received through Dr. A. K. Fisher: Skin of Point Barrow Gull, *Larus barrovianus*, from the State of Washington. 34424.
- HINE, Prof. J. S., Ohio State University, Columbus, Ohio: Twenty-three specimens of *Bittacus* and 70 specimens of *Odonata*, representing 25 species (34264); fly (34505).
- HITCHCOCK, A. S., Agricultural College, Manhattan, Kans.: Thirteen hundred plants. Exchange. 34379.
- HITCHCOCK, C. H., Hanover, N. H.: Phosphate rocks from Redonda and volcanic ashes from the Hawaiian Islands. Exchange. 33937.
- HITT, J. E., Augusta, Ga.: Wheelbug (*Prionidus cristatus* Linnaeus). 33924.

- HODGE, F. W., Bureau of Ethnology, Washington, D. C.: Mexican notice of church services. 34134. (See under Anthropological Society of Washington, D. C.)
- HOGAN, GEORGE, Ennis, Tex., received through Department of Agriculture: Specimen of *Pentstemon murrawicus* from Texas. 34999.
- HOLM, THEO., Brookland, D. C.: Plant from Colorado. 34233.
- HOLMAN, C. H., Willard, Ill.: Beetle (*Plectodera sculator* Fab.). 33876.
- HOLMES, F. H., Berryessa, Cal.: Five skins of California vultures. Purchase. 34469.
- HOLMES, Prof. J. A., Chapelhill, N. C.: Twenty-six specimens, representing 9 species, of Cretaceous invertebrates from Wilmington, N. C. 34958.
- HOLMES, Prof. W. H. (See under Smithsonian Institution, Bureau of Ethnology.)
- HOLWAY, E. W. D., Decorah, Iowa: Type specimen of *Sida holwayi* Rose. 34683.
- HOLZINGER, J. M., Winona, Minn.: Forty-five plants from northwestern Montana. Exchange. 34760.
- HORNUNG, Dr. J., San Francisco, Cal.: Fifty-nine birds' skins from the western United States (exchange) (33890); 67 birds' skins from California (gift) (34258); 24 birds' skins from California (exchange) (34524).
- HOUGH, Dr. G. DeN., New Bedford, Mass.: Forty-five specimens of Diptera. 34536.
- HOUGH, Dr. WALTER, U. S. National Museum: Eight lanterns and lamps purchased for the Museum. 34034. (See under A. V. Boughner; William Boughner; Hon. J. Marshall Hagans; Mrs. Dorcas Haymond; Mayer Pottery Company; Miss Jennie Thompson.)
- HOUSE, H. D., Oneida, N. Y.: Plant. Exchange. 35234.
- HOWARD, E. E., Edgar, Nebr.: Specimen of *Mus musculus*. 35123.
- HOWARD, Dr. L. O. (See under Prof. Lawrence Bruner; T. R. Hays; G. W. Kirkaldy; Prof. E. L. Rice; F. W. Ulrich.)
- HOWARD, O. W., Los Angeles, Cal.: Egg of Olivaceous Flycatcher, *Mniarchus lawrencei olivaceus*, from Virginia. 34324.
- HOWELL, ARTHUR, Washington, D. C.: Plant from Alexandria. 34139.
- HOWELL, E. E., Washington, D. C.: Specimen of opal in the matrix from Barcoo River, Queensland, Australia (purchase) (34042); meteoric iron from Mount Joy Township, Adams County, Pa. (gift) (34317).
- HUDSON, Dr. A. S., Stockton, Cal.: Specimen in alcohol of *Heterakis perspicillum* (Rudolphi, 1803), taken from a fresh egg. 34996.
- HUDSON, J. W. (See under Smithsonian Institution, Bureau of Ethnology.)
- HUGHES, EDWARD. (See under Smithsonian Institution, Bureau of Ethnology.)
- HULBERT, Prof. H. E., Mount Vernon, N. Y.: Suit of armor worn by a Korean general in 1592. Purchase. 35228.
- HUMPHREY, CHARLES, Mount Catharine mine, Yerilla, West Australia: Twenty-eight specimens of Australian insects. 35006.
- HUNT, Mrs. E. G., Providence, R. I.: Scale insects infesting the English hawthorn. 33989.
- HUSTED, J. D., New York City: Onyx marble from Colorado. 34939.
- HYDE, L. H., Joliet, Ill.: Two hundred and eighty-seven specimens of Niagara fossils from the Chicago Drainage Canal. 33957.
- IHERING, Dr. H. von, Museu Paulista, Sao Paulo, Brazil: Collection of Tertiary fossils from Patagonia and Parana (33883); 15 species of shells from Argentina and Patagonia (34143).
- ILLINOIS BOTANICAL STATION, Urbana, Ill., received through Dr. C. A. Kofoid: Microscopic slide of type specimens of *Pleodorina illinoensis* belonging to the family *Volvocineae*. 34003.
- INGERSOLL, Mrs. M. W., Point Pleasant, N. J.: Six specimens of Schizoneurine. 33858.
- INTERIOR DEPARTMENT, Hon. Ethan A. Hitchcock, Secretary: Received through Prof. F. W. Clarke: Chipewa canoe. 34567.

INTERIOR DEPARTMENT—Continued.

United States Geological Survey, Mr. Charles D. Walcott, Director: Chipped and partly polished hatchet, arrow, and spearheads, etc., from Scioto County, collected by Wilbur Stout (33799); rocks illustrating the Pre-Cambrian geology of the Lake Superior region, obtained by Prof. C. Van Hise (33815); 599 specimens of elastic rocks illustrating the structure, petrography, and economic geology of the slate belt of eastern New York, western Vermont, and adjacent territory, collected by Prof. T. Nelson Dale (33820); collection of fossil vertebrates obtained by N. H. Darton (33823); collection of vertebrate fossils (returned from the estate of Prof. E. D. Cope) (33828); 1,150 specimens of Ordovician, Silurian, and Carboniferous fossils from Oklahoma Territory, collected by J. A. Taff (33840); 60 specimens of Devonian fossils from eastern Kentucky, collected by M. R. Campbell (33841); specimens showing contact of granite and gneiss from Stoll's quarry, Groton, Conn. (33860); 6 specimens of Tertiary fossils (33952); chrome ore and corundum in hornblende transmitted by A. E. Heighway (33977); specimen of *Platycrinus* and a specimen of *Poteroicrinus* from near Livingston, Mont. (34299); collection of rocks, concretions, etc., from Colorado, and fossils from Niagara County, N. Y., collected by G. K. Gilbert (34343); through O. C. Marsh, collection of fossil vertebrates (34346); fossiliferous silt from under gravel, from White River Valley, Northwest Territory, British Columbia, collected July 1, 1898, by the Peters-Brooks party of the Survey (34361); 2 specimens of sandstone containing markings of aborigines (34443); 3,990 specimens of Cambrian brachiopods (34481); fossil fish (34488); 18 specimens of Permian fossils from the Black Hills of South Dakota (34499); 13 specimens of either Devonian or Carboniferous fossils from the Tanana Basin, Alaska (34507); specimen of melanterite from

INTERIOR DEPARTMENT—Continued.

United States Geological Survey—Cont'd. Hayward, S. Dak., collected by N. H. Darton (34518); 2 specimens of priceite coated with aragonite and one specimen of priceite from Lone Ranch, Curry County, Oreg. (34519); 450 specimens of Chemung fossils collected by Dr. G. H. Girty in 1894 in the eastern portion of the Buckhannon quadrangle (34532); 99 specimens of minerals from various localities (34544) (0); specimens of jointed sandstones and calc tufa from Black Hills, S. Dak. (34546); 33 specimens of Devonian fossils from the Upper Kuskokwim River, Alaska (34547); 47 specimens of Upper Cretaceous Ammonites, Scaphites, Inoceramus, and other fossils from near Fairburn, S. Dak.; 9 specimens of Ammonites, Nautilus, Scaphites, and other fossils from the mouth of Elk Creek, Cheyenne River, collected by N. H. Darton (34559); 400 plants from California collected by J. B. Leiberger (34560); large collection of Carboniferous plant remains obtained by J. A. Taff and an assistant of the Geological Survey in the McAlester (Ind. T.) coal field (34565); 95 specimens of fossil invertebrates from eastern Tennessee, collected by Cooper Curtice; 75 specimens of Medina, Clinton, and Niagara fossils (34576); specimen of roscelite with native gold obtained by W. Lindgren from Stocklages Mine, El Dorado County, Cal. (34592); 70 specimens of Oriskany fossils from Cumberland, Md. (34604); 3 bowlders collected by G. K. Gilbert in Wilson, N. Y. (34612); about 10 species of fossil corals from 4 miles west of Lares, Porto Rico (34668); fossils collected by N. H. Darton in the White River beds southeast of Oelrich, S. Dak. (34672); rocks and ores from Tintic, Utah, collected in 1897 by George W. Tower and G. O. Smith (34708); sand in form of stalactites from a black sand mine in Cook County, Oreg., collected by J. S. Diller (34744); 3 species of land shells from McAlester, Ind. T. (34775);

INTERIOR DEPARTMENT—Continued.

United States Geological Survey—Cont'd.

black sand from the Pacific Ocean Beach, at the mouth of Pistol River, Oreg. (34797); specimen of albertite collected by David T. Day in Nova Scotia (34802); 130 specimens of Lower Silurian fossils, 63 specimens of Upper Silurian fossils, and 5 specimens of Devonian fossils collected by M. R. Campbell (34822); sand from Burnett and Johnson's Mine, Gilbert Creek, Smith River, Del Norte County, Cal., collected by David T. Day (34847); tooth of a mastodon (34867); rocks from Coon Butte and San Francisco Mountain, Arizona, collected by G. K. Gilbert (34891); sample of beach sand containing gold and platinum from Crescent City, Cal. (34920); 10 specimens of fish remains from Silver Peak Range, Esmeralda County, Nev. (34986); 3 skulls, 3 geological specimens from White Mountain, New Mexico; 5 small specimens of zonoehrolite from the northern shore of Lake Superior, and a geological specimen from Galena, Ill., collected by F. X. Shulak (34971); specimens of asphaltic mineral from the southern part of the McAlester quadrangle, Choctaw Nation, Ind. T., collected by J. A. Taff (35018); a series of 158 specimens of Lower Cretaceous Gryphæas (35059); 75 specimens of fossils from the Cincinnati group of central Kentucky; 69 specimens of fossils from the Upper Carboniferous of Shasta County, Cal. (35064); 4 fossil plants from the coal measures of Sciotoville, Ohio (35079); 3 specimens of garnets collected by C. W. Cross in Ophir Loop, Telluride Quadrangle, Colo. (35084). (See under M. R. Campbell, Cooper Curtice, T. Nelson Dale, N. H. Darton, David T. Day, J. S. Diller, G. K. Gilbert, G. H. Girty, A. E. Heighway, J. B. Leiberger, Ig. Lucas, G. O. Smith, Wilbur Stout, G. W. Tower, J. A. Taff, J. A. Udden.)

IOWA, STATE UNIVERSITY OF, Iowa City, Iowa, received through Prof. C. C.

IOWA, STATE UNIVERSITY OF—Continued.

- Nutting: Five species of crabs. Exchange. 34407.
- JACKSON, Miss VICTORIA, Bowling Green, Ky.: Sixty specimens, representing 7 species of land and fresh-water mollusks (33899); 8 species of shells (34647).
- JACOBS, W. H., Lonaconing, Md.: Peacock. 34723.
- JACOBSON, C. A., Northfield, Minn.: Compacted mycelium of a wood-inhabiting fungus. 35030.
- JAMES, G. WHARTON, Pasadena, Cal.: Photograph of baskets made by the Cahuilla Indians, and photograph of a Navajo blanket weaver. 35168.
- JARBOE, Miss LEONORA, Baltimore, Md.: Cane used by Capt. James Jarboe, a soldier of the war of 1812; original letter written by Captain Jarboe, dated September 15, 1814. 34038.
- JELlicORSE, R., Carthage, Tenn.: Seven pottery bowls. 33946.
- JENNINGS, J. H., Henderson, Tenn.: Three specimens of Myrmeleonids. 33857.
- JENSEN, A. S., Universitetets Museum, Copenhagen, Denmark: Six specimens of *Montacuta molleri* (Holböll) Mörch, from Greenland. 34846.
- JERMY, JULIUS, San Antonio, Tex.: One thousand plants (34516); 325 plants from Hungary (34945). Purchase.
- JOHANSEN, O. A., Chicago, Ill.: Small collection of Acrididae. 34607.
- JOHNSON, A. J., Cheteo, Oreg., received through Department of Agriculture: Seven plants from Oregon. 34964.
- JOHNSON, A. R., Whitesboro, N. Y.: Clasp knife, flint, 2 pieces of a military buckle, 2 buttons probably of British manufacture, picked up on the battlefield of Crown Point. 33763.
- JOHNSON, Hon. BENJAMIN. (See under State, Department of.)
- JOHNSON, C. F., Freeport, Ill.: One hundred specimens of violets (35067); 22 plants from Illinois (35148). Exchange.
- JOHNSON, Prof. C. W., Wagner Free Institute of Science, Philadelphia, Pa.: Specimen of *Calliodes schwarzi* (34024);

- JOHNSON, Prof. C. W.—Continued.
35 specimens of Diptera (34537); specimen of *Ptyne appendiculatus* Fab. (34640); 45 specimens of Hymenoptera (34881).
- JOHNSON, Capt. M. L., U. S. N. (See under Navy Department.)
- JOHNSTON, Mrs. H. D., San Pedro, Cal.: Ten species of marine shells. 34351.
- JONES, Rev. D. (See under Smithsonian Institution, Bureau of Ethnology.)
- JONES, M. E., Salt Lake City, Utah: Plant. 33984.
- JONES, O. H. (See under G. E. H. Barrett-Hamilton.)
- JONES, R. L., Burlington, Vt.: Five specimens of violets. Exchange. 34589.
- JUDD, S. D., Biological Survey, Department of Agriculture: Amphipods from New England. 34225.
- JUDEN, Mrs. AMABEL, New Orleans, La.: Twenty specimens of Cretaceous *Erogyra* and *Anomia*, from Jamestown, Ga. 34127.
- JUNGEN, Lieut. C. W., U. S. N.: Marine telegraph cable cut by the U. S. S. *Wampatuck* June 1, 1898; marine telegraph cable cut by the same steamer on May 18, 1898; cartridge case fired from the *Wampatuck* June 30, 1898. 34075.
- JOHNSON, C. F., Freeport, Ill.: Specimens of violets. (35067, 35148.) Exchange.
- KARSHNER, H. I., Burnett, Wash.: Six Miocene nodules or concretions containing fossil crabs, from Washington. 34308.
- KATO, KAISUKA, Imperial Department of State for Agriculture and Commerce, Tokio, Japan: Specimens of twinned native quartz, native arsenic, and other deposits from Japan. 34571.
- KAVANAUGH, E. G. (See under Smithsonian Institution, Bureau of Ethnology.)
- KEARFOTT, W. D., New York City, N. Y.: Fifteen specimens of Lepidoptera; 2 larvæ, 3 of pupæ, and a Tachinid-fly with case. 35152.
- KEARNEY, T. H., jr., Washington, D. C.: Nine plants. Exchange. 33765.
- KELCHER, THOMAS, Washington, D. C.: Specimen of *Tabanus trimaculatus*. 33791.
- KELLOGG, Prof. V. L., Leland Stanford Junior University, Stanford University, Cal.: Sixty slides representing cotypes of Mallophaga. 35089.
- KELSEY, F. W., San Diego, Cal.: Shells from San Diego Harbor, California. 34142.
- KENGLA, L. A., San Francisco, Cal.: Collection of sea algae from Pigeon Point, San Mateo County, Cal. 34684.
- KENNER, B., Utah: Fossil bones of a turtle. 35174.
- KENT SCIENTIFIC INSTITUTE, Grand Rapids, Mich., received through L. S. Livingston: Thirty-two specimens of South American Lepidoptera. 34405.
- KENTUCKY FIRE BRICK COMPANY, Portsmouth, Ohio: Fire clay. 34226.
- KERBEY, J. O., Cocanut Grove, Fla.: Plant. 34586.
- KERR BROTHERS, Wrightsville, Pa.: Limestone used for making quicklime. 34159.
- KEW, ENGLAND, ROYAL BOTANIC GARDENS, received through Dr. W. T. Thiselton-Dyer, director: Plants. 34651.
- KILMER, F. B., New Brunswick, N. J.: Six plants. 35069.
- KIMBLE, G. W., Placerville, Cal., received through H. W. Turner: Seven specimens of roscoelite from Stocklages mine, Eldorado County, Cal. 34593.
- KINGSTON, JAMAICA: Public Gardens and Plantations, Botanical Department: One hundred and twelve plants from Jamaica. Exchange. 34137.
- KIRKALDY, G. W., Wimbledon, Surrey, England, received through Dr. L. O. Howard: Ten species of exotic Hemiptera. 34993.
- KIZER, Dr. D. T., Chillicothe, Mo.: Fresh-water shells from Missouri and Kansas. 33904.
- KNIGHT, W. C., Laramie, Wyo.: Eight species of fresh-water shells. 35043.
- KNOWLES, TAYLOR & KNOWLES COMPANY, East Liverpool, Ohio: Eleven pieces of pottery. 34492.
- KNOWLTON, F. H., U. S. Geological Survey: Specimen of *Linnæa borealis* from Washington, D. C. (34111); 500 plants (34253); 5 specimens of *Mus musculus* (34455); white jasper scraper blade

- KNOWLTON, F. H.—Continued.
from Carbonado, State of Washington (34491); plant from the District of Columbia (34679).
- KOBER, Dr. G. M., Washington, D. C.: Headdress made of an otter skin obtained from the Bannock Indians of North Idaho, and a basket obtained from the Piute Indians of Southern Utah. Exchange. 34548.
- KOENIG, ADOLF, Pittsburg, Pa.: Twenty-three plants. 35182. (See under Agriculture, Department of.)
- KOFOID, Dr. C. A.: (See under Illinois Botanical Station.)
- KOONS, B. F., Storrs, Conn.: Three pieces of brick clay in curious forms. 33910.
- KRANTZ, Dr. F., Bonn, Germany: Cast of an Archaeopteryx. Purchase. 34344. "O."
- KREITE, R., Kansas City, Mo.: Twelve Upper Carboniferous crinoids. Purchase. 34109.
- KUNZ, G. F., New York City: Specimen of prosopite from Dugnay district, Utah; prosopite from near Park City, Summit County, Utah, and awarnite from the western coast of South Island, New Zealand. 34591.
- LACKLAND, SAMUEL, Bowie, La.: Two spiders (33893), specimen of *Argyropeira hortorum* Hentz (34266).
- LACOE, R. D., Pittston, Pa.: Two specimens of *Belinurus lacoei* and 2 specimens of *Euproöps danae* from Mazou Creek, Illinois (34541); 26 boxes containing Carboniferous plants from the vicinity of Morris, Ill. (35093).
- LAIDECCKER, N. E., Greencastle, Ind.: Cuban cockade. (See under Porto Rico collection 35201.)
- LAMA, R. W., Norfolk, Va.: Mauser clip recovered from the wreck of the Spanish ship *Reina Mercedes*. (See under Norfolk collection 35187.)
- LAMPREY, J. P., Kensington, N. H.: Plow made by Henry Lamprey in 1732. 34769.
- LAMSON, C. H., Portland, Me.: Lilienthal air-sailer. 34952.
- LANG, J. G., New Market, Tenn.: Zinc ore. 34311.
- LANGDALE, J. W., Washington, D. C.: Specimen of mesolite from Ireland (gift) (34556); rutile and actinolite in quartz (exchange) (34940).
- L'ANGLAISE, Rev. L. H., Paineourtville, La.: Larva of an insect. 33881.
- LAURAUZI, Capt. J. LIO M., Coamo, P. R.: Shrapnell shell. (See under Porto Rico collection 35201.)
- LEARY, Capt. R. P., U. S. N.: Piece of a settee from the cabin of the *San Francisco*; knife made from the armor shot of the ship; cartridge case belonging to a Hotchkiss rapid-firing machine gun (33994); ceiling fixture of an electric lamp in the cabin of the *San Francisco*, wrecked by a shell fired from Morro Castle; 2 cartridge cases from the *San Francisco* (34121).
- LEE, H. A., Denver, Colo.: Cast of a silver nugget from Mollie Gibson Mine (purchase) (34803); photograph of a nugget of native silver from Smuggler Mine, Aspen, Colo. (gift) (35060).
- LEECH, J. F., Washington, D. C.: Specimen of *Cyrtia tenuiola* Hentz. 35199.
- LEHMAN, W. V., Tremont, Pa.: Twelve specimens of Carboniferous fossil plants from the southern anthracite field, Schuylkill County, Pa. 34642.
- LEIBERG, J. B. (See under Interior Department, U. S. Geological Survey.)
- LEIDEN, HOLLAND: Rijks Ethnographisch Museum, received through Dr. L. Serurier, director: Collection of ethnological objects from the East Indies. Exchange. 33997.
- LEMON, Dr. J. H., New Albany, Ind.: Plaster cast of stone carvings; metal cast of stone carvings (34503); fluted brick from a mound in Washington County, Miss. (34618).
- LEON, P. M. DE, U. S. Consul-General, Guayaquil, Ecuador, received through Alexandro Santos, Consul-General of Bolivia, New York City: Stuffed snake. 33761.
- LESLIE COPPER MINING COMPANY, received through Wesley Everett, Wallace, Idaho: Specimen of hematite iron ore from Montana. 35235.
- LESUEUR, ALEX., San Juan, P. R.: Dutch copper coin. (See under Porto Rico Collection 35201.)

- LEUTZE, Commander E. H. C., U. S. N. (See under Navy Department.)
- LINCOLN, H. D., Cottage Grove, Oreg.: Larval form of a female Lampyrid representing the genus *Zarhipis*. 33877.
- LINDGREN, W. (See under Interior Department, U. S. Geological Survey.)
- LINDSAY, Mrs. WILLIAM. (See under National Society of the Daughters of the American Revolution.)
- LINNEMEYER, D. F., Brooklyn, N. Y.: Blue-checked homer pigeon with four legs. 33871.
- LISACK, Major, U. S. V., Jewell, Ind.: Mauser clip. (See under Porto Rico Collection. 35201.)
- LISLE, Dr. J. D., Philadelphia, Pa., received through T. W. Stanton: Cast of a gold nugget from Reid Mine, North Carolina. 34479.
- LITTLEBRANT, Lieut. W. T., U. S. A., Fort Bayard, N. Mex.: Four photographs of a cliff dwelling on Gila River, N. Mex. 33845.
- LIVINGSTON, L. S. (See under Kent Scientific Institute.)
- LOYD, D. P. & Co., Fostoria, Ohio: Limestone used for making quicklime. 34278.
- LOYD, H. W., Charleston, S. C.: Tineid case bearer. 33758.
- LONDON, ENGLAND: British Museum (Natural History), South Kensington: One hundred and ninety specimens, representing 63 species, of fossil corals, principally Post-Paleozoic, from England (34510); received through George Murray, 1,049 plants, consisting of Set No. 4 of F. Ruge's Florida plants, collected in 1842-1849 (34771); received through Dr. Henry Woodward, 3 casts of skulls (34839); Exchange.
- LONG, M. E. (See under Museum Public Library, Kansas City.)
- LOOMIS, Rev. H., Yokohama, Japan: Twenty-two specimens, representing 22 species of marine, fresh water, and land shells from Japan (33908); shells and barnacles (34179); land and marine shells from Japan (34610); collection of Japanese Lepidoptera (34873).
- LOPEZ, E. MARTINES, Bayamon, P. I.: Cartridge box, belt, and buckle. (See under Porto Rico Collection 35201.)
- LORING, J. ALDEN, London, England: One hundred and seventy-eight mammals and a bird skin from Upsala, Sweden (34073); 230 mammals from Braunschweig, Germany (34155); 451 European mammals and 3 birds' skins (34422). These specimens were purchased by Mr. Loring from a special allotment furnished by the National Museum.
- LOVELL, J. H., Waldoboro, Me.: Twenty-five specimens of aculeate Hymenoptera. 34688.
- LOVETT, EDWARD, Croydon, England: Eight specimens of tallies and lighting apparatus. Exchange. 34368.
- LOWE, H. N., Long Beach, Cal.: Nine specimens of shells, representing 4 species (33854); 7 species of marine shells from California (34186); 7 species of marine shells (34709).
- LUCAS, IG., Passaic, N. J., through the Interior Department, U. S. Geological Survey: Four specimens of fossil corals. 34245.
- LUCAS, F. A., U. S. National Museum: Skull of a crocodile. 34125.
- LUDLOW, Capt. Nicoll, U. S. N. (See under Navy Department.)
- LUKENTY, N. B., Portland, Oreg., received through Department of Agriculture: Plant. 34621.
- LYON, M. W., Jr., U. S. National Museum: Thirty-seven mammals and 2 birds from Washington, D. C. (34435); 2 frogs from Virginia (35103); toad from Bay Ridge, Md. (35142).
- MCCANN, J. J., Punta Gorda, Fla.: Io moth, *Saturnia io*. 34230.
- MCCOMB, G. T., Lockport, N. Y.: Two specimens of Niagara fossils. 34072.
- MCCARTHY, J. B., Washington, D. C.: Geological material from Italy (33842); specimens of asbestos and sulphur from Italy and hematite from England (34241). Collected by F. W. Crosby.
- MCCLENDEN, Dr. E. F., Trinity, Tex.: Drinking horn, Krag shells, and the fragment of a shell. (See under Porto Rico collection, 35201.)
- MCCREERY, J. H., Oceanport, N. J.: Pounding bowl more than 150 years old. 34899.

- McDOUGAL, D. T., Minneapolis, Minn.: Three hundred and ninety-five plants from Arizona. Purchase. 34401.
- McELFRESH, F. M., Illinois Biological Station, Urbana, Ill.: Eggs of Katydid, representing the species *Antigaster mirabilis* Walsh, with parasites. 34396.
- McFADDEN, J. E., Sterling, N. Y.: Sphinx moth. 33767.
- McFARLAND, DANIEL, Los Angeles, Cal.: Four specimens of *Conorhinus protractus*. 33915.
- McGILLIVRAY, Prof. ALEX., Ithaca, N. Y.: Two species of Cynipids (*Philonix fulvicollis* Fitch and *Philonix nigricollis* Fitch). 34579.
- McGREGOR, R. C., Palo Alto, Cal.: One hundred and sixteen birds' skins (gift) (33866); 34 birds' skins (deposit) (35085).
- McGUIRE, F. B., Washington, D. C.: Pottery vase from Peru, South America. 34894.
- McKANN, Mr. (no address given): Coal, petroleum, and other deposits. 34658. (O.)
- McKINLEY, Hon. WILLIAM, President of the United States: A copy of a memorial, transmitted to the President of the United States by Emperor William of Germany, commemorative of the consecration on October 31, 1898, of the Church of the Savior in Jerusalem. 34935.
- McKNIGHT, A. J., San Francisco, Cal.: Specimen of *Sirex arcولاتus* Cresson. 34183.
- McMAHAL, J. E., Diamond, Ariz.: Two specimens of Cottonwood Beetle, *Lina scripte* Fab. 35074.
- McNUTT, FRANCES, Rockbridge Baths, Va.: Five specimens of *Thyriopteryx ephemeraformis* Hall. 33964.
- MACOUN, J. M., Geological Survey, Ottawa, Canada: Ninety-eight plants from Canada (34673); 22 plants from Pribilof Islands (34770). Exchange.
- MAGINNIS, Judge W. L., Ogden, Utah: Specimen of mica from Latah County, Idaho. 35076.
- MAGRANE, R. W., New York City: Remington (Spanish) rifle captured at the surrender of Ponce de Porto Rico; also 12 Remington cartridges. Deposit. 34102.
- MAGRAW, A. R., Washington, D. C.: Specimen of Upper Devonian sandstone containing casts of shells, from Bay Ridge, Va. 34458.
- MAHOOD, F. W., Washington, D. C.: Siliceous sand for glass making from near Stapleton Mills, Va. 34406.
- MANTON, H. B., Akron, Ohio: Kaolite slip used as a glaze in the manufacture of pottery. 35065.
- MAREAN, ———, Washington, D. C.: Two barn owls. 35196.
- MARSH, Prof. O. C., New Haven, Conn.: Nineteen polished spheres of Japanese breccia. 34643. (See under Interior Department, U. S. Geological Survey.)
- MARSHALL BRICK COMPANY, Rapid City, S. Dak.: Specimens of raw and burnt clay. 34496.
- MARSHALL, ERNEST, Laurel, Md.: Fishes and leeches. 34911. (See under George Marshall.)
- MARSHALL, GEORGE, U. S. National Museum: Maynard revolver manufactured by the Massachusetts Arms Company (34026); Pine Mouse, *Microtus pinetorum*, from Washington, D. C. (34382); specimen of *Microtus pennsylvanicus* (34736); fishes and leeches obtained in Laurel, Md., by Henry and Ernest Marshall (34911); Jumping Mouse, *Zapus hudsonius*, from Laurel (35027).
- MARSHALL, H., U. S. National Museum: Nest of a wasp. 34181. (See under George Marshall.)
- MARTIN, Prof. K., Director des Geologischen Museums, Leyden, Holland: Fossil corals representing 25 localities on the island of Curaçao. Exchange. 34194.
- MASON, GEORGE E., London, England: Eleven frogs from England. Exchange. 35238.
- MASON, MRS. LUCY ORD, Washington, D. C.: Sword of Lieut. J. Garesché Ord, Sixth United States Infantry, killed at the battle of San Juan Hill, Santiago de Cuba, July 1, 1898. Deposit. 34126.
- MAXON, Mrs. S. A., Oneida, N. Y.: One hundred plants (35052); 150 plants from New York (35104).

- MAXON, W. R., U. S. National Museum: Three ferns from Jamesville, N. Y. (34380); plants (34681); fern (34685); 12 plants (34954); collection of insects (35140).
- MAXSON, H. B., Reno, Nev.: Ores, marbles, and petrified wood. 34659. (O.)
- MAYER POTTERY COMPANY, Beaver Falls, Pa.: received through Dr. Walter Hough: Eight specimens of colored glassware. 34052.
- MEADOWS, E. W., Pamplin, Va.: Moth, *Cherocampus tersa* Linnæus. 34130.
- MEANS, T. H., Department of Agriculture: Specimen of fuller's earth from Quincy, Fla. 34534.
- MEARNS, DR. E. A., U. S. A.: Collections of natural history specimens and ethnological objects (33829, 33874); fishes, insects, and shells from Fort Clark, Tex. (34429); 5 beetles and 39 skulls of mammals from Lexington, Ky. (34461); birds' skins from Lexington, Ky., and plants from Chickamauga National Park, Georgia (34482); natural history specimens from Texas and Georgia (34611, 34676); mollusks from Newport, R. I. (35062).
- MEARNS, LOUIS DI ZEREGA, Fort Clark, Tex.: Fifty-six birds' skins from Texas (deposit) (33880); 3 plants from Texas (gift) (34083); skin and skull of Gray Squirrel, *Sciurus carolinensis* (deposit) (34483); 28 mammal skins and 30 mammal skulls (deposit) (34706).
- MEEK, A. K., Washington, D. C.: Twelve specimens of fungi. 34874.
- MELFORD, Miss A. I., Washington, D. C.: Three plants from New Mexico. 34145.
- MELVILLE, W. P., Sault Ste. Marie, Mich.: Four birds' skins from Angola. Exchange. 34907.
- MERCER, W. J. (See under Smithsonian Institution, Bureau of Ethnology.)
- MEREDITH, H. C. (See under Smithsonian Institution, Bureau of Ethnology.)
- MERIVALE, WALTER, Bridgeton, Barbados, West Indies: Specimen of Merivale manjak, or mineral bitumen, from Barbados, West Indies. 34897.
- MERRIAM, DR. C. HART, Department of Agriculture: Yellow Rail, *Porzana noveboracensis* Audubon. 34415.
- MERRIAM, E. D., Conneaut, Ohio: Skull of a Catfish, *Ameiurus lacustris*. 33981.
- MERRILL, E. D., Orono, Me.: received through Dr. T. H. Bean: Three specimens of Stickleback, *Gasterosteus atkinsii*. 34925.
- MERRILL, DR. G. P., U. S. National Museum: Drift boulder from Lincoln, N. H. 33832.
- METCALF, J. K., Silver City, N. Mex.: Seven plants. 34452.
- MEYERS, MAX, Sheridan, Mont.: Specimen of wad. 35108.
- MEXICAN AMOLA SOAP COMPANY, Peoria, Ill.: Collection of yucca roots. 33887.
- MICHELSEN, Hon. CHRIS., received through Capt. J. W. Collins, U. S. Fish Commission: Model of the steamship *Merrimac*, sunk by Lieutenant Hobson at Santiago. 34490.
- MIDDLETON, Mrs. J. J., Washington, D. C.: Shell representing the genus *Anomia*. 34462.
- MIGUEL, JEAN, Barroubio, Hérault, France: Seven hundred and ninety-eight specimens of European fossils from the Paleozoic, Mesozoic, and Cenozoic horizons. Exchange. 34712.
- MILLER, A. W., Portland, Oreg.: Ores, building stones, ochers, and petrified wood. 34654. (O.)
- MILLER, B. D., Peterboro, N. Y.: Specimen of albinistic Red Squirrel, *Sciurus hudsonicus*, from Peterboro, N. Y. 35160.
- MILLER, C. L. (See under Smithsonian Institution, Bureau of Ethnology.)
- MILLER, E. E., Canton, Ohio: Plant. 34116.
- MILLER, GERRIT S., jr., U. S. National Museum: Plant (33742); 14 plants from the District of Columbia (33913); spiders (33923); skin of *Coccyzus bairdi* from Jamaica (33931); small collection of fishes from North Truro, Mass., and from the Shenandoah River (33974); snake from Maryland (33985); 2 plants from Maryland (34085); 2 specimens of bats (*Pipistullus subflavus* and *Lasiurus borealis*) (34095); 2 specimens of *Mus musculus* and a specimen of *Scalops aquaticus* from Forest Glen, Md. (34189); 11 mammals (34290); snake from Maryland (34538); specimen of Night Hawk,

- MILLER, GERRIT S., jr.—Continued.
Chordeiles virginianus (35056); mole (*Scalopus aquaticus*) and Flying Squirrel, *Sciuropterus volucella* (35092).
- MILLER, DR. J., U. S. National Museum: Spider (*Epeira domiciliana* Hentz). 34553.
- MILLS, Gen. Anson, U. S. Army: Tent made from buffalo skin. Loan. 34880.
- MILLS, R. A., Orlando, Fla.: Hammerstone from Mammoth Cave, Kentucky. 34895.
- MILLS, R. P., St. Petersburg, Fla.: Crab-spider, *Gasteracantha cancer* Hentz. 34506.
- MINNESOTA, GEOLOGICAL SURVEY OF, Minneapolis, Minn., received through Prof. W. H. Winchell: Sixty specimens of Lower Helderberg fossils from New York. Exchange. 35096.
- MINNESOTA, UNIVERSITY OF, Minneapolis, Minn.: One hundred and thirteen plants. Exchange. 35022.
- MIRICK, MISS NELLIE, Oneida, N. Y.: Twenty plants. Exchange. 35233.
- MITCHELL, DR. C. T., Canandaigua, N. Y.: Three specimens of mollusks representing the genus *Goniobasis*. 34962.
- MITCHELL, G. E., Washington, D. C.: Four specimens of *Carpodectes nitidus* from Nicaragua. 34202.
- MITCHELL, Hon. J. D., Victoria, Tex.: Specimen of *Callinectes sapidus* from near Dupuy Lake, Texas (34017); 2 species of fresh-water shells from Texas (34392); 6 specimens of *Callinectes sapidus* with parasites from Old Indianola, Tex. (34729); 8 species of marine shells (34735); marine and land shells from Texas (34833); 20 crabs (13 with parasites) from Texas (34871).
- MOAK, C. C., Corning, Iowa: Brass pipe-hatchet. Purchase. 34641.
- MOIR, DR. CHARLES, Mobile, Ala.: Specimen of *Viola carolina* Greene (exchange) (34449); plant from Lookout Mountain, Mentone, Tenn. (gift) (34529); 7 plants (exchange) (34623).
- MONTEITH, MISS CLARA, New Orleans, La.: Caterpillar of *Empretia stimulea* Clemens. 34010.
- MONTREAL RIVER IRON MINING COMPANY, Hurley, Wis.: Iron ore. 34173.
- MOON, E. P., Palmer, Colo., received through Isaac Winston: Specimen of sandstone. 33884.
- MOORE, B. B., Washington, D. C.: Flying Squirrel, *Sciuropterus volucella*. 35161.
- MOORE, C. B., Philadelphia, Pa.: Six counterfeit ceremonial crooks. 33824.
- MOORE, DR. H. D., New Lexington, Pa.: Specimen of *Clintonia umbellata*. 35146.
- MOORE, J. E., Seattle, Wash.: Specimen of molybdenum. 33846.
- MOORHEAD, JAMES, Pecos High Bridge (Lozier post-office), Tex.: Five plants. 34161.
- MOOREHEAD, WARREN K. (See under Thomas Wilson.)
- MORELIA, MEXICO, MUSEO MICHOACANO, received through Dr. Manuel Martinez Solórzano: Seven birds' skins and 90 specimens of insects from Mexico. Exchange. 34305.
- MORGAN, DR. E. L., Washington, D. C.: Specimens of Flying Squirrel, *Sciuropterus volucella* (34280, 34644).
- MORRIS, G. F. (See under Smithsonian Institution, Bureau of Ethnology.)
- MORRISON, E. H. (See under Walker Electric Company.)
- MORTON, Mrs. A. E., Olney, Colo.: Specimen of Mantis, *Stagmomantis carolina* Linnaeus; 2 tarantulas, and a specimen of Holbrook's Lizard, *Holbrookia maculata*. 34129.
- MOSS, WILLIAM, Ashton-under-Lyne, England: Shells from Lifu, Loyalty Islands, Oceania (34887); 3,000 specimens of minute marine and land shells from the same locality (35113).
- MULFORD, Miss A. I., Washington, D. C.: Three plants from New Mexico. 34145.
- MUNIZ, DR. M. A. (See under Smithsonian Institution, Bureau of Ethnology.)
- MURDAUGH, Mrs. H. I., Luray, S. C.: Crab Spider, *Gasteracantha cancer* Hentz. 34100.
- MURFELDT, Miss MARY, Kirkwood, Mo.: Fourteen specimens of insects. 35007.
- MURRAY, GEORGE. (See under London, England, British Museum.)
- MUSÉE D'HISTOIRE NATURELLE. (See under Paris, France.)

MUSEO MICHUACANO. (See under Morelia, Mexico.)

MUSEUM OF COMPARATIVE ZOOLOGY, Cambridge, Mass. Received through Dr. C. R. Eastman: Cast of an egg of a fossil ostrich (*Struthiolithus chersonensis*); teeth of fossil fishes (Ceratodonts) (gift) (33755). Received through Dr. Walter Faxon: 77 specimens of decapod crustaceans, representing 21 species (exchange) (34156); 90 specimens, representing 26 species of crabs (exchange) (34789).

MUSEUM PUBLIC LIBRARY, Kansas City, Mo., received through M. C. Long: Electrotypes of the Washington Peace Medal, bearing date 1793. 34980.

MUSEUM SENCKENBERGLANUM. (See under Frankfurt-am-Main.)

NASH, C. W., Toronto, Canada, received through Dr. A. K. Fisher: Snake (*Storeria dekayi*) from Toronto. 34284.

NATIONAL SOCIETY OF THE COLONIAL DAMES OF AMERICA, Miss Elizabeth Bird Nicholas, Treasurer-General. Received through Mrs. William Henry Browne and Gen. Joseph Wheeler, chair used by William Henry Harrison, President of the United States; coat worn by Lord Fairfax of Greenway Court, Va.; bellows owned by Elizabeth Bradford; silver candlestick owned by the Delancey family; silver spoon owned by the Cooper family; silver teaspoon owned by Elizabeth Langdon; silver salt-cellar without the glass, 1745; 2 silver spoons owned by William Byrd; china tea caddy owned by Robert Carter; silver tablespoon, 1745, owned by William Byrd, and a soup plate also owned by William Byrd (34972). Received through Mrs. William Henry Browne, hand embroidery on home-made linen woven by Mrs. L. W. Knowlton; pastel portrait, on vellum, of Hon. Oliver Wolcott, Paris, 1783 (35040). Received through Mrs. Lucy Carter Trent, in behalf of the Richmond branch of the society, collection of historical relics consisting of letter, glassware, silverware, etc. (35082). Received through Mrs. Charles Washington Coleman, autograph letters and papers of 13 signers of the

NATIONAL SOCIETY OF THE COLONIAL DAMES OF AMERICA—Continued.

Declaration of Independence (35087). Received through Mrs. Elizabeth Byrd Nicholas, collection of historical relics (35162).

NATIONAL SOCIETY OF THE DAUGHTERS OF THE AMERICAN REVOLUTION. Received through Mrs. William Lindsay: Piece of the British ship *Somerset*; 3 letters from daughters of Revolutionary soldiers; order for payment of money to General Lafayette; 3 dinner plates, a frame and photograph (33792); coat worn by Charles Carroll, of Carrollton, on the occasion of his signing the Declaration of Independence (34307); buff silk embroidered waistcoat worn by Copeland Parker, a descendant of the Earls of Macclesfield, surveyor and inspector of the customs of the port of Norfolk, Va., by appointment of President George Washington; wood from home of John Hancock, Boston, Mass., built in 1737 and destroyed in 1863; letters, viz, from Anna Morse, Emily Allen, A. I. H. Dyer, and members of Old South Chapter, Boston, daughters of soldiers of the war of the Revolution (34613); snuffbox used in the Jones family, silver loving cup of Captain Parker, 2 cut-glass wine glasses brought from England in 1750; colonial miniature gilt portrait frame, pewter tankard brought from England in 1639, a pair of epaulettes owned by Gen. Weir Smallwood, Revolutionary War, pewter candlestick brought from England in 1750, colonial lantern brought from England in 1750, oil portrait of Susan Coates Jones (34731); 2 engravings, small gilded shield, block of wood with 2 bullets embedded, found on Cowpens battlefield, plate, cup, and saucer (34743); collection of historical relics (34851); blue and white china platter with strainer (35137).

NATIONAL GEOGRAPHICAL SOCIETY, Washington, D. C.: Harpoon head, taken from a whale in Bering Sea. Deposit. 34838.

NAVY DEPARTMENT, Hon. John D. Long, Secretary: Received from Admiral George Dewey, 2 brass trophy guns

NAVY DEPARTMENT—Continued.

- captured from the Spanish arsenal at Cavite, P. I., on May 1, 1898 (34752). Received through Bureau of Ordnance, from the battleship *Maine*, arms and munitions, also sample of powder obtained from the wreck of the *Maine* (33948). Received through Capt. Nicoll Ludlow, U. S. S. *Massachusetts*, electric fan used for driving smoke from the bores of heavy guns, piece of a Spanish shell (34192), soup tureen with cover and 2 vegetable dishes with covers presented to the *Maine* by the citizens of the State of Maine in 1895, also a silver loving cup presented to the ship by natives of the State of Maine residing in New Orleans March 10, 1897 (34345). Received from Capt. M. L. Johnson, commanding United States Navy-Yard, Boston, Mass., binnacle and compass from the captured Spanish gunboat *Saudoral* (34423); received through Hon. Charles H. Allen, Assistant Secretary of the Navy, shield, crown, and scrolls comprising the stern ornament of the *Christobal Colon* (34521). Received from Commander R. B. Bradford, small steering binnacle and compass from the conning tower of the torpedo boat *Winslow* (34671). Received through Rear-Admiral Charles O'Neill, two 3-inch cartridge cases (34753). Received from Chief Naval Constructor Philip Hichborn, steering wheels of the *Maine* (34860); collection of historical relics incident to the battle of Manila, collected by Commander E. H. C. Leutze (35081). Deposit.
- NEHRING, H., Milwaukee, Wis.: Three photographs of the skull of a Humpback Whale. 33972.
- NEITZY, W. M., Washington, D. C.: Specimen of *Astroscopus y-gracum*. 34291.
- NELSON, AVON, Laramie, Wyo.: Ninety-two plants from Wyoming. Exchange. 34690.
- NELSON, CHRIS, Fort Hamilton, N. Y.: One hundred and twenty-three arrow points of flint and obsidian, pendants and ornaments of shell and turquoise, and fragments of painted pottery from

NELSON, CHRIS—Continued.

- near Fort Grant, Arizona (34930); 3 grooved stone axes and an arrow-shaft polisher from near Fort Grant (35038).
- NELSON, E. W. (See under Mrs. N. M. Brown; Smithsonian Institution, Bureau of Ethnology.)
- NEWCOMB, Capt. F. H., U. S. R. C. S., New York City: Rope bolt from the wreck of the Spanish cruiser *Viscaya*; 4-inch cartridge case from the U. S. S. *Swanee*; cartridge case of a 6-pound shot fired from the U. S. S. *Hudson* at the time of the rescue of the *Winslow*, on May 11, 1898. 33995.
- NEW ENGLAND TALC COMPANY, Stockbridge, Vt.: Talc. 34294.
- NEW MEXICO AGRICULTURAL EXPERIMENT STATION, Mesilla Park, N. Mex., received through Prof. T. D. A. Cockerell: Eighteen plants (33804); specimen of *Eremopedes scudderi* Ckll., from *viridis* Ckll. (2 topotypes) (33895); 2 specimens of *Helix mioryhssa* Dall from White Mountain, New Mexico (34170); 12 specimens of Hymenoptera, including one type specimen (34355); New Mexican Hymenoptera, Hemiptera, and other specimens (34904); specimen of *Zonites* representing a new species (35023).
- NEW YORK UNIVERSITY, University Heights, New York City, received through Dr. C. L. Bristol: Polyps and other specimens from the Bermudas. Exchange. 34478.
- NIBLACK, Lient. A. P., U. S. Navy. (See under *Winslow*, U. S. torpedo boat.)
- NICHOLAS, Miss ELIZABETH BYRD. (See under National Society of the Colonial Dames of America.)
- NORFOLK COLLECTION, obtained through Paul Beckwith: Collection of war relics from Porto Rico and Cuba. 35187. The names of persons who contributed to this collection occur alphabetically in this list.
- NORMAN, W. W., Austin, Tex., received through the Department of Agriculture: Three specimens of *Panorpa rufa* Gray, and 2 specimens of *Lipolexis rapæ* Curtis. 34728.
- NORTH RIVER GARNET COMPANY, North River, N. Y.: Garnet rock. 34369.

- NORTHWESTERN IRON COMPANY, Milwaukee, Wis.: Specimen of iron ore. 34175.
- NORTON, Miss M. L., Marine, Ill.: Specimen of Cecropia Moth, *Attacus cecropia* Linnaeus. 35127.
- NOYES, Miss C. E., U. S. National Museum: Two unsigned ten-dollar notes of the Commercial Bank of Florida (34387); 6 envelopes with historical designs used during the civil war, 1861-1865 (35229).
- NUTTING, Prof. C. C. (See under Iowa, State University of.)
- NYE, WILLARD, jr., New Bedford, Mass.: Six specimens of mantis shrimp from Acushnet River. 34705.
- NYLANDER, O., Caribou, Me.: Specimens of Margaritanas (33831); amphipods from Maine (34362); 20 specimens of Cambrian fossils from near Newport, R. I., and 4 specimens of *Monograptus clintonensis* from Aroostook County, Me. (34725).
- O'CONNOR, J. J., Washington, D. C.: Peat from near the Lakes of Killarney, County Kerry, Ireland. 34436.
- O'NEIL, Rear-Admiral CHARLES, U. S. N., Bureau of Ordnance, Navy Department: Model of the new 4.7-inch shrapnel, U. S. A. 34000.
- O'ROURKE, BERNADOU, Paterson, N. J.: Schenkl shell (patented October 10, 1861), found in Virginia about 4 miles from Dumfrie, in dividing the line between Stafford and Prince William counties. 34951.
- OFFER, WILLIAM, Miami, Fla.: Fifty-five species of shells from Florida. 35021.
- OHIO CEMENT COMPANY, Lisbon, Ohio: Cement rock. 34168.
- OLD ABE COMPANY, White Oaks, N. Mex., received through J. Y. Hewitt, and A. E. Heighway: Three specimens of gold in selenite from Old Abe mine, White Oaks, N. Mex. 34701.
- OLD DOMINION MINING COMPANY, Spokane, Wash.: Silver ore. 34247.
- OLDROYD, Mrs. T. S., Los Angeles, Cal.: Five species of marine shells from Cuba. 34649.
- OLDS, H. W., Woodside, Md.: Thirty-nine plants from Brookside, W. Va. (34084); 22 plants (34140); plant from the District of Columbia (35121).
- ORD, J. T., Monterey, Mexico: Relics of the Spanish-American war. Deposit. 34080.
- ORR, H. D., Washington, D. C.: One-pound cartridge case and a one-pound shell. (See under Porto Rico collection 35201.)
- OSBORN, Prof. HENRY. (See under Agriculture, Department of.)
- OTTAWA, CANADA: GEOLOGICAL SURVEY OF CANADA, received through Prof. J. F. Whiteaves: Twenty-four specimens of Trenton fossils from Akpatok Island, Hudson Bay. Exchange. 34989.
- OTTOLENGUI, Dr. R., New York City: Forty-five specimens of Lepidoptera. 34107.
- OWEN, W. O., Washington, D. C.: Fourteen pieces of ancient pottery, a stone slab; a portion of a shell bracelet found among the ruins at Fort Bayard, N. Mex. 34522.
- OWENS, M. J., Mathias Point, Va.: Snake (33979); 2 vertebrae of a fossil whale (34371).
- PACKARD, A. S., Providence, R. I.: Fossil, genus *Astacus*, from Idaho. 33756.
- PALME, R. G., Washington, D. C.: Seaside Sparrow from South Carolina. 34953.
- PALMER, EDWARD, Washington, D. C.: Specimens of *Bulimus* from Salteo, Mexico; crustaceans and worms from Mexico (34602); 550 plants from Mexico (purchase) (34853). (See under Smithsonian Institution, Bureau of Ethnology.)
- PALMER, Dr. T. S., Department of Agriculture: Skull of Razor-billed Auk. 33935.
- PALMER, WILLIAM, U. S. National Museum: Pine-mouse, *Microtus pictorum*, from Hampstead, Md. (33778); 17 birds' skins from the western section of the United States (33941); 14 birds' skins from various localities (34180); crabs, worms, jelly-fish, and holothurian from Smiths Island, Virginia (34486); 6 skins and skulls of mammals from Smiths Island, Virginia (34597); 2 skins of *Microtus pennsylvanicus nigrans* (34633); plant from the District of Columbia (34983); 15 bats from Maryland (35184); collection of isopods, sponges, shells, fishes, and plants from Virginia (35186).

- PAN-AMERICAN MEDICAL CONGRESS, 1896: A miscellaneous collection of medicinal plants received in response to a circular issued by the Smithsonian Institution at the request of the promoters of the meeting of the Pan-American Medical Congress held in the City of Mexico in November, 1896. 35178.
- PARKER, L. C., Saltpetre Cave, Va.: Black marble. 34609.
- PARIS, FRANCE, MUSÉE D'HISTOIRE NATURELLE. Received through Léon Vaillant. Collection of fishes in alcohol from north and central Asia, obtained by M. Chaffanjon (34363). Received through E. L. Bouvier, crustaceans, representing 80 species obtained from the dredgings of the *Travailleur* and *Talisman* (35078). Exchange.
- PARLIN, J. C., North Berwick, Me., received through Department of Agriculture: Twelve plants from Maine. 34943.
- PARMENTER, C. S. (See under Baker Institute.)
- PARRATA-DORIA, MIGUEL DE, Ponce, P. R.: Rough idol and a storm collar, leg shackles, pistol holsters, and a revolver. (See under Porto Rico collection 35201); copper ore, lead ore, auriferous quartz, graphite, and phosphate (34884).
- PARRITT, H. W., London, England: Seventeen specimens of marine invertebrates. Exchange. 35010.
- PARSONS, Dr. W. B., Missoula, Mont.: Specimen of substance, apparently a form of carbon, found on the edge of a stream in Missouri. 33944.
- PARSONS, W. D. (See under Treasury Department, U. S. Life-Saving Service.)
- PAVONA, Prof. C. F., Museum of Natural History, University of Turin, Turin, Italy: One hundred and sixty-seven specimens, representing 95 species, of fossil corals from the Italian Tertiary deposits. Exchange. 34448.
- PAYNE, E. J., Olympia, Wash.: Mineral from Index, Wash. 34058.
- PEABODY, Mrs. H. M., Bluff, Utah: Eighty-four specimens of Lepidoptera and Neuroptera. 34375.
- PEARSON, A. Y., Omaha, Neb.: Ostrich skin. Purchase. 34133.
- PEARY, Lieut. R. E. (See under American Museum of Natural History.)
- PECK, C. H., Albany, N. Y.: Five specimens of plants, representing the genus *Houstonia*. 34352.
- PECKHAM, Prof. G. W., Hartland, Wis.: Insect, representing the genus *Crabro* (33813); 2 wasps (33892).
- PENNSYLVANIA, UNIVERSITY OF, DEPARTMENT OF ETHNOLOGY AND PALEONTOLOGY, Philadelphia, Pa.: Skull of a fossil bison. Deposit. (Returned.) 33847.
- PERRINS, A. F., Catatunk, N. Y.: Specimen of Walking Stick, *Diapheromera fernorata* Say. 34059.
- PETERS-BROOKS PARTY. (See under Interior Department, U. S. Geological Survey.)
- PHIELPS, Miss ELLEN, Nitta Yuma, Miss.: Wings of a Seventeen-year Locust, *Cicada septendecim* Linnaeus. 34203.
- PHILADELPHIA COMMERCIAL MUSEUM, Philadelphia, Pa.: Forty specimens of violets. Exchange. 35166.
- PHILLIPS, Dr. W. A., Evanston, Ill., received through W. A. Carter, Brandon, England: Collection of flint implements from England. Exchange. 33933.
- PILSBRY, H. A., Philadelphia, Pa.: Specimens of *Somatogygus* from Alabama and *Paludestrina* from California. 34595.
- PINE, GEORGE, Aripeka, Fla.: Fifteen specimens of shells, representing 4 species (33885); 12 specimens of *Ampullaria* from the Homosassa River, Florida, representing a new species (34169).
- PIPER, C. V., Pullman, Wash.: Plant (34408); 2 specimens of Umbelliferae, collected by A. D. E. Elmer in Washington (34601); 13 moths (34923); 295 specimens of Lepidoptera, including 2 specimens of *Arctonotus lucidus*, a rare species (35049).
- PITCHER, J. E., Custer City, S. Dak.: Skull of mammal, representing the genus *Oreodon* (purchase) (34459); ores, mica, clays, and other geological specimens (gift) (34460).
- PITTIER, H. F., Director del Instituto Físico-Geográfico Nacional, San José, Costa Rica: Two hundred plants (33930, 34006); 102 plants from Central America (34686). Purchase.

- PLANK, E. N., Kansas City, Mo., received through Department of Agriculture: Three plants. 34966.
- PLASKETT, R. A., Gorda, Cal.: One hundred and sixty-seven plants from California. Purchase. 34955.
- PLECKER, W. A., Hampden, Va.: Specimens of *Lagoa opercularis* Ashd. 34070.
- PLITT, C. C., Baltimore, Md., received through Department of Agriculture: Three plants from near Baltimore. 34029.
- POLLARD, C. L., U. S. National Museum: Violet (33743); 50 plants from Maryland and the District of Columbia, and 300 plants from Florida (33835); specimens of *Vespertilio fuscus* (33836); 9 plants from Long Island (33953); 13 plants from near Boston, Mass. (33983); 26 specimens of Lepidoptera (34994).
- POLLARD, EDWARD, Washington, D. C.: Japanese dagger. Exchange. 35100.
- POPE, C. A., Trenton, N. J., received through Bureau of Ethnology: Specimens of "Inca" pottery. 35145.
- Porto Rico Collection, obtained by Paul Beckwith: Collection of Spanish war relics. A collection of natural specimens was also obtained by Mr. Beckwith in Porto Rico. 35201. The names of persons who contributed to this collection occur in alphabetical order in the accession list.
- POST, E. J., Tampa, Fla.: Nine species of shells from Florida and Honduras (34136); 5 species of marine shells from Florida (34975); 6 species of marine shells (35042).
- POSTEL, HENRY. (See under Smithsonian Institution, Bureau of Ethnology.)
- POUNDSTONE, Lieut. H. C., U. S. N., received through Lieut. J. B. Bernadou: Specimens of powder from the Spanish ships *Oquendo* and *Maria Theresa*. 34193.
- POWELL, J. B. (See under Smithsonian Institution, Bureau of Ethnology.)
- POWELL, W. F. (See under State, Department of.)
- PRATT, F. C., Department of Agriculture: Seventeen specimens of miscellaneous insects. 35154.
- PRATT, J. H., Chapel Hill, N. C.: Two specimens of wellsite from a mine near
- PRATT, J. H.—Continued.
- Buck Creek, and two specimens of anorthophyllite from near Bakersville (34666); anorthite in forrelenstone from Buck Creek (34733); kyanite and anorthite in forrelenstone (34734).
- PREBLE, E. A., Department of Agriculture: Three plants (33865); 5 specimens of *Mus musculus* (34350); 6 frogs (34956).
- PRENTISS, D. W., Jr., Washington, D. C.: Mammals, snakes and batrachians, and shells. 34012.
- PRESTON, J. W., Baxter, Iowa: Hawk from Manitoba. 35128.
- PRICE, Miss S. F., Bowling Green, Ky.: Two species of fresh-water shells (34113); plant from Warren County, Ky. (34224); species of *Goniobasis* from Kentucky (34485); 7 specimens of violets (35135). (See under J. K. Small.)
- PRINGLE, C. G., Charlotte, Vt.: Two hundred and fifty plants from Mexico (34030); type specimens of *Polygonum pringlei* (34234).
- PRITCHETT, H. S. (See under Treasury Department, U. S. Coast and Geodetic Survey.)
- PUBLIC GARDENS AND PLANTATIONS, BOTANICAL DEPARTMENT. (See under Kingston, Jamaica.)
- PURPUS, C. A., San Diego, Cal.: Plants. (35080, 35106, 35181.) Purchase.
- QUAINTANCE, A. L., and P. H. Rolfs, Lake City, Fla.: Specimens of *Coccidia americana*, representing 20 species of North American scale insects. 34377.
- RAMIREZ, Dr. JOSÉ, Instituto Medico Nacional, City of Mexico, Mexico: Thirty water-lily bulbs from Mexico. Exchange. 34562.
- RAMSAY, T. R., Dublin, Ga.: Moth (*Attacus cecropia* Linnaeus). 34933.
- RANDALL, F. A., Warren, Pa.: Specimens of *Echinocaris socialis*; 2 specimens of *Tropidocaris bicarinata*; 1 specimen of *Elymocariss siliqua*, and 7 specimens of *Lingula* from the Chemung formation, Warren, Pa. Exchange. 34480.
- RANDELMAN, Mrs. A. B., Lewis, Iowa.: Tooth of a mastodon found in Cheyenne County, Nebr. Purchase. 34442.
- RANDOLPH, P. B., Seattle, Wash.: Shells from Alaska (33889, 34398).

- RANKIN, E. W. (See under Gerard Troost, estate of.)
- RATHBUN, Miss M. J., U. S. National Museum: Collection of marine invertebrates, mullusks, fishes, millepores, and algae from Grand Manan, New Brunswick. 34048.
- READING, H. G., Franklin, Pa.: Two specimens of stone-flies, representing the species *Acroneuria arida* Hagan. 35118.
- REESE, HAMMOND & Co., Bolivar, Pa.: Sample of fire clay. 35055.
- REEVES, J. A., Joplin, Mo.: Specimen of calamine after calcite from Aurora, Mo. (34605); fire clay from St. Louis, Mo., and mineral water from Bowling Green, Mo. (34695) "O".
- REINECKE, Dr. F., Breslau, Germany: Five hundred plants from the Samoan Islands. Purchase. 34276.
- REYNOLDS, A. J., Connertsville, Ind.: Sixty specimens of quarry rejects (exchange). 33839.
- RUODS, Dr. Thomas Leidy, U. S. N., Washington, D. C.: Skull transfixed with an arrow point. 34306.
- RICE, Prof. E. L., Delaware, Ohio; received through Dr. L. O. Howard: Three specimens of amphipods. 34730.
- RICHARDS, W. A., Cheyenne, Wyo.: Ores, clays, coals, petroleum, and silicified palm trunk. 34655. "O."
- RICHARDSON, Dr. D. A., Denver, Colo.: Two plants from Washington. 34115. (Returned.)
- RICHARDSON, H., Trail, Oreg.: Sample of ocher. 34262.
- RICHMOND, C. W., U. S. National Museum: Five birds' skins from Smiths Island, Va. (34105); skeleton of Black Skimmer (34315); skin of Snowy Owl (exchange) (34626).
- RICKER, Prof. Maurice, Burlington, Iowa: Butterfly (*Agraulis vanille* L.); bumblebee (*Bombus americanorum* Fab). 34581.
- RIDENOUR, W. B., Scranton, Pa.: Specimens of *Dynastes titus* Linnaeus. 33973.
- RJKS ETHNOGRAPHISCH MUSEUM. (See under Leiden, Holland.)
- RJKSMUSEUM. (See under Stockholm, Sweden.)
- RILEY, J. H., U. S. National Museum: Specimen of *Nycticejus humeralis* from Falls Church, Va. (33879); set of eggs of Broad-winged Hawk (35011); 29 batrachians, representing the species *Plethodon cinereus* from Virginia (35109); mole (*Scalops aquaticus*), and a red squirrel (*Sciurus hudsonicus*); 2 birds' skins and 5 eggs of Henslow's Bunting (35115); 7 birds' eggs (35129); bat (*Vespertilio fuscus*) (35144); 6 birds' skins from North Carolina (exchange) (35169).
- RIZER, Mrs. H. C., Washington, D. C.: Twenty-five plants from Florida. 34830.
- ROBERTS, C. H., Paris, Ontario, Canada: Plaster cast of a bird amulet. Exchange. 34502.
- ROBERTS, W. G., Middletown, Ohio: Fossil skull of a bear. Purchase. 34866.
- ROBERTS, W. J., Harrisville, Pa.: Specimen of *Corydalis cornutus*. 33856.
- ROBINSON, Dr. B. L., Cambridge, Mass.: Three specimens of violets from Massachusetts. 34081.
- ROBINSON, S. A., Orlando, Cal.: Two teeth of *Bison latifrons* and a tooth of *Procamelus*. 33830.
- ROBINSON, W. RUSSELL, Wingina, Va.: Nest, 5 eggs, and a specimen of Migratory Shrike (*Lanius ludovicianus migrans*) (34937, 34948).
- ROEBLING'S, J. A., Sons & Co., Trenton, N. J.: Twenty-one specimens of electrical cables and wires. 34724.
- ROGERS, Maj. E. J., Michigan National Guard, Port Huron, Mich.: Copy of the first newspaper published in Santiago. as "Company F Enterprise." 33950.
- ROLFS, Prof. P. H., and A. L. Quaintance, Lake City, Fla.: Specimens of *Coccidae americanae*, representing 20 species of North American scale insects. 34377.
- ROON, VAN, G., Rotterdam, Holland: Collection of beetles from Java and South Africa. Exchange. 34381.
- ROSALSKY, W., Clackamas, Oreg., received through Department of Agriculture: Plant from Oregon. 34982.
- ROSE, J. N., U. S. National Museum: Plants (33762, 33818, 34035, 34223).
- ROSS, Hon. M. L., Knoxville, Tenn., received through R. L. Garner: Fossil tooth of a mammal. 33942.

- ROSSER, L. K., Luray, Va.: Two specimens of *Dymastes titus* Linnaeus. 34765.
- ROTHROCK, DR. THOMAS, Howard, Pa.: German fat-lamp, piece of fossil rock, and stone implements. 34974.
- ROWLES, W. W., Cornell University, Ithaca, N. Y., received through Department of Agriculture: Fifty-eight plants from the northwestern part of the United States. 35034.
- ROYAL BOTANIC GARDENS. (See under Kew, England.)
- RUFF, MRS. T. B., Laurel, Md.: Three specimens of *Mus musculus*. 34566.
- RUHL, J. W., Covington, Ohio: Limestone used for making quicklime. 34205.
- RUSCHLEWEYH, G., Buenos Ayres, Argentina: Collections of Lepidoptera (34267, 35155). Exchange.
- RUSH, R. C., Hudson, Ohio: Specimens of *Sphaerium*. 33807.
- RUSSELL, H. S. (See under Fire Department, Fire Alarm Branch, Boston, Mass.)
- RUSSELL, MRS. M. E., Pomeroy, Pa.: Specimen of *Corydalis cornutus* Linnaeus, and a specimen of *Desmocercus palliatus* Forster. 33802.
- RUSSELL, SAMUEL, U. S. volunteer, Telford, Tenn.: Mauser clip with fixed ammunition complete, captured near Coama, P. R.; brass bullet, fixed ammunition, used by the Spanish troops, and captured at Santiagode Cuba during the campaign. 34149.
- RUST, H. N. (See under Smithsonian Institution, Bureau of Ethnology.)
- RUTH, Prof. A., West Knoxville, Tenn.: Six hundred plants from East Tennessee and Alabama. Purchase. 35105.
- RYDING, H. W., Thorsby, Ala.: Larval specimen of *Papilio troilus* Linnaeus. 33960.
- RYERSON, HARRY, Larchmont Manor, N. Y.: Specimen of 100-pound rail, 5 inches long, used by the New York and New Haven Railroad Company, with standard angle splice-bars and bolt attached. 34157.
- SAEGER, C. M., Coplay, Pa.: Cement rock and products. 34919.
- SAFFORD, Prof. J. M., Vanderbilt University, Nashville, Tenn.: Ninety-six specimens of fossils from the Califerous formation; 143 specimens from the Lower Helderberg, and 51 miscellaneous specimens from the Wells Creek Basin of Tennessee. 34878.
- SALINE RIVER PAINT COMPANY, Saline River, Kans.: Sample of ocher. 34332.
- SANDERS, W. C., jr., Luverne, Ala.: Limestone used for making quicklime. 34297.
- SANDERSON, Prof. E. DWIGHT, Collegepark, Md.: Twelve specimens of neuropteroid insects. 35198.
- SANDUSKY PORTLAND CEMENT COMPANY, Cleveland, Ohio: Sample of marl. 34242.
- SANFORD, MRS. E. L., Watertown, Conn.: Specimen of *Citheronia regalis* Fabr. 33766.
- SANFORD, J. A., Stockton, Cal.: Two plants. 34162.
- SANTOS, ALEXANDRO. (See under P. M. de Leon.)
- SARDESON, F. W., Minneapolis, Minn., received through Hon. C. D. Walcott: Eighty-five specimens of Middle Cambrian brachiopoda. Exchange. 34763.
- SAUNDERS, M. B., East Norwalk, Conn.: Hemipterous eggs belonging to the family Coreidae. 34011.
- SAVAGE MOUNTAIN FIRE BRICK WORKS, Frostburg, Md.: Fire-clay. 34178.
- SAWYER, E. L., Winchendon, Mass.: Fifty specimens of Australian Lepidoptera. Exchange. 34438.
- SCHAUM & UHLINGER, Philadelphia, Pa.: Six shuttles for textile machinery. 33805.
- SCHAUPP, F. G., Shovel Mount, Tex.: Plant from Texas. 34942.
- SCHLARBAUM, PAUL, Loveland, Colo.: Two specimens of *Euhagena nebraska*. Exchange. 34419.
- SCHMID, E. S., Washington, D. C.: Marmoset. 34787.
- SCHNECK, Dr. J., Mount Carmel, Ill.: Old-squaw duck. 34722.
- SCHOENEMANN, W. C., Philadelphia, Pa.: Collection of shells for the exhibit in the Children's Hall. Purchase. 34674.
- SCHOENRICH, OTTO, Baltimore, Md.: Spanish flag carried through the battle at

SCHOENRICH, OTTO—Continued.

- Guayama, P. R.; 2 maracas, or native rattles, used as a musical instrument; native pottery and a vase from Porto Rico. 34869.
- SCHÖNLAND, DR. S. (See under Grahams-town, South Africa, Albany Museum.)
- SCHOOLY, I. P., Herndon, Va.: Specimen of *Strix pratineola*. 33822.
- SCHUCHERT, CHARLES, U. S. National Museum: Three hundred specimens of Choteau fossils (33744); 100 specimens of Lower Oriskany fossils from Becafts Mountain, near Hudson, New York (34606). (See under R. A. Blair.)
- SCHUYLER, COLFAX, South Amboy, N. J.: Wingless parasitic moth or mutillid, representing the species *Mutilla occidentalis* Linnaeus. 33967.
- SCHWARZ, E. A., Department of Agriculture, Washington, D. C.: Collection of exotic beetles from Java, Borneo, Africa, and other localities. 34689.
- SCHWARZ, H., Washington, D. C., and St. Louis, Mo.: One hundred and ninety-five specimens of Lepidoptera from Texas and Mexico (exchange) (34119); 45 moths and butterflies (exchange) (34232); 33 specimens of Mexican Hesperidae (gift) (34289); 2 specimens of Hymenoptera (gift) (34393).
- SCOTT, Capt. L. A., San Juan, P. R.: Ship's plate, and a poem, "Remember the Maine." (See under Porto Rico Collection 35201.)
- SCOTT, RALEIGH, Mountain Ranch, Irma, Oreg.: Specimen of priceite from Curry County, obtained by Dr. David T. Day. 34569.
- SEAL, W. P., Delair, N. J.: Specimen of *Callichthys fasciatus* from Argentina (34391); specimens of *Mesogonistius chactodon*; *Aphredoderus sayanus*; *Boleosoma*; *Erimyzon succetta*; *Callichthys fasciatus* (34719); collection of fishes, reptiles, and a shrimp from Wilmington, N. C. (34997).
- SEAMAN, DR. L. L., New York City: Insignia of the Engineer Corps of the United States Army. (See under Porto Rico Collection 35201.)
- SEARS, J. H., Salem, Mass.: Specimens of fayalite from Rockport, Mass. (34041, 34557).
- SELYS-LONGCHAMPS, BARON EDMOND DE, Liege, Belgium: Twenty-four mammals. 34421.
- SEMPERS, J. F., Aikin, Md., received through Department of Agriculture: Plant. 34680.
- SENEFF ZOOLOGICAL EXPEDITION OF COLUMBIA COLLEGE, received through N. R. Harrington: Specimen of *Polyternus bichir*. Exchange. 34898.
- SERRURIER, DR. L. (See under Leiden, Holland, Rijks Ethnographisch Museum.)
- SEYMOUR, HENRY, Norfolk, Va.: Three-pound cartridge and a metal label recovered from the wrecks of the Spanish ships *Reina Mercedes* and *Maria Teresa*. (See under Norfolk Collection 35187.)
- SHAFFER, O. E. (See under Gus Wycoff and Cleo Backus.)
- SHAREN, J. M., Rocky Ridge, Md.: Barn Owl (*Strix pratineola*). 34428.
- SHARP, MRS. J. E. D. (See under Prof. O. F. Cook.)
- SHAW, R. E., Alberene, Va.: Snake. 33827.
- SHEAR, C. L., Washington, D. C., received through Department of Agriculture: Seven plants from Colorado. 34965.
- SHEETS, HENRY, Norfolk, Va.: Articles recovered from the wrecks of the Spanish ships *Cristobal Colon*, *Reina Mercedes*, *Maria Teresa*, and *Amirante Oquendo*. (See under Norfolk Collection 35187.)
- SHELDON, E. P. (See under Agriculture, Department of.)
- SHORT, S. H. (See under Walker Electric Company.)
- SIRIVER, HOWARD, Cumberland, Md.: Plant. 34028.
- SHULAK, FRANK X. (See under Interior Department, U. S. Geological Survey.)
- SIMMER, HANS. (See under Freie Vereinigung Tiroler Botaniker, Carinthia, Austria.)
- SIMPSON, J. A., Manatee, Fla.: Seven hundred and three plants from Florida (33749, 33982, 34110, 34124, 34236, 34274, 34321, 34432). Exchange.

- SINGLEY, J. A., Giddings, Tex.: Marine shells from the Gulf of California. 33779.
- SKINNER, Dr. H., Philadelphia, Pa.: Four specimens of Alaskan Arctiidae. 34288.
- SLACK, Rev. W. S., Musson, La.: Larva of moth (*E. prostrisimula*). 34044.
- SLOCUM, A. W., Milwaukee, Wis.: Post-Pliocene marl and fossils. 33850.
- SLOSSON, Mrs. A. T., New York City, N. Y.: Two specimens of *Aethonius leucostriatus* Linell. 35024.
- SMALL, J. K., New York City, N. Y.: Plant obtained by Miss Salie F. Price, of Bowling Green, Ky. 34545.
- SMITH, Mrs. ALONZA, Carthage, N. Y.: Three specimens of minerals from St. Lawrence County, N. Y. 34929.
- SMITH, C. E., Philadelphia, Pa.: Specimens of *Quinifera mucronosa* Jussieu. 34146.
- SMITH, Prof. F. D., University of Montana, Missoula, Mont.: Parasite from Florence, Mont. 34520.
- SMITH, G. O. (See under Interior Department, U. S. Geological Survey.)
- SMITH, HENRY, clerk of supreme court, Honolulu, Hawaiian Islands: Silver dollar of the issue of 1883, used during the reign of Kalakaua I, King of Hawaii. 33909; 3 Hawaiian coins. 34620.
- SMITH, H. F., Washington, D. C.: Bronze medal given to Gen. John Anderson by the city of New York in recognition of his defense of Fort Sumter. Deposit. 34748.
- SMITH, H. I., New York City, N. Y.: Amphipods (34588); invertebrates, mollusks, and fishes from Fort Rupert, British Columbia. 34711.
- SMITH, Dr. H. M., U. S. Fish Commission: Five species of land and fresh-water shells. 35125.
- SMITH, Mrs. J. A., Menardville, Tex.: Unios. 34751, 34908.
- SMITH, Prof. J. R., New Brunswick, N. J.: Four plaster casts of burrows made by *Ignotus caninus* (33888); 23 moths, including 20 type specimens. 34638; 26 specimens of Hymenoptera. 34777; 210 slides illustrating the structural characters of the Noctuidae, Arctiidae, Hydracra, Coccinea, etc. 34883; 2 type specimens of *Chrysomela picta* Smith. 35005.
- SMITH, JOHN DONNELL, Baltimore, Md.: Plant from Costa Rica. 34678.
- SMITH, JARED G., Department of Agriculture: Specimen of allium from New Mexico (33770); plant from Wyoming (34625); 28 plants (35120).
- SMITH, L. E., Buffalo, N. Y.: Corps badge of the First Division, Third Army Corps. 34902.
- SMITHSONIAN INSTITUTION, Mr. S. P. Langley, Secretary:
- Bronze reproduction of the Bruce gold medal. Deposit. 34255.
- Specimen of citrine quartz (cut stone) from Florissant, Colo. Received from Dr. L. T. Chamberlain, New York City, for addition to the Lea Collection. 34279.
- Specimens of ores from the Zanendo mines, near Melellin, Colombia, South America. Received through Hon. Charles Burleigh Hart, United States minister. 34874.
- Ninety-seven birds' eggs from various parts of the United States. Received through Dr. W. L. Ralph, Utica, N. Y. 34698.
- Starry flag of the *Bon Homme Richard* and letter of James Meyler, dated December 13, 1784, presenting the flag from the Marine Committee to Lieutenant Stafford. Received through Mrs. H. R. P. Stafford, Cottage City, Mass. 34460.
- Barrling sword of the *Bon Homme Richard* and musket captured from the *Svevia* by John Paul Jones. Received through Mrs. H. R. P. Stafford. 34599.
- Pocket telegraph instrument in an oval mahogany case; Morse telegraph relay; Morse telegraph sounder. Received through Mr. D. Wilmot Smith, Breckinridge, Minn. 34790.
- Twenty-one gems (sapphires) from Montana, and 2 gems (rhodolites) from North Carolina. Received from Dr. L. T. Chamberlain, New York City, for the "Lea collection." 35077.
- Specimen of *Bala bicolorata* from Florida. Received from Dr. W. L. Ralph, Utica, N. Y. 35086.

SMITHSONIAN INSTITUTION—Continued.

seventy-nine birds' eggs from California and Arizona, and 31 birds' eggs from Florida. Received from Dr. W. L. Ralph, Utica, N. Y. (35110, 35114.)

Two specimens of *Crotaphaga* and from Florida. Received from Dr. W. L. Ralph, Utica, N. Y. (35170.)

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

Cirripes taken from the French-American cable by the steamship *Missis*; also a piece of the cable, received through Dr. J. Walter Fewkes (33753); collection of potsherds from the talus of Katzimo, or the Enchanted Mesa, near the pueblo of Acoma, in Western-Central New Mexico (33794); stone ceremonial spear, also fibers, combs, etc., from Cebollita Valley, New Mexico (33806); collection of mound pottery and other objects obtained through G. F. Morris (33919); necklace made of greenstone beads, panther made of greenstone beads, and 2 mirrors made of pyrites of iron, obtained through G. F. Morris (33928); double frog pipe carved in sandstone, found in a mound in Crittenden County, and a pottery vessel from a mound in Mississippi County, Ark., obtained through G. F. Morris (33934); collection of Indian relics, obtained through Rev. D. Jones (33939); saddles, horse trappings, skins used for bedclothing, cradles, obtained through J. B. Hatcher from the Tuelchetes Indians of Patagonia (33958); blanket wrapping for Kiowa shield and a calendar painted on buckskin by the Kiowa Indians of Oklahoma (34001); collection of pottery vessels, bone implements, wooden tray, basketwork, and other objects from Cliff Ruins in San Juan County, Utah, obtained through Henry S. Gane (34002); ethnological objects from the Indians of the plains and Rocky Mountains and 2 skulls of *Antilocapra* and a pair of antlers, obtained through Emile Granier (34005); 18 trephined skulls from Peru, obtained through Dr. M. A.

SMITHSONIAN INSTITUTION—Continued.

Meniz (34004); collection of ancient pottery from San Juan region, Montezuma Valley, obtained from Mrs. W. L. Stafford (34806); ethnographical collection from Mexico, obtained by E. W. Nelson (34807); ethnological objects from Mexico, obtained from Edward Palmer (34808); anthropological objects from California, obtained through W. H. Holmes (34809); stone implements, objects of burned clay, bone, shell, etc., obtained through Edward Hughes, Stockton, Cal. (34810); mound relics of shell, bone, and stone, obtained through H. C. Merrell, Stockton, Cal. (34811); stone implements and objects of baked clay, obtained through J. A. Barr, Stockton, Cal. (34812); human bones and fossil bones of mammals, obtained through W. J. Mercer, Murphy, Cal. (34813); net and headband used for carrying baskets, used by the Pomo Indians, obtained through W. H. Holmes from J. W. Hudson, Ukiah, Cal. (34814); set of gambling bones from the same tribe, obtained from C. F. Briggs, San Francisco, Cal. (34815); stone mortar from California, obtained from E. G. Kavanaugh, Forest Hill, Cal. (34816); 4 stone implements, obtained through J. B. Pownall, Columbia, Cal. (34817); stone implements and utensils from Pasadena, Cal., obtained from H. N. Rust, South Pasadena, Cal. (34818); costume of an Ojibwa warrior, Kway gway ye way be nung, from Minnesota (34912); mug from a pueblo in Cebollita (34908); Shawnee wampum belt, received through Willis N. Tobias, Moraviantown, Ontario, Canada (34924); discoidal stone found in Cherokee County, Ga., received from C. L. Miller, Coulterville, Tenn. (35068); antiquities from Mexico and Texas, collected by Mr. Holmes (35101); obtained through Henry Postel, New York City, collection of Mexican and Peruvian relics (35172); obtained through J. H. Elder, Rutledge, Ga., a carved stone pipe (35176).

SMITHSONIAN INSTITUTION—Continued.

- (See under James Crockett; C. A. Pope; Rev. I. P. Whittmore.)
 Transmitted from the National Zoological Park, Dr. Frank Baker, superintendent:
- Skeletons of parrot and water snakes (33748); specimen of *Erethizon dorsatus* (33776); Owl Monkey and a Loon (33783); specimen of *Nasua narica* and a Porcupine (*Erethizon dorsatus*) (33867); Ostrich in the flesh (33868); iguana from the Bay of Honduras (33966); Black Buck (*Antelope cervicapra*) (33965); Gila monster and Otter (33966); California Sea-lion, *Zalophus californianus* (34104); specimen of *Canis lupus griseo-albus* (34218); 5 mammals in the flesh (34366); specimen of *Oreortyx pictus* (34373); Wolf (*Canis lupus griseo-albus*) (34378); 3 mammals in the flesh (34445); Sea-lion, Beaver, California Jay, Plumed Partridge, Snake bird, Rattlesnake, and Pine Snake (34454); peccary (*Dicotyles*) (34614); specimens of *Mephitis mephitis*, *Zalophus californianus*, and *Lynx rufus maculatus* (34738); 2 kangaroos (34788); partridge (*Oreortyx pictus*) (34855); partridge (*Oreortyx pictus*) (34856); Mandarin Duck, *Aix galericulata* (34858); Sand-hill Crane, *Grus mexicana* (34857); specimens of *Felis leo*, *Macacus cynomolgus*, and *Canis lupus griseo-albus* (35004); specimen of *Pituophis melanoleucus* from Florida (35012); Wood Ibis, *Tantulus loculator* (35087); specimen of *Caica xanthomera* from the Upper Amazons (35171); specimen of *Haliæctes leucocephalus* and specimen of *Geococcyx californianus* (35175); Antelope (35172); Spoonbill, *Ajaja ajaja* (35197).
- SNYDER, Prof. A. J., Belvidere, Ill.: Fourteen specimens of butterflies. 35153.
- SNYDER, Dr. ELIZABETH, Philadelphia, Pa.: Thirty-four photographs of Havasupais, Navaho, Moki, and Laguna Indians. 34697.
- SOLÓRZANO, Dr. MANUEL MARTINEZ. (See under Morelia, Mexico, Museo Michoacano.)
- SOLTAN, HUGO, Louisville, Ky.: Insects, myriapods, and spiders. 34013.
- SOUTHERN ICE EXCHANGE, Apalachicola, Fla., received through George H. Whiteside: Original letters of patent and specification of Dr. John Gorrie; also bound volume of the "Commercial Advertiser" of Apalachicola issued during the year 1844, containing the original articles written and published by Dr. Gorrie on the ice machine. 33784.
- SPENCE, R. S., Paris, Idaho: Ten specimens of Triassic fossils. 34834.
- SPENCER, Mrs. GERTRUDE, Hooper, Colo.: Specimen of *Epeira sylvatica*. 34061.
- SPORTSMAN'S EXPOSITION NEW YORK (QUEBEC EXHIBIT), Glens Falls, N. Y., received through A. N. Cheney: Specimen of brook trout (*Salvelinus fontinalis*) from Lake Edward, Canada. 34870.
- SPOTTSWOOD, H. N., U. S. National Museum: Two bobolinks. 35048.
- STABLER, J. P., Sandy Spring, Md.: Sharp-shinned Hawk, *Accipiter velox*. 34908.
- STAFFORD, Mrs. W. L. (See under Smithsonian Institution, Bureau of Ethnology.)
- STANDISH, B. H., Minneapolis, Minn.: Collections of ants (33746, 33786); specimens of *Tapinoma sessile* Say and *Messor andrei* Mayr (33917).
- STANTON, T. W., U. S. Geological Survey: Four plants from Texas (34007); specimens of *Holospiras* from Texas (33925). (See under J. D. Lisle.)
- STANTON, Rev. W. A., St. John's College, Belize, British Honduras: Crustaceans and a lizard from British Honduras (35700); collection of natural history specimens (34976).
- STANTON, Mr., Central Mine, Houghton County, Mich.: Copper bowlder with native silver (34456); crystallized copper silver nugget (34457). Purchase.
- STAR CLAY COMPANY, Mertztown, Pa.: Clay for chinaware and paper manufacture. 34391.
- STATE, DEPARTMENT OF, received through Hon. David J. Hill: Two specimens of ores from Haiti obtained by Hon. W. F. Powell, United States minister (34967); received through Hon. T. W.

STATE, DEPARTMENT OF—Continued.

- Criddle, piece of a 6-inch shell fired at Cavite; letter from Consul Wildman; Spanish shell captured at Cavite arsenal and a small Spanish shell from Cavite (deposit) (33906); fragments of pottery from Honduras obtained by Hon. Benjamin Johnson, United States consul (35158). (See under Hon. A. D. Barlow; Marquis Visuddha.)
- STEARNS, FREDERICK, Detroit, Mich.: Eighty-three casts of Oriental seals. 34188.
- STEARNS, DR. R. E. C., Los Angeles, Cal.: Four specimens of *Crepidula glauca* Say from beds of oysters transplanted from the Atlantic coast to San Francisco Bay (34776); insects and 8 specimens of *Gemma purpurea* from Alameda, Cal. (34905).
- STEELE, E. S., Washington, D. C.: Plant (gift) (34400); 244 plants from West Virginia (purchase) (34514); plant (exchange) (34682); violet (gift) (35133).
- STEIMAN, AUG., Swiss Alps, Tex., received through Department of Agriculture: Plant from Texas. 34938.
- STEINER, ROLAND, Grovetown, Ga.: Weapon used by runaway slaves to protect themselves from bloodhounds (34917); double-barreled flint-lock gun, and 6 flints (35158).
- SPREITZ, A., Baltimore, Md.: Eight photographs of orchids. 34235.
- STEINEGER, DR. LEONHARD, U. S. National Museum: Four frogs from Bergen, Norway (34023); mouse (*Mus musculus*) from Brookland, D. C. (34190).
- STEINEGER, MISS THORA, Department of Agriculture: Fifty-three mammal skins and skulls from Norway. Purchase. 33901.
- STERKI, DR. V., New Philadelphia, Ohio: Amphipods. 34206.
- STEVENSON, J. A., Miami, Fla.: Five specimens of marine shells (34774); 9 species of land and marine shells (34845).
- STITT, E. E., Columbus, Ohio: Limestone used for making quicklime. 34160.
- STOCKHOLM, SWEDEN, RIKSMUSEUM, received through Dr. Oscar Carlgren: Twenty-nine species of Actinians. Exchange. 34020.
- STONE, R. L., U. S. National Museum: Seven photographic prints of pictures of ostriches and a large photograph of an ostrich. 34372.
- STOUT, WILBUR. (See under Interior Department, U. S. Geological Survey.)
- STRECKER, DR. HERMAN, Reading, Pa.: Specimens of Lepidoptera (34781, 34795, 35156). Exchange.
- STROBRIDGE, MRS. I. M., Humboldt, Nev.: Thirteen specimens of petrified wood from Humboldt County (34147); 11 mounted photographs (blue prints), representing views in the "Virgin Valley Forest," showing fossil tree-trunks in position (34172).
- STRUBBS, A. P., Ware, Mass.: Fossil shells from Winterport, Massachusetts. 34821.
- SUHR, KIN B., U. S. National Museum: Korean flute. 33894.
- SUKSDORF, W. N., Bingen, Wash.: Forty-three plants. 35032.
- SUMPTER, I. W., Elliston, Va.: American Silk-moth *Attacus cecropia* Linné. 34990.
- SUTHERLAND, DR. L. D., Canandaigua, N. Y.: Specimen of *Epeira domiciliana* Hentz. 34231.
- SUTTON, W. H., Philadelphia, Pa.: Program of concerts given by the Young Men's Christian Association to the soldiers in camp at Chickamauga in 1898; also newspapers. (See under Porto Rico Collection 35201.)
- SWAIN, C. O., Roslyn, Wash.: Fossils from Washington. 34852.
- SWAIN, THOMAS, Paradox, Colo.: Specimens of uranium ore from "Yellow Bay," La Sal Creek, and from "Copper Prince," Roe Creek. 34823.
- SWAN, ETHELYN, Dallas City, Pa.: Specimen of *Diapheromera femorata* Say. 34064.
- SWARTA STONE AND LIME COMPANY, Swarta Station, Pa.: Specimen of limestone used for making quicklime. 34420.
- SWEET, C. J., Fisher, Minn.: Meteorite. Purchase. 34244.
- SWEETWATER COAL MINING COMPANY, Rock Springs, Wyo.: Coal. 34558.
- SYRACUSE COAL AND SALT COMPANY, Syracuse, Ohio: Specimen of common fine salt made from Syracuse brines. 34914.

- SZOLD, Miss HENRIETTA, Baltimore, Md.: Photograph of a synagogue of the Ohel Shalom Congregation in Baltimore. 34628.
- TABER, JOHN, Dallas, Tex.: Specimen of *Sphacrophthalmus occidentalis*. 33918.
- TAFF, J. A. (See under Interior Department, U. S. Geological Survey.)
- TAIT, J. A., Floral City, Fla.: Plant. 34050.
- TALBOT, D. H., Sioux City, Iowa: Specimen of wolfram from near Lead City, S. Dak. 34963.
- TASSIN, Mrs. MARY, Washington, D. C.: Sword, sword knot, and belt presented to the late Col. A. S. Tassin, U. S. A. (sword case and packing box). 33986.
- TASSIN, WIRT, U. S. National Museum: Diamond crystal from De Beers Mine, South Africa. 34987.
- TATE, W. B., U. S. National Museum: Specimen of *Vespertilio fuscus*. 33878.
- TAYLOR, J. G., Owensboro, Ky.: Skin of a Passenger Pigeon. 33875.
- TAYLOR, WILLIAM, Rockcreek, Wyo.: Specimens of bentonite or taylorite. 34370.
- TEHAMA CONSOLIDATED CHROME COMPANY, Red Bluff, Cal.: Sample of ocher. 34210.
- TENNESSEE CENTENNIAL EXPOSITION, Nashville, Tenn.: One hundred and thirteen photographs from negatives of views of buildings and grounds of the Exposition in 1897. 35237.
- TENNESSEE COAL, IRON AND RAILROAD COMPANY, Birmingham, Ala.: Coal. 34177.
- TERRY, C. A. (See under Westinghouse Electric and Manufacturing Company.)
- TEXAS COAL AND FUEL COMPANY, Weatherford, Tex.: Coal. 34212.
- THISELTON-DYER, Dr. W. T. (See under J. B. Baker: Kew, England, Royal Botanic Gardens.)
- THOMPSON, E. S., New York City, N. Y.: Two specimens of *Cercus canadensis*; 2 specimens of *Odocoileus hemionus*; 3 specimens of *Ovis carvina*, and 1 specimen of *Antilocapra*. Purchase. 34977.
- THOMPSON, Miss JENNIE, Morgantown, W. Va.: Collection of molding tools, molds and dies, etc., obtained by Dr. Walter Hough from the Thompson Pottery, at Morgantown. 34057.
- THOMPSON, Capt. WILLIAM, Norfolk, Va., received through W. A. Wilcox: Three deformed claws of *Callinectes sapidus*. 33768.
- THURSTON, G. P., Nashville, Tenn.: Fifteen skulls of Stone grave Indians. 34696.
- THURLOW, F. W., Harvester, Tex.: Medicinal plants (33808); received through Department of Agriculture, 10 plants (34876); 19 plants (35033).
- TIFFANY & Co., New York City, N. Y.: Four cut opals. Purchase. 35163.
- TILDEN, Miss JOSEPHINE, University of Minnesota, Minneapolis, Minn.: One hundred specimens of American algae. Purchase. 34238.
- TINGLE, G. R., Snug Harbor, Cook Inlet, Alaska: Hair worm, representing the genus *Gordius*. 35149.
- TINSLEY, J. D., Mesilla Park, N. Mex.: Myriapod. 33916.
- TOBIAS, W. N. (See under Smithsonian Institution, Bureau of Ethnology.)
- TONGUE, Miss AMY, Washington, D. C.: Specimen of *Psorophora ciliata* Fabr. 33891.
- TORES Y TORES, Guayanillo, Porto Rico: Sword, or hanger. (See under Porto Rico collection, 35201.)
- TOTTEN, W. K. D., jr., Cincinnati, Ohio: Fish-moth, *Lepisma saccharina*. 34200.
- TOWER, G. W. (See under Interior Department, U. S. Geological Survey.)
- TOWNSEND, C. H. TYLER, Mesilla Park, N. Mex.: Land shells and mollusks (34120); 2 species of *Polygyra* from Sierra Blanca (34214); 10 specimens of Hymenoptera (34903).
- TOWNSEND, E. C., Columbus, N. C., received through Cornell University: Four hundred plants. Purchase. 35165.
- TRACY, Prof. S. M., Biloxi, Miss., received through Department of Agriculture: Plants (34568, 34740, 34793, 34875) (exchange); 700 plants from the Gulf coast (35063) (purchase).
- TRASK, Mrs. BLANCHE, Avalon, Santa Catalina Island, Cal.: One hundred and two plants. Purchase. 35000.
- TREASURY DEPARTMENT, Hon. Lyman S. Gage, Secretary:
U. S. Coast and Geodetic Survey, received through Henry S. Pritchett, superin-

- TREASURY DEPARTMENT—Continued.
- tendent: Specimen of the first trans-Atlantic cable laid in 1858 from Ireland to Newfoundland (34198); 4 plaster medallions struck in commemoration of Prof. John E. Watson (35200).
- U. S. Life-Saving Service*, received through W. D. PARSONS, keeper, Hither Plain Station, N. Y.: Piece of whalebone from a finback whale that floated ashore at Montauk. 34841.
- TRELEASE, Prof. WILLIAM, Missouri Botanical Garden, St. Louis, Mo.: Agave leaves from Mexico. 34389.
- TRENT, Mrs. LUCY CARTER. (See under National Society of the Colonial Dames of America.)
- TROOST, GERARD, estate of, received through E. W. Rankin, acting administrator of the estate of James Hall, Albany, N. Y.: "Troost collection of erinoids," consisting of 294 specimens; also manuscript and drawings of 107 species. 34282.
- TRUE, J. M., Branch, Pa.: Beetle (*Cuscuta guttata* Oliv.) 34998.
- TRUENDELL & FREAREY, West Stockbridge, Mass.: Limestone used in making quicklime. 34207.
- TURNER, S. H., White Sulphur Springs, W. Va.: Photograph of a mirror struck by lightning. 33992.
- TURNER, H. W. (See under G. W. Kimble.)
- TURNER, W. D., Ferguson's Wharf, Va.: Specimen of Hartford Fern, *Lygodium palmatum* (34314); specimen of phosphatic marl (34464).
- TURRILL, C. B., San Francisco, Cal.: Marine and fresh-water shells from Lower California and western North America (34257, 34359).
- UDDEN, Prof. J. A., Rock Island, Ill.: Three specimens of *Cardiocraris*, 1 specimen of *Orthoceres*, 1 bryozoan, and a sponge (34498); received through U. S. Geological Survey, two ent specimens of a structure obtained from Cedar Valley limestone. 35001.
- UMBACH, L. M., Naperville, Ill.: Plants (34322, 34758, 34794, 34829, 35094). Exchange.
- UNION SAND AND EMERY WHEEL COMPANY, Boston, Mass.: Garnets used for abrasive purposes. 34418.
- UNION SOAPSTONE COMPANY, Chester Depot, Vt.: Specimen of soapstone. 34431.
- URICU, F. W., Port of Spain, Trinidad, British West Indies: Collection of Venezuelan Lepidoptera and Diptera (35008); received through Dr. L. O. Howard, fishes from Trinidad (35102).
- VAILLANT, LEON. (See under Paris, France, Musée d'Histoire Naturelle.)
- VAN ARSDALE, Mrs. ELLEN BRAINARD (See under Lieut. F. R. Brainard.)
- VAN HECKEREN, Baron, Sinagar, Java: One large Scoliid. 34385.
- VAN HISE, Prof. C., Madison, Wis. (See under Interior Department, U. S. Geological Survey.)
- VAN KIRK, J. W., Pottsgrove, Pa.: Four stone implements; mammal skulls; beaded money purse, wooden chair, and a specimen of lime deposit from a teakettle. 34067.
- VAN PELT, J. C., Woodstock, Va.: Confederate paper money. 33862.
- VANNEMAN, WILLIAM, U. S. National Museum: Miniature ship's anchor, manufactured at the Washington Navy Yard from sights and sight boxes recovered from the wreck of the "Maine". 34805.
- VASEY, Miss FLORA, U. S. National Museum: Plant. 34739.
- VAUGHAN, T. WAYLAND, U. S. Geological Survey: Set of negatives¹ of Duchassaing and Michelotti's types of Symphylliid corals in the Museum of Turin (33848, 33849); 2 species of land shells from Texas (35819); 50 specimens of shells, representing 12 species from Texas; 2 beetles and 6 specimens of Homoptera from the same locality (33861).
- VERD ANTIQUE MARBLE COMPANY, Chicago, Ill.: Slab and cubes of verd antique marble from Holly Springs, Ga. 34934.
- VERRILL, Prof. A. E., Yale University Museum, New Haven, Conn.: Fourteen specimens of Gorgonians and corals. Purchase. 34472. "O."

¹These negatives were presented to Mr. Vaughan by Count Peracca, and transferred by Mr. Vaughan to the National Museum.

- VERY, C. F., New Albany, Ind.: Two Horn-tailed Sawflies, representing the species *Tremex columba* Linnæus. 33872.
- VINEYARD OCHER COMPANY, Boston, Mass.: Ocher. 34151.
- VISUDDHIA, Marquis, Siamese legation, London, England, received through Department of State: Model of the monastery of Wat Chang at Bangkok. 34650.
- VORN, Dr. H. R., Field Columbian Museum, Chicago, Ill.: Six dozen small arrow points from Arizona. 35143.
- VRIÈRE, Baron RAOUL R. DE, Chateau de Baos-Veld, Zedelghem, Belgium: Collection of Belgian Coleoptera. Exchange. 35026.
- VROMAN, A. C., Pasadena, Cal.: One hundred and twenty photographs of California missions. Exchange. 33932.
- WADSWORTH, Miss MATTIE, Hallowell, Me.: Ninety-two dragon flies. Exchange. 34439.
- WAGHORNE, Rev. A. C., Bay of Islands, Newfoundland: Plants from Labrador. Purchase. 33796.
- WALCOTT, Hon. C. D., Director, U. S. Geological Survey: Photograph of an elk from Yellowstone National Park (gift) (34437); 10 rugs made of mammal skins (deposit) (35044.) (See under F. W. Sardeson.)
- WALKER, BRYANT, Detroit, Mich.: Specimens of *Unio superioerensis* from Michigan. 34141.
- WALKER, C. H., Galion, Ohio: Specimen of *Argiope riparia*. 33962.
- WALKER ELECTRIC COMPANY, Cleveland, Ohio, received through S. H. Short and E. H. Morrison: Bound volume containing photographs of the Short electric railway motors and other objects. Deposit. 34608.
- WALLACE, WILLIAM, Ansonia, Conn.: Three Wallace arc lights, a pair of electric connecting rods, and a facsimile of a letter of Benjamin Franklin to Mr. Strahan, dated July 5, 1775. 35164.
- WALLINGSFORD, W. W., U. S. National Museum: Hand looking-glass and a copy of the New Testament, issued and used during the Cuban campaign in the volunteer service of the United States. 34747.
- WAMSLEY, F. W., Bridgeton, N. J.: Forty-eight specimens of coral polyps etc. Purchase. 34473. "O."
- WAR DEPARTMENT, Hon. R. A. Alger, Secretary: Received through Ordnance Office, 2 Mauser rifles, bayonet, and scabbard captured at the surrender of Santiago (34096); received through the Army Medical Museum, reptiles in alcohol (34465). (See under Driggs-Seabury Gun and Ammunition Company.)
- WARD, Prof. Lester F., U. S. Geological Survey: Plants from Kansas and other localities (33947, 34027, 35139).
- WARD, M. J., Unadilla, N. Y.: Water bug, *Belostomatid americanum*. 35116.
- WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N. Y.: Nine Indian and African mammals (purchase) (33793); 160 specimens of Carboniferous cephalopods (exchange) (33863); 924 specimens of fossils of the Trenton and Silurian formation from Tennessee and of the Carboniferous formation from Texas (exchange) (33945); cast of skull of *Castoroides ohioensis* (purchase) (34166); 14 specimens of Gorgonians and 16 casts of Protozoans (purchase) (34471). (O.)
- WARING, G. W., Tyrone, Pa.: Specimen of *Epeira domiciliana* Hentz. 34184.
- WARNER, Miss A. P., Maywood, Nebr.: Fragments of pottery. 34501.
- WASLEKAR, N. N., Washington, D. C.: Scarf of Nana Sahib from India; turban worn by the Mohammedans; turban of Brahim from the Deccan; turban of Parsee and a skirt of muslin (34319); silk and gold turban belonging to a Rajah; 11 photographs of Hindoos (34879). Purchase.
- WATTERSON, R. L., Kings Mountain, N. C.: Specimen of Mantis, *Stagnomantis carolina* L. 34335.
- WEAVER, J. M., Oakshade, Va.: Moth (*Chorocampa tersa* L.). 34150.
- WEAVER, W. B., Lakeland, Fla.: Specimen of *Cassida guttata* Oliv. 34447.
- WEBER, L. R., Eureka Springs, Ark.: Specimens of Arkansas fossils (34716); 2 specimens of siliceous limestone containing fossils of the Calciferous age (34913).

- WEBSTER, Prof. F. M., Wooster, Ohio: Eight specimens of Hymenoptera. 34921.
- WEED, W. H., U. S. Geological Survey: Sapphire in lamprophyre dike rock from Yogo sapphire mines, Little Belt Mountains, Montana. 34882.
- WEEDEN, W. C., U. S. National Museum: Bat (*Vespertilio fuscus*). 34667.
- WEEKS, A. J., Akron, Ohio: Slip clay. 35066.
- WEITH, R. J., Elkhart, Ind.: Wasp (*Pelecinus polyturator* Drury), new to the Museum collection. 33812.
- WELLS, R. L., Humeston, Iowa: Star, or headquarters badge of the Seventh Army Corps, United States Volunteers, 1898-99, used as the official badge of the Seventh Corps Association and worn by the donor during the Cuban campaign. 35039.
- WESLEY, WILLIAM, & SONS, London, England: Prints of synagogues, print portrait of a rabbi, leather manuscript of prayers on Purim, 4 photographs of synagogues, 7 souvenirs of the Zionists Congress, and a leather manuscript of the Book of Esther (34414); print of German synagogue at Amsterdam and a print of a Portuguese synagogue at Amsterdam (34508). Purchase.
- WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, New York City, received through C. A. Terry, secretary: Collection of electric motors, car models, and other objects. Deposit. 34632.
- WHEELER, Gen. JOSEPH. (See under National Society of the Colonial Dames of America.)
- WHEELER, J. A., Milford, N. H.: Medicinal plants. 34269.
- WHITAKER, S. F., Ogden, Utah: Ores, clays, hydrocarbons, and other material from Utah. 34661. "O."
- WHITE, Dr. C. A., Washington, D. C.: Framed specimen of a rose showing the transformation of the flower parts into leaves (33869); sun-glassed by Daniel Corey, of Dighton, Bristol County, Mass., in 1790-1800 (35112).
- WHITE, DAVID, U. S. Geological Survey: Eight specimens of violets. 35053.
- WHITE, E. H., Clearwater Harbor, Va.; Larva of *Lagoa opercularis* S. & A. 34354.
- WHITE, JAMES, Norfolk, Va.: Articles recovered from the wrecks of the Spanish ships *Reina Mercedes*, *Viscaya*, *Cristobal Colon*, *Maria Teresa*, and *Almirante Oquendo*. (See under Norfolk collection 35187.)
- WHITE, J. J., Rockledge, Fla.: Five species of land and marine shells. 34489.
- White, MARK, Winfield, Kans.: Plants. 34525.
- WHITEAVES, J. F. (See under Ottawa, Canada, Geological Survey of.)
- WHITED, KIRK, Ellensburg, Wash.: Medicinal plants. 33811.
- WHITE PINE ZINC COMPANY, Louisville, Ky.: Lead and zinc ore. 34211.
- WHITESIDE, G. H. (See under Southern Ice Exchange.)
- WHITESIDES, Mrs. N. J. (See under Joseph M. Callis.)
- WHITING, Dr. C. A., University of Utah, Salt Lake City, Utah: Fresh-water invertebrates from Utah. 33760.
- WHITTEMORE, Rev. ISAAC T., Florence, Ariz., received through Smithsonian Institution, Bureau of Ethnology: Collection of cliff dwellers' objects from Arizona (34065); plaster cast of a footprint in the Casa Grande ruin, made by Mr. Whittemore, the finder of the impression (35167).
- WICKERSHAM, Prof. H. F., Iowa City, Iowa: Specimens of Termites. 34539.
- WICKERSHAM, JAMES, Tacoma, Wash.: Six plaster casts of carved stone and bone clubs. 34523.
- WILBUR, E. P., Titusville, Fla.: Specimen of *Epitragus tomentosus*. 33911.
- WILCOX, W. A. (See under William Thompson.)
- WILD, A., Loveland, Colo.: Specimen of gypsum. 34594.
- WILD, EDWARD, Aschaffenburg, Bavaria, Germany: Photograph of the Tower of Babel. 34037.
- WILES, GEORGE, Stratford, N. C.: Specimen of mineral. 33968.
- WILEY, Mrs. J. M., Atkinson, Kans.: Specimen of *Stagnomantis carolina* Linnaeus, belonging to the family *Mantidae*. 34069.

- WILEY, ROY, Palestine, Tex.: Skin of Ruby-throated Hummingbird, *Trochilus colubris*. 34167.
- WILCOX, JOSEPH, Philadelphia, Pa.: Eocene fossils from Santiago de Cuba. 34849.
- WILLIAMS, C. K., & Co., Easton, Pa.: Ocher. 34320.
- WILLIAMS, F. H., Bristol, Conn.: Three specimens of beetle, representing the species *Odontata rubra* Web. 33988.
- WILLIAMSON, E. B., Carnegie Museum, Pittsburg, Pa.: Two specimens of dragon flies, representing the species *Ichnura kellicotti* Williamson (cotypes). 35036. (See under Carnegie Museum.)
- WILLIAMSON, Mrs. M. B., Los Angeles, Cal.: Four species of marine shells from California (34710); specimen of *Calliostoma canaliculatum* (34863); shell, representing a species of the genus *Anodontia* (35070).
- WILLISTON, Prof. S. W., Lawrence, Kans.: Two specimens of *Estheria* from Oklahoma (34260); photograph of White River Miocene, Bad Lands, South Dakota (34266).
- WILLMAN, ARIEL, South Berlin, N. Y.: Water beetle, *Dysticus verticalis* Say. 34227.
- WILSON, COMPTON, U. S. V.: Medal. (See under Porto Rico collection 35201).
- WILSON, Capt. H. C., U. S. V., Washington, D. C.: Collection of relics of the Porto Rican campaign (34742); part of a metal shoulder knot belonging to the uniform of a Spanish staff officer (34936). Deposit.
- WILSON, K. D., Industry, Pa.: Six eggs (one set) of Sharp-shinned Hawk, *Accipiter velox*. 34859.
- WILSON, THOMAS, U. S. National Museum: Archaeological objects from Egypt (34329); 111 flint scrapers from various localities along the Ohio River, collected by W. K. Moorehead (34384); 2 terra-cotta figures of Watcombe Torquay pottery (34476). Deposit.
- WILSON & Bro., Hanoverville, Md.: Sample of ocher. 34249.
- WIMAN, L. E., Schenectady, N. Y.: Caterpillar (*Empretia stimulea*). 34099.
- WINCHELL, Prof. W. H. (See under Minnesota Geological Survey.)
- WINSER, J. H. (See under American Museum of Natural History.)
- WINSLOW, U. S. torpedo boat, received through Lieut. A. P. Niblack, U. S. Navy: Wire hand-railing from the *Winslow*, and a section of boiler plate perforated by a Spanish shell. 34077.
- WINSTON, ISAAC. (See under E. P. Moon.)
- WINTER'S METALLIC PAINT COMPANY, Iron Mountain, Wis.: Mineral paint. 35046.
- WOLCOTT, R. H., University of Nebraska, Lincoln, Nebr.: Co-types of *Acarina*. 34825.
- WOLTZ, GEORGE, U. S. National Museum: Brewer's candlestick (gift) (33837); soldier's combination folding spoon and fork (deposit) (33882); 2 Krag-Jørgensen rifle cartridges, a Remington 45-caliber revolver used during the Spanish-American War in Santiago de Cuba (gift) (33905); badge of the Third U. S. Cavalry worn by the soldiers of the Santiago campaign (gift) (33907); metal tag of the American Army Registry of New York, in use during the Spanish-American War (gift) (33987).
- WOLTZ, Miss SADIE, Washington, D. C.: Specimen of hard-tack furnished the United States Army in Santiago de Cuba during the Spanish-American War; crossed cannon of the Fifth U. S. Artillery, and crossed swords of the First Cavalry. 34021.
- WOOD, C. F., Boston, Mass.: Documents relating to the early history of the electro-magnetic telegraph. 34365.
- WOOD, N. R., U. S. National Museum: Eighty-three dragon flies. 35126.
- WOODSTOCK IRON WORKS, Rock Springs, Ala.: Limestone used for making quicklime. 34386.
- WOODWARD, Dr. H. W. (See under London (England) British Museum.)
- WOOTON, E. O., New York City: Five hundred and eighty-seven plants from New Mexico. Purchase. 33797. "O."
- WORTHEN, C. K., Warsaw, Ill.: Four skins and skulls of moles, representing the species *Scapanus orarius*. 34045.
- WRIGHT, B. H., Penn Yan, N. Y.: Four species of Southern unios (34131); 2

- WRIGHT, B. H.—Continued.
 species of Unionidae (34325); 3 species of Unionidae (34426); 6 species of Unionidae from the Southeastern States (34494); unio (34629); 12 species of shells from the Southern States (34832); 3 species of unios (34906; unios from the Southern States (35019.)
- WRIGHT, J. O., & Co., New York City: Lithograph of Louis Agassiz. Purchase. 34341.
- WYCOFF, GUS, Port Townsend, Wash., received through O. E. Shaffer: Specimen of *Rhamphocottus richardsoni* from Port Townsend Bay. 34947.
- YAKELEY, FRANK, Gebo, Mont.: Specimen of *Anabrus purpuratus* Uhler. 33785.
- YOUNG, CHESTER, Ellenville, N. Y.: Three species of saw-fly larvæ, new to the Museum collection. 34687.
- YOUNG, E. E., Wickford, R. I.: Specimen of Sea Hare, representing a species of *Tethys*. 34097.
- YOUNG, R. T., Ann Arbor, Mich.: Three mice, 4 shrews, and a chipmunk. 34713.
- YOUNG, W. F., Fairview City, Utah, received through Dr. David T. Day: Crude magnesian silicate. 34766.
- YOUNGS, ELMONZO, Washington, D. C.; Specimen of *Canis familiaris*. 34737.
- ZEILLER, Prof. R., Paris, France: Three Carboniferous plants. 33943.
- ZELEDON, JOSÉ C., San José, Costa Rica: Two birds' skins from Costa Rica. 34032.
- ZELEDON, Mrs. JOSÉ, San José, Costa Rica: Cast of a crab-shaped mortar. 34493.
- ZELL, Mrs. L. D., Lancaster, Pa.: Plant. 34138.
- ZOLLIKOFER, ERNST, St. Gallen, Switzerland: Collection of skins and specimens in alcohol from Switzerland and Sardinia. Purchase. 33902.

APPENDIX III.

STATEMENT OF THE DISTRIBUTION OF SPECIMENS DURING THE FISCAL YEAR ENDING JUNE 30, 1899.

AFRICA.

- Albany Museum, Grahamstown, South Africa: Alaskan moose (1 specimen). Exchange. (D. 12720.)
 Wood, J. Medley, Port Durban, Natal: Plants (209 specimens). Exchange. (D. 12063.)

AMERICA.

NORTH AMERICA.

CANADA.

- Canadian Geological Survey, Ottawa: Fossils (5 specimens). Gift. Plants (254 specimens); fossils (17 specimens). Exchange. (D. 12278, 12534, 12646.)
 Cox, Philip, Chatham: Frog (1 specimen). Exchange. (D. 12313.)
 Roberts, C. H., Paris, Ontario: Casts of stone objects (3 specimens); casts of amulets. Exchange. (D. 12419, 12712.)

MEXICO.

- National Medical Institute, Mexico: Mexican plants (659 specimens). Exchange. (D. 12514.)

UNITED STATES.

Alabama.

- Baker, Carl F., Auburn: Isopods and Amphipods. Exchange. (D. 12229.)
 Earle, F. S., Auburn: Plants (14 specimens). Exchange. (D. 12602.)
 Mell, P. H., Auburn: Plants (3 specimens). Exchange. (D. 12065.)
 Mohr, Charles, Mobile: Plants (41 specimens). Exchange. (D. 12045, 12671.)
 Museum of the University of Alabama, Tuscaloosa: Alcoholic fishes (64 specimens). Gift. (D. 12414.)

Arkansas.

- McNeill, Jerome, Fayetteville: Orthoptera (15 specimens). Lent for study. (D. 12426.)

California.

- Brandegree, T. S., San Diego: Plants (3 specimens). Exchange. (D. 12066.)
 Hornung, J., San Francisco: Bird skins (107 specimens). Exchange. (D. 12128, 12437.)
 Jordan, D. S., Stanford University: Fishes (2 specimens). Lent for study. (D. 12173, 12554.)
 Leland Stanford Junior University, Palo Alto: Plants (111 specimens). Exchange. (D. 12044.)
 Stearns, R. E. C., Los Angeles: Small shells (about 1,000 specimens). Lent for study. (D. 12739.)
 University of California, Berkeley: Plants (50 specimens). Exchange. Annelids (71 specimens, 21 species.) Gift. (D. 12043, 11967.)

Colorado.

- Hills, R. C., Denver: Meteorites (2 specimens). Exchange. (D. 11984.)
 Schlarbaum, Paul, Loveland: Moths (2 specimens). Exchange. (D. 12339.)

Connecticut.

- Gulliver, F. P., Norwich: Salts (5 specimens). Exchange. (D. 12033.)
 Marsh, O. C., New Haven: Potomac breccia (1 specimen); Japanese marbles (15 specimens). Lent for study. (D. 12400, 12401.)
 Wesleyan University Museum, Middletown: Pueblo pottery (20 specimens). Exchange. (D. 12431.)
 Yale University Museum, New Haven: Crinoids (14 specimens). Exchange. (D. 12212.)

Delaware.

Canby, William M., Wilmington: Plants (117 specimens). Exchange. (D. 12087, 12299, 12639.)

District of Columbia.

Catholic University, Washington: Plants (93 specimens). Exchange. (D. 12050.)

Central High School, Washington: *Pentactinurus decorus* (1 specimen). Gift. (D. 12329.)

Chesnut, V. K., Washington: Medicinal plants. Lent for study. (D. 12778.)

Crosby, W. O., Washington: Geological and natural history material. Exchange. (D. 12666.)

Greene, E. L., Washington: Plants (26 specimens). Exchange. Plants (57 specimens). Lent for study. (D. 12428, 12627.)

Holm, T., Brookland: Plants (60 specimens). Lent for study. Plants (92 specimens). Exchange. (D. 12112, 12575.)

Kober, George M., Washington: Zuni pottery vase. Exchange. (D. 12395.)

McGee, W. J., Washington: Ethnological specimens. Lent for study. (D. 12140.)

Richmond, C. W., Washington: Snowy owl (1 specimen). Exchange. (D. 12453.)

Tweedy, Frank, Washington: Plants (44 specimens). Exchange. (D. 12427.)

U. S. Fish Commission, Washington: Marine invertebrates (309 specimens, series vi, set 54); alcoholic fish (1 specimen); shells (2 specimens); crustaceans (16 specimens). (D. 11973, 12146, 12175, 12622.)

Florida.

Simpson, J. H., Manatee: Minerals. Exchange. (D. 12548.)

Illinois.

Carthage College, Carthage: Marine invertebrates (303 specimens, series vi, set 61). Gift. (D. 12103.)

Coulter, John M., Lake Forest: Plants (3 specimens). Exchange. (D. 12064.)

Elliot, D. G., Chicago: Mammals (3 specimens). Exchange. (D. 12587, 12590.)

Illinois—Continued.

Ferriss, James H., Joliet: Shells (41 specimens). Exchange. (D. 12360.)

Field Columbian Museum, Chicago: Plants (142 specimens). Exchange. (D. 12051.)

Illinois Female College, Jacksonville: Marine invertebrates (303 specimens, series vi, set 78). Gift. (D. 12436.)

Loucks, W. E., Peoria: Bird skins (62 specimens). Lent for study. (D. 12683.)

Millsbaugh, C. F., Chicago: Plants (161 specimens). Exchange. (D. 12675.)

Northwest Division High School, Chicago: Marine invertebrates (306 specimens, series vi, set 71). Gift. (D. 12371.)

Phillips, W. A., Evanston: Flints (120 specimens). (D. 12371.)

Snyder, A. J., Belvidere: Butterflies. Lent for study. (D. 12710.)

Udden, J. A., Rock Island: Samples of sea bottom (84 vials). Exchange. (D. 12570.)

University of Chicago, Chicago: Plants. Exchange. (D. 12032.)

Indiana.

Bartlett, Charles H., South Bend: Cast of inscribed tablet. Gift. (D. 12258.)

High school, Jeffersonville: Marine invertebrates (312 specimens, series vi, set 67). Gift. (D. 12233.)

Indiana University, Bloomington: Plants (64 specimens). Exchange. (D. 12046.)

Iowa.

Agricultural Experiment Station, Ames: Plants (300 specimens). Exchange. (D. 12059.)

Boepple, J. E., Muscatine: Quartz crystal (1 specimen). (D. 12434.)

Charles City College, Charles City: Marine invertebrates (103 specimens, series vi, set 63); casts of stone implements (98 specimens, set 62). Gift. (D. 12133.)

High school, Early: Rocks and ores (104 specimens, set 11). Gift. (D. 12495.)

High school, Lake Mills: Rocks and ores (104 specimens, set 17). Gift. (D. 12336.)

Iowa—Continued.

- High school, Manchester: Marine invertebrates (303 specimens, series vi, set 76); rocks and ores (104 specimens). Gift. (D. 12404.)
- High school, Sac City: Rocks and ores (104 specimens, set 22). Gift. (D. 12138.)
- Miller, Benjamin L., Oskaloosa: Samples of sea bottom (10 vials). For study. (D. 12591.)
- Putnam, Mrs. M. D., Davenport: Eskimo costume. Exchange. (D. 12632.)

Kansas.

- Beede, J. W., Lawrence: Fossils (5 specimens). Exchange. Fossils (8 specimens). Lent for study. (D. 12222, 12445.)
- Hitchcock, A. S., Manhattan: Plants (921 specimens). Exchange. (D. 12545.)
- University of Kansas, Lawrence: Cambrian fossils (51 specimens). Exchange. Corals (4 specimens). Gift. (D. 11986, 12094.)

Kentucky.

- Williamsburg Institute, Williamsburg: Rocks and ores (104 specimens, set 20). Gift. (D. 12248.)

Maine.

- Bowdoin College, Brunswick: Crabs (60 specimens). Gift. (D. 12287.)
- Wadsworth, Miss Nettie, Hallowell: Dragon flies (19 specimens). Exchange. (D. 12452.)

Maryland.

- Western Maryland College, Westminster: Marine invertebrates (306 specimens, series vi, set 69); rocks and ores (104 specimens, set 18). Gift. (D. 12267.)

Massachusetts.

- Bangs, Outram, Boston: Bird skins (35 specimens); one specimen belonging to the genus *Sciurus*. Lent for study. Mammal skins and skulls (14 specimens). Exchange. Deer skull (1 specimen). Lent for study. (D. 12179, 12182, 12239, 12314, 12369, 12392, 12442, 12565.)
- Botanic garden, Cambridge: Plants (553 specimens). Exchange. (D. 12056.)

Massachusetts—Continued.

- Brewster, William, Cambridge: Bird skins (94 specimens). Lent for study. (D. 12361, 12368, 12611.)
- Cummings, Miss Clara E., Wellesley: Plants (15 specimens). Exchange. (D. 12661.)
- Davenport, George E., Medford: Plants (3 specimens). Lent for study. Plants (84 specimens). Exchange. (D. 12381, 12535.)
- Eastman, C. R., Cambridge: Fossils (10 specimens). Lent for study. (D. 12380.)
- Emerson, B. K., Amherst: Thin sections of rocks (116 specimens). Lent for study. (D. 12595.)
- Fernald, M. L., Cambridge: Plants (104 specimens). Lent for study. (D. 12386.)
- Harvard University, Cambridge: Rocks and ores. Exchange. (D. 12615.)
- Howe, Reginald Heber, jr., Brookline: Bird skins (13 specimens). Lent for study. (D. 12628.)
- Johnson, Roswell H., Cambridge: Double-headed snakes (3 specimens). Lent for study. (D. 12531.)
- Museum of Comparative Zoology, Cambridge: Crustacea (39 specimens; crabs (21 specimens); photographs of type specimens in foreign museums. Exchange. (D. 12296, 12609, 12754.)
- Peabody Museum, Cambridge: Collection of stone implements, fragments of pottery, etc. Gift. (D. 12451.)
- Peck, James L., Woods Hole: specimens of foraminiferal sand and infusorial earth. Gift. (D. 12024.)
- Robinson, B. L., Cambridge: Plants (447 specimens). Lent for study. Plants (55 specimens). Exchange. (D. 12203, 12231, 12282, 12460, 12550, 12598, 12623, 12660.)
- Sargent, C. S., Jamaica Plain: Plants (59 specimens). Lent for study. Plants (2 specimens). Exchange. (D. 12636.)
- Sawyer, E. L., Winchendon: Lepidoptera (54 specimens). Exchange. (D. 12358.)
- State Normal School, Westfield: Marine invertebrates (306 specimens, series vi, set 65). Gift. (D. 12187.)

Massachusetts—Continued.

Strong, R. M., Cambridge: Shrikes (76 specimens). Lent for study. (D. 12566.)

Michigan.

Melville, W. P., Sault Ste Marie: Bird skins (6 specimens). Exchange. (D. 12701.)

Mulliken, W. Earle, Grand Rapids: Bird skin (1 specimen). Lent for study. (D. 12501.)

Minnesota.

Brower, J. V., St. Paul: Stone implements and pottery (146 specimens). Exchange. (D. 12556.)

Gustavus Adolphus College, St. Peter: Rocks and ores (104 specimens, set 12). Gift. (D. 12508.)

Heatwole, Joel P., Northfield: Zuñi and Chiriqui pottery (35 specimens). Exchange. (D. 11970.)

High School, Worthington: Casts of stone implements (98 specimens, set 64). Gift. (D. 12176.)

Holzinger, J. M., Winona: Plants (72 specimens). Exchange. (D. 12546.)

Hyde, Louis H., Lake Benton: Fossils (218 specimens). Exchange. (D. 12197.)

McDougal, D. T., Minneapolis: Plants (9 specimens). Lent for study. (D. 12144.)

Sardeson, F. W., Minneapolis: Fossils (2 specimens). Exchange. (12543.)

University of Minnesota, Minneapolis: Cambrian fossils (43 specimens); plants (274 specimens). Exchange. (D. 11985, 12061, 12180.)

Mississippi.

Mississippi Agricultural and Mechanical College, Agricultural College: Marine invertebrates (303 specimens, series vi, set 80). Gift. (D. 12511.)

Missouri.

Ayres, Howard, Columbia: Alcoholic fishes (22 specimens). Lent for study. (D. 12439.)

Glatfelter, N. M., St. Louis: Plants (8 specimens). Lent for study. Plants (50 specimens). Exchange. (D. 11999, 12041.)

Missouri Botanical Garden, St. Louis: Plant (living specimen). Exchange. (D. 12098.)

Missouri—Continued.

Plattsburg Public School, Plattsburg: Marine invertebrates (306 specimens, series vi, set 72). Gift. (D. 12372.)

Public Schools, Macon: Marine invertebrates (309 specimens, series vi, set 74). Gift. (D. 12370.)

Schwarz, H., St. Louis: Butterflies (99 specimens). Exchange. (D. 12214.)

Trelease, William, St. Louis: Plants (252 specimens). Lent for study. (D. 12224.)

Montana.

Helena High School, Helena: Marine invertebrates (312 specimens, series vi, set 52). Gift. (D. 11974.)

State Historical Library, Helena: Marine invertebrates (306 specimens, series vi, set 79); alcoholic fishes (75 specimens). Gift. (D. 12455.)

University of Montana, Missoula: Shells (409 specimens). Gift. (D. 12230.)

Nebraska.

Bruner, Lawrence, Lincoln: Mexican and Central American Orthoptera (176 specimens); insects (5 specimens). Lent for study. (D. 12408, 12486.)

Gates College, Neligh: Lamprey, eel, and skate (1 specimen each). (D. 12525.)

Public School, Fort Calhoun: Bird skins (31 specimens); insects (531 specimens); marine invertebrates (55 specimens); mollusks (98 specimens); minerals (4 specimens); fossils (8 specimens); archaeological objects (64 specimens). Gift. (D. 12417.)

University of Nebraska, Lincoln: Plants (402 specimens). Exchange. (D. 11969.)

Ward, Henry B., Lincoln: Gephyreans (570 specimens). Lent for study. (D. 12422.)

New Hampshire.

Literary Institution, New Hampton: Marine invertebrates (309 specimens, series vi, set 68); minerals (57 specimens, set 194). Gift. (D. 12247.)

New Jersey.

Edwards, Arthur M., Newark: Infusorial earth (7 specimens). Lent for study. (D. 12462.)

New Jersey—Continued.

- Smith, John B., New Brunswick: Moths (2 specimens). Lent for study. (D. 12478.)
 Kilmer, F. B., New Brunswick: Plants (14 specimens). Lent for study. (D. 12558.)

New York.

- Allen, J. A., New York: Small mammal skins and skulls (14 specimens). Exchange. (D. 12301.)
 American Museum of Natural History, New York: Ethnological material (13 specimens). Gift. (D. 12770.)
 Bicknell, E. P., New York: Plants (202 specimens). Lent for study. (D. 12321.)
 Bird, Henry, Rye: Larvæ of *Hydracia*. Exchange. (D. 12177.)
 Britton, Mrs. E. G., New York: Mosses (20 specimens). Exchange. (D. 12562.)
 Britton, N. L., New York: Plants (435 specimens). Exchange. (D. 12060.)
 Colgate University, Hamilton: Marine invertebrates (306 specimens, series vi, set 62). Gift. (D. 12160.)
 Cornell University, Ithaca: Plants (140 specimens). Exchange. Granite (7 specimens). Gift. (D. 12042, 12058, 12474.)
 Brown, Mrs. John Crosby, New York: Facsimile of musical instrument (1 specimen). Exchange. (D. 12680.)
 Dwight, Jonathan, jr., New York: Bird skins (60 specimens). Lent for study. (D. 12667, 12714, 12777.)
 Ely's School, The Misses, New York: Marine invertebrates (303 specimens, series vi, set 64). Gift. (D. 12169.)
 Erasmus Hall High School, Brooklyn: Marine invertebrates (303 specimens, series vi, set 77); casts of stone implements (98 specimens). Gift. (D. 12416, 12454.)
 Gilbert, B. D., Clayville: Plants (88 specimens). Lent for study. (D. 12490, 12513.)
 High School, Hancock: Marine invertebrates (306 specimens, series vi, set 75); rocks and ores (104 specimens, set 15). Gift. (D. 12394.)
 Holland Purchase Historical Society, Batavia: Casts of prehistoric stone

New York—Continued.

- implements (90 specimens, set 67). Gift. (D. 12744.)
 Hulst, George D., Brooklyn: Moths (157 specimens). Lent for study. (D. 12202.)
 Miller, Gerrit S., jr., New York: Skins with skulls of *Erotomys alasensis* (6 specimens). Lent for study. (D. 12461.)
 Mirrick, Miss Nellie, Oneida: Plants (20 specimens). Exchange. (D. 12784.)
 Osborn, H. F., New York: Skull of *Oreodon* (1 specimen). Lent for study. (D. 12576.)
 Porter, George F., New York: Electrical apparatus (5 pieces). Lent for study. (D. 12647.)
 Putnam, F. W., New York: Left scapula of male and female musk ox (1 specimen each). Lent for study. (D. 12642.)
 Small, J. K., New York: Mounted specimens of plants (17 specimens). Lent for study. (D. 12262, 12663, 12772.)
 Underwood, L. M., New York: Plants (2 mounted specimens); plants (24 specimens). Lent for study. (D. 12208, 12507.)
 Ward's Natural Science Establishment, Rochester: Two collections of fossils. Exchange. (D. 12130, 12398.)
 Waugh, F. H., Ithaca: Plants (3 specimens). Lent for study. (D. 12382.)
 Webster Free Library, New York: Casts of stone implements (98 specimens, set 66). Gift. (D. 12620.)
- North Carolina.*
 Ash, W. W., Raleigh: Plants (319 specimens). Exchange. (D. 12049.)
 Beadle, C. D., Biltmore: Plants (707 specimens). Exchange. (D. 12542.)
 Biltmore Herbarium, Asheville: Plants (378 specimens). Exchange. (D. 12096.)
 Trinity College, Durham: Marine invertebrates (306 specimens, series vi, set 81). Gift. (D. 12567.)
- North Dakota.*
 Mager, Miss Ernestine, Walhalla: Plant (1 specimen). Exchange. (D. 12266.)

Ohio.

- Case School of Applied Science, Cleveland: Plants (15 specimens). Exchange. (D. 12053.)
- High School, Logan: Casts of stone implements (98 specimens, set 63). Gift. (D. 12162.)
- Lindahl, Joshua, Cincinnati: Salamander (1 specimen). Lent for study. (D. 12438.)
- Piwonka, Thomas, Cleveland: Foraminifera (3 lots). Lent for study. (D. 12228.)
- Ricker, Maurice, Burlington: Insect (1 specimen). For study. (D. 12432.)
- Western College, Oxford: Marine invertebrates (306 specimens, series vi, set 66); marine invertebrates (306 specimens, series vi, set 70). Gift. (D. 12207, 12281.)
- Pennsylvania.*
- Calvert, Philip P., Philadelphia: Dragon flies (1072 specimens). Lent for study. (D. 12489.)
- Carnegie Museum, Pittsburg: Ethnological material (29 specimens). Exchange. (D. 12166.)
- Clarion State Normal School, Clarion: Marine invertebrates (309 specimens, series vi, set 3). Gift. (D. 12014.)
- Crawford, Joseph, Philadelphia: Plants (97 specimens). Exchange. Plants (19 specimens). Lent for study. (D. 12672, 12780.)
- Culin, Stewart, Philadelphia: Collection of games. Lent for study. (D. 12456.)
- Fox, William J., Philadelphia: Insects (322 specimens). Lent for study. (D. 11987.)
- High School, Harrisburg: Rocks and ores (104 specimens, set 13). Gift. (D. 12413.)
- High School, York: Marine invertebrates (306 specimens, series vi, set 73). Gift. (D. 12510.)
- Moore, J. Percy, Philadelphia: Leeches (54 specimens); *Desmognathus brimleyorum* (1 specimen). Lent for study. (D. 12174, 12359.)
- Pilsbry, H. A., Philadelphia: Slugs (2 specimens). Lent for study. (D. 12729.)

Pennsylvania —Continued.

- State Normal School, Mansfield: Marine invertebrates (303 specimens, series vi, set 82). Gift. (D. 12592.)
- Stone, Witmer, Philadelphia: Bird skins (41 specimens). Lent for study. (D. 12456.)
- Strecker, Hermann, Reading: Lepidoptera (60 specimens). Exchange. Lepidoptera (2 specimens). Lent for study. (D. 12569, 12776.)

Rhode Island.

- Collins, J. Franklin, Providence: Plants (28 specimens). Exchange. (D. 12052.)

Tennessee.

- Library and Reading Room, Erin: Rocks and ores (104 specimens, set 21). Gift. (D. 12186.)

Texas.

- Price, R. H., College Station: Plants (62 specimens). Exchange. (D. 12673.)
- San Antonio Female College, San Antonio: Rocks and ores (104 specimens, set 16). Gift. (D. 12373.)

Utah.

- Jones, Marcus E., Salt Lake City: Plants (250 specimens). Exchange. (D. 12040.)

Virginia.

- Hampden-Sidney College, Hampden-Sidney: Rocks and ores (104 specimens, set 19). (D. 12266.)

Washington.

- Heckman, P. Y., Issaquah: Fossil plants and crinoids (36 specimens). Exchange. (D. 12573.)
- Wickersham, James, Tacoma: Plaster cast of stone club. For examination. (D. 12374.)

West Virginia.

- Pollock, W. M., Buckhannon: Plants (50 specimens). Exchange. (D. 12057.)

Wisconsin.

- Adams, C. K., Madison: Plants (162 specimens). Lent for study. (D. 12523, 12544.)
- High School, Janesville: Rocks and ores (104 specimens, set 26). Gift. (D. 12085.)
- High School, Kenosha: Rocks and ores (104 specimens, set 23). Gift. (D. 12106.)

Wisconsin—Continued.

High School, Monroe: Rocks and ores (104 specimens, set 25). Gift. (D. 12108.)

High School, Racine: Rocks and ores (104 specimens, set 24). Gift. (D. 12107.)

WEST INDIES.

Connell, E. Y., Basse Terre, St. Kitt's, and Nevis: Stone implements (62 specimens). Exchange. (D. 12139.)
Public Gardens and Plantations, Kingston, Jamaica: Plants (78 specimens). Exchange. (D. 12553.)

SOUTH AMERICA.

ARGENTINA.

Ruscheweyh, G., Buenos Ayres: Lepidoptera (113 specimens). Exchange. (D. 12280.)
Silvestri, Filippo., Buenos Ayres: *Argulus* (10 specimens). For examination. (D. 12711.)

PERU.

Colunga, M. F., Lima: Bird skins (26 specimens). Exchange. (D. 12696.)

ASIA.

CHINA.

Bergen, Paul D., Chefoo: Bird skins (48 specimens); mammal skins (2 specimens). Exchange. (D. 12475.)
Chinanfu Museum, Chinafu: Minerals (57 specimens, set 195); rocks and ores (113 specimens). Exchange. (D. 12738.)

INDIA.

Indian Museum, Calcutta: Decapod crustaceans (171 specimens); bird skins (4 specimens). Exchange. Decapod crustaceans (124 specimens). Gift. (D. 12334, 12653, 12765.)
Royal Botanic Garden, Bengal: Plants (240 specimens). Exchange. (12689.)

EUROPE.

AUSTRIA.

Simmer, Hans, Carinthia: Plants (296 specimens). Exchange. (12688.)

BAVARIA.

Geological-Paleontological Institute, Munich: Cambrian fossils (76 specimens). Exchange. (D. 12000.)

BELGIUM.

Selys-Longchamps, Baron Edmund de, Liege: Skins and skulls of Microtine rodents. For examination. (D. 12724.)

Vrière, Baron R. de, Zedelghem: Coleoptera (112 specimens). Exchange. (D. 12753.)

BOHEMIA.

Fritsch, Anton, Prague: Fossils (6 specimens). Lent for study. (D. 12184, 12630.)

DENMARK.

Meinert, F., Copenhagen: Pyenogonida (120 specimens). Lent for study. (D. 12536.)

Warming, Eugenius, Copenhagen: Plants (500 specimens). Exchange. (D. 12084.)

FRANCE.

Miguel, Jean, Barronbio, Hérault: Fossils (272 specimens). Exchange. (D. 12613.)

Trocadero Museum, Paris: Thirteen casts of ethnological specimens. (D. 12446.)

GERMANY.

Haferlandt and Pippow, Berlin: Skull of Bison (1 specimen). Exchange. (D. 12619.)

GREAT BRITAIN.

ENGLAND.

Baker, E. G., London: Collection of plants. Exchange. (D. 12650.)

Barrett-Hamilton, G. E. H., London: Mammals, mice, and squirrels (112 specimens). Lent for study. (D. 12502.)

British Museum, London: Plants (246 specimens). Exchange. Plants (12 specimens). Lent for study. Tertiary Corals (229 specimens); cretaceous bryozoa (5 vials); skins and skulls of mammals (19 specimens); mollusks (27 specimens); invertebrates (9 specimens). Exchange. (D. 11992, 12209, 12320, 12343, 12504.)

- Brunetti, E., London: Diptera (278 specimens). Exchange. (D. 12494.)
- Gamble, T. W., Manchester: Collection of Annelids. Lent for study. (D. 12005.)
- Hampson, Sir George F., London: Moths (12 specimens). Lent for study. (D. 12418.)
- Masters, T. Maxwell, London: Plants (18 specimens). Lent for study. (D. 12069.)
- Parritt, H. W., London: Echinoderms and crustaceans (28 specimens). Exchange. (D. 12726.)
- Royal Gardens, Kew, London: Plants (3 sets). Lent for study. Plants and seeds (5 sets). Exchange. Living plants (*Agave*) (2 specimens). Gift. (D. 12148, 12251, 12363, 12529, 12574, 12649, 12664.)
- Rudler, F. W., London: Onyx marble (1 specimen). Exchange. (D. 12105.)
- Thomas, Oldfield, London: Skins and skulls of African rodents (17 specimens). Lent for study. (D. 12168.)
- University College, Liverpool: Marine invertebrates (series v, set 97, 475 specimens); invertebrates (5 specimens and 1 vial). Exchange. (D. 12006, 12210.)
- Woodward, Henry, London: Cranium and cast of cranium of *Castoroides*. Exchange. (D. 12279.)

SCOTLAND.

- Chilton, Charles, Edinburgh: Blind crustaceans (15 specimens). Exchange. (D. 12232.)

ITALY.

- Gestro, R., Genoa: Fish (1 specimen). Exchange. (D. 12743.)
- Mayer, P., Naples: Small crustaceans (1,154 specimens). Lent for study. (D. 12493.)
- University of Turin, Turin: Fossils (77 specimens). Exchange. (D. 12612.)

NETHERLANDS.

- Royal Ethnographic Museum, Leyden: Ethnological objects (195 specimens). Exchange. (D. 12741.)
- Von Roon, G., Rotterdam: Coleoptera (100 specimens). Exchange. (D. 12553.)

SWEDEN.

- Royal Swedish Academy of Sciences, Stockholm: Plants (361 specimens). Exchange. (D. 12086.)

SWITZERLAND.

- Autran, Eugene, Geneva: Plants (663 specimens). Exchange. (D. 12533.)
- Candolle, M. Casimir de, Geneva: Plants (23 specimens). Lent for study. (D. 12433.)

OCEANICA.

AUSTRALIA.

- Grant, F. H. McK., Melbourne, Victoria: Casts of stone pipes (3 specimens). Exchange. (D. 12393.)

APPENDIX IV.

BIBLIOGRAPHY OF THE U. S. NATIONAL MUSEUM FOR THE FISCAL YEAR ENDING JUNE 30, 1899.

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, 1896. | — | Report | of the | U. S. National Museum. | — | Washington: | Government Printing Office. | 1898. Svo, pp. 1-XXIV, 1-1107, 198 pls., 555 figs.

PROCEEDINGS.

Smithsonian Institution. | United States National Museum. | — | Proceedings | of the | United States National Museum. | — | Volume XX. | — | Pub-

lished under the direction of the Smithsonian Institution. | — | Washington: | Government Printing Office. | 1898. Svo, pp. 1-XII, 1-932, pls. 1-XCVII, figs. 1-149.

BULLETINS.

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 II. | Washington: | Government Printing Office. | 1898. Svo, pp. 1-XXX, 1241-2183.

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 III. | Washington: | Government Printing Office. | 1898. Svo, pp. 1-XXIV, 2184-3136.

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

ADLER, CYRUS, and CASANOWICZ, I. M. Biblical antiquities. *Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1896 (1899), pp. 943-1023, pls. 1-46.*

AMERICAN ORNITHOLOGISTS' UNION (Committee on Classification and Nomenclature). Ninth Supplement to the Ameri-

AMERICAN ORNITHOLOGISTS' UNION—Canadian Ornithologists' Union Check-list of North American Birds.

Auk, XVI, No. 1, Jan., 1899, pp. 97-133.

More than 150 additions, changes in nomenclature, etc., are here made. A list of proposed changes and additions not acted upon at this session of the committee is included.

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.

ASHMEAD, WILLIAM H. A generic synopsis of the Blennocampidae.

Journ. N. Y. Ent. Soc., vi, No. 2, July, 1898, pp. 126-129.

Twenty-two genera are characterized, 4 of which are new, viz. *Isodytium*, *Parazarcia*, *Erythraspides*, and *Calozarcia*.

— Classification of the Horn-tails and Saw-flies, or the suborder Phytophaga. Paper No. 2.

Canadian Entomologist, xxx, No. 7, July, 1898, pp. 177-183.

Gives generic tables of the Oryssidae, Siricidae, Xiphydriidae, and Cephidae. Twenty-four genera and 3 new species are characterized.

— Classification of the Horn-tails and Saw-flies, or the suborder Phytophaga. Paper No. 3.

Canadian Entomologist, xxx, No. 8, Aug., 1898, pp. 205-213.

Gives generic tables of the Xyelidae, Lydidae, and Hylotomidae. Forty genera are tabulated, 7 of which are new, viz. *Liolyda*, *Pseudotoxyphona*, *Caloptilia*, *Acanthoptenos*, *Neoptilia*, *Gymniopterus*, and *Mierarge*.

— Thymidae in the United States.

Psyche, viii, No. 268, Aug., 1898, p. 251.

Describes 1 new genus (*Glyptomotopa*) and 2 new species: *Telephoromyia anthracina* and *Glyptomotopa americana*.

— Classification of the Horn-tails and Saw-flies, or the suborder Phytophaga. Paper No. 4.

Canadian Entomologist, xxx, No. 9, Sept., 1898, pp. 225-232.

Gives generic tables of the Lophyridae, Peryiidae, Pterygophoridae, and Pergidae. Thirty genera are tabulated, of which 7 are new, viz. *Lophyridea*, *Lophyrotoma*, *Pterygophorinus*, *Syzygonidea*, *Parapterya*, *Pseudopteryga*, and *Neopteryga*.

— Classification of the Horn-tails and Saw-flies, or the suborder Phytophaga. Paper No. 5.

Canadian Entomologist, xxx, No. 10, Oct., 1898, pp. 249-257.

This paper treats of the family Selandriidae, which is divided into 4 subfamilies. Generic tables of all the genera are given. Thirty-seven genera have been recognized, of which 9 are new, viz. *Monopadnoides*, *Paraselandria*, *Periclistoptera*, *Endelomyia*, *Ericampoidea*, *Tetraneura*, *Pecilotomidea*, *Zaschizonyx*, and *Macgillivraya*.

— Two new genera of Sand Wasps.

Entomological News, ix, No. 8, Oct., 1898, pp. 187-189.

ASHMEAD, WILLIAM H.—Continued.

Describes 2 new genera and 4 new species of Sand Wasps, viz. *Faria pacifica*, *Micophinus laticeps*, *M. californicus*, and *M. texanus*.

— Classification of the Horn-tails and Saw-flies, or the suborder Phytophaga. Paper No. 6.

Canadian Entomologist, xxx, No. 11, Nov., 1898, pp. 281-287.

Treats of the family Nematidae, which is divided into 2 subfamilies, (1) Cladinae and (2) Nematinae; and of the family Dineuridae, which is also divided into 2 subfamilies, (1) Hemichroinae and (2) Dineurinae. In all 28 genera are tabulated, of which 2 are new, *Opisthoneura* and *Marlattia*.

— Some new genera of bees.

Psyche, viii, No. 271, Nov., 1898, pp. 282-285.

Gives a generic table of the Stelididae, in which 5 genera are tabulated. In this paper 8 new bee genera and 1 new species are described, viz. *Zucosmia*, *Melanostelis betheli*, *Neopasites*, *Hoplopasites*, *Hylaeosoma*, *Cockerellia*, *Phloxanthus*, and *Nomadopsis*.

— Classification of the Horn-tails and Saw-flies, or the suborder Phytophaga. Paper No. 7.

Canadian Entomologist, xxx, No. 12, Dec., 1898, pp. 305-316.

This paper, which is the last of the series, treats of the families Tenthredinidae and Cimbiidae. The first is divided into 4 subfamilies, the last into 2. In all, 48 genera are tabulated, 11 genera being new, viz. *Pseudosiobla*, *Strongylogastroilca*, *Dimorphopteryx*, *Parasiobla*, *Aomolyctium*, *Aphlodactium*, *Polystichophagus*, *Hypotaenarus*, *Hemitaenarus*, and *Homocœnura*.

— Reports upon the insects, spiders, mites, and myriapods collected by Dr. L. Stejneger and G. E. H. Barrett-Hamilton on the Commander Islands.

Report of Fur Seal Investigations 1896-1897, Part iv, 1898, Appendix i, pp. 328-351.

This report is edited by Mr. Ashmead, and is the joint work of several of the specialists connected with the National Museum (*vide* Banks, Cook, Coquillett, Dyar, Linell, and Schwarz.)

Mr. Ashmead contributed the report upon the Hymenoptera and Rhynchota. In the former, 11 species are recorded, 8 being new; in the latter, 3 species are noted, only 1 being new.

— Four new entomophilous wasps.

Entomological News, x, No. 1, Jan., 1899, pp. 9, 10.

Describes *Pisonopsis triangularis*, *Nitidlopsis striatipes*, *Harpactus howardi*, and *H. cockerelli*.

ASHMEAD, WILLIAM H.—Continued.

— Three new species in the genus *Diplectron* Fox.

Entomological News, x, No. 3, Mar., 1899, pp. 55, 56.

Gives a table of the known species and describes as new *Diplectron ferrugineus*, *D. bidentatus*, and *D. foxii*.

— Superfamilies in the Hymenoptera, and generic synopses of the families Thynnidae, Myrmosidae, and Mutillidae.

Journ. N. Y. Ent. Soc., vii, No. 1, Mar., 1899, pp. 45-60.

In this paper Mr. Ashmead has divided the Hymenoptera into ten superfamilies: (I) Apoidea, (II) Sphegoidea, (III) Vespoidea, (IV) Formicoidea, (V) Proctotrypoiden, (VI) Cynipoidea, (VII) Chalcidoidea, (VIII) Ichneumonoidea, (IX) Siricoidea, and (X) Tentredinoidea. Generic tables are given for the families Thynnidae, Myrmosidae, and Mutillidae.

Fifty-three genera are tabulated. Sixteen new genera are defined: *Iscaroides*, *Ephutonoma*, *Typhoctes*, *Odontomutilla*, *Dolichomutilla*, *Bothrionomutilla*, *Nomicphagus*, *Pyrrhomutilla*, *Eurymutilla*, *Hoplomutilla*, *Dasymutilla*, *Albomutilla*, *Trogaspidia*, *Altoncurion*, and *Micromutilla*.

— Four new species belonging to the genus *Plenoculus* Fox.

Psyche, viii, No. 275, Mar., 1899, pp. 337-339.

Gives a synoptic table for recognizing the known species of *Plenoculus* and describes 4 new species: *P. punctatus*, *P. abdominalis*, *P. niger*, and *P. albipes*.

— On the genera of the Cleonyminæ.

Proc. Ent. Soc. Wash., iv, No. 3 (issued May 24, 1899), pp. 200-206.

Mr. Ashmead separates this family into 4 subfamilies (1) Chalcidectinæ, (2) Cleonyminæ, (3) Pelecinellinæ, and (4) Colotrechinæ. Thirty-six genera are tabulated, of which 3 are new: *Chalcidiseictis*, *Tomicobia*, and *Eutrichosoma*.

— On the genera of the Eucharidæ.

Proc. Ent. Soc. Wash., iv, No. 3 (issued May 24, 1899), pp. 235-242.

Tabulates all the known genera, 23 in number. Two genera are new: *Pseudomctagea* and *Dicolothorax*.

— Classification of the old family Chalcididae.

Proc. Ent. Soc. Wash., iv, No. 3 (issued May 24, 1899), pp. 242-249.

In this paper Mr. Ashmead treats the old family as a superfamily, Chalcidoidea, and then divides it into 14 distinct minor families, as already proposed by him in a previous paper. Tables for recognizing these families,

ASHMEAD, WILLIAM H.—Continued.

and the subfamilies into which they are again divided, are given: Agaonidae, Torymidae with 5 subfamilies, Chalcidoidea with 2 subfamilies, Eurytomidae, Perilampidae, Eucharidæ, Miscogasteridae with 1 subfamilies, Cleonymidae with 4 subfamilies, Encyrtidae with 3 subfamilies, Pteromalidae with 5 subfamilies, Elasmidae, Eulophidae with 4 subfamilies, Trichogrammidæ with 2 subfamilies, and Mymaridæ with 2 subfamilies.

— Classification of the entomophilous wasps, or the superfamily Sphegoidea. Paper No. 1.

Canadian Entomologist, xxxi, No. 6, June, 1899, pp. 145-155.

Mr. Ashmead gives an introduction on the arrangement of these wasps by previous authors, exhibits the scheme of arrangement proposed by Dr. Franz Kohl, and divides the superfamily into 12 families, giving a table for their recognition. The families are: Oxybelidae, Crabronidae, Pamphredonidae, Bembecidae, Larridae, Philanthidae, Trypoxylidae, Mellinidae, Nyssonidae, Stizidae, Sphegidae, and Ampulicidae.

— A generic table of the family Panurgidae; a reply to Mr. Cockerell's critique on the segregation of *Perdita* Cockerell.

Psyche, viii, No. 278, June, 1899, pp. 372-376.

In this paper Mr. Ashmead points out particularly the differences between *Cockerellia* and *Perdita*; shows that four of Mr. Cockerell's recent new bee genera belonging in this group are synonymys, and concludes by tabulating the genera of the Panurgidae. Nineteen genera are thus tabulated.

— Classification of the bees, or the superfamily Apoidea.

Trans. Am. Ent. Soc., Phila., xxvi, May-June, 1899, pp. 49-100.

Divides the Apoidea into 14 families, some of which are again divided into subfamilies. Dichotomous tables for recognizing the families, subfamilies, and the bee genera of the world are given. In all, 216 genera are tabulated, of which 19 are new.

BANGS, OUTRAM. On some birds from Pueblo Viejo, Colombia.

Proc. Biol. Soc. Wash., xii, Aug. 10, 1898, pp. 157-160.

An account of 28 species of birds collected by W. W. Brown, jr., in Colombia. *Elania browni*, *Automolus rufipectus*, *Euarremon basilicus*, and *Thryothorus luteus* are described as new. Based partly upon Museum material.

— On some birds from the Sierra Nevada de Santa Marta, Colombia.

Proc. Biol. Soc. Wash., xii, Oct. 31, 1898, pp. 171-182.

BANGS, OUTRAM—Continued.

Notes on 66 species of birds collected by W. W. Brown, jr., in Colombia, of which the following are diagnosed as new: *Neorex colombianus*, *Aulacorhamphus lantus*, *Leucuria* (new genus), *Leucuria phalerata*, *Elania sororia*, *Gallaria spatiator*, *Spinus pinusceus capitaneus*, *Diglossa nocticolor*, *Merula phaeopygia minusea*, and *Merula gigas cacozela*. Based partly upon Museum material.

— On the subspecies of *Manacus manacus* (Linn.).

Proc. New England Zool. Club, I, Mar. 31, 1899, pp. 33-37.

This species is divided into four forms, viz: *Manacus manacus manacus* (Linn.), *M. M. abditius* (new subspecies), *M. M. purus* (new sub-species), and *M. M. gutturosus* (Desm.). Based partly upon Museum material.

— A new Rail from Southern California.

Proc. New England Zool. Club, I, June 5, 1899, pp. 45, 46.

Rallus levipes is described as new. Based partly upon Museum material.

BANKS, NATHAN. Some new spiders.

Canadian Entomologist, xxx, No. 7, July, 1898, pp. 185-188.

Descriptions of 7 new species from various parts of the United States.

— Some Mexican Phalangida.

Journ. N. Y. Ent. Soc., vi, No. 3, Sept., 1898, pp. 181, 182.

Descriptions of 5 new species from Mexico.

— Three myrmecophilous mites.

Canadian Entomologist, xxx, No. 10, Oct., 1898, pp. 265, 266.

Descriptions of 3 new mites associated with ants.

— Descriptions of new North American neuropteroid insects.

Trans. Am. Ent. Soc., xxv, No. 3, Dec., 1898, (Jan., 1899), pp. 199-218.

Descriptions of 5 new genera and 41 new species; synopses of 1 family and 3 genera.

— [Plecoptera, Trichoptera, and Arachnida.]

Report of Fur Seal Investigations 1896-1897, Part IV, 1898, Appendix 1, pp. 346-350, pl. A.

These notes are included in "Reports on the insects, spiders, mites, and myriapods collected by Dr. L. Stejneger and Mr. G. E. H. Barrett-Hamilton on the Commander Islands," edited by W. H. Ashmead. Seven new species are described.

— A classification of the North American Myrmeleonidae.

Canadian Entomologist, xxxi, No. 3, Mar., 1899, pp. 67-71.

Synopses of the genera; descriptions of 2 new genera and 1 species.

BANKS, NATHAN—Continued.

— Some spiders from northern Louisiana.

Proc. Ent. Soc. Wash., IV., No. 3 (issued May 24, 1899), pp. 188-193.

A list of 127 species. Seven new species are described.

— A new species of the genus *Haltarache*.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 212-214, fig. 15.

A new species found in a West Indian seal.

— An American species of the genus *Caculus*.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 221, 222, fig. 16.

A new species from Southern California.

— *Tarsonemus* in America.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 294-296, fig. 17.

A new species injurious to chrysanthemums.

— A new solpugid from California.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 314, 315.

A new species of *Citobis*.

— New Myrmeleonidae.

Entomological News, x, No. 6, June, 1899, pp. 170-172.

Descriptions of three new species.

BARTSCH, PAUL. First record of the Turnstone, *Arenaria interpres* (Linn.), in Iowa (May 21, 1892).

Iowa Ornithologist, IV, No. 3, July, 1898, p. 3.

The paper records the capture of 2 specimens at Burlington, Iowa.

— Primitive nesting sites of the Cliff Swallow.

Osprey, III, No. 1, Sept., 1898, p. 6, 1 fig.

This paper mentions two colonies noted on the Oneota River in northern Iowa, and includes a figure showing their nesting site.

— An afternoon amongst old scenes.

Wilson Bull., No. 22, 1898, pp. 63-65.

This paper gives an account of the birds observed on an afternoon ramble in Henderson County, Ill.

— A piscivorous Yellow-leg.

Wilson Bull., No. 24, Jan., 1899, p. 8.

This paper records the Yellow-leg feeding upon Top minnows.

— *Xema sabinii* and *Chordeiles virginianus sennetti*: Two additions to the Iowa avifauna.

Auk, XVI, Jan., 1899, p. 86.

BARTSCH, PAUL.—Continued.

Sabine's Gull and Sennett's Nighthawk are added to the list of Iowa birds. The record of the Nighthawk is based upon a specimen now in the National Museum collection.

— A primitive Swift colony.

Wilson Bull., No. 25, Mar., 1899, pp. 21, 22.

This paper deals with the Chimney Swifts, nesting in hollow cypress trees, at Lake Drummond, Dismal Swamp, Virginia.

BEAN, BARTON A. Notes on a collection of fishes from Mexico, with description of a new species of *Platyptecilus*.

Proc. U. S. Nat. Mus., XXI, No. 1159, Nov. 21, 1898, pp. 539-542, 1 fig.

— Notes on the capture of rare fishes.

Proc. U. S. Nat. Mus., XXI, No. 1165, Dec. 20, 1898, pp. 639, 640.

— *Myoxocephalus medius*, new species.

Bull. U. S. Nat. Mus., No. 47, Pt. II, 1898, pp. 1983, 1984.

A diagnosis of *Myoxocephalus medius*, included in Jordan and Evermann's "Fishes of North and Middle America," published as Bulletin 47 of the National Museum.

— *Porocottus quadratus*, new species.

Bull. U. S. Nat. Mus., No. 47, Pt. II, 1898, p. 1998.

A diagnosis of *Porocottus quadratus*, included in Jordan and Evermann's "Fishes of North and Middle America," published as Bulletin 47 of the National Museum.

BEAN, TARLETON H., and BARTON A. Note on *Orycottus acuticeps* (Gilbert) from Sitka and Kadiak, Alaska.

Proc. U. S. Nat. Mus., XXI, No. 1167, Dec. 20, 1898, pp. 655, 656.

BREWSTER, WILLIAM. An undescribed Clapper Rail from Georgia and East Florida.

Proc. New England Zool. Club, 1, June 9, 1899, pp. 49-51.

Rallus crepitans waynei is described as new. Based partly upon Museum material.

CASANOWICZ, I. M. Some customs of the Jews in Palestine.

American Hebrew, LXIV, pp. 641, 642.

(See also under Cyrus Adler.)

CHAPMAN, FRANK M. Kirtland's Warbler (*Dendroica kirtlandi*).

Auk, xv, No. 4, Oct., 1898, pp. 289-293, pl. IV.

An account of this rare bird is given, together with a list of the known specimens, and published records of the same. Based partly upon Museum material.

CHAPMAN, FRANK M.—Continued.

— The distribution and relationships of *Ammodramus maritimus* and its allies.

Auk, xvi, No. 1, Jan., 1899, pp. 1-12, pl. I.

A review of the forms of *Ammodramus maritimus*, giving the distinctive characters and geographical distribution of each. *Ammodramus maritimus fisheri* is described as new. Based partly upon Museum material.

CHESNUT, VICTOR KING. Thirty poisonous plants of the United States.

Farmers' Bull., U. S. Dept. Agric., No. 86, Jan. 19, 1899, pp. 1-32, figs. 1-24.

— Principal poisonous plants of the United States.

Bull. Div. Bot., U. S. Dept. Agric., No. 20, pp. 1-60, figs. 1-34.

CHITENDEN, FRANK H. The Larger Apple-tree Borers.

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 32, July 1 (5), 1898, pp. 1-12, figs. 1-3.

A general consideration of *Saperda candida*, *S. cretata* and *Chrysobothris fenoreta*, with particular attention to remedial treatment. Three original illustrations are given.

— A new Squash Bug.

Canadian Entomologist, xxx, No. 9, Sept., 1898, pp. 239, 240.

A preliminary article on *Anasa armigera* Say.

— Insect injury to millet.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 17, Dec. 1, 1898, pp. 84-86.

Notes on injury to *Panicum miliaceum* and other species by *Chaetocnema denticulata*, *Monocrepidius belus*, *Diabrotica 12-punctata*, *Lachnosterna* sp., and *Chlorops assimilis*.

— Insects injurious to beans and peas.

Yearbook U. S. Dept. Agric., 1898, pp. 233-260, figs. 66-82.

Popular economic accounts of 12 species of bean and pea-destroying Coleoptera, with notices of 15 other insects.

Author's extras of this paper were issued May 15, 1899.

— Twig pruners and allied species.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899, pp. 35-43, 4 figs.

A general popular account of *Elaphidion villosum*, with shorter notes on *E. incerne*, *E. subpubescens*, *E. mucronatum*, and 5 other species of the genus. Three of the figures are original.

CHITTENDEN, FRANK H.—Continued.

- A destructive borer enemy of birch trees with notes on related species.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899, pp. 44-51, 3 figs.

A general consideration of *Agrilus anxius* and its injuries to birch at Buffalo, N. Y.

The portion of this article having reference to other forms of *Agrilus* was excluded for lack of space, but the corresponding change was unfortunately not made in the title.

Author's extras were published January 12, 1899.

- A Leaf-tyer on grape and elderberry.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899, pp. 82, 83.

Notes on *Phytectenia tortalis*.

- A Flea-beetle living on purslane.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899, pp. 83-85.

Biologic notes on *Disonycha caroliniana* with descriptions of the larva and pupa.

- Biologic note on *Conotrachelus elegans* Say.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899, pp. 94, 95.

- Recent injury by Bark-beetles: A correction.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899, p. 96.

Note on injury by *Dendroctonus* to coniferous forest trees in the Northern States.

- A Leaf-beetle injurious to cultivated sunflower.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899, p. 96.

Note on *Chrysomela (Zygogramma) exelamtionis*.

- A new Sugar-beet beetle.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 6, 1899.

Occurrence of *Monoxia puncticollis* on sugar beet at Hagerman, New Mexico, and on sea blight in the East.

- The Squash Ladybird; its literature and biology.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 11-20, figs. 1, 2.

A general consideration of *Epilachna borealis*.

- Life history of the common Squash Bug (*Anasa tristis* De G.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 20-28, figs. 3-5.

CHITTENDEN, FRANK H.—Continued.

- The Horned Squash Bug (*Anasa armigera* Say).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 28-34, fig. 6.

- Some observations on the life history of the Squash-vine Borer (*Melittia satyriniformis* Hbn.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 34-40, figs. 7, 8.

- Notes on the Pickle Worm and Melon Caterpillar.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 41-44.

Notes on *Margarona nitidalis* and *M. hyalinata*.

- Leaf-footed plant-bugs which attack Cucurbits.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 44-48, figs. 9, 10.

Notes on *Leptoglossus oppositus* and *L. phyllopus*.

- Notes on the Striped Cucumber Beetle (*Diabrotica vittata* Fab.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 48-51, fig. 11.

Description of the egg and oviposition; notes on methods of control; note on *D. tri-vittata*.

- A new webworm enemy of cabbage and other cruciferous plants.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 51-57, fig. 12.

A general consideration of *Hellula undatis*, a recently discovered imported enemy of cruciferous crops in Georgia.

- Notes on the Garden Flea-hopper (*Ialticus uhleri* Giard).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 57-62, fig. 13.

A general account of this species.

- The Imbricated Snout-beetle (*Epicerrus imbricatus* Say).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 62-67, fig. 14.

- The Brown Fruit-chafer (*Euphoria inda* Linn.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 67-74, fig. 15.

CHITTENDEN, FRANK H.—Continued.

— Biologic notes on the May Beetle (*Lachnosterna arcuata* Smith).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 74-80, figs. 16-18.

A somewhat general consideration of *Lachnosterna arcuata* and a note on insect enemies of white grubs in general.

— The Spinach Flea-beetle (*Disonychia xanthomelana* Dalm.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 80-85, fig. 19.

— Biologic and other notes on the flea-beetles which attack solanaceous plants.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 85-90, fig. 20.

Notes on the North American species of *Epitrix*.

— The Cherry Leaf-beetle (*Galerucella caricollis* Lec.).

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 90-93.

— Notes on the Plum and the Rose Leaf-beetles.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 93-95.

Notes on *Nodonota tristis* and *N. puncticollis* and a short note on *N. clypealis*.

— Notes on the Fruit-tree Bark-beetle and other borers affecting fruit-trees.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 19, April 12, 1899, pp. 96-99.

Notes on *Scolytus rugulosus*, *Chion cinctus*, *Amphicercus bicaudatus*, and *Oberca ocellata*.

— The Squash-vine Borer (*Melittia satyriniformis* Hbn.).

Circ. Div. Ent., U. S. Dept. Agric. (new series), No. 38, April 22, 1899, pp. 1-6, figs. 1, 2.

A compilation of the article on the same insect in Bulletin 19 (new series), pp. 34-40, with elaboration of remedial treatment.

— The Squash Bug (*Anasa tristis* Deg.).

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 39, May 11, 1899, pp. 1-5, figs. 1-3.

A similar adaptation of an article on this insect in Bulletin No. 19 (new series), pp. 20-28.

CLARK, HUBERT LYMAN. The feather-tracts of North American Grouse and Quail.

Proc. U. S. Nat. Mus., XXI, No. 1166, Jan. 4, 1899, pp. 641-653, pls. 47-49, figs. 1-4.

COOK, O. F. American Oniscoid Diplopoda of the order Merocheta.

Proc. U. S. Nat. Mus., XXI, No. 1154, Nov. 19, 1898, pp. 451-468, pls. 29-32.

— [Myriapoda.]

Report of Fur Seal Investigations 1896-1897, Part IV, 1898, Appendix 1, pp. 350, 351.

Included in "Reports upon the insects, spiders, mites, and myriapods collected by Dr. L. Stejneger and Mr. G. E. Barrett-Hamilton on the Commander Islands," edited by W. H. Ashmead.

— African Diplopoda of the genus *Pachybolus*.

Proc. U. S. Nat. Mus., XXI, No. 1168, Mar. 17, 1899, pp. 657-666, pls. 50-52.

— The Diplopod family Striariidae.

Proc. U. S. Nat. Mus., XXI, No. 1169, March 30, 1899, pp. 667-676, pls. 53, 54.

— African Diplopoda of the family Gomphodesmidae.

Proc. U. S. Nat. Mus., XXI, No. 1170, Mar. 30, 1899, pp. 677-739, pls. 55-61.

COQUILLET, DANIEL W. On the Dip-terous family Scatophagidae.

Journ. N. Y. Ent. Soc., VI, No. 3, Sept., 1898, pp. 160-165.

Gives a synoptic table of the genera of this family occurring in this country, and describes 3 new genera and 7 new species.

— Additions to my synopsis of the Tachinidae.

Canadian Entomologist, XXX, No. 9, Sept., 1898, pp. 233-237.

Describes 9 new species, belonging to 6 different genera.

— Report on a collection of Japanese Diptera presented to the U. S. National Museum by the Imperial University of Tokyo.

Proc. U. S. Nat. Mus., XXI, No. 1146, Nov. 4, 1898, pp. 301-340.

— New species of Sapromyzidae.

Canadian Entomologist, XXX, No. 11, Nov., 1898, pp. 277-280.

Describes 14 new species belonging to 4 different genera.

— [Diptera and Siphonaptera.]

Report of Fur Seal Investigations 1896-1897, Part IV, 1898, Appendix 1, pp. 341-346.

Included in "Reports upon the insects, spiders, mites, and myriapods collected by Dr. L. Stejneger and Mr. G. E. H. Barrett-Hamilton on the Commander Islands," edited by W. H. Ashmead.

A list of 29 species is given, with descriptions of 1 new genus and 8 new species.

COQUILLET, DANIEL W.—Continued.

— Description of a new *Psilopa*.

Canadian Entomologist, xxxi, No. 1, Jan., 1899, p. 8.

Describes *Psilopa petrolei* from California, the larva of which lives in earth saturated with crude petroleum.

— A Cecidomyiid injurious to seeds of sorghum.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, Jan. 7, 1899, pp. 81, 82.

Describes *Diplosis sorghicola*, with notes on the early stages of the larva, which infests the seeds of sorghum, causing them to shrivel up and die.

— A new Trypetid from Hawaii.

Entomological News, No. 5, May, 1899, pp. 129, 130.

Describes *Dacus cucurbitæ*, the larva of which lives in green cucumbers.

COULTER, J. M., and ROSE, JOSEPH NELSON. *Hesperogenia*, a new genus of Umbelliferae from Mount Rainier.

Contrib. U. S. Nat. Herbarium, v, No. 4, Oct., 1899, p. 203.

COVILLE, FREDERICK VERNON, and ROSE, JOSEPH NELSON. List of plants collected by Dr. and Mrs. Leonhard Stejneger on the Commander Islands, 1895 and 1897.

Report of Fur Seal Investigations 1896-1897, Part iv, 1898, Appendix II, pp. 352-361.

CULIN, STEWART. Chess and playing cards.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1896 (1899), pp. 665-942, pls. 1-50, figs. 1-226.

CURRIE, ROLLA P. New species of North American Myrmeleoneidæ. III.

Canadian Entomologist, xxx, No. 9, Sept., 1898, pp. 241-243.

Describes *Brachymemurus hubbardii*.

— New species of North American Myrmeleoneidæ. IV.

Canadian Entomologist, xxx, No. 11, Nov., 1898, pp. 273-276.

Describes *Brachymemurus brunneus*.

DALL, WILLIAM HEALEY. Note on the anatomy of *Resania* Gray and *Zenatia* Gray.

Proc. Malacological Soc., III, part 2, July, 1898, pp. 85, 86.

This is a note on the anatomy of 2 rare bivalves from New Zealand, which were obtained by the Museum from Mr. Suter, of

DALL, WILLIAM HEALEY—Continued.

Christchurch. Some interesting anatomical features are described in which these mollusks seem to differ from any hitherto known.

— A new species of *Ceres* from Mexico.

Nautilus, XII, No. 3, July, 1898, pp. 27, 28.

A new species of *Ceres* from Mexico, *Ceres nelsoni*, which is especially interesting for the reason that hitherto only two species of this remarkable genus have been known, and the present one, collected in Mexico by Mr. E. W. Nelson, is larger and finer than either of the earlier known species.

— On a new species of *Myllita*.

Nautilus, XII, No. 4, Aug., 1898, pp. 40, 41.

This paper discusses the nomenclature of the genus, enumerates the species which are already known, and describes *Myllita inaequalis*, a new species from South Australia.

— A new species of *Terebra* from Texas.

Nautilus, XII, No. 4, Aug., 1898, pp. 44, 45.

This note describes the first typical *Terebra* known from the tropical waters of eastern America. It was collected by Hon. J. D. Mitchell, of Victoria, Texas. The type, which has been named *Terebra texana*, is in the National Museum.

— A new *Polygyra* from New Mexico.

Nautilus, XII, No. 7, Nov., 1898, p. 75.

Polygyra minorhyssa, from the Sierra Blanca, Lincoln County, New Mexico.

— Description of a new *Ampullaria* from Florida.

Nautilus, XII, No. 7, Nov., 1898, pp. 75, 76.

This note describes *Ampullaria pinei*, collected on the Homosassa River, Florida, by Mr. George Pine.

— A table of the North American Tertiary horizons correlated with one another and with those of western Europe, with annotations.

18th Ann. Rep. U. S. Geol. Surv., part 2, 1898, pp. 325-348.

This paper gives a synopsis of the main divisions of the Tertiary, defining their limits, and shows in a table, so far as our present knowledge extends, the succession of these beds, and correlates those of the eastern, central, and western portions of the country in a manner to show the equivalent beds in the same horizontal line. This table includes the entire Tertiary series. A series of notes upon names used in the table is given, indicating the origin of the name, mentioning any question which has arisen in regard to the division of this or some other name, giving references to the literature in which each name was defined or fully described, and mentioning the chief synonyms.

DALL, WILLIAM HEALEY—Continued.

— On the proposed University of the United States and its possible relations to the scientific bureaus of the Government.

Am. Naturalist, XXIII, No. 386, Feb., 1899, pp. 97-107.

This essay discusses the practical methods by which the opportunities offered by the scientific bureaus of the Government could be utilized for the instruction of students, and points out the difficulties in the realization of any plan in which the presence of the students in those laboratories forms a part. Although this is a feature of most of the propositions for a National University, on the practicability of which the success of those projects depends absolutely, it has been almost universally ignored by those persons who have endeavored to promote the establishment of such a university.

— On a new species of *Drillia* from California.

Nautilus, XII, No. 11, Mar., 1899, p. 127.

A new species of *Drillia*, collected by Mr. and Mrs. T. S. Oldroyd, off San Pedro, Cal., is described under the name of *Drillia empyrosia*.

— A new *Pteronotus* from California.

Nautilus, XII, No. 12, Apr., 1899, pp. 133, 139.

This note describes *Pteronotus carpenteri*, obtained from several localities on the coast of California.

— How long a whale may carry a harpoon.

Nat. Geograph. Mag., x, No. 4, Apr., 1899, pp. 136, 137.

This paper gives some data in relation to a harpoon deposited in the National Museum by the National Geographic Society, and found in a whale taken in Bering Sea in August, 1890, which it appears must have been carried in the animal's body for thirty-six years.

— The Calaveras skull.

Proc. Acad. Nat. Sci., Phila., Apr., 1899, pp. 2-4.

This note places on record the observations of witnesses in regard to this skull, about which so much controversy has gathered and in regard to which, recently, some new expressions of incredulity have been published.

— Synopsis of the American species of the family Diplodontidae.

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 *Felanidella*, based on *Felanina usta* Gould, and section *Phycetiderma* Dall, based on *Diplodonta semi-*

DALL, WILLIAM HEALEY—Continued.

aspera Phil., are described as new; *Diplodonta verrilli* is proposed as a new name for *Diplodonta burgula* Verrill and Smith, not Conrad; *Diplodonta semirugosa* Dall is proposed as a new name for *Diplodonta semispora* of Carpenter, not of Philippi; *Diplodontu platensis* from Argentina is described as new.

— Synopsis of the recent and Tertiary Leptonacea of North America and the West Indies.

Proc. U. S. Nat. Mus., XXI, No. 1177, June 29, 1899, pp. 873-897, pls. 87, 88.

This paper gives the results of a revision of the groups belonging to the Leptonacea, a table of the revised classification and lists (A) of the species of the east coast of North America; (B) of the west coast of North America, and (C) of the Tertiary American species.

The genus *Galeomma* is divided into sections, of which two, *Amphilepida* and *Paralepida*, are new; *Spaniorinus* and *Scintillorhis* are new subgenera of *Solecardia* Conrad; *Vasconicella* is proposed as a new generic name for *Vasconia*, which is preoccupied. In the Leptonidae, *Epilepton* (subgenus of *Lepton*) is proposed for *Lepton clarkii*; *Ceratobornia*, a section of *Bornia*, *Manickellia* and *Kelliola*, sections of *Kellia*, *Serridens* and *Dicranodesma*, subgenera of *Thecodonta*, and *Pythinella*, subgenus of *Mysella* angas, are new.

The following new species and varieties are described: *Sportella pilsbryi*, *S. californica*, *S. stearnsii*, *Anisodontu corbuloides*, *Erycina linella*, *E. cammoussi*, *E. periscopiana*, *E. fernandina*, *E. compressa*, *Bornia barbadensis*, *B. retifera*, *Mysella tumidula*, var. *verrilli*, *Mysella barbadensis*, *M. aleutica*, *M. pedrona*, *Montacuta floridana*, *M. minuscula*, *M. limpida*, *M. percompressa*.

The following new names are applied to species of which the names in use are preoccupied or erroneous: *Solecardia mörchii* for *S. cburnea* Mörch, not Conrad.

The new species are figured, the method in which *Pseudopythina* attaches itself to crustacea, and the animal of *Ceratobornia* are illustrated.

DILLER, J. S. Origin of Paleotrochis.

Am. Journ. Sci., VII, May, 1889, pp. 337-342.

The author shows that these supposed fossils are derived from an ancient eruptive rock. These bodies are of the nature of spherulites and are therefore not organic.

DYAR, HARRISON G. Notes on some Saw-fly larvae, especially the Xyelidae.

Canadian Entomologist, xxx, No. 7, July, 1898, pp. 173-176.

Describes 4 larvae.

— Concerning *Xanthorhoe glacialis* Hulst.

Canadian Entomologist, xxx, No. 8, Aug., 1898, p. 203.

DYAR, HARRISON G.—Continued.

— Six new or little-known larvæ of Pterophoridae.

Psyche, VIII, No. 268, Aug., 1898, pp. 249, 250.
One new species is described, *Pterophorus rhynchosiv*.

— Life histories of New York Slug Caterpillars, XVI.

Journ. N. Y. Ent. Soc., VI, No. 3, Sept., 1898, pp. 151-158, pl. VIII, figs. 1-11.

— Life history of *Calybia slossoniæ*.

Journ. N. Y. Ent. Soc., VI, No. 3, Sept., 1898, pp. 158-160.

— Life history of *Pamphila ethiæus*.

Entomological News, IX, No. 7, Sept., 1898, pp. 163-165.

— Note on the larva of *Melanomma auricinctarium* Grote.

Canadian Entomologist, XXX, No. 10, Oct., 1898, p. 257.
Description of larva.

— A new *Parasa*, with a preliminary table of the species of the genus.

Psyche, VIII, No. 270, Oct., 1898, pp. 273-276.
Describes *Parasa prasina*.

— *Inguromorpha slossonii* Hy. Edw.

Entomological News, IX, No. 9, Nov., 1898, pp. 213, 214.

— A new Hypopta.

Entomological News, IX, No. 9, Nov., 1898, p. 214.
Describes *Hypopta anna* from a specimen collected at Miami, Fla., by Mrs. A. T. Slosson.

— Notes on certain South American Cochlidiidae and allied families.

Journ. N. Y. Ent. Soc., VI, No. 4, Dec., 1898, pp. 231-239.

Contains descriptions of the following new genera: *Dalcerina*, *Epipinea*, *Brachycodilla*, *Episibine*, *Protalima*, *Epiperola*, *Palcophobron*, *Pseudovipsania*, and of one new species, *Euclea viridigrisca*.

— Life history of New York Slug Caterpillars. XVII.

Journ. N. Y. Ent. Soc., VI, No. 4, Dec., 1898, pp. 241-246, pl. XI, figs. 1-12.

— [Lepidoptera.]

Report of Fur Seal Investigations 1896-1897, Part IV, 1898, Appendix I, pp. 335, 336.

Included in "Reports upon the insects, spiders, mites, and myriapods collected by Dr. L. Stejneger and Mr. G. E. H. Barrett-Hamilton on the Commander Islands", edited by W. H. Ashmead. A list of 5 species.

DYAR, HARRISON G.—Continued.

— Life histories of North American Geometridæ. 1.

Psyche, VIII, No. 273, Jan., 1899, pp. 310, 311.

Descriptive of *Aplodes mimosaria* Guenée.

— A suggestion for the Pterophoridae.

Entomologist's Record and Journal of Variation, XI, No. 2, Feb. 15, 1899, pp. 39, 40, pl. 1, figs. 1-6.

Points out the principal characters to be noted in describing the larvæ.

— Description of larva of *Ingura delineata* Guen.

Canadian Entomologist, XXXI, No. 2, Feb., 1899, pp. 27, 28.

Description of all stages.

— On the larvæ of North American Nolidæ, with descriptions of new species.

Canadian Entomologist, XXXI, No. 3, Mar., 1899, pp. 61-64.

Three new species are described, viz: *Nola clethreæ*, *Meganola minor*, and *M. dentata*.

— Life histories of New York Slug Caterpillars. XVIII.

Journ. N. Y. Ent. Soc., VII, No. 1, Mar., 1899, pl. 1, figs. 1-10, pp. 61-68.

— Life history of *Diphthera fallax* H.-S.

Journ. N. Y. Ent. Soc., VII, No. 1, Mar., 1899, p. 68.

— Description of the larva of *Calocampa curvimaacula*.

Psyche, VIII, No. 275, Mar., 1899, pp. 336, 337.

— West African moths.

Canadian Entomologist, XXXI, No. 4, April, 1899, p. 88.

Corrective note of some previous descriptions.

— On the smallest Pyromorphid and its larva.

Entomological News, X, No. 4, April, 1899, pp. 99, 100.

Describes the Cuban genus *Setiodes* H.-S., and the new species, *S. bahamensis*, adult and larva.

— Spathulate Head Setæ on the larva of *Chamyris cerintha* Treits.

Journ. N. Y. Ent. Soc., VIII, No. 276, April, 1899, p. 349.

— Some structural points in Saw-fly larvæ.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 218-220.

DYAR, HARRISON G.—Continued.

— Note on an external feeding Hymenopterous parasite.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 233, 234.

— A new Saw-fly.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 262, 263.

Describes larva and adult *Lophyrus pratti*.

— Identification of the euceid larvæ figured in Glover's "Illustrations of North American Entomology."

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 300-302.

— Descriptions of the larvæ of fifty North American Noctuidæ.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 315-332.

Contains also a synoptic table for the forms described in this paper.

— Larvæ of Xyelidæ.

Canadian Entomologist, XXXI, No. 5, May, 1899, p. 127.

Note in reply to F. W. Konow.

— A new Cossid from Texas.

Entomological News, x, No. 5, May, 1899, p. 129.

Describes *Inguromorpha arbeloides*.

— Notes on Alaskan Arctiidæ.

Entomological News, x, No. 5, May, 1899, pp. 130, 131.

Contains a description of a new species, *Hypophorata subnebulosa*.

— A new Lithosian.

Psyche, VIII, No. 277, May, 1899, pp. 359, 360.

Describes *Ozodania schwarziorum*, new genus and species.

— The phylogeny of the Lasiocampids.

Entomologist's Record and Journal of Variation, XI, No. 6, June 1, 1899, pp. 141, 142, pl. 1.

— *Spilosoma congrua* Walker.

Canadian Entomologist, XXXI, No. 6, June, 1899, pp. 155, 156.

Note in reply to Rev. T. W. Fyles.

DYAR, H. G. (See also under JOHN B. SMITH.)

EAKLE, ARTHUR S. Topaz crystals in the mineral collection of the U. S. National Museum.

Proc. U. S. Nat. Mus., XXI, No. 1148, Nov. 10, 1898, pp. 361-369, figs. 1-22.

EVERMANN, BARTON W. (See under DAVID S. JORDAN.)

GILBERT, CHARLES H. On the occurrence of *Caulolepis longidens* Gill, on the coast of California.

Proc. U. S. Nat. Mus., XXI, No. 1161, Nov. 21, 1898, pp. 565, 566.

GILL, THEODORE N. The determinants for the major classification of fish-like vertebrates.

Rep. Brit. Assoc. Adv. Sci., 1897 (1898), p. 696, 697.

Nine classes of vertebrates are recognized, of which five have been confounded under the designation of "fishes"—the Leptocardians, Marsipobranchs, Ostracophores, Selachians, and Teleostomes. "The gaps between the lower classes are very great. The least differences between the Selachians and Teleostomes are manifest in the Xenacanthini and Dipnoi of the Palæozoic; the least differences between the Teleostomes and Amphibians in the Crossopterygians and Stegocephals."

— On the derivation of the pectoral member in terrestrial vertebrates.

Rep. Brit. Assoc. Adv. Sci., 1897 (1898), p. 697.

The most important hint respecting the origin of the chiropterygium is furnished by *Polypterus*. "The chief objection to the derivation of the chiropterygium from the pectoral member of such a form as *Polypterus* is that at present no extinct representatives are known. Probably future research will reveal such, as the genus belongs to a very archaic type."

— Some questions of nomenclature.

Ann. Rep. Smithsonian Inst., 1896 (Nov. 19, 1898), pp. 457-483.

A republication, with corrections of former typographical errors, of the address as vice-president of section F (Zoology) at the Buffalo meeting of the American Association for the Advancement of Science, August, 1896. It also contains an additional note on Lang's "Methodus novæ Testaceæ—distribuendi," 1722.

After an "introduction" (p. 457), the author treats of the "commencement of binomial nomenclature" (p. 459), "trivial names" (p. 461), "draconian laws" (p. 462), "misapplied names" (p. 465), "double names" or tautonyms (p. 468), "variants and similarity of names" (p. 469), "making of names" (p. 471), "typonyms" (p. 474), "choice of names simultaneously published" (p. 475), "major groups and their nomenclature" (p. 475), "family" (p. 478), "superfamily" (p. 481), "other groups" (p. 482), and "complaints of instability of nomenclature" (p. 482).

GILL, THEODORE N.—Continued.

— The tailless batrachians of Europe.

Science (new series), VIII, Dec. 30, 1898, pp. 932-938, with 13 figs.

A review of "The Tailless Batrachians of Europe, by G. A. Boulenger, F. R. S." The work is highly commended and the illustrations borrowed from it.

A comparison is instituted between the European and North American batrachians. Dissent is expressed from previous investigators respecting the affinities of *Scaphiopus*. The families Pelobatidæ and Scaphiopiidæ of Cope are declared to be inseparable.

"Further examination of the skeletons of *Pelodytes*, *Pelobates*, and *Scaphiopus* should convince a competent observer that the differences between *Pelobates* and *Pelodytes* are much less than those between *Pelobates* and *Scaphiopus*;" in fine, "if the family is to be divided, the two European genera should be combined and contrasted with the American." It is further urged that an arrangement of the phanerozoic forms into three superfamilies of which the arciferous family of Discoglossids is the most generalized, may be more acceptable to some; the superfamilies are Discoglossoidæ, Bufonoidea, and Ranoidea.

— The generic names *Pediocetes* and *Poocetes*.

Auk, XVI, Jan., 1899, pp. 20-23.

Pediocetes and *Poocetes* are formed on the model of *Ammodetes*, a misspelling of *Ammocetes* by Baird. The same author, however, substituted for them and first published *Pediocetes* and *Poocetes*, and those should be adopted. *Poocetes graminca affinis* is a new combination.

— Suggestions for a new history of North American birds.

Osprey, III, Feb., 1899, pp. 88-94.

The suggestions are arranged under the following headings: Our predecessors; deficiencies [of previous works]; a new work timely; desirability of generalized biographies; proposals for publication; classification to be adopted; avine orders; natural selection among birds; oscine families; subspecies; extra-limital species; synonymy; sequence of data; general; historical; who shall write?

— Concerning Dr. Gill's proposed history.

Osprey, III, Mar., 1899, p. 137.

A letter to the editor of the *Osprey*, inclosing letters to the writer, with comments.

— Relative value of the different groups of animals from the faunistic standpoint.

Proc. Ent. Soc. Wash., IV, May 24, 1899, p. 194.

Report of remarks at meeting of May 13, 1897.

GILL, THEODORE N.—Continued.

— Larval stage of the eel.

Science (new series), IX, June 9, 1899, p. 820.

It is deduced that "Inasmuch as (1) the sea-going eels do not mature their ova till the winter season, (2) the leptocephalus young are found from February to September, or later, and (3) the transitional form between the leptocephalus stage and the cylindrical stage has been found in January, it appears tolerably certain that the evers which ascend the rivers in the early spring are the progeny of eels that descended therefrom *not later* than winter of the penultimate (and not last) season."

— The longevity of birds and other vertebrates.

Osprey, III, June, 1899, pp. 157-160.

Comments on Mr. J. H. Gurney's article "On the comparative ages to which birds live," with remarks on the conclusions of previous writers, and generalizations respecting relation of growth to duration of life in mammals, birds, and fishes.

— (Editor) Report, in part, of Samuel Mitchell, M. D., professor of natural history, etc., on the fishes of New York. Washington: Printed for the editor.

Svo, pp. i-x, 1-30.—Published Dec. 7, 1898.

The editor remarks: "One of the rarest of American contributions to ichthyology is a little work published in 1814—to be very precise, published 'January 1, 1814'—on the fishes of New York; in brief, the 'Report, in part, of Samuel L. Mitchell, M. D., professor of natural history, etc., on the fishes of New York.' The only copies of whose existence in the United States the editor was able to learn are three. It contains original and detailed descriptions of 49 species, with a simple catalogue of 21 more." Thirty-eight are described or designated as new and 12 were really so at the time. Four genera also are designated as new and 3 have been adopted by recent authors.

A small edition has been published with a historical and critical introduction and identification of the species, as well as a concordance of names with those by which the species are known at the present day.

GOODE, G. BROWN.¹ Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1896.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1896 (1899), pp. 1-284, pls. 1-4.

GRINNELL, JOSEPH. Geographical races of *Harpophynchus redivivus*.

Auk, xv, No. 3, July, 1898, pp. 236, 237.

¹Died September 6, 1896.

GRINNELL, JOSEPH—Continued.

Harpogonochelus redivivus pasadenensis is described as new. Based partly upon Museum material.

— The San Nicolas Rock Wren.

Auk, xv, No. 3, July, 1898, pp. 237-239.

Salpinctes obsoletus pulcherrimus is described as new. Based partly upon Museum material.

HAY, OLIVER P. On *Protostega*, the systematic position of *Dermochelys*, and the morphology of the Chelonian carapace and plastron.

Am. Naturalist, xxxii, Dec., 1898, pp. 929-948.

Observations on a young specimen of *Dermochelys* in the National Museum.

HAY, W. P. Description of a new species of subterranean isopod.

Proc. U. S. Nat. Mus., xxi, No. 1176, June 1, 1899, pp. 871, 872, pl. LXXXVI.

This species, *Hypophthalmus puteus*, was obtained from an old well in Irvington, Ind. It is related to *H. mengii* (Zaddaeh) and *H. danicus* Budde-Lund.

HENDERSON, L. F. Two new species of plants from the Northwestern States.

Contrib. U. S. Nat. Herbarium, v, No. 4, Oct., 1899, pp. 201, 202.

HILL, R. T., and VAUGHAN, T. WAYLAND. The Lower Cretaceous Gryphæas of the Texas region.

Bull. U. S. Geol. Surv., No. 151, 1898, pp. 1-129, pls. 1-35.

This work treats in great detail the Texan Gryphæas and the very intricate synonymy. The material is nearly all in the U. S. National Museum.

HOUGH, WALTER. Korean clan organization.

Am. Anthropologist (new series), i, No. 1, Jan., 1899, pp. 150-154.

An account of the interesting clan or family organization of Korea which has survived to the present day, paralleling the present governmental system. This paper grew out of the labeling of Korean specimens in the Museum by Mr. Kiu Beung Surh.

— The lamp of the Eskimo.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1896 (1899), pp. 1025-1057, pls. 1-24, figs. 1-4.

A monograph of the lamps of the Eskimo area, showing distribution of forms, local modifications, effect of latitude, uses, and illuminants; also the bearing of the lamp on the social life, art, and religion of the Eskimo.

HOWARD, LELAND O. Remedial work against the Mexican Cotton-boll Weevil.

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 33, July 15, 1898, pp. 1-6.

An account of the latest and best measures to be used against *Anthonomus grandis*.

— House flies (*Musca domestica* et al.).

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 35, July 18, 1898, pp. 1-8, figs. 1-6.

An account of the habits and life histories and the remedies to be used against several dipterous insects found in houses.

— International relations disturbed by an insect.

Forum, July, 1898, pp. 569-573.

An account of international restrictions to prevent the spread of the San Jose scale, with a plea for scientific representation of the United States at foreign capitals.

— On some new parasitic insects of the family Encyrtinae.

Proc. U. S. Nat. Mus., xxi, No. 1142, Oct. 4, 1898, pp. 231-248.

Descriptions of ten new genera and thirty-four new species, together with a synoptic table of the species of the genus *Aphyeus*.

— Two beneficial insects introduced from Europe.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 17, Dec. 1, 1898, pp. 13-16, figs. 1, 2.

Notes on *Scutellista cyanica* Mots., and *Iabrolepis dabmani* Westw.

— Notes on house flies and mosquitoes.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 17, Dec. 1, 1898, pp. 55, 59.

Author's abstract, treating especially of the use of permanganate of potash against mosquitoes, indicating its uselessness in spite of frequent recommendations.

— *Pulvinaria acericola* (W. & R.) and *P. innumerabilis* Rathv.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 17, Dec. 1, 1898, pp. 57, 58, 1 fig.

Giving evidence that these species, of which the first was considered a synonym of the second, are in reality distinct, and that the name *Pulvinaria acericola* (W. & R.) must hold.

— (Editor) Proceedings of the American Association for the Advancement of Science, forty-seventh meeting and fiftieth anniversary, held at Boston, 1898.

Salem, Dec. 18, 1898, pp. 1-658, 7 pls. and 18 figs.

HOWARD, LELAND O.—Continued.

— Report of the Entomologist for 1898.

Rep. Secy. Agric., 1898, pp. 17-25.

An executive report of the work of the Division of Entomology of the U. S. Department of Agriculture. Published also in separate form.

— The San José scale on dried fruit.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, 1898 (Jan. 6, 1899), pp. 7-13.

An account of a series of experiments made upon different varieties of fruit dried by different commercial methods. It was found that these methods invariably result in the death of the scale, and that therefore European restrictions on the importation of American dried fruit are uncalled for.

— The work of *Icerya purchasi* in Portugal, with an account of the introduction from America of *Norius cardinalis*.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, 1898 (Jan. 6, 1899), pp. 30-35.

An account of the introduction of *Icerya purchasi* into Portugal, with a statement of its damage and of the result of the sending *Norius cardinalis* from America, which at the time of writing appeared to promise the almost entire extermination of the *Icerya*.

— Cotton-field insects.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, 1898 (Jan. 6, 1899), pp. 85-89.

A list of insects collected in a cotton field at Victoria, Texas, by the Hon. J. D. Mitchell. The specimens were obtained by means of a trap lantern on a single night in October.

— General notes and notes from correspondence.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, 1898 (Jan. 6, 1899), pp. 89-101.

A number of unsigned notes.

— An insect breeding in crude petroleum.

Sci. Amer., LXXX, No. 5, Feb. 4, 1899, pp. 75, 76, 1 fig.

An account of *Psilopa petrolei* Coq., which breeds in crude petroleum pools in the vicinity of Los Angeles, California.

Reprinted in the *Pharmaceutical Era*, Mar. 2, 1899.

— The economic status of insects as a class.

Science, IX, No. 216 (new series), Feb. 17, 1899, pp. 233-247.

Address of the retiring president of the Biological Society of Washington, delivered Jan. 18, 1899.

Reprinted in the *Scientific American Supplement*, Nos. 1209, 1210, Mar., 1899.

HOWARD, LELAND O.—Continued.

— *Allorhina* as a fruit pest.

Entomological News, No. 3, Mar., 1899, p. 71.

— The odor of Coccidæ.

Canadian Entomologist, XXXI, No. 4, April, 1899, p. 96.

— The principal insects affecting the tobacco plant.

Yearbook U. S. Dept. Agric., 1898 (issued May 15, 1899), pp. 121-150, figs. 7-31.

An account of the life histories and habits of the principal tobacco insects of the United States, with data concerning the remedies used.

Author's extras of this paper were issued May 20, 1899.

— A dipterous parasite of *Lachnosterna*.

Proc. Ent. Soc. Wash., IV, No. 3, May 24, 1899, pp. 198, 199.

An account of undescribed dipterous eggs found upon the thorax of *Lachnosterna* in Greene County, N. Y.

— The Thomson-Mayr priority question settled.

Proc. Ent. Soc. Wash., IV, No. 3, May 24, 1899, pp. 207, 208.

Showing that the encyrtine genera of Gustav Mayr take priority over those of C. G. Thomson.

— Butterflies attracted to light at night.

Proc. Ent. Soc. Wash., IV, No. 3, May 24, 1899, pp. 333, 334.

An account of instances on record. *Pholisora catullus* is added to the list of species previously recorded.

— Notes on *Rasahus thoracicus*, *Xylocopa cubæcola*, and *Dichelonycha fulgida*.

Proc. Ent. Soc. Wash., IV, No. 3, May 24, 1899, p. 335.

— The extermination of the mosquito.

Sci. Am. Suppl., XLXII, No. 1222, June 3, 1899, p. 19593.

Exposes the so-called permanganate of potash remedy.

— Pests of the hop crop.

The Hop, its Culture, Care, Marketing, and Manufacture. By Herbert Myrick. Orange Judd Co., 1899, pp. 113-141, figs. 55-72.

An account of the habits and life histories of and remedies to be used against the insects which affect the hop plant in the United States.

Author's extras of this article were distributed June 21, 1899.

JORDAN, DAVID STARR, and EVERMANN, BARTON W. Smithsonian In-

JORDAN, DAVID STARR, and EVERMANN, BARTON W.—Continued.

stitution. | 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 II. | Washington: | Government Printing Office. | 1898.

8vo., pp. 1-xxx, 1241-2183.

— 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 III. | Washington: | Government Printing Office. | 1898.

8vo., pp. 1-xxiv, 2184-3136.

KNOWLTON, FRANK HALL. In a coal swamp.

Plant World, III, Nov., 1898, pp. 21-23, 1 pl.

This paper contains a general account of the production of coal.

— The fossil plants of the Payette formation.

18th Ann. Rep. U. S. Geol. Surv., 1896-97 (1898), Part III, pp. 721-744, 4 pls.

In this paper, which is based upon material eventually to be transmitted to the U. S. National Museum, 32 forms are enumerated, of which 17 are described as new. They are from five localities in Boise County, Idaho, and are said to be of Upper Miocene age. The relationship of the flora to that of Bridge Creek and John Day Valley, Oregon, is pointed out.

KNOWLTON, FRANK HALL—Cont'd.

— A catalogue of the Cretaceous and Tertiary plants of North America.

Bull. U. S. Geol. Surv., No. 152, 1898, pp. 1-247.

This catalogue is arranged in alphabetical sequence. A bibliography, consisting of a list of the works and papers used in preparing the catalogue, is included.

LINELL, MARTIN L.¹ On the coleopterous insects of the Galapagos Islands.

Proc. U. S. Nat. Mus., XXI, Oct. 4, 1898, No. II43, pp. 249-268.

Gives a list of the insects found on the Galapagos Islands and describes one genus and 11 species as new. Descriptions of two allied species from Brazil are included.

— Descriptions of some new species of North American heteromerous Coleoptera.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 180-185.

Describes 8 new species.

LINELL, MARTIN L., and SCHWARZ, EUGENE A. [Coleoptera.]

Report of Fur Seal Investigations 1896-1897, Part IV, 1898, Appendix I, pp. 328-336.

Included in "Reports upon the insects, spiders, mites, and myriapods collected by Dr. L. Stejneger and Mr. G. E. H. Barrett-Hamilton on the Commander Islands," edited by W. H. Ashmead. Gives a list, with notes, of 48 Coleoptera.

LORD, EDWIN C. E. On the dikes in the vicinity of Portland, Me.

Am. Geologist, XXII, Dec., 1898, pp. 335, 336, 1 map.

Describes the petrographic nature of the rocks in the region noted. The work was done in the laboratory of the Division of Geology, and a type series of the rocks studied remains in the Museum.

— Petrographic report on rocks from the United States-Mexico boundary.

Proc. U. S. Nat. Mus., XXI, No. 1173, May 22, 1899, pp. 773-782, pl. 85.

Gives a description of the rocks collected by Dr. E. A. Mearns, while connected with the International Boundary Commission, and deposited by him in the National Museum.

LUCAS, FREDERIC AUGUSTUS. Contributions to Paleontology.

Am. Journ. Sci., VI, Nov., 1898 (article XXXIX), pp. 399, 400.

(1) A new crocodile from the Trias of southern Utah, to which the name *Heterodontosuchus gawi* is given. (2) A new species of *Dinictis* (*D. major*). The types are in the U. S. National Museum.

¹ Mr. Linell died May 3, 1897, and the papers here cited are posthumous.

LUCAS, FREDERIC AUGUSTUS—Cont'd.

— A new snake from the Eocene of Alabama.

Proc. U. S. Nat. Mus., XXI, No. 1164, Dec. 20, 1898, pp. 637, 638, pls. XLV, XLVI.

Describes a large snake found associated with remains of *Zenagodon* for which the name *Pterospheenus schucherti* is proposed.

— *Theragra* Lucas, a new genus.

Bull. U. S. Nat. Mus., No. 47, Part III, 1898, p. 2535.

Gives a diagnosis of the genus of which the Alaskan Pollack, *Theragra chalcogramma*, is the type. The description is included in Jordan and Evermann's "Fishes of North and Middle America," published as Bulletin 47 of the National Museum.

— The characters of *Bison occidentalis*, the Fossil Bison of Kansas and Alaska.

Kansas Univ. Quarterly, VIII, No. 1, Jan., 1899 (Series A), pp. 17, 18, pls. VIII, IX.

Describes this new species and contrasts it with *Bison antiquus*.

— The nomenclature of the hyoid in birds.

Science (new series), IX, No. 218, Mar. 3, 1899, pp. 223-234, 1 fig.

Calls attention to the discrepancies in naming the component parts of the hyoid and suggests the correct names for them.

— The Fossil Bison of North America.

Proc. U. S. Nat. Mus., XXI, No. 1172, May 13, 1899, pp. 755-771, pls. LXV-LXXXIV, figs. 1, 2.

Describes and figures the various species of North American fossil bison and gives synonymy.

The species recognized are *Bison alleni*, *antiquus*, *bison*, *crassicornis*, *ferox*, *latifrons*, and *occidentalis*. This paper is based largely upon material belonging to other institutions.

MCGREGOR, RICHARD C. Description of a new *Ammodramus* from Lower California.

Auk, xv, No. 3, July, 1898, pp. 265-267.

Ammodramus halophilus is here described. Based partly upon Museum material.

MARK, E. L. 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. XXIV.—Pre-

MARK, E. L.—Continued.

liminary report on *Branchiocerianthus urceolus*, a new type of actinian.

Bull. Mus. Comp. Zool. Harv. Coll., XXXII, No. 8, Aug., 1898, pp. 147-154, pls. 1-3.

In general appearance this form resembles *Cerianthus*, but differs from it in important points and may be the type of a new family. It exhibits a pronounced bilateral symmetry and an incomplete circle of branching gill-like organs.

The specimens were taken in the Gulf of Panama in 286 and 210 fathoms.

MARLATT, CHARLES L. House ants.

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 34, July, 1898, p. 4, 3 figs.

Gives the life habits and remedies for three common species.

— The true Clothes Moth.

Circ. Div. Ent., U. S. Dept. Agric. (second series), No. 36, Aug., 1898, pp. 1-8, 3 figs.

A full account of three species.

— Japanese Hymenoptera of the family Tenthredinidae.

Proc. U. S. Nat. Mus., XXI, No. 1157, Nov. 21, 1898, pp. 493-506.

Includes the description of 26 new species of sawflies, with a list of additional species based on material presented to the National Museum by Dr. K. Mitsukuri, of the Imperial University, Tokyo, Japan.

— Notes on insecticides.

Bull. Ent. Div., U. S. Dept. Agric. (new series), No. 17, Nov., 1898, pp. 94-98.

Presents the result of experimental work with kerosene, fish-oil soaps, and arsenicals. In the case of the latter particular attention is called to the superior value of arsenite of copper over paris green.

— Some new Nematids.

Canadian Entomologist, xxx, No. 12, Dec., 1898, pp. 302-304.

Describes the following new species: *Protania consors*, *P. borealis*, and *Pteronus carpini*; describes also the male of the two following species: *Pteronus quercus* and *Nematus chlorcus*.

— A new nomenclature of the broods of the Periodical Cicada.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, 1898, pp. 52-58.

Gives a review of the nomenclature adopted at different times for the Periodical Cicada, and points out the inappropriateness of the system in common use; suggests a renumbering of the broods, to show the relationship of the broods to each other, in both the seven-teen and the thirteen-year race. The relationship sustained between the different broods

MARLATT, CHARLES L.—Continued.
of both races is indicated, and three new seventeen-year and three new thirteen-year broods are designated.

— A consideration of the validity of the old records bearing on the distribution of the broods of the Periodical Cicada, with particular reference to the occurrence of broods VI and XXIII in 1898.

Bull. Div. Ent., U. S. Dept. Agric. (new series), No. 18, 1898, pp. 59-78.

Points out the sources of error in the old records, describes the work undertaken in the case of broods XXIII and VI in 1898, and concludes with a list, by States and Counties, of the occurrence of these broods in the year named. The author also gives a list of the persons reporting on these broods, with an indication of the nature of the report received.

— An investigation of applied entomology in the Old World.

Proc. Ent. Soc. Wash., IV, No. 3 (issued May 24, 1899), pp. 265-291.

Summarizes the writer's experience in the course of several months' investigation of the practical work in entomology in various European States.

— Fitch's Cotton Scale Insect.

Entomological News, x, No. 5, May, 1899, p. 146.

Discusses the scale insect described by Dr. Fitch as *Aspidiotus gossypii*, and shows from examination of the original specimen received from China that it is not an *Aspidiotus* at all, but an *Aleurodes*. The literature of the subject is discussed.

— Some sources of error in recent work on Coccidæ.

Science (new series), x, June 16, 1899, p. 835.

Points out various characters in scale insects, particularly the Diaspinæ, which have mistakenly been made the basis of new species and varieties.

MASON, ORIS TUFTON. Aboriginal American zoötechny.

Am. Anthropologist (new series), 1, No. 1, Jan., 1899, pp. 45-81, pls. 4.

A study of the aboriginal industries associated with the animal kingdom on the American continent before its discovery by the whites. In a word, aboriginal American zoötechny embraces every phase of Indian life growing out of the connection between man and the beasts of the Western Hemisphere in pre-Columbian times.

MEARNS, EDGAR A. Descriptions of two new birds from the Santa Barbara Islands, Southern California.

Auk, xv, No. 3, July, 1898, pp. 258-264.

Carpodacus clematis and *Lanius ludovicianus anthonyi* are described.

— Notes on the mammals of the Catskill Mountains, New York, with general remarks on the fauna and flora of the region.

Proc. U. S. Nat. Mus., XXI, No. 1147, Nov. 4, 1898, pp. 341-360, figs. 1-6.

MERRILL, GEORGE PERKINS. A trip across Lower California.

Osprey, III, Oct., 1898, pp. 20-25, pls. 1-5.

A popular review of an article on the "Geology and natural history of Lower California," published in the Annual Report of the U. S. National Museum for 1895.

— Some little-known American ornamental stones.

Am. Architect and Building News, LXII, Dec. 10, 1898.

A paper read before the thirty-second annual convention of the American Institute of Architects, Washington, October, 1898. The paper was also printed in abstract in other journals.

— Description of residual rocks and desert varnish. (Educational series of rocks.)

Bull. U. S. Geol. Surv., No. 150, 1898, pp. 376-385 and 389-391.

Describes, microscopically and chemically, residual sand from granite (District of Columbia), and from diabase (Medford, Mass.); residual clay from feldspathic rock (Hockessin, Del.), and from limestone (Virginia). The brown coating on quartzite pebbles, called "desert varnish," from the Tooele Valley, Utah, is also described.

— The physical, chemical, and economic properties of building stones.

Rep. Geol. Surv. of Maryland, II, Part II, 1898, pp. 39-123.

The article forms the introductory chapter to a general report on the "Building and decorative stones of Maryland, containing an account of their properties and distribution," by George P. Merrill and Edward B. Matthews.

— Marbles and granites.¹

Nature and Art Mag., 1, No. 4, May, 1898, pp. 125-129.

A popular article for general readers.

¹Omitted from the bibliography of the last fiscal year.

MILLER, GERRIT S., Jr. List of bats collected by Dr. W. L. Abbott in Siam.

Proc. Acad. Nat. Sci. Phila., July 25, 1898, pp. 316-325.

Enumeration of 9 species from the province of Trong. *Cynopterus angulatus*, *Kerivouta minuta*, and *Emballonura peninsularis* are new to science.

— Descriptions of five new Phyllostome bats.

Proc. Acad. Nat. Sci. Phila., July 25, 1898, pp. 326-337, figs. 1-5.

Based in part on material belonging to the Institute of Jamaica and to Mr. Outram Bangs. *Chilonotalus*, subgen. nov.; *Reithronycteris*, gen. nov.; *Natalus brevimanus*, sp. nov.; *Micronycteris microtis*, sp. nov.; *Glossophaga longirostris*, sp. nov.; *Reithronycteris aphylla*, sp. nov., and *Micronycteris megalotis mexicanus*, subsp. nov., are described.

— A new chipmunk from Northeastern China.

Proc. Acad. Nat. Sci. Phila., Aug. 1, 1898, pp. 348-350.

Based in part on material belonging to the Academy of Natural Sciences, Philadelphia. *Eutamias scnescens*, sp. nov., is described.

— Description of a new bat from Lower California.

Ann. and Mag. Nat. Hist. (7), II, Aug., 1898, pp. 124, 125.

Based chiefly on material belonging to the British Museum. *Myotis peninsularis*, sp. nov., is described.

— Notes on the Arctic Red-backed Mice.

Proc. Acad. Nat. Sci. Phila., Oct. 11, 1898, pp. 358-367, figs. 1, 2.

Evolomys wosnessenskii (Polyakoff) and *E. alascensis*, sp. nov., are recognized as distinct from *E. rutilus*.

— Description of a new genus and species of Microtine rodent from Siberia.

Proc. Acad. Nat. Sci. Phila., Oct. 11, 1898, pp. 368-371, figs. 1-4.

Aschizomys lemninus, gen. et. sp. nov., is described.

— Notes on the Naked-tailed Armadillos.

Proc. Biol. Soc. Wash., XIII, Jan. 31, 1899, pp. 1-8, figs. 1, 2.

Based in part on material belonging to the Academy of Natural Sciences of Philadelphia, the American Museum of Natural History, and Mr. Outram Bangs.

The name *Tatoua* is substituted for *Xenurus*

MILLER, GERRIT S., Jr.—Continued.

(preoccupied); Gray's genus *Ziphia* is recognized as a subgenus, and *Tatoua centralis*, sp. nov., is described.

— Description of a new vole from Eastern Siberia.

Proc. Biol. Soc. Wash., XIII, Jan. 31, 1899, pp. 11, 12.

Microtus tsuktshorum, sp. nov., is described.

— A new vole from Hall Island, Bering Sea.

Proc. Biol. Soc. Wash., XIII, Jan. 31, 1899, pp. 13, 14.

Microtus abbreviatus, sp. nov., is described.

— Two new Glossophagine bats from the West Indies.

Proc. Biol. Soc. Wash., XIII, May 29, 1899, pp. 33-37.

Based in part on material belonging to the American Museum of Natural History. *Phylonycteris planifrons*, sp. nov., and *P. bombifrons*, sp. nov., are described.

— A new polar hare from Labrador.

Proc. Biol. Soc. Wash., XIII, May 29, 1899, pp. 39, 40.

Based in part on material belonging to Mr. Outram Bangs. *Lepus labradorius*, sp. nov., is described.

— A new fossil bear from Ohio.

Proc. Biol. Soc. Wash., XIII, May 29, 1899, pp. 53-56.

Ursus procerus, sp. nov., is described.

— A new moose from Alaska.

Proc. Biol. Soc. Wash., XIII, May 29, 1899, pp. 57-59.

Alces gigas, sp. nov., is described.

MONTGOMERY, THOMAS H. The Gordiacea of certain American collections, with particular reference to the North American fauna.

Bull. Mus. Comp. Zool. Harv. Coll., XXXII, No. 3, April, 1898, pp. 23-59, pls. 1-15.

A historical review of previous researches on American species is followed by the systematic portion of the paper. Seventeen forms are described, among which are 1 new genus, 10 new species, and 1 new subspecies. In an appendix, additions to the bibliography are given.

MOORE, J. PERCY. The leeches of the U. S. National Museum.

Proc. U. S. Nat. Mus., XXI, No. 1160, Nov. 21, 1898, pp. 543-563, pl. XL.

The systematic portion of the paper is preceded by a discussion of the annulation of the somite.

Twenty-nine species (6 of them new) are

MOORE, J. PERCY—Continued.

enumerated. They are referred to 15 genera, 1 of which is new. The material comes from different parts of the world.

MURDOCH, JOHN. A historical notice of Ross's Rosy Gull (*Rhodostethia rosea*).

Auk, XVI, No. 2, Apr., 1899, pp. 146-155.
An exhaustive history of the species.

NELSON, E. W. Descriptions of new birds from Mexico.

Auk, XVI, No. 1, Jan., 1899, p. 25.

The following species and subspecies are described as new: *Colinus virginianus maculatus*, *Callipepla gambeli fulvirectus*, *Aphelocoma sicberi colima*, *A. s. potosina*, *Pachyrhamphus major uropygialis*, *Melospiza adusta*, *Melospiza goldmani*, *Spizella socialis mexicana*, *Virco noveboracensis micrus*, and *Geothlypis flaviceps*.

— Descriptions of new birds from northwestern Mexico.

Proc. Biol. Soc. Wash., XIII, May 29, 1899, pp. 25-31.

Twelve species and subspecies of birds are described as new, viz: *Amazona albifrons saltucensis*, *Anthus lanius goldmani*, *Aphelocoma grisea*, *Pipilo fuscus intermedium*, *Cardinalis cardinalis affinis*, *C. c. sinuatus*, *Arremonops superciliosa sinuatus*, *Basileuterus rufifrons candatus*, *Thryothorus felix pallidus*, *Helcoedestes stridulus*, *Myadestes obscurus cinereus*, and *Catharus olivaceus*.

NEWBERRY, JOHN STRONG. The later extinct floras of North America. A posthumous work edited by Arthur Hollick.

Monograph U. S. Geol. Surv., XXXV, 1898, pp. 1-17, 1-295, pls. 1-68.

This is mainly a description of specimens originally illustrated and published without text, in 1876, under the title "Illustrations of Cretaceous and Tertiary plants of the Western Territories of the United States," a revised edition of which (with 43 additional plates) was published subsequently, but withheld from distribution.

NUTTING, CHARLES CLEVELAND. Hydroïda from Alaska and Puget Sound.

Proc. U. S. Nat. Mus., XXI, No. 1171, Apr. 29, 1899, pp. 741-753, pls. LXII-LXIV.

A considerable proportion of the material upon which this paper is based was collected by the Young Naturalists' Society in connection with the University of Washington, which organized a dredging expedition in Puget Sound in the summer of 1895.

A table of the distribution of the 17 species in the collection previously described is followed by descriptions of 5 new species, and notes on 2 known species.

OBERHOLSER, HARRY C. Description of a new North American thrush.

Auk, xv, No. 4, Oct., 1898, pp. 303-306.

Hylocichla ustulata alma, a new subspecies, is described.

— A revision of the wrens of the genus *Thryomanes* Sclater.

Proc. U. S. Nat. Mus., XXI, No. 1153, Nov. 19, 1898, pp. 421-450.

— Description of a new *Hylocichla*.

Auk, XVI, No. 1, Jan., 1899, pp. 23-25.

Hylocichla ustulata adica is described as new.

— A synopsis of the Blue Honey-Creepers of Tropical America.

Auk, XVI, No. 1, Jan., 1899, pp. 31-35.

A list of the forms of Blue Honey-creepers is given, together with their synonymy and correct names.

Cyanerpes is proposed as a new term in place of *Arbelorhina*.

OSGOOD, WILFRED H. *Chamava fasciata* and its subspecies.

Proc. Biol. Soc. Wash., XIII, May 29, 1899, pp. 41, 42.

The Wren-tits are found to belong to two forms, one of which is here named *Chamava fasciata phoca*.

The form formerly described as *C. f. henschawi* is here shown to be true *fasciata*, or so near it as to be inseparable.

PALMER, WILLIAM. Our small eastern shrikes.

Auk, xv, No. 3, July, 1898, pp. 244-258.

A review of the small shrikes of eastern North America. *Lanius ludovicianus migrans* is described as a new subspecies. Based largely upon Museum material.

POLLARD, CHARLES LOUIS. Further observations on the eastern acaulescent violets.

Botan. Gazette (v), XXVI, No. 5, Nov., 1898, pp. 325-342, 1 fig.

A synopsis of the various species of this group, with a key and full bibliography. One new species, *Viola insignis*, is described and figured with a text cut, also a new variety of *V. primulifolia* (var. *australis*). *V. communis* is proposed as a new name for the plant variously known as *V. obliqua* and *V. euenlata*, which are known to be distinct species.

RANKIN, W. M. The Northrop collection of Crustacea from the Bahamas.

Annals N. Y. Acad. Sci., XI, No. 12, Aug., 1898, pp. 225-254, pls. XXIX, XXX.

One new species, *Uca leptodactyla* (Guérin MS.), included by Mr. Rankin in his list, was

RANKIN, W. M.—Continued.

described by Miss M. J. Rathbun, and the type specimens are in the National Museum.

RATHBUN, MARY J. A contribution to a knowledge of the fresh-water crabs of America. The Pseudohelphusinae.

Proc. U. S. Nat. Mus., XXI, No. 1158, Nov. 21, 1898, pp. 507-537, text figs. 1-18.

The first part of this paper is devoted to a description of the subfamily, genera, and new species, with analytical keys. Four genera and 52 species are recognized, of which 17 species are new. The second part deals with the distribution of genera and species.

— The Brachyura collected by the U. S. Fish Commission steamer *Albatross* on the voyage from Norfolk, Va., to San Francisco, Cal., 1887-88.

Proc. U. S. Nat. Mus., XXI, No. 1162, Nov. 22, 1898, pp. 567-616, pls. XLI-XLIV.

The collections made on this cruise were obtained in the West Indies, on the coast of South America, and the west coast of Mexico.

The Brachyura number 151 species, of which 31 are new. The new forms are chiefly from the shores of Lower California. Nearly all of them are figured.

— Notes on the Crustacea of the Tres Marias Islands.

North Am. Fauna (U. S. Dept. Agric.), No. 14, Apr. 29, 1899, pp. 73-75.

These notes are part of a report on the natural history of the Tres Marias Islands, based on explorations made by E. W. Nelson and E. A. Goldman.

Four species of Crustacea were taken, viz: *Gecarcinus digueti* Bouvier, *Oecypode occidentalis* Stimpson, *Grapsus grapsus* (Linnaeus), and *Bithynis jamaicensis* (Herbst).

RICHARDSON, HARRIET. Key to the isopods of the Pacific coast of North America, with descriptions of 22 new species.

Proc. U. S. Nat. Mus., XXI, No. 1175, June 5, 1899, pp. 815-869, figs. 1-34.

The isopods of the Pacific coast of North America are distributed into 16 families, 44 genera, and 97 species. Keys are given to the families, genera, and species. Twenty-two new species are described and figured.

RICHMOND, CHARLES W. Description of a new species of *Gymnostinops*.

Auk, xv, No. 4, Oct., 1898, pp. 326, 327. *Gymnostinops cassini* is described.

— New name for the genus *Tetragonops*.

Auk, XVI, No. 1, Jan., 1898, p. 77.

Tetragonops is found to be preoccupied and *Pan* is proposed in its place.

RICHMOND, CHARLES W.—Continued.

— *Thalassidroma castro*, of Harcourt.

Auk, XVI, No. 2, Apr., 1899, pp. 177, 178.

A reproduction of the original description of this species.

— *Pelecanus occidentalis* versus *P. fuscus*.

Auk, XVI, No. 2, Apr., 1899, p. 178.

A note calling attention to the fact that the name *P. occidentalis* antedates *P. fuscus*.

— On the name *Xenocichla*.

Auk, XVI, Apr. 2, 1899, pp. 183, 184.

The name *Xenocichla* is shown to be preoccupied by *Bleda*, of Bonaparte.

— Four preoccupied names.

Auk, XVI, No. 2, Apr., 1899, pp. 186, 187.

The following names are shown to be preoccupied: *Amazona augusta*, *Pachyrhamphus similis*, *Blar*, and *Boeagia*. They are renamed *Amazona imperialis*, *Pachyrhamphus salvini*, *Blacops*, and *Antichromus*, respectively.

— *Tyrannus magnirostris* d'Orb. (Renamed.)

Auk, xv, No. 4, Oct., 1899, p. 330.

Tyrannus magnirostris d'Orb., 1839, is found to be antedated by *T. magnirostris* Sw., 1831, and is accordingly given a new name, *T. cubensis*.

RIDGWAY, ROBERT. Descriptions of supposed new genera, species, and subspecies of American birds. I—Fringillidae.

Auk, xv, No. 3, July, 1898, pp. 223-230.

The author's edition of this paper was published May 13, 1898.

The following genera, etc., are described as new: *Melanospiza*, *Brachyspiza*, *Myospiza*, *Pagiospiza*, *Incaespiza*, *Rhynchospiza*, *Pselliophorus*, *Lysurus*, *Serriopsis*, *Heterospingus*, *Mitrospingus*, *Rhodothraupis*, *Hemithraupis*, *Stelgidostomus*, *Aimophila ruficeps sororia*, *Aimophila sartorii*, *Atlapetes pileatus dilutus*, *Arremonops venezuelensis*, *Arremonops richmondii*, *Cyanocampus cuneata cyanescens*, *Amphispiza bilineata deserticola*, *Amphispiza belli elementae*.

— Description of supposed new genera, species, and subspecies of American birds. II—Fringillidae (continued).

Auk, xv, No. 4, Oct., 1898, pp. 319-324.

The following new forms are described: *Pinicola enucleator atascensis*, *P. c. montana*, *Astragalinus mexicanus jouyi*, *Calcearius lapponicus atascensis*, *C. l. coloratus*, *Junco montanus*, *Brachyspiza capensis insularis*, *Euthelia coryi*, *E. bryanti*, *Pyrrhuloxia affinis*, *P. dominicana*, *P. crissalis*, and *P. coryi*. *Brachyspiza capensis peruviana* (Lesson) is found to be the earliest name for the bird named *Zonotrichia capensis costaricensis* Allen, and *Guiraca caerulea lazula* (Lesson) for the species now known as *G. c. eurhyncha* (Coues).

RIDGWAY, ROBERT—Continued.

The generic name *Passerina* is transferred from the painted buntings to the snowflakes, and *Cyanospiza* Baird is revived for the former.

— Descriptions of supposed new genera, species, and subspecies of American birds. III—Fringillidæ (continued).

Auk, xvi, No. 1, Jan., 1899, pp. 35-37.

° The following forms are described as new: *Melospiza fasciata cooperii*, *M. f. pusillula*, *M. f. caurina*, *Passercella iliaca fuliginosa*, *Zonotrichia leucophrys nuttalli*, *Sialis chapmani*, and *Spinus alleni*.

— Description of a new species of Hummingbird from Arizona.

Auk, xv, No. 4, Oct., 1898, pp. 325, 326.
Atthis morconi is described as new.

— *Hemithraupis*—a correction.

Auk, xv, No. 4, Oct., 1898, 330, 331.

Hemithraupis is found to be preoccupied and is renamed *Sporathraupis*.

— On the genus *Astragalinus* Cabanis.

Auk, xvi, No. 1, Jan., 1899, pp. 79, 80.
Astragalinus is recognized as a genus distinct from *Spinus*. A list of the North American forms is added.

— On the generic name *Aimophila* versus *Peuca*.

Auk, xvi, No. 1, Jan., 1899, pp. 80, 81.
Aimophila is considered distinct from *Peuca*, and a list of the United States forms is given.

ROSE, JOSEPH NELSON. [*Bunchosia costaricensis* and *Bunchosia macrophylla*.]

Primitive Flora Costaricensis, Instituto Físico-Geográfico Nacional, San José, Costa Rica, 2, fasc. 1, 1898, pp. 63, 64.

— Plants of the Tres Marias Islands.

North Am. Fauna (U. S. Dept. Agric.), No. 14, 1898, pp. 77-91.

— *Agave cypatriata* and other Agaves.

Ann. Rep. Missouri Bot. Garden, 11, June 3, 1899, 1-5.

— The genus *Agave*.

Cyclopædia North American Horticulture, 1, 1899, pp. 33-36.

ROSE, J. N. (See also under J. M. Coulter and F. V. Coville.)

SAFFORD, JAMES, and SCHUCHERT, CHARLES. The Camden Chert of Tennessee and its Lower Oriskany fauna.

Am. Journ. Sci., vii, June, 1899, pp. 429-432.

Professor Safford describes the rocks and

SAFFORD, JAMES, and SCHUCHERT, CHARLES—Continued.

areal distribution, and Mr. Schuchert lists the fossils found by him in 1897 and shows their Lower Oriskany age. The fossils are in the U. S. National Museum.

SCHUCHERT, CHARLES. (See under JAMES SAFFORD and DAVID WHITE.)

SCHWARZ, EUGENE A. Martin Larsson Linell.

Proc. Ent. Soc. Wash., iv, No. 3 (issued May 24, 1899), pp. 117-180.

Gives a brief biography of Mr. Martin Larsson Linell and records the titles of 18 papers published by him.

— Note on the *Cedrela* Psyllids (genus *Freyssula* Aleman).

Proc. Ent. Soc. Wash., iv, No. 3 (issued May 24, 1899), pp. 195-197.

Gives a history of this Mexican genus, with a full diagnosis, and describes 2 new varieties from Venezuela and Trinidad.

— Descriptions of new species of Coleoptera.

Psyche, viii, No. 277, May, 1899 (Supplement), pp. 8-13.

An appendix to an article by H. G. Hubbard on the Insect fauna of the Giant Cactus. Describes 1 new genus and 7 new species of beetles from Arizona.

— Classified list of species observed by H. G. Hubbard on the Giant Cactus.

Psyche, viii, No. 277, May, 1899 (Supplement), pp. 13, 14.

Gives a list of Hymenoptera, Coleoptera, Lepidoptera, Diptera, Orthoptera, Neuroptera, Heteroptera, Acari, and Pseudoscorpionida found on the Giant Cactus.

(See also under Martin L. Linell.)

SMITH, HUGH M. On the occurrence of *Amphiuma*, the so-called Congo Snake, in Virginia.

Proc. U. S. Nat. Mus., xxi, No. 1150, Nov. 10, 1898, pp. 379, 380.

SMITH, JOHN B., and DYAR, HARRISON G. Contributions toward a monograph of the Lepidopterous family Noctuidæ of Boreal North America. A revision of the species of *Acronycta* (Ochsenheimer) and of certain allied genera.

Proc. U. S. Nat. Mus., xxi, No. 1140, Nov. 17, 1898, pp. 1-194, pls. 1-XXII.

STARKS, EDWIN C. The osteology and relationships of the family Zeidæ.

Proc. U. S. Nat. Mus., xxi, No. 1155, Nov. 21, 1898, pp. 469-476, pls. XXXIII-XXXVIII.

STEARNS, R. E. C. Description of a species of *Actæon* from the Quaternary bluffs at Spanish Light, San Diego, Cal.

Proc. U. S. Nat. Mus., XXI, No. 1145, Nov. 2, 1898, pp. 297-299, 1 fig.

A preliminary description of this species appeared in the *Nautilus*, XI, No. 1, Philadelphia, May, 1897.

Actæon traskii occurs in the above region both in a living and fossil state, together with *Actæon (Rictaris) punctocelatus*, and a variety of the latter—var. *coronadoensis*.

— Notes on the *Cytherea (Tivela) crassatelloides* Conrad, with descriptions of many varieties.

Proc. U. S. Nat. Mus., XXI, No. 1149, Nov. 10, 1898, pp. 371-378, pls. XXIII-XXV.

In this paper the author gives the range of this species and a description. He divides the variations of color pattern into 6 groups and 16 different named varieties. The three plates illustrate the general characters of the shell variations in outline, and the anatomy.

— Preliminary description of a new variety of *Haliotis*.

Nautilus, XII, No. 9, Jan., 1899, pp. 106, 107.

Haliotis fulgens Phil., variety *wallacensis*, occurring on the coast of Mendocino County, Cal., is described.

— *Urosalpinx cinereus* Say, in San Francisco Bay.

Nautilus, XII, No. 10, Feb., 1899, p. 112.

The occurrence of the so-called oyster-drill of the Atlantic coast, heretofore detected on the western shore of San Francisco Bay, has later been found on the eastern side at a distance of several miles from the first-discovered locality.

— *Crepidula convexa* Say, variety *glauca* Say, in San Francisco Bay.

Nautilus, XIII, No. 1, May, 1899, p. 8.

The foregoing molluscan form is another incidental introduction from the Atlantic seaboard, as well as *Urosalpinx cinereus* previously mentioned. Both of these Eastern species have been introduced with the Eastern oyster, *Ostrea virginica*, by the oyster dealers of San Francisco.

— Natural history of the Tres Marias Islands of Mexico.

Nautilus, XIII, No. 2, June, 1899, pp. 19, 20.

The above paper refers to an article published in *North American Fauna*, No. 14 (Biological Survey, U. S. Department of Agriculture), in which the author, Mr. E. W. Nelson, states that himself and companion were the only naturalists who visited the islands sub-

sequent to the visits of Grayson and Farrer,

until May, 1897, whereas Mr. W. J. Fisher made an extensive collection in the group in 1876. The molluscan species collected by Fisher at that time are now a part of the national collection and are listed in the Proceedings of the U. S. National Museum, vol. XVII, No. 996, pp. 139-204. Eighty-nine species are enumerated.

STEJNEGER, LEONHARD. The birds of the Kuril Islands.

Proc. U. S. Nat. Mus., XXI, No. 1144, Oct. 4, 1898, pp. 269-296.

A complete list of the birds observed by the author, and others, in the Kuril Islands.

— Description of a new species of Spiny-tailed Iguana from Guatemala.

Proc. U. S. Nat. Mus., XXI, No. 1151, Nov. 10, 1898, pp. 381-383.

Ctenosaura palearis, new species (Type specimen No. 22703, U. S. N. M.).

— The Asiatic Fur Seal Islands and Fur Seal Industry. By | Leonhard Stejneger | of the U. S. National Museum. |—| With one hundred and thirteen plates and maps. |—| (Part IV of the Fur Seals and Fur Seal Islands of the North Pacific Ocean) |—| Washington | 1898.

Royal 8 vo., pp. 1-384, pls. 1-113.

The author's final report as member of the Fur Seal Investigation Commission.

— Report on the Russian Fur Seal Islands.

Seal and Salmon Fisheries and General Resources of Alaska, IV, 1898, pp. 613-754, 74 plates and 14 maps.

Essentially a reprint of "The Russian Fur Seal Islands" (1896), by the same author.

— [Review of] The birds of Indiana. By A. Butler.

Am. Naturalist, XXXIII, Jan., 1899, pp. 65-69.

— A curious malformation on a snake's head.

Am. Naturalist, XXXIII, March, 1899, pp. 251, 252, 2 figs.

The malformation consists chiefly in the absence of a frontal plate, and is supposed to be due to a wound. The specimen belongs to the Museum of the Cincinnati Natural History Society.

— Relationships of North American Grouse and Quail.

Am. Naturalist, XXXIII, March, 1899, pp. 259-263.

A review of "The Feather-tracts of North American Grouse and Quail," by H. L. Clark.

STEJNEGER, LEONHARD—Continued.

— Reptiles of the Tres Marias and Isabel Islands.

North. Am. Fauna (U. S. Dept. Agric.), No. 14, April 29, 1899, pp. 63-71.

The collection on which this paper is based was made by Mr. E. W. Nelson for the Biological Survey, U. S. Department of Agriculture, and is now in the National Museum.

— The land reptiles of the Hawaiian Islands.

Proc. U. S. Nat. Mus., XXI, No. 1174, June 5, 1899, pp. 783-813, figs. 1-13.

A list, with full synonymies and descriptions, of all the species occurring in the Archipelago.

One new species is described: *Hemiphyllodactylus leucostictus* (Type specimen 23500, U. S. N. M.). All the species are represented in the National Museum collection.

— Description of a new genus and species of Discoglossoid Toad from North America.

Proc. U. S. Nat. Mus., XXI, No. 1178, June 20, 1899, pp. 899-901, pl. LXXXIX, figs. 1-4.

Ancophus truci, new species and genus, from Humpulips, Washington, is described (Type specimen No. 25979 U. S. N. M.). This is the first member of the batrachian suborder Costata known with certainty to have been discovered in the Western Hemisphere.

— Evans's birds.

Am. Naturalist, XXXIII, June, 1899, pp. 523-526.

A review of volume IX of "The Cambridge Natural History—Birds," by A. H. Evans.

— Blind Cave Salamanders.

Popular Science, XXXIII, June, 1899, pp. 121, 122, with text figs.

A popular account of *Proteus anguineus*, *Typhlotriton spelæus*, and *Typhlomolge rathbani*, with illustrations of the latter from photographs.

— On a collection of batrachians and reptiles from Formosa and adjacent islands.

Journ. Science College Mus. Univ. Tokyo (Japan), XII, part III, pp. 215-225.

The collection which was made for the Japanese Government was submitted to the author to be worked up. The first set of specimens belongs to the Science College Museum, Tokyo; the second has been presented to the National Museum. *Rana longicrus*, *Japalura nitsunkvrii*, *Emydopcephalus tjimæ* are described as new species.

TEST, FREDERICK CLEVELAND. A contribution to the knowledge of the variations of the Tree Frog, *Hyla regilla*.

Proc. U. S. Nat. Mus., XXI, No. 1156, Nov. 19, 1898, pp. 477-492, pl. 39.

TRUE, FREDERICK W. On the nomenclature of the Whalebone Whales of the tenth edition of Linnaeus's "Systema Naturæ."

Proc. U. S. Nat. Mus., XXI, No. 1163, Nov. 4, 1898, pp. 617-635.

— An account of the United States National Museum.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1896 (1899), pp. 287-324.

UPHAM, E. P. (See under THOMAS WILSON.)

VAUGHAN, T. WAYLAND. (See under R. T. HILL.)

WALCOTT, CHARLES DOOLITTLE. Cambrian Brachiopoda: *Obolus* and *Lingulella*, with descriptions of new species.

Proc. U. S. Nat. Mus., XXI, No. 1152, Nov. 19, 1898, pp. 385-420, pls. 26-28.

In this paper the author describes 10 American species of *Obolus*, and 59 species and varieties of *Lingulella*.

— Fossil Medusæ.

Monograph U. S. Geol. Surv., XXX, 1898, pp. 1-201, pls. 1-47.

In this extensive, detailed, and finely illustrated work by the Director of the U. S. Geological Survey, all the species of fossil medusæ are described and figured. The chief localities for Paleozoic species are in America, and in Coosa Valley, Alabama, they are abundant. The material is now in the U. S. National Museum.

— Pre-Cambrian fossiliferous formations.

Bull. Geol. Soc. Am., X, April, 1899, pp. 199-244, pls. 22-28.

In this paper the writer brings together all that is known regarding the American fossiliferous formations beneath the Cambrian, and describes and figures the fossils, of which there are 9 species.

WARD, LESTER F. Descriptions of the species of *Cycaleoidea* or fossil cycadean trunks, thus far determined from the Lower Cretaceous rim of the Black Hills.

Proc. U. S. Nat. Mus., XXI, No. 1141, Oct. 29, 1898, pp. 195-229.

This paper is based on a study of 155 specimens, 25 of which belong to the National Museum. Twenty-one species are described, all of which, with one exception, are new to science.

WATSON, THOMAS L. Weathering of Diabase near Chatham, Va.

Am. Geologist, XII, Aug., 1898, pp. 85-101.

WATSON, THOMAS L.—Continued.

Gives results of studies of fresh and decomposed material along lines laid down by Dr. Merrill, in his work on "Rocks, rock-weathering, and soils."

The investigations were carried on in the National Museum laboratories, and the specimens described remain among the Museum collections.

WHITE, DAVID, and SCHUCHERT, CHARLES. Cretaceous series of the West Coast of Greenland.

Bull. Geol. Soc. Am., IX, June, 1898, pp. 343-368, pls. 24-26.

The writers were sent to North Greenland by this Museum in 1897. An account of their geological investigations is here published. The lists of fossil plants are based entirely on material collected by them.

The Cretaceous and Tertiary formations of Noursoak peninsula are described. Of sedimentary deposits the thickness is not less than 3,500 feet, capped by Tertiary basalts attaining a maximum thickness of 4,000 feet. The various localities and horizons for fossils are described.

WHITEAVES, J. F. On some additional or imperfectly understood fossils from the Hamilton formation of Ontario, with a revised list of the species therefrom.

Contributions to Canadian Palaeontology, Geological Survey of Canada, I, No. 7, Nov., 1898, pp. 361-436, pls. XLVIII-L.

Based partly on material collected in the vicinity of Thedford, Ontario, for the National Museum, by Charles Schuchert.

WILSON, THOMAS. Prehistoric art, or the origin of art as manifested in the works of prehistoric man.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1896 (1899), pp. 325-664, pls. 1-74, figs. 1-325.

This paper deals with art in prehistoric times. It approaches the subject from the aesthetic rather than the utilitarian point of view, although the two are necessarily interrelated.

The introduction contains remarks on the theory of art.

The first and second chapters deal with all kinds of art in the Paleolithic and Neolithic periods, and with the differences in art between the two periods and the geometric ornaments employed in both.

The third chapter treats of prehistoric musical instruments, describing the gold and bronze horns of northern Europe. This portion of the work was prosecuted in collaboration with Mr. E. P. Upham, whose musical

WILSON, THOMAS—Continued.

knowledge made its successful accomplishment possible and to whom the credit of this chapter largely belongs.

— Art in prehistoric times.

Proc. Am. Assoc. Adv. Sci., XLVII, 1898, pp. 456-459.

A summary of the author's work on "Prehistoric Art."

This article was reprinted in *The American Archaeologist* (formerly *The Antiquarian*), II, Pt. 2, Nov., 1898, pp. 281-283.

— Classification of arrowpoints, spearheads, and knives.

Proc. Am. Assoc. Adv. Sci., XLVII, 1898, pp. 464-470.

Summary of the author's work on "Arrowpoints, spearheads, and knives of prehistoric times."

— Archæological museums. Modes of lighting.—Effect of glass upon light.

Sci. Am. Suppl., No. 1203, New York, Jan. 21, 1899, p. 19288.

This paper was read before the mid-winter meeting of the American Association for the Advancement of Science, Dec., 1898, held at Columbia University, New York City.

Glass may affect the transmission of light by reflection, by refraction, or by absorption. The question discussed in this article is the amount or proportion of light lost in passing through glass of different kinds. Various mechanical appliances were used to determine loss: (1) a camera obscura, (2) comparative photographs, (3) photometer.

— (Translator and editor). Quaternary deposits at Abbeville, France, wherein Paleolithic implements were first discovered. By G. D'Ault Du Mesnil.

Am. Antiq. and Orient. Journ., XXI, No. 3, May and June, 1899, pp. 137-145.

Describes the deposits and shows the different strata in which appear the bones of fossil animals and artefacts of flint associated therewith.

WILSON, THOMAS, and UPHAM, E. P. Prehistoric musical instruments.

Proc. Am. Assoc. Adv. Sci., XLVII, 1898, pp. 459-464.

This article was reprinted in *The American Archaeologist* (formerly *The Antiquarian*), III, Part 1, Jan., 1899, pp. 9-14.

Summary of the third chapter of Mr. Wilson's work on "Prehistoric Art."

LIST OF AUTHORS.

- ADLER, DR. CYRUS, Smithsonian Institution.
AMERICAN ORNITHOLOGISTS' UNION, New York City.
ASHMEAD, WILLIAM H., U. S. National Museum.
BANGS, OUTRAM, Boston, Mass.
BANKS, NATHAN, Falls Church, Va.
BARTSCH, PAUL, U. S. National Museum.
BEAN, BARTON A., U. S. National Museum.
BEAN, DR. TARLETON H., U. S. National Museum.
BREWSTER, WILLIAM, Cambridge, Mass.
CASANOWICZ, DR. I. M., U. S. National Museum.
CHAPMAN, FRANK M., American Museum of Natural History, New York City.
CHESNUT, VICTOR K., U. S. Department of Agriculture.
CHITTENDEN, FRANK H., U. S. Department of Agriculture.
CLARK, PROF. HUBERT LYMAN, Amherst College, Amherst, Mass.
COOK, PROF. O. F., U. S. Department of Agriculture.
COQUILLET, DANIEL W., U. S. Department of Agriculture.
COVILLE, FREDERICK VERNON, U. S. Department of Agriculture.
CULIN, STEWART, University of Pennsylvania, Philadelphia, Pa.
CURRIE, ROLLA P., U. S. National Museum.
DALL, WILLIAM H., U. S. Geological Survey.
DILLER, J. S., U. S. Geological Survey.
DYAR, DR. HARRISON G., U. S. Department of Agriculture.
EAKLE, ARTHUR S., Harvard University, Cambridge, Mass.
GILBERT, DR. CHARLES H., Leland Stanford Junior University, Stanford University, Cal.
GILL, DR. THEODORE N., Smithsonian Institution.
GRINNELL, JOSEPH, Pasadena, Cal.
GOODE, DR. G. BROWN. (Deceased.)
HAY, DR. OLIVER P., Washington, D. C.
HAY, PROF. W. P., Washington, D. C.
HILL, R. T., U. S. Geological Survey.
HOUGH, DR. WALTER, U. S. National Museum.
HOWARD, DR. LELAND O., U. S. Department of Agriculture.
KNOWLTON, F. H., U. S. Geological Survey.
LINELL, MARTIN L. (Deceased.)
LORD, DR. E. C. E., Washington, D. C.
LUCAS, FREDERIC A., U. S. National Museum.
MCGREGOR, RICHARD C., Palo Alto, Cal.
MARK, E. L., Cambridge, Mass.
MARLATT, CHARLES L., U. S. Department of Agriculture.
MASON, PROF. OTIS T., U. S. National Museum.
MEARNS, DR. EDGAR A., U. S. A., Fort Adams, Newport, R. I.
MERRILL, DR. GEORGE P., U. S. National Museum.
MILLER, GERRIT S., JR., U. S. National Museum.
MONTGOMERY, THOMAS L., Wagner Free Institute of Science, Philadelphia, Pa.
MOORE, DR. J. PERCY, University of Pennsylvania, Philadelphia, Pa.

- MURDOCH, JOHN, Public Library, Boston, Mass.
NELSON, E. W., U. S. Department of Agriculture.
NEWBERRY, Dr. JOHN STRONG. (Deceased.)
NUTTING, Prof. C. C., State University of Iowa, Iowa City, Iowa.
OBERHOLSER, HARRY C., U. S. Department of Agriculture.
OSGOOD, WILFRED H., U. S. Department of Agriculture.
PALMER, WILLIAM, U. S. National Museum.
POLLARD, CHARLES LOUIS, U. S. National Museum.
RANKIN, W. M., Princeton University, Princeton, N. J.
RATHBUN, MARY J., U. S. National Museum.
RICHARDSON, HARRIET, Washington, D. C.
RICHMOND, Dr. CHARLES W., U. S. National Museum.
RIDGWAY, ROBERT, U. S. National Museum.
ROSE, Dr. J. N., U. S. National Museum.
SAFFORD, JAMES, Vanderbilt University, Nashville, Tenn.
SCHUCHERT, CHARLES, U. S. National Museum.
SCHWARZ, EUGENE A., U. S. Department of Agriculture.
SMITH, Dr. HUGH M., U. S. Fish Commission.
SMITH, Prof. JOHN B., Rutgers College, New Brunswick, N. J.
STARKS, EDWIN C., University of Washington, Seattle, Wash.
STEARNS, Dr. R. E. C., Los Angeles, Cal.
STEJNEGER, Dr. LEONHARD, U. S. National Museum.
TEST, Dr. FREDERICK C., Chicago, Ill.
TRUE, Dr. FREDERICK W., U. S. National Museum.
VAUGHAN, T. WAYLAND, U. S. Geological Survey.
WHITE, DAVID, U. S. Geological Survey.
WARD, Prof. LESTER F., U. S. Geological Survey.
WILSON, Dr. THOMAS, U. S. National Museum.
WALCOTT, Hon. CHARLES D., Director U. S. Geological Survey.
WATSON, THOMAS L., Cornell University, Ithaca, N. Y.

APPENDIX V.

PAPERS PUBLISHED IN SEPARATE FORM DURING THE YEAR ENDING JUNE 30, 1899.

FROM THE REPORT FOR 1896.

- Report upon the condition and progress of the U. S. National Museum during the year ending June 30, 1896. By G. Brown Goode. pp. 1-284, pls. 1-4.
- An account of the United States National Museum. By Frederick W. True. pp. 287-324.
- Prehistoric art; or the origin of art as manifested in the works of prehistoric man. By Thomas Wilson. pp. 325-664, pls. 1-74, figs. 1-325.
- Chess and playing cards. By Stewart Culin. pp. 665-942, pls. 1-50, figs. 1-226.
- Biblical antiquities. By Cyrus Adler and I. M. Casanowicz. pp. 943-1023, pls. 1-46.
- The lamp of the Eskimo. By Walter Hough. pp. 1025-1057, pls. 1-24, figs. 1-4.

FROM VOLUME 21 OF THE PROCEEDINGS.

- No. 1140. Contributions toward a monograph of the Lepidopterous family Noctuidæ of Boreal North America. A revision of the species of *Acronycta* (Ochsenheimer) and of certain allied genera. By John B. Smith and Harrison G. Dyar. pp. 1-194, pls. 1-22.
- No. 1141. Descriptions of the species of Cycadeoidea, or fossil cycadean trunks, thus far determined from the Lower Cretaceous rim of the Black Hills. By Lester F. Ward. pp. 195-229.
- No. 1142. On some new parasitic insects of the subfamily Encyrtinae. By L. O. Howard. pp. 231-248.
- No. 1143. On the Coleopterous insects of Galapagos Islands. By Martin L. Linell. pp. 249-268.
- No. 1144. The birds of the Kuril Islands. By Leonhard Stejneger. pp. 269-296.
- No. 1145. Description of a species of *Acteon* from the Quaternary Bluffs at Spanish Bight, San Diego, Cal. By Robert E. C. Stearns. pp. 297-299.
- No. 1146. Report on a collection of Japanese Diptera, presented to the U. S. National Museum by the Imperial University of Tokyo. By D. W. Coquillett. pp. 301-340.
- No. 1147. Notes on the mammals of the Catskill Mountains, New York, with general remarks on the fauna and flora of the region. By Edgar A. Mearns. pp. 341-360, figs. 1-6.
- No. 1148. Topaz crystals in the mineral collection of the U. S. National Museum. By Arthur S. Eakle. pp. 361-369, figs. 1-22.
- No. 1149. Notes on *Cytherea (Tivela) crassatelloides* Conrad, with descriptions of many varieties. By Robert E. C. Stearns. pp. 371-378, pls. 23-25.
- No. 1150. On the occurrence of *Amphiuma*, the so-called Congo Snake, in Virginia. By Hugh M. Smith. pp. 379, 380.
- No. 1151. Description of a new species of Spiny-tailed Iguana from Guatemala. By Leonhard Stejneger. pp. 381-383.
- No. 1152. Cambrian Brachiopoda: *Obolus* and *Lingulella*, with descriptions of new species. By Charles D. Walcott. pp. 385-420, pls. 26-28.

- No. 1153. A revision of the wrens of the genus *Thryomanes* Sclater. By Harry C. Oberholser. pp. 421-450.
- No. 1154. American Oniscoid Diplopoda of the order Merocheta. By O. F. Cook. pp. 451-468, pls. 29-32.
- No. 1155. The osteology and relationships of the family Zeidae. By Edwin Chapin Starks. pp. 469-476, pls. 33-38.
- No. 1156. A contribution to a knowledge of the variations of the Tree Frog, *Hyla regilla*. By Frederick Cleveland Test. pp. 477-492, pl. 39.
- No. 1157. Japanese Hymenoptera of the family Tenthredinidae. By C. L. Marlatt. pp. 493-506.
- No. 1158. A contribution to a knowledge of the fresh-water crabs of America—The Pseudothelphusinae. By Mary J. Rathbun. pp. 507-537, figs. 1-17.
- No. 1159. Notes on a collection of fishes from Mexico, with description of a new species of *Platyptecidus*. By Barton A. Bean. pp. 539-542, 1 fig.
- No. 1160. The leeches of the U. S. National Museum. By J. Percy Moore. pp. 543-563, pl. 40.
- No. 1161. On the occurrence of *Caulepis longidens* Gill on the coast of California. By Charles Henry Gilbert. pp. 565, 566.
- No. 1162. The Brachyura collected by the U. S. Fish Commission steamer *Albatross* on the voyage from Norfolk, Va., to San Francisco, Cal., 1887-88. By Mary J. Rathbun. pp. 567-616, pls. 41-44.
- No. 1163. On the nomenclature of the Whalebone whales of the Tenth Edition of Linnæus's "Systema Naturæ." By Frederick W. True. pp. 617-635.
- No. 1164. A new snake from the Eocene of Alabama. By Frederic A. Lucas. pp. 637, 638, pls. 45, 46.
- No. 1165. Notes on the capture of rare fishes. By Barton A. Bean. pp. 639, 640.
- No. 1166. The feather-tracts of North American Grouse and Quail. By Hubert Lyman Clark. pp. 641-653, pls. 47-49, figs. 1-4.
- No. 1167. Notes on *Oxycoelus acuticeps* (Gilbert) from Sitka and Kadiak, Alaska. By Tarleton H. Bean and Barton A. Bean. pp. 655, 656.
- No. 1168. African Diplopoda of the genus *Pachybolus*. By O. F. Cook. pp. 667-676, pls. 50-52.
- No. 1169. The Diplopod family Striariidae. By O. F. Cook. pp. 667-676, pls. 53, 54.
- No. 1170. African Diplopoda of the family Gomphodesmidae. By O. F. Cook. pp. 677-739, pls. 55-61.
- No. 1171. Hydroida from Alaska and Puget Sound. By Charles Cleveland Nutting. pp. 741-753, pls. 62-64.
- No. 1172. The fossil Bison of North America. By Frederic A. Lucas. pp. 755-771, pls. 65-84, figs. 1, 2.
- No. 1173. Petrographic report on rocks from the United States-Mexico boundary. By Edwin C. E. Lord. pp. 773-782, pl. 85.
- No. 1174. The land reptiles of the Hawaiian Islands. By Leonhard Stejneger. pp. 783-813, figs. 1-13.
- No. 1175. Key to the isopods of the Pacific Coast of North America, with descriptions of 22 new species. By Harriet Richardson. pp. 815-869, figs. 1-34.
- No. 1176. Description of a new species of subterranean isopod. By W. P. Hay. pp. 871, 872, pl. 86.
- No. 1177. Synopsis of the recent and Tertiary Leptonacea of North America and the West Indies. By William H. Dall. pp. 873-897, pls. 87, 88.
- No. 1178. Description of a new genus and species of Discoglossoid Toad from North America. By Leonhard Stejneger. pp. 899-901, pl. 89.