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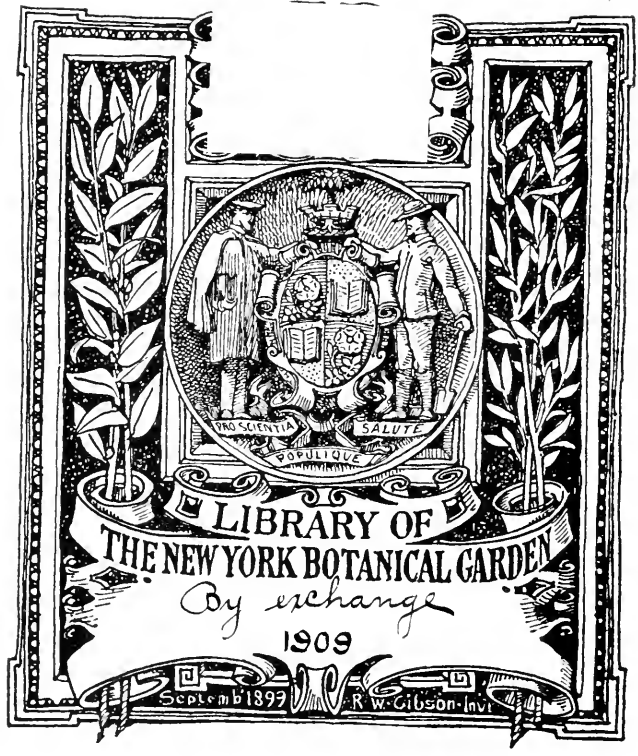
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UNITED STATES NATIONAL MUSEUM

REPORT ON THE PROGRESS AND CONDITION OF THE U. S. NATIONAL MUSEUM FOR THE YEAR ENDING JUNE 30, 1909

WASHINGTON
GOVERNMENT PRINTING OFFICE
1909

UNITED STATES NATIONAL MUSEUM,
UNDER DIRECTION OF THE SMITHSONIAN INSTITUTION,
Washington, D. C., October 20, 1909.

SIR: I have the honor to submit herewith a report upon the present condition of the United States National Museum, and upon the work accomplished in its various departments during the fiscal year ending June 30, 1909.

Very respectfully,

RICHARD RATHBUN,
Assistant Secretary, in Charge of the National Museum.

DR. CHARLES D. WALCOTT,
Secretary, Smithsonian Institution.

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REPORT ON THE PROGRESS AND CONDITION OF THE U. S. NATIONAL MUSEUM FOR THE YEAR ENDING JUNE 30, 1909.

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

INCEPTION AND HISTORY.

The Congress of the United States, in the act of August 10, 1846, founding the Smithsonian Institution, recognized that an opportunity was afforded, in carrying out the large-minded design of Smithson, to provide for the custody of the museum of the nation. To this new establishment was therefore intrusted the care of the national collections, a course that time has fully justified.

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

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

The Congress which passed the act of foundation enumerated as within the scope of the Museum "all objects of art and of foreign

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

If the wisdom of Congress in so fully providing for a museum in the Smithsonian law challenges attention, the interpretation put upon this law by the Board of Regents within less than six months from the passage of the act can not but command admiration. In the early part of September, 1846, the Regents took steps toward formulating a plan of operations. The report of the committee appointed for this purpose, submitted in December and January following, shows a thorough consideration of the subject in both the spirit and letter of the law. It would seem not out of place to cite here the very first pronouncement of the Board with reference to the character of the Museum:

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

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

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

[a] Since the Institution was not chartered in a legal sense but established by Congress, the use of the word "charter" in this connection was not correct.

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

"The gallery of art, your committee think, should include both paintings and sculpture, as well as engravings and architectural designs; and it is desirable to have in connexion with it one or more studios in which young artists might copy without interruption, being admitted under such regulations as the board may prescribe. Your committee also think that, as the collection of paintings and sculpture will probably accumulate slowly, the room destined for a gallery of art might properly and usefully meanwhile be occupied during the sessions of Congress as an exhibition room for the works of artists generally; and the extent and general usefulness of such an exhibition might probably be increased if an arrangement could be effected with the Academy of Design, the Arts-Union, the Artists' Fund Society, and other associations of similar character, so as to concentrate at the metropolis for a certain portion of each winter the best results of talent in the fine arts."

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

In the resolutions which were adopted upon the presentation of the report, a museum was mentioned as "one of the principal modes of executing the act and trust."[a] The work was to go forward as the

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

funds permitted, and, as is well known, the maintenance of the museum and the library was long ago assumed by Congress, the Institution taking upon itself only so much of the necessary responsibility for the administration of these and subsequent additions to its activities as would weld them into a compact whole, which together form a unique and notable agency for the increase and diffusion of knowledge, for the direction of research, for cooperation with departments of the Government and with universities and scientific societies in America, and likewise afford a definite correspondent to all scientific institutions and men abroad who seek interchange of views or knowledge with men of science in the United States.

Since that early day no material change has been suggested in the general scope of the government Museum; it has only remained to elaborate the details, and the opportunity is now close at hand to realize all that the first Board had in view, since ample space will be available during the coming year.

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

The department or gallery of the fine arts had made little progress, though not from lack of desire or appreciation, until within the past three years, during which its interests have been markedly advanced, as elsewhere explained.

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

It is gratifying to note that in the course of a few months it will be possible to give the national collections a systematic arrangement and to provide for the increase of those branches whose growth has heretofore been restricted through lack of space. By transferring to

the new building, as proposed to Congress, the subjects which are best represented, which have been as a whole most completely classified and can therefore be most advantageously exhibited for the benefit of the public, namely, ethnology, archeology, natural history, and geology, the older buildings may be turned over to the arts and industries, in several branches of which the collections are already important and extensive.

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

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

Nor has the elementary or even the higher education been by any means the sole gainer from the work of the Museum. To advance knowledge, to gradually extend the boundaries of learning, has been one of the great tasks to which the Museum, in consonance with the spirit of the Institution, has set itself from the first. Its staff, though chiefly engaged in the duties incident to the care, classification, and labeling of collections in order that they may be accessible to the public and to students, has yet in these operations made important discoveries in every department of the Museum's activities, which have in turn been communicated to other scholars through its numerous publications. But the collections have not been held for the study of the staff nor for the scientific advancement of those

belonging to the establishment. Most freely have they been put at the disposal of investigators connected with other institutions, and, in fact, without the help of many such the record of scientific progress based upon the material in the Museum would be greatly curtailed. When it is possible to so arrange, the investigator comes to Washington; otherwise such collections as he needs are sent to him, whether he resides in this country or abroad. In this manner practically every prominent specialist throughout the world interested in the subjects here well represented has had some use of the collections, and thereby the National Museum has come to be recognized as a conspicuous factor in the advancement of knowledge wherever civilization has a foothold.

SOME IMPORTANT MATTERS OF THE YEAR.

THE NEW BUILDING.

Although it had been expected, as explained in the last report, that the new building would be finished before the close of the year, delayed contracts and other circumstances interfered with the progress of the work to such an extent that no part of the structure was in readiness for occupancy at the end of June. The entire stonework of the outer walls of the building, including the porch, columns, and front of the south pavilion in which the main entrance is located, was, however, completed, as were also the roofs and skylights of the building generally. The placing of the slate on the dome of the rotunda and on the adjacent roof of the south pavilion was under way, but the laying of the extensive granite approaches, for which the stone has been delivered, had not been begun.

Much remains to be done in the interior of the rotunda, but as it is the main part of the building that is most urgently needed, for the accommodation of the collections and laboratories, it is there that the work has been most energetically prosecuted. Except for some special items, such as metal doors, transoms, etc., the construction of which will continue through several months, it is expected that at least some parts of the building will be ready for use and that the moving from the older buildings may be started before autumn.

It is interesting to mention that the building has already been made to serve a commendable purpose—as the meeting place of the Sixth International Tuberculosis Congress, held in the early autumn of 1908. Being then in a very unfinished condition, it was necessary to make special arrangements, authorized by an act of Congress, for such partitions and other fittings as were required for the accommodation of the several sections and for the display of the extensive collections that were brought together. A large part of the first and second floors, as well as of the basement, was given over to the congress, and while the progress of construction of the building was thereby much retarded, the delay may be regarded as fully sanctioned by the exceptionally important nature of the event which occasioned it.

Good progress was made in the preparation and construction of furniture for the new building, more especially for the storage rooms and laboratories, in which it is intended, so far as possible, to utilize the best quality of fireproof material. The boiler and electrical plant installed in this building, which embodies the latest improvements

and is of sufficient capacity for the purpose, will also be used for heating and lighting the older buildings. The necessary connections will be made during the summer, and will result in a considerable saving in cost.

Anticipating more rapid progress in the construction of the new building, no appropriation had been requested for continuing the leases on the outside rented buildings, which had, therefore, to be surrendered at the end of June, 1909. These structures contained an exceedingly large amount of property, consisting of both specimens and furniture, of which the only disposition possible was to transfer it in bulk to one of the exhibition stories of the new building in which the floors had been laid. This summary action prevented the assorting and proper assignment of the material in advance of its removal, as had been planned, and will necessarily cause some inconvenience in the final adjustment of the collections. There were also several workshops and laboratories in the rented buildings for which temporary provision had to be made.

NATIONAL GALLERY OF ART.

By a third deed of gift, dated May 10, 1909, Mr. Charles L. Freer, of Detroit, Michigan, added to his large donation of American and oriental art the following examples acquired since the transfer of the previous year, namely: Four oil paintings and 1 pastel, by Dwight W. Tryon; 3 oil paintings and 1 pastel, by Thomas W. Dewing; a portrait of ex-President Roosevelt, by J. Gari Melchers; 2 oil paintings, 1 water color, 4 drawings and sketches, 1 album of sketches, and 3 etchings and dry points, by James McNeill Whistler; 4 oriental paintings; 247 pieces of oriental pottery; and 25 miscellaneous examples of oriental art.

Mr. William T. Evans, of New York, also continued to make important additions to his collection of the works of contemporary American artists, which at the close of the year numbered 84 oil paintings received in Washington, representing 58 artists. As the Corcoran Gallery of Art required for its own use the space which has been occupied by the Evans pictures, their transfer was arranged for in June and carried into effect during the first week of July, 1909. The walls and screens of the picture gallery in the Museum building were entirely given over to this collection, and the new installation displays the paintings to much better advantage than the previous one. This change, however, necessitated the removal of the paintings which have hitherto been hanging in the gallery to temporary quarters in the Smithsonian building.

It has now become imperative to provide some place where the paintings belonging to the National Gallery of Art can be segre-

gated, and since the fitting up of the second story of the Smithsonian building has so far failed to secure the approval of Congress, it has been decided to make temporary use of one of the skylighted halls in the new Museum building. Its adaptation to this purpose will be taken up early in the new fiscal year.

It should be mentioned that the full-length portrait of Guizot, the French statesman and writer, by G. P. A. Healy, belonging to the Government, has been recalled from the Corcoran Gallery of Art. An important addition to the historical portrait series is a full-length painting of Rear-Admiral George W. Melville, U. S. Navy, by Sigismond de Ivanowski. This portrait was executed on the order of a number of friends of the distinguished naval officer and presented through the American Society of Mechanical Engineers at their annual meeting held in Washington in May, 1909.

The collossal marble statue of Washington by Horatio Greenough, which had stood in the Capitol grounds for many years and was transferred to the custody of the Smithsonian Institution by an act of Congress approved May 22, 1908, as announced in the last report, was removed during the year and installed in the apse of the west hall of the Smithsonian building, where it rests upon a low marble pedestal.

LOAN COLLECTION OF ART TEXTILES, ETC.

The loan collection of art textiles and other objects of artistic workmanship begun in May, 1908, by Mrs. James W. Pinchot, with the assistance of a number of ladies of Washington, has received much attention and its importance has been greatly increased by many valuable additions. The limited amount of space which could be allotted to this subject in the picture gallery of the Museum building tended to restrict the number of contributions, but as soon as the removal of the paintings to another hall has been effected the entire area of the present hall will become available. The collection is now contained in 24 cases, of which 9 are devoted to laces, 7 to other art fabrics, 4 to porcelains, 2 to enamels, and 2 to fans. With these are also exhibited numerous examples of silverware, jewelry, and wood and ivory carving. The assemblage of lace constitutes the most noteworthy part of the collection, being exceeded in variety and value in this country, it is said, only by the collections of the Metropolitan Museum of Art of New York and the Boston Museum of Fine Arts. This art movement, so auspiciously inaugurated and so earnestly supported, if it be sedulously followed up, is certain to prove an important factor in the future history of the National Museum. It was started with the definite purpose of stimulating the formation of a permanent exhibit which should be valued not only on account of its attractiveness and historical interest, but more especially as furnish-

ing motives and designs which may help to elevate the standard of art workmanship in this country. Its growth has been exceptional and it is hoped that its intent will be fulfilled.

The contributors during the past year were Mrs. William Bowie, Mr. Edson Bradley, Miss Helen Amory Ernst, Mrs. Arnold Hague, Mrs. James Harriman, Mrs. Robert R. Hitt, Mrs. Richard Morris Hunt, Mrs. Hennen Jennings, Mrs. Morris K. Jesup, Mrs. Frederic A. Keep, Mrs. William Kingsland, Miss Murray Ledyard, Mrs. L. Z. Leiter, Mrs. Allan McLane, the Countess Carl von Moltke, Mrs. Thomas Nelson Page, Mrs. James W. Pinchot, Mrs. H. K. Porter, Mrs. Dean Sage, Mrs. William A. Slater, the Baroness Speck von Sternburg, Mrs. Frederick F. Thompson, Mrs. William Wharton, and Mrs. Norman Williams.

The following account of the collection has been furnished by Miss Leila Mechlin:

"The work, so ably begun a year ago under the direction of Mrs. James W. Pinchot and a committee of ladies, of assembling and arranging an exhibit of artistic handicraft, has not only been continued but enlarged during the past season. With discriminating judgment and most excellent taste, many rare and beautiful specimens of lace, textiles, needlework, china, silverware, jewelry, fans, and enamels have been collected and displayed. The space at their disposal has of necessity been limited, but in spite of this fact the exhibition has been in character exceedingly comprehensive. It has not been possible to show numerous specimens of the same type, illustrating variety in craftsmanship, as would, naturally, have been desirable, but the standard has been kept so high that significance from the art standpoint, in every instance, has been made manifest. And because of this fact the exhibit has derived special importance. The purpose was not merely to show works rare and curious, representing the acme of skill in production, but to illustrate patently the union of beauty and utility and to make known to all how wide, indeed, is the field of art. The rich Italian brocades, the Genoese velvets, the Venetian, Flemish, and French laces of earlier centuries are not cherished to-day because they are old or because they were well made, but because they are beautiful. Doubtless these fabrics recall the splendor of bygone days and bring to mind the pomp and magnificence of court pageantry, but, fortunately, they stand for something less ephemeral. To them we turn for standards of taste and for example in design. A great contemporary educator has said that in this world but two things are permanent—art and ideas—and, reviewing history, we can well believe it. In the immediate past an inclination has been shown to fence in, as it were, the fine arts, but the trend to-day is toward the obliteration of belittling distinc-

tions. There is a revival of the art crafts; renewed interest in the study of design; and woven fabrics, baskets, pottery, and works in metal are being given place with paintings and sculpture in current exhibitions. America has become a great manufacturing nation; her industries are one of her principal sources of wealth and are destined to steadily increase in importance. At the present time only in matter of design does American china, American figured silk and like products rank lower than those of France, which in this field has so long held supremacy. It is partly with the purpose of remedying this shortcoming that collections of exemplary craftsmanship are being exhibited by educational institutions, and that the early establishment of an industrial art museum is being strongly advocated. In the early eighteenth century Bishop Berkeley is quoted as having said, 'How could France and Flanders have drawn so much money from other countries for figured silk, lace, and tapestry if they had not had their academies of design?' And, he might well have added, such fine examples to follow. All considered, therefore, it is not, perhaps, to be lamented that lack of space made it necessary to exhibit in the same hall in which are set forth the paintings and sculpture included in the National Gallery collection the textiles, laces, jewelry, fans, and enamels generously lent and admirably set forth by Mrs. Pinchot and her aids.

"Much might well be written of each of the several features of this industrial art loan exhibit, but special attention must be called to the collection of laces, which is particularly complete and peculiarly notable, ranking, indeed, only second, it is said, to the collections owned by the Metropolitan Museum of New York and the Museum of Fine Arts of Boston, which are among the finest in the world. To fully appreciate this collection and comprehend its worth one must of necessity be a student of laces or a connoisseur, for it is not alone the charm of the several specimens but their rare quality which commends them. It is true that every kind of known lace is by no means included in the collection, but all the principal kinds are, so that the history of lace-making from the earliest time to the present is admirably illustrated.

"In this collection, for example, are found specimens of the cut and drawn work from which real lace is descended. There is a piece of uncommonly interesting old Spanish drawn work lent by Mrs. W. A. Slater which shows precisely how the stitches were counted off and the pattern worked in, somewhat after the manner of elaborate darning, and yet, at the same time, in the spirit of embroidery. Human beings, birds, harps, and altars are part of its quaint device, wrought with archaic simplicity and childish convention. There is also a beautiful specimen of old English church lace, lent by Mrs.

Hennen Jennings, almost certainly of a later period, because of the greater freedom displayed in its design, in which are found symbols of the Passion; while of much earlier date are a handsome Gothic lace altar cloth, lent by Mr. Edson Bradley, and an Italian cut-work altar cloth of most interesting description, lent by Mrs. Pinchot. From these ancient forms of embroidery was evolved 'point lace,' and, turning from specimens of the one to specimens of the other, it is not difficult to follow the process—to observe how, as interest in craftsmanship increased and the workers became more expert, attention centered upon the pattern which was being created, and the foundation was permitted to play a less and less important part, until the work literally resolved itself into stitches in the air—'punto in aria.' And as the change was made in the method of work, in the technique of the production, so a new spirit is seen to have crept into the character of the design, geometric figures being cast aside, and scrolls and floral motives taking their place. The same change is seen to have occurred in both the painting and sculpture of the same period. The Renaissance released art from the strait-jacket in which it had been confined and, as though to compensate for its years of imprisonment, it directly burst into full bloom. Recall the carving in the stone work on some of the palaces in Venice; note the ivory carvings of the same period; yes, even the furniture; and then turn to some of the specimens of Venetian lace, and the common inspiration—the unity of spirit which animated the workers—must be recognized. Of Venetian point some exceptionally beautiful specimens are included in this collection, lent by Mrs. James Harriman, Mrs. Pinchot, Mrs. Robert R. Hitt, Mrs. Norman Williams, and others. Because of extraordinary beauty of design and delicacy of execution, special reference, perhaps, should be made to a set of collar and cuffs of seventeenth century rose point lent by Mrs. Harriman, as well as to a cape of gros point de Venice lent by Mrs. Pinchot, which, despite certain characteristic heaviness, displays remarkably fine workmanship. It has been said that Venetian lace attained a grace and perfection which baffle all description, and so it would seem. The fine rose point, with its delicacy of execution, complexity of stitch, and beauty of pattern; the gros point, with its vigor of line and sumptuous effect, deserve most truly to be ranked with other works of art.

"The early geometric patterns of the 'punto a reticella' and even the 'punto in aria' were, we are told, derived from Greece and the Ionian Isles, these arts having been transplanted from the East through the channels of commerce. It is, therefore, of special interest to find with the Venetian laces in this collection 4 yards of very rare reticella, probably produced in Greece in the sixteenth cen-

tury, as well as other lace of like description which may have had similar origin. The piece first referred to is, indeed, a splendid example, firmly worked and uncommonly interesting in design, figures of men and beasts being naïvely introduced in the well-balanced pattern.

"The next step in the development of lace making was the introduction of groundwork—a mesh of 'brides' or 'tyes' arranged in a honeycomb pattern—'reseau'—which caused the compact relief to give way to lighter and daintier patterns. Instead of simulating ivory carvings, as do the Venetian points, the later laces suggest cobwebs or frost tracery. This transition took place in the early part of the seventeenth century and is illustrated in the loan collection by a charming piece of Venetian point lent by Mrs. Hitt, wherein many brides are used, not apparently to hold the pattern together but, as it were, to embellish the pattern. Laces of this description were nowhere produced with greater perfection than at Alençon and Argentan, in France, which in time outrivaled Venice in their production.

"How this came about is worth noting. Henry the Second, of France, history tells us, appointed a Venetian, Frederic Vinciolo by name, to be pattern maker for varieties of linen needlework and laces to his court, through whom 'the seeds of a taste for lace in France were principally sown.' A century later when Louis XIV came to the throne, through the advice of Colbert, he bent his energies to fostering these seeds which had given signs of life, and intrigued to secure the services of Venetian lace makers as teachers for his own people, issuing, at the same time, an edict forbidding the importation of Venetian lace. The result was that in 1676 an Italian of note, referring to the craft of lace making, is reported to have declared that 'as far as punto in aria went, the French could then do it to perfection.'

"The distinguishing characteristic of point d'Argentan is supposedly its ground of hexagonally arranged brides, but this has likewise been found a peculiarity of certain Venetian laces of earlier date, and here it is that the student of laces finds confusion gathering on his path. The migration of lace makers and the interchange of pattern books make it almost impossible to assert with confidence, in many instances, precisely in which country, certainly in which city, specimens have been produced. But while this may work the bewilderment of the connoisseur, it need not disturb the average observer nor rob the specimens set forth of their significance as works of art craftsmanship—of their real beauty. Numerous splendid examples of both point d'Alençon and point d'Argentan are shown in this collection, but of extraordinary importance is a flounce, 27 inches

wide, of point d'Argentan, lent by Mrs. Robert R. Hitt, which is a superb museum specimen. This can very confidently be assigned to the eighteenth century by its design of garlands and baskets of flowers in flowing, repeated pattern. Those who are collectors of lace, alone can realize the great value and extraordinary rarity of so perfect an example of the lace makers' art. With this, most interestingly, has been set forth a scarcely less regal flounce of point d'Milan, showing a conventional, all-over, scroll pattern, very graceful and effective, also the property of Mrs. Hitt. And right here, perhaps, mention should be made of a remarkable piece of church lace, said to be of the time of Louis XIV, lent by Mrs. Thomas Nelson Page, on which the Virgin is seen pictured as drawn in a chariot, above the clouds, by cherubs.

"And this brings us to the consideration of the bobbin laces, which are, in fact, no less well represented by examples than the needle point. The invention of pillow or bobbin lace is usually accredited to Flanders, but whether or not rightly, some question. It is worthy of note, however, as a well-known writer has pointed out, that the two regions of Europe where pictorial art first flourished—North Italy and Flanders—should have been the localities where lace making first became an industry of importance. Doubtless the intercourse between Italy and the Low Countries brought this to pass, but certain it is that the Flemish not only borrowed but independently developed the art, so that to-day to acquaint ourselves with special phases of lace making we are obliged to go to the Dutch and Flemish portraits for confirmatory data. Recalling vividly some of the great portraits painted by Van Dyck and his contemporaries is a piece of Van Dyck point of the seventeenth century, lent by Miss Margaret A. Codman.

"But to return again to the bobbin laces. Many specimens of Mechlin—in the seventeenth century styled the 'Queen of laces'—of Valenciennes and Bruxelles, have been lent and admirably set forth, so that their distinguishing characteristics might be readily noted. Special mention should, perhaps, be made of two interesting veils—one point d'appliqué, French of the nineteenth century, with a naturalistic design of roses and lilacs, and the other Brussels point on a bobbin ground, the design roses and wheat, the period probably that of the French revolution—both witnessing to a weakening in design disassociated from the matter of craftsmanship; and, also, of fine specimens of Flemish bobbin, eighteenth century, lent by Mrs. W. M. Kingsland, and of Valenciennes lent by Mrs. F. A. Keep.

"From Flanders the lace-making art passed to England, and in an effort to foster and protect it Charles II, like Louis XIV, issued an edict prohibiting importation. To evade this law the lace makers of

Flanders called a certain variety of their handicraft 'Point d'Angleterre,' and so smuggled it into England. Again, however, it was the workers themselves who were induced to establish the rival industry, and for this reason similarity once more arises between the product of two nations. A handsome specimen of 'Point de Bruxelles et Angleterre' has been lent by Miss Codman, and some exceptionally fine and interesting examples of Honiton lace, the English product strongly resembling lace made in Brussels, have been supplied by Mrs. Pinchot and Mrs. Arnold Hague. And still no mention has been made of the examples set forth of Spanish blonde and of eighteenth century Chantilly—of a very rare and beautiful specimen of Schleswig-Holstein lace, suggesting in the delicacy of its design filigree silver, lent by Mrs. Pinchot; of a modern copy of ancient 'pot lace' and of a very rare piece of old 'Heidenbo,' contributed by the same generous collector; or, indeed, of many other pieces. Brief space, however, must be reserved for consideration of other exhibits, and sufficient has been said, it is hoped, to at least indicate the comprehensive nature of this special collection.

"Being composed of loans chiefly, the units of this exhibit have changed from time to time but its character, on the whole, has not materially altered. Throughout the year many beautiful fans have been on view with the laces, bringing to mind gay associations, conviviality, luxury. Many have been in themselves works of art, daintily and exquisitely fashioned with carved pearl and ivory sticks, and painted and embroidered pictures—works by master artists and craftsmen. A great variety of design has been noted and excellent taste in the selection of material. The majority of the fans shown have been lent by Mrs. Pinchot, who has also kindly contributed from her private collection twenty exceedingly interesting miniatures in Limoges enamel. These alone invite lengthy consideration.

"The woven fabrics have been less numerous but likewise choice, adding a welcome note of color and establishing a standard for acquisition. Mr. Edson Bradley and Mrs. H. Kirke Porter have both made valuable loans, amongst which are Spanish embroideries of the sixteenth century, Genoese velvets of the seventeenth and eighteenth centuries, old brocades, and silver and gold appliqués and embroideries. From Miss Ernst, Mrs. Allan McLane, Mrs. Charles W. Richardson and others, contributions of china and silver ware have come, lending variety and enrichment to the exhibit. And in addition to all these, Mrs. Richard M. Hunt lent for a considerable time a series of needlework pictures, dating from the early seventeenth century down, which suggested in many instances the quaint old miniatures in the illuminated missals which antedate the days of printing. And

with all this variety there has been orderly sobriety. Neither an impression of overcrowding nor of confusion has prevailed. The visitor has been gently led from object to object, at liberty to linger for study or merely find enjoyment at a glance.

"To direct attention to the exhibit and engender interest in the project of developing the collection as space permitted, a reception was held at the Museum in the exhibition hall on the afternoon of Saturday, April 24, 1909, to which several hundred persons were invited, Mrs. Walcott and Mrs. Pinchot acting as hostesses. Those who have carried the work so far insist that no more than a beginning has as yet been made and with unabated zeal indicate their willingness to carry it on to a more definite conclusion."

SUMMARY OF THE OPERATIONS OF THE YEAR.

APPROPRIATIONS.

The appropriations made by Congress in the sundry civil act approved May 7, 1908, for the maintenance and activities of the United States National Museum during the period covered by this report, namely, from July 1, 1908, to June 30, 1909, were as follows:

Preservation of collections	$190,000
Furniture and fixtures	50,000
Heating and lighting	22,000
Building repairs	15,000
Books	2,000
Rent of workshops	4,580
Postage	500
Printing and binding	34,000
Total	318,080

The following appropriations were granted for the year ending June 30, 1910, the increased amount being called for by the approaching occupancy of the new building:

Preservation of collections	$250,000
Furniture and fixtures	200,000
Heating and lighting	60,000
Building repairs	15,000
Books	2,000
Postage	500
Moving collections, etc	4,000
Printing and binding	34,000
Total	565,500

BUILDINGS.

An account of the progress made in the construction of the new building is given on a previous page.

The work of replacing with tin the old slate roofs over the main part of the Museum building was completed during the year with the renovation of the covering of the rotunda, which occupied a month during the summer of 1908. This task was much more difficult than that presented by the other roofs as it was decided not to disturb the ceiling, with possible injury to the interior walls, but to work entirely from the outside. The slate having been removed, the tin was fastened on with screws instead of nails and the seams were locked by

hand. The results have been entirely satisfactory, and the leakage during rains, which was always heavy, has been entirely stopped.

The photographic laboratory, which occupies the upper part of the southeast pavilion, was in course of remodeling at the close of the year, among the changes in progress being the building of an appropriate skylight, the addition of new windows, the extension of the printing room, and the substitution of an encaustic tile floor for the old wooden one.

A pair of iron grille gates for the main entrance to the building had been ordered but not received. They are needed to improve the ventilation of the halls. Of miscellaneous repairs and alterations it is difficult to speak in general terms. They were such as are to be expected in connection with buildings of the size and character occupied by the Museum, the percentage of expenditure being exceedingly low. They related mainly to the roofs and floors, the repair and painting of walls and ceilings, the renewal of woodwork, and the building of fireproof partitions. The outside buildings also required some repairs and painting.

The boilers and other parts of the steam plant were thoroughly overhauled and renovated in the summer of 1908. Steam was raised on October 2, 1908, and discontinued on May 22, 1909, the boilers having been in actual use for 2,410 hours and having consumed 990 tons of hard coal.

At the close of the year there were on hand 2,407 exhibition cases, 3,184 storage cases, and 1,645 pieces of office and other furniture. The additions during the year consisted of 36 storage cases and 17 pieces of office furniture made in the Museum workshops, besides 38 exhibition cases, 723 storage cases, including 660 of steel, and 54 pieces of other furniture purchased in the open market. The Museum force was largely occupied in remodeling and fireproofing storage cases for the new building, the number so transformed having been 667. The work consisted chiefly in covering them with sheet steel, but other alterations were also made, the herbarium cases, for instance, being changed to an independent unit. Several thousand insect drawers were cut down and refinished so as to adapt them to the 160 steel racks provided for the new building. Six woodworking machines with electric motors and one piece of metalworking machinery were purchased for the equipment of the new shops.

COLLECTIONS.

The total number of accessions during the year was 1,358, comprising 254,787 specimens, which were distributed among the three departments as follows: Anthropology, 26,400; biology, 216,324; geology, 12,063. A detailed list of the accessions is given in the latter part of the report.

DEPARTMENT OF ANTHROPOLOGY.

Ethnology.—The most important addition to the division of ethnology was a contribution from Dr. W. L. Abbott, consisting of about 500 objects, gathered on the Kendawangan River in southwestern Borneo adjoining the region traversed by him the previous year, in continuation of the biological and ethnological survey of Malaysia which this explorer has indefatigably pursued for more than a decade. This collection is rich in well-constructed basketry, contains numerous illustrations of the manufacture and use of bark cloth, which is there finer than in any other locality in Malaysia, and includes many objects relating to the domestic arts of the Dyaks. Several noteworthy collections from Asiatic countries were received as follows: Four unique specimens from the almost unknown Iao tribe of Chinese aborigines, northwestern Canton Province, contributed by Miss Louise Johnston, of Wooster, Ohio; a rain coat, a remarkable collection of models of insects and reptiles, and a model of an irrigation pump constructed by north Chinese, through Mr. Frank N. Meyer, explorer for the Bureau of Plant Industry of the Department of Agriculture; and a number of Chinese velvets and embroideries of the Chien-lung period (1736–1795), presented by the Baroness von Sternburg as a memorial to her husband, the late Baron Speck von Sternburg, German ambassador to the United States. Dr. Hugh M. Smith, U. S. Deputy Commissioner of Fisheries, contributed five baskets, a knit bag, and a musical instrument of bamboo from the Philippine Islands. Africa was represented by three accessions. Two of these, consisting of bows and a leather work bag from the Sudan, were donated by Dr. Cyrus Adler; the other accession, appertaining to the Inhambane Zulus of East Africa, comprises carved wooden drums, a marimba, baskets, pottery, dolls, costumes, hoes, weapons, and domestic utensils, and numbers over 200 specimens.

With the exception of Doctor Abbott's gift, the larger collections were from North America. Dr. Aleš Hrdlička, of the National Museum, while engaged in securing data on tuberculosis among the Indians, gathered many ethnological specimens from the Menominee, Nez Percé, Hupa, and Mohave tribes. Mr. E. de K. Leffingwell, on his return from the arctic coast of Alaska, presented a series of very interesting Eskimo objects from the ancient village sites on the coast east of Point Barrow. A number of baskets by the Chetimacha Indians of Louisiana, obtained by purchase, accompanied by the native names of the basket designs and their meaning, are especially valuable for the study of symbolic patterns. Through the Bureau of American Ethnology there were secured several Chetimacha bows, mortars, and blowguns, obtained by Dr. John R. Swanton. A collection from the Tarahumara Indians of northern Mexico was con-

tributed by Dr. Edward Palmer, of the Department of Agriculture. Mr. William B. Douglass, of Washington, District of Columbia, presented a number of cliff dweller relics from the neighborhood of the great natural bridges of southeastern Utah.

Central and South America were represented by a few small collections. Mrs. William H. Bell, of Washington, presented a collection of photographs of the San Blas Indians; Mrs. H. C. Curl, of Washington, a wicker basket from the interior of Panama; and Mr. Frank E. Read, of Panama, a trumpet, basket, gourd vessels, and resin from the Indians of Bocas del Toro, Panama. A remarkable hafted stone hatchet of the Guayaquil Indians was given by Mr. Francesco P. Moreno, of Buenos Aires, Argentina. Rear-Admiral A. V. Reed, U. S. Navy (retired), deposited a handkerchief of filmy spider-web lace from Paraguay, and from Mr. J. N. Ruffin, Buenos Aires, Argentina, two suits of Tobo Indian clothing were purchased. A Makah basket wallet, collected by Admiral Charles Wilkes, U. S. Navy, and long in the possession of the Wilkes family, was received as a loan from Miss Sophie Pearce Casey, of Washington, District of Columbia. In quality, size, and decoration, the basket is unique.

The usual attention was paid to the care of the collections. The Philippine exhibit was taken down and prepared for the Alaska-Yukon-Pacific Exposition, the swords and other articles of metal being cleaned and made rust-proof, and the remainder of the material being greatly improved. The Philippine weaver, the Zuni, and the Hopi groups were also sent to Seattle, and the cases which they had occupied were used for the installation of the Bradford Chetimacha baskets, the Ceylon figures, and the Leiter collection of Hindu art textiles. Important accessions have been promptly placed on exhibition, which has necessitated the rearrangement of many cases. With the assistance of Mr. Frits von Holm, of Copenhagen, while in the service of the Smithsonian Institution, much progress was made in the labeling of the Chinese and Japanese collections. Constant advance has been made in the preparation of the study and storage collections for removal to the new building. A complete list of accessions by localities has been compiled: it will be immediately helpful as well as of historical interest.

The acting head curator of the department, Dr. Walter Hough, continued his study of the life and culture of the ancient inhabitants of the upper Gila and Salt rivers in Arizona, based on the large collection gathered by the expeditions made possible through the liberality of Mr. P. G. Gates. Another investigation which will shortly be completed deals with the cultivation of maize among the Hopi Indians of Arizona, whose methods illustrate an early phase of the cultivation of cereals. The Abbott collections offer a number of interesting topics for study, and of these the parang or sword-knife, the

blowgun, and the textures made from the bark of trees have received special attention.

A number of persons visited the division of ethnology for the purpose of studying its collections or its methods of work and installation, and many were furnished information by correspondence. Among artists who were supplied with data regarding Indian costumes and decorative designs were Mr. William Ordway Partridge and Mr. H. K. Bush-Brown. Others who made use of the collections or secured information in various lines were Mr. Stewart Culin, of the Museum of the Brooklyn Institute of Arts and Sciences; Dr. Samuel A. Barrett, of the University of California; Mr. E. de K. Leffingwell, who is conducting investigations on the northern coast of Alaska; Mr. Arthur C. Parker, of the New York State Museum; Mr. William B. Douglass, of the General Land Office; Mr. Frederick O. Grover, curator of the new museum at Oberlin College, Ohio; Judge James Wickersham, Delegate for Alaska; Mr. Herman Bucher, instructor in the department of manual arts, New York City public schools; and Mrs. John Wilkes, of Charlotte, North Carolina. Influenced by a pamphlet on Anthropology in Education for the consular service, by the assistant curator, the Department of State has included this topic in its curriculum of consular instruction, and on July 8, 1908, a number of newly appointed consuls were addressed and shown the collections in the Museum by Professor Mason.

Prehistoric archeology.—Of greatest importance among the accessions to this division were two collections as follows: The first resulted from the excavations and repair of the Casa Grande ruins, Arizona, conducted by Dr. J. Walter Fewkes, under act of Congress approved March 4, 1907. Numbering 662 objects, it comprised stone axes and hammers, rubbing and grinding stones, mortars, paint stones, digging implements, stone balls and spindle-whorls; earthenware bowls, pots, ladles, effigy vases, etc.; pieces of basketry and textile fabrics, shell ornaments, bone awls, and wooden implements. These form a valuable addition to the material obtained at the same locality by Doctor Fewkes in 1906–7. The second collection, consisting of about 500 objects, was made during similar excavations at the ruins of the Spruce Tree House, in the Mesa Verde National Park, Colorado, in 1908, for the Department of the Interior, by the same explorer. These objects included stone axes and hammers, paint stones and mullers, bone adz, scrapers, awls and needles, wooden planting sticks, awls, arrow-shafts, fire sticks, spindle-whorls, latticework, loops of agave fiber (primitive fastenings for doorways), fragments of blankets or mats (cord and feather work), basket-work sandals, woven head bands, head rings or cushions, buckskin medicine bags, bundles of fiber used in basketry, gaming sticks and hoops. There was also a valuable series of earthenware bowls, mugs, pitchers, etc.,

and although many of them were broken, enough pieces were secured to restore about twenty vessels. Mr. W. L. Shear, of Clarendon, Virginia, also contributed a number of objects from the Spruce Tree House, obtained during explorations for the Department of Agriculture.

Mr. Herbert E. Clark, United States vice-consul at Jerusalem, contributed 37 remarkable flint implements of paleolithic types found near Jerusalem on the Plain of Bethlehem and 46 photographs from his large and varied Palestine collection. From the Natural History Museum of Elbeuf, France, there were received in exchange 273 prehistoric flint and quartzite implements. The Bureau of American Ethnology transferred a collection of stone implements, including hammer stones, roughly shaped pieces (turtle backs), leaf-shaped blades, scrapers, knives, arrow points, etc., obtained during the summer of 1908 at an aboriginal workshop site at the headwaters of the East Branch of the Kennebec River where it leaves Moosehead Lake, by Mr. J. D. McGuire, who presented them to the bureau. The material of the flaked objects is mainly felsitic rhyolite, sometimes called Mount Kineo flint. Another transfer from the bureau consisted of 88 aboriginal Carib implements from various sites in the British and Danish West Indies, collected by Mr. C. W. Branch, of St. Vincent. The Carnegie Institution of Washington, District of Columbia, presented 23 examples of pottery, basketry, gourd vessels, textiles, etc., secured by Mr. W. J. Peters on the sterile, mortuary island of San Lorenzo, near Callao, Peru.

The Mexican Government presented a complete reproduction in plaster of the Tablet of the Cross of Palenque, in consideration of the return to that Government of the original of one section of the tablet brought from Yucatan in 1842 and for many years preserved in the National Museum. A collection of hammer stones and plummet stones, a small stone mortar, and an engraved stone mace head, from Tiahuanaco, Bolivia, and an earthenware vessel from Nazca, Peru, procured by Mr. William H. Holmes during his trip to South America, was received from the Bureau of American Ethnology. The Department of State transferred an ancient copper bell, found in a cave in the valley of Naco near Santa Cruz de Yojoa, Honduras, by William E. Alger, American consul at Tegucigalpa, Honduras. It is a very interesting piece of aboriginal metal-work, globular in shape, and resembling the modern sleigh bell, but about 2 inches in diameter. The upper portion has a wire loop for suspension and, with other pieces of metal attached, takes the form of a grotesque face, more animal than human in conception. Among other things found in the same cave were wooden idols, stone lances, etc. A remarkable carved stone pestle, the upper portion representing a human head, was presented by Señor D. Juan Cabezas, of Carolina,

Porto Rico, near which place it was plowed up in a field. Señor Dias Lira, of Santiago, Chile, contributed an earthenware effigy bottle, a perforated stone club head, a double-pitted stone, and a globular stone probably used in games; and Mr. R. E. Lacham, of the same place, 2 stone pestles of unusual form, a stone pigment plate, and 12 fragments of pottery showing incised decorations. Both of these accessions were presented through Mr. Holmes.

The many objects received during the year were numbered, labeled, and catalogued, and arranged in unit drawers preparatory to their removal to the new building. Only small additions were made to the exhibition series. Investigations have related mainly to the hammer and pitted stones, edge tools, roughly notched implements, and the geographical distribution of aboriginal pottery.

Historic archeology.—The divisions of historic archeology and historic religions were combined under the former title. An important acquisition by the division consisted of a manuscript of the Mahabharata, the great epic of India, comprising 90,000 couplets written in Sanscrit in Bengali characters on palm leaves, presented by the learned rajah, Sir Sourindro Mohun Tagore. A magnificent silver Hanukah lamp of repoussé and fretwork of the Louis XV period, used in the Jewish ceremonial during the feast of Dedication, and an artistically written manuscript of the Book of Ecclesiastes were lent by Haidji Ephriam Benguiat and Son. Mention should also be made of a rubbing and photographs of the Nestorian Stone, the oldest monument of Christianity in China and the Far East, donated by Mr. Frits von Holm. An illuminated Arabic manuscript of the Koran, captured in the Philippines by Capt. Charles F. Bates, U. S. Army, was transferred from the Department of War. It shows the effect of hard usage by the Mohammedan natives of Mindanao.

To the exhibition collection were added one entire case and several miscellaneous objects of Jewish ceremonial, a series of rosaries, a Dutch Bible of 1742, figures of the goddess Taurt and of Osiris, a piece of mummy cartonage, a lead handle with a human bust, and a wooden statuette. Two papers on material in the division were published, as follows: "The Collection of Jewish Ceremonial Objects in the U. S. National Museum," by Cyrus Adler and I. M. Casanowicz; and "The Collection of Rosaries in the U. S. National Museum," by Doctor Casanowicz.

Physical anthropology.—The principal additions to this division were as follows: Forty-five brains of orangs and monkeys from Malaysia, presented by Dr. W. L. Abbott; over 50 skulls and skeletons of prehistoric inhabitants of Arkansas and Louisiana, constituting the first collection of any size made in that region, from Mr. Clarence B. Moore, of Philadelphia, Pennsylvania; 46 skulls and skeletons of

ancient Egyptians, accompanied by a full set of detailed original notes relating to them, from the Metropolitan Museum of Art, New York City; Chilean Indian crania, from Mr. R. E. Lacham, of San Isidro, Santiago, Chile; 3 ancient Tarasco Indian crania from Mexico, from the American Museum of Natural History; a collection of bones from burial mounds on Alkali Ridge, southeastern Utah, from the University of Utah; 5 skulls from mounds in Nebraska, 4 contributed by Mr. R. F. Gilder and 1 by Mr. J. E. Wallace, of Omaha; 195 negatives taken during a joint expedition under the Office of Indian Affairs and the Smithsonian Institution for the study of tuberculosis among the American Indians by Dr. Aleš Hrdlička; Indian skulls and bones from an ossuary on Piscataway Creek, Maryland, collected by Mr. J. D. McGuire, Doctor Hrdlička, and Mr. J. H. Reams; human skeletal remains from Casa Grande, Arizona, from the excavations by Dr. J. W. Fewkes; skeleton of a Chinese, from Dr. William D. Owens, U. S. Navy; 2 skulls from the island of San Lorenzo, Peru, from Mr. William J. Peters, of the Carnegie Institution of Washington; 2 Sioux skulls from Pine Ridge, South Dakota, from Dr. J. R. Walker; and 2 skulls from a mound near Bardstown, Mississippi, from Mr. A. F. Barrott, of Washington, District of Columbia. Important anatomical material was also secured from Capt. Irving Rand, U. S. Army; Dr. Henry J. Nichols, U. S. Army; Dr. E. A. Mearns, U. S. Army, and Prof. F. P. Mall, of Johns Hopkins University.

Under the joint auspices of the Smithsonian Institution and the Office of Indian Affairs, Dr. Aleš Hrdlička, assistant curator in charge of the division, visited several tribes of Indians, for the purpose of ascertaining the prevalence and cause of tuberculosis among them. The results of his investigations are noted in connection with the account of the Sixth International Congress of Tuberculosis on a later page. Through the courtesy of the Metropolitan Museum of Art, of New York City, arrangements were made for the preservation of such skeletal material as might be uncovered during the excavations which that museum has been conducting in Egypt during several years past. Doctor Hrdlička was detailed to accompany the expedition of last year, at the invitation and expense of the Metropolitan Museum. The importance of his work may be judged by the fact that over 500 mummied bodies and other remains were obtained for the National Museum, and the opportunity was afforded for making observations on and measurements of living Egyptians and the skulls and bones representing various epochs preserved in the museum at Cairo. On his return trip, Doctor Hrdlička visited several European museums and laboratories of anthropology and anatomy.

Doctor Hrdlička has continued investigations on the humerus, on the cranial capacities in the American aboriginal race, and on the

significance of low foreheads in American crania. Studies were completed on three special groups of skeletal material—the Gilder collection from Nebraska, the Fowke collection from Missouri, and the Moore collections from Arkansas and Louisiana. A bulletin by Doctor Hrdlička, entitled "Medical and Physiological Observations among the Indians of Southwestern United States and Northern Mexico," was issued by the Bureau of American Ethnology. The results of the investigation of tuberculosis among the Indians were published in several preliminary reports, and also in a special bulletin of the Bureau of American Ethnology. The examination of Mr. Clarence B. Moore's collection of 1909 has been completed and an illustrated report embodying the results is in course of preparation.

Technology.—An important accession, completing the transfer of models from the United States Patent Office under act of Congress, comprised 222 objects, including 118 rifles, muskets, revolvers, and pistols, some of much historical importance; 80 models of electrical devices, rare calculating machines, models of printing presses, etc.; and a model of the gasoline automobile invented by Mr. George B. Selden, of Rochester, New York, in 1895, which, it is stated in a report by the Commissioner of Patents, may be considered the pioneer invention in the application of the compression gas engine to road or horseless carriage use. The firearms embrace not only models, but also a large number of full-size pieces, as well as examples illustrating the history of the flint-lock, the percussion pill-lock, and the ordinary percussion cap, together with automatic percussion primers fitted to guns and pistols. With the addition of the specimens received during the past year, the firearms exhibit in the National Museum is now the finest in the country, containing not less than 50 pieces which can not be duplicated.

A noteworthy contribution to the section of aeronautics was received from Mr. Octave Chanute, of Chicago, Illinois, and consists of 3 models, one-fourth the original size, of the gliding machines with which Mr. Chanute has successfully experimented. They comprise the biplane of 1896, the multiple wing of 1896, and the oscillating wing of 1901–2. The Aerial Experiment Association presented, through Dr. Alexander Graham Bell, an exceptionally fine collection of 76 enlarged photographs of the Wright aeroplane taken during the period of testing by Mr. Orville Wright at Fort Myer, Virginia, in September, 1908. The views show the machine at rest, in different positions during the successful flights, and at the time of the accident which resulted in the death of Lieutenant Selfridge. They constitute a valuable historical record of this important epoch in the history of air navigation.

Mr. Alfred C. Clark, of New York City, deposited a Berliner gramophone, with improvements by the lender. A flint-lock horse

pistol made at Richmond, Virginia, in 1808, was lent, and a rare Remington carbine having a split hammer and special locking device was presented by Dr. Walter Hough. Mrs. Malek Ahdel Loring, of Chicago, Illinois, presented a pair of Colt's double-action revolvers and a Colt's army revolver with belt, which had been used by Captain Loring. Dr. Hugh M. Smith, United States Deputy Commissioner of Fisheries, contributed a rare and interesting revolver obtained by him in Japan. A pom-pom shell of a form used by the Boers during their siege of Ladysmith, South Africa, was received from the Hon. Russell Hastings Millward, of Washington, District of Columbia, and a 3-inch artillery shell found in the Canal Zone, from Mr. F. E. Shuck, of Gatun.

Prof. Calvin Rae Smith, of Brooklyn, New York, donated 15 watch movements of English and French makes, arranged to show the construction of such mechanisms with rack lever, cylinder, detached lever, verge, Swiss patent lever, vertical, and duplex types of escapement. One of the movements, made by a famous English watchmaker, Eardley Norton, about 1810, is a very rare specimen. Mr. John Hansen, of Washington, District of Columbia, contributed 8 watches and watch movements of American and foreign manufacture, which form a valuable addition to the historical exhibit of horology. Dr. Thomas Featherstonhaugh, of Washington, District of Columbia, presented an English and a French watch movement, and a pocket chronograph and pocket chronometer devised and made by Mr. C. Fasoldt, of Albany, New York, between 1864 and 1870. The chronograph has a chronometer balance, combination lever, and chronometer escapement, and a micronometer regulator. The mechanism is operated by an independent movement and is provided with three registering hands, one for minutes, one for seconds, and one for tenths of seconds. Not more than four or five of these chronographs were made, and the location of only one other is now known. The chronometer time mechanism is much like that of the chronograph, and both are valuable specimens. A universal sundial and compass for both north and south latitudes was received as a gift from the Keuffel and Esser Company, of New York City. Two sundials, one calculated for the latitude of Washington, were contributed by Mr. Claude L. Woolley, of Baltimore, Maryland.

Mr. Elias F. Morgan, of New London, Connecticut, presented a model of a cotton gin made by his father, Elias F. Morgan, which was introduced in 1860 and used in the South for many years, superseding the Whitney gin. A battery made from an ordinary copper gun cap, with which communications were successfully sent across the Atlantic Ocean, through the entire length of the cable, was donated by Mr. Henry H. Ward, of East Orange, New Jersey. This

battery is the smallest of a series used in 1866 to demonstrate that batteries of very high power were not necessary to operate the cable.

The aeronautical exhibit under this division now contains Dr. S. P. Langley's small aerodromes of 1896, 1898, and 1903, all of which made successful flights, the engine of his full-size machine, the Stringfellow machine of 1868, the Hargrave machine of 1891, the Lilienthal air-sailer, and the models from Mr. Chanute above referred to. Prominent aeronauts, members of aeronautical clubs, and others, have visited the Museum to study these objects, and the collection of firearms has received equal attention from experts in that field. Many persons connected with or interested in the Hudson-Fulton celebration at New York in September, 1909, have sought information to be utilized in connection with the exhibits which will be prepared for that event, and especially regarding Fulton's steamboat, the *Clermont*. An examination of the model of the *Clermont* in the Museum and such other data as could be furnished here have served to correct much misapprehension respecting the size and form of that steamer. In September, 1908, a special exhibition of fishing boats was arranged for the benefit of the International Fisheries Congress, which held its session in this city during the last week of that month. Mr. Francis D. Millet also made use of the boat models in preparing a series of paintings illustrative of the history of industrial development in the United States.

Ceramics.—Of exceptional interest among the accessions to this division were a celadon vase and a peachblow vase, both of great beauty and rarity, presented to the Museum by the Imperial Chinese Government. The celadon vase is of the Yung-cheng period (1723–1735), the peachblow, of the K'ang-hsi period (1662–1722). Three specimens of Hampshire ware were received as a gift from Messrs. J. S. Taft & Co., of Keene, New Hampshire, and placed with the examples of American art ceramics. Miss Katherine Kavanaugh, of Washington, District of Columbia, lent a teapot of the beautiful ivory white glaze in which the Chinese potters have excelled. The general installation has been changed only in minor respects. The Hippisley collection of Chinese porcelains was carefully rearranged with the aid of Mr. Frits von Holm, in order to bring important pieces into better view. Mr. Alfred E. Hippisley, who is an authority on Chinese porcelains, and whose collection in the National Museum is one of the best known in the world, examined the ceramic series on his return from China during the year, and gave valuable information concerning specimens in the general exhibit.

Graphic arts.—The accessions in this division were more numerous than for some years, among the more noteworthy being 144 process color prints and 32 photogelatin process prints donated by

various companies. Eleven prints in color from wood blocks were presented by Mr. Walter Bobbett, of Berkeley, California. A collection of models of camera shutters, transferred from the United States Patent Office, illustrate the historical sequence of the inventions for the regulation of the contact of light with the sensitive plate. The collection has also been enriched by 12 photographs in color made by Mr. T. W. Smillie, whose manuscript, entitled "Recent Progress in Color Photography," was published in the Smithsonian Report for 1907.

Musical instruments.—Noteworthy additions to this collection comprise a violincello, in which a part of the body is of paper and the head and pegs of carved wood, lent by Mr. A. P. Rice, of the National Museum, by whose great-grandfather it was made about one hundred years ago; a model of a percussion keyboard instrument which substitutes tuning forks for wires, transferred from the Patent Office; a spinet, the only one in the collection, presented by Messrs. F. H. and H. A. Vinton; a drum or gong of bronze cast in one very thin piece, constituting a remarkable example of metal working, from the Karens, interior of Burmah, who regard such gongs as symbols of wealth, deposited by Mr. H. A. Belden, of Washington, District of Columbia; instruments of bamboo used by the Igorot women of Benguet, Luzon, Philippines, for keeping time on the march, contributed by Dr. Hugh M. Smith, United States Deputy Commissioner of Fisheries; and a unique tubular wooden drum used by the Iao, an aboriginal tribe of Canton Province, China, presented by Miss Louise Johnston, Wooster, Ohio. The catalogue of musical instruments of the world, on which Mr. E. H. Hawley has been long engaged, has reached 9,746 entries. When completed it should contain over 17,000 numbers.

Medicine.—The Bureau of Chemistry, Department of Agriculture, transferred 122 specimens of crude drugs of commerce, which had been determined by Dr. H. H. Rusby. A collection of amulets and charms, mostly pertaining to magic medicine, made in England for trade with Africa, India, and Italy, was purchased, and two Indian fetishes from the upper Yukon, Alaska, were contributed by Dr. Ferdinand Schmitter, U. S. Army, Jefferson Barracks, Missouri. The large series of portraits and scenes illustrating the history of medicine in America was amplified and sent to the Alaska-Yukon-Pacific Exposition at Seattle. Improvements have been made in the method of installation of many specimens in the exhibition collection, and a rearrangement of the series of magic medicine was begun.

History.—A most valuable and attractive collection of presents from the Czar of Russia to the Hon. Gustavus Vasa Fox was received by bequest of his widow, Mrs. Virginia L. W. Fox. These objects were given to Mr. Fox during his mission to Russia in 1866 for the

purpose of conveying the congratulations of the United States to Alexander II on his escape from the attempted assassination of April 16, 1866, and consist of a superb malachite casket, gold and silver medals, illuminated freedom of cities, a silver saltcellar, silver salver, gold snuffbox, letters, and books. A life-size portrait of Gustavus Vasa was deposited by Mr. Gist Blair, and a bound volume of "Fox's Mission to Russia" was contributed by Miss Ellen de Q. Woodbury and Mr. Blair. A valuable silver gilt bowl with dragon handles and a silver model of a Chinese war junk, presented to Mrs. Theodore Roosevelt by the late Empress Dowager of China, were lent for exhibition by Mrs. Roosevelt. The following were received from the Navy Department: A large collection of relics of the Jeannette arctic expedition of 1879–1881, found in the snow with the bodies of Lieut. George W. De Long and his men who perished in the Lena Delta, Siberia; a gold cup, a trophy of baseball championship won at Amoy, China, by members of the crew of the U. S. S. *Kentucky;* and an engrossed resolution and a gold medal of the Philippine Art Association, prepared to commemorate the visit of the United States fleet in 1908.

Mrs. G. Brown Goode presented 9 medals awarded to the late Doctor Goode in appreciation of his work in the advancement of the science of ichthyology and in recognition of his services in connection with the establishment of the Hodgkins Fund, and also a package of extremely rare Italian playing cards of the seventeenth century, purchased in Italy by Doctor Goode. A notable collection of Delaware and Cherokee tribal relics was lent by Mr. Richard C. Adams, representative in Washington of the Delaware Indians. It consists of a silver pipe, a silver tomahawk, a war club with silver plate, an antique cedar flute, a wampum peace belt, and a war bonnet, associated with Delaware history. A large and fine series of the postage stamps of all nations, comprising nearly 20,000 specimens, in 12 portfolios, was deposited by Mr. David W. Cromwell, of New York City. Mrs. Julian James added miniatures and laces to the Bailey-Myers-Mason collection and a volume containing biographical sketches of the Bailey-Myers-Mason families. Mrs. Laura Kilpatrick Morgan contributed presentation china to the Gen. Judson Kilpatrick collection; and a cap and saber worn by the late Capt. James T. Ord, U. S. Army, during the Spanish war was lent by Mrs. Ord. Mrs. Hosley deposited the sword and belt given to the late Commander Harry H. Hosley, U. S. Navy, by the Larchmont Yacht Club in appreciation of his valuable services to the Government in towing the dry dock *Dewey* from Chesapeake Bay to the Philippines, and also four cablegrams of congratulation from President Roosevelt and other officials. The original manuscript from the journal of Mr. Samuel Volk, describing how he made the casts of Lincoln's hands, was presented by

Mr. Douglas Volk, of New York City, and 13 newspapers published at Richmond, Virginia, in 1865, were received from Mr. George C. Maynard.

Among other accessions may be mentioned relics of John Hancock, deposited by Mr. Thomas Chase, of Philadelphia, Pennsylvania; a shotgun owned and used by Daniel Webster, presented by Dr. Henry Furness, of Malone, New York; an autograph letter of Gen. Ulysses S. Grant, given by Mr. Irvine Mitchell, United States commissioner, at St. Louis, Missouri; a cane of the Haytian general and statesman, Toussaint l'Ouverture, donated by Mr. Gaillard Hunt, of the Library of Congress; an autograph letter of Isidore Geoffroy St. Hilaire, gift of Dr. C. W. Richmond, of the National Museum; a powder gourd carried in the Revolutionary war by William Edwards, and in the civil war by his great-grandson Hon. Thomas J. Edwards, lent by the latter. The National Society of Colonial Dames of America added 24 objects to its collection. The collection of coins and medals was also increased.

Much attention was given to the installation, readjustment, and labeling of the collections. The Alaska-Yukon-Pacific Exposition has drawn heavily on the time and material of the division. Among those who obtained assistance were: Mr. Douglas Volk, who photographed the life mask of President Lincoln made by Leonard Volk in 1860; Mr. John Ward Dunsmore, of New York, who measured Washington's uniform for use in painting a portrait of the first President; and Mr. W. P. Kyle, who sought information as to the type of Revolutionary service sword to use on a monument to Gen. James Lingan, of the Continental Army.

Preparators.—The work of the preparators was actively prosecuted. Mr. Joseph Palmer was chiefly occupied with the care and repair of specimens, but also made casts of 13 life-size figures from sculpture molds for the Seattle Exposition. Mr. H. W. Hendley completed a number of type busts of Indians for the division of physical anthropology, made casts of archeological specimens, and completed the rehabilitation of the costumed groups in the Museum exhibit. From September, 1908, to May, 1909, Mr. Hendley was attached to the special force engaged in preparations for the Seattle Exposition.

DEPARTMENT OF BIOLOGY.

Among the accessions to this department containing material belonging to more than one division the following are especially noteworthy: A gift of about 1,200 European mammals, besides 61 reptiles, from Mr. Oldfield Thomas, of the British Museum, and Mr. Gerrit S. Miller, jr., of this Museum, so greatly increases the importance of the National Museum collection of the mammals of

Europe that it has become one of the largest and most valuable in the world. The department is again indebted to Dr. W. L. Abbott for a contribution from Borneo consisting of some 700 mammals and 200 birds, a few eggs and nests, and other specimens. Mr. Owen Bryant, of Cohasset, Massachusetts, generously presented about 600 invertebrates obtained by him during a trip to Labrador, and also an egg of the Great Auk, together with other fragments of these eggs and some of the soil in which they were embedded. On behalf of the Peruvian Government, Dr. R. E. Coker donated a large collection of Peruvian crustaceans, about 300 sponges and 20 reptiles, and specimens of some 95 species of mollusks, being a part of the material secured during his investigations of the fisheries of that country. A small collection of Australian reptiles and fishes was received from Mr. Henry J. Brown, through the Hon. T. G. B. Killmaster, United States consul at Newcastle, New South Wales.

The United States Bureau of Fisheries transferred an exceptional amount of valuable material. In connection with its explorations among the Philippine Islands, Dr. Paul Bartsch, a member of the Museum staff, was detailed to serve for a year as one of the naturalists on the steamer *Albatross*. The collections, to the assembling of which Doctor Bartsch, with the hearty and effective cooperation of the staff of the steamer, paid special attention, comprised about 100,000 specimens of mollusks, 48 lots of medusæ, several hundred birds, about 100 reptiles, etc. Other large and important collections transferred by the bureau included 243 lots of medusæ, obtained during the *Albatross* expedition to the eastern Pacific in 1904–5, 52 lots of alcyonarian corals taken off the coast of California by the *Albatross* in 1904, and more than 400 sea urchins, 23 lots of sponges of the families Geodidæ and Erylidæ, and several hundred samples of sea bottom from different parts of the Pacific. A large miscellaneous collection of fishes, including about 600 specimens from New York and Ohio and a series from Panama, should also be mentioned.

Two field parties in which the Institution and Museum are greatly interested left this country during the year for important collecting regions, from both of which especially valuable results may be expected. The first, which will explore in Java and some of the adjacent islands, is being conducted by Mr. Owen Bryant, of Cohasset, Massachusetts, entirely at his own expense. He is accompanied by Mr. William Palmer, of the Museum staff, and will present to the Museum a large share of the specimens obtained. The party sailed at the beginning of the calendar year 1909. The second expedition is that organized by Col. Theodore Roosevelt as a hunting trip into British East Africa and more inland districts. It has attached to it three well-known naturalists, Lieut. Col. Edgar A. Mearns, U. S. Army, Mr. E. E. Heller, and Mr. J. Alden Loring, whose expenses

are being paid from a private subscription fund given to the Smithsonian Institution for the purpose.

The work on the collections in biology has been mainly of a routine character, owing to the crowded condition of the older buildings and the preparations for moving to the new one. For the same reason but few changes were made in the exhibition collections, although the present installations were carefully maintained and to some extent improved. Only a very few specimens were added, but a new card catalogue of the entire exhibition series of mammals was nearly completed at the close of the year. The head curator, Dr. Frederick W. True, served during the year as chairman of the Smithsonian committee on publications.

Mammals.—Besides the accessions above noted, the division of mammals received several important acquisitions. The skin and skeleton of an adult male buffalo, in splendid condition, and also several elk antlers were transmitted from the Yellowstone National Park by the superintendent, Maj. H. C. Benson, U. S. Army. The receipts from the National Zoological Park comprised 84 mammals, including many large species such as the roedeer, carabao, orang, Virginia deer, cougar, kangaroo, aoudad, lion, black bear, pronghorn antelope, bison, etc. Collecting trips for fossil cetaceans along the Calvert Cliffs, Maryland, were continued in the autumn of 1908, under the direction of the head curator, by Mr. William Palmer and Mr. D. B. Mackie. A large amount of valuable material was obtained, including many skulls, fragments of skulls, and other remains.

Mr. Angel Cabrera, of Madrid, presented three Spanish mammals, including the type of a new species of squirrel, *Sciurus infuscatus*, which he had described. Another valuable lot of 16 Spanish mammals, comprising a roedeer, fox, badger, etc., were obtained in exchange from the Rev. Father Saturio Gonzales, of Santo Domingo de Silos. Mr. E. R. Warren, of Colorado Springs, Colorado, transmitted the type of a subspecies of chipmunk, named by him *Eutamias quadrivittatus animosus*, and the heirs of Dr. Robert J. Nevin contributed 15 mounted heads of large game, chiefly from South Africa. The Marquis G. Doria, of Genoa, Italy, presented a very rare bat from Peru, *Amorphochilus schnablii*. A skeleton of the dwarf carabao, or tamarao, of Mindoro Island, was received as a donation from Mr. M. L. Merritt, of Grundy Center, Iowa. Two goat antelopes and a badger from western China were purchased of the Rev. W. W. Simpson, of Taochow, China, and there was also purchased the skeleton of a killer whale from Barnegat, New Jersey, the only authentic specimen of the kind from the Atlantic coast of the United States in any museum.

The majority of the specimens in the collection of European mammals, which number several thousand, were identified and labeled, a

work made possible by the recent extensive studies and collecting expeditions in Europe of Mr. Gerrit S. Miller, jr., now the curator of the division. Some additional work was done toward rearranging the general collection of rats and mice, and also of squirrels. Some 4,200 skulls, of which about 900 were large or of medium size, were cleaned during the year. There remain, however, a very large number of skulls, received in earlier years, in a more or less unsatisfactory condition as regards preparation, which require treatment to free them from grease, dirt, etc. Forty-eight large skins were dressed and folded for preservation and 92 made up for the same purpose.

Much scientific work was conducted during the year. Mention should especially be made of the catalogue of type specimens of mammals, including those in the Biological Survey collection, by Messrs. Lyon and Osgood, which has been published. It makes a volume of 325 pages and contains extensive data regarding each type. Other papers on mammals, to the extent of 1,860 pages, with numerous plates, were issued. The mammals collected in southern Borneo by Dr. W. L. Abbott, and recently presented by him to the Museum, have been studied by Dr. M. W. Lyon, jr., assistant curator, who has an annotated catalogue of them partly finished. Two types of American species and a dozen other specimens were lent to Dr. J. A. Allen, of the American Museum of Natural History, for comparison. A few other loans were made for similar purposes. The naturalists of the Biological Survey made free use of the collections, as in past years. Dr. F. W. True continued investigations of American fossil cetaceans and published several papers relating to them.

Birds.—The birds obtained on the Museum-Zeledon expedition to Costa Rica, mentioned in the report of last year, were not received in Washington until after July 1, 1908. They consisted of 1,630 specimens of humming birds, flycatchers, tanagers, etc., including many rarities and the types of two new species. A part of this material was from the Dota Mountain region, which has seldom been visited by naturalists, and was prepared by Mr. Basulto, at the request of Mr. Zeledon, after the return of Mr. Ridgway. A collection of 261 specimens of Philippine birds was received in exchange from the Bureau of Science at Manila, and 165 species, including 5 types, from the same islands were contributed by Dr. E. A. Mearns, U. S. Army. About 60 Abyssinian birds, the first received from that country, were presented by Lady A. McM. Harrington. From Mr. Outram Bangs, of Boston, there was obtained, partly as a gift and partly by exchange, a series of 172 birds from Costa Rica and Jamaica, including a specimen of the rare *Laletes osburni* and other species not previously well represented in the Museum. Three birds from Darien were donated by Mr. R. S. Williams, of New York. A collection of 66 East Indian birds was received in exchange from the Selangor State Museum, and

another of 43 specimens, chiefly from South America, was secured in the same manner from Count Hans von Berlepsch, of Germany. Among 10 rare birds, purchased from Mr. W. F. H. Rosenberg, of London, are a specimen of Rudolph's bird of paradise, a flightless duck from New Zealand, *Nesonetta aucklandica*, and two species of the genus *Miro*, now nearly extinct.

Of birds' eggs obtained in exchange may be mentioned 56 specimens from Mexico and South America, including the eggs of *Calypte helenæ*, probably the smallest bird known; 8 eggs and a nest of the western golden-crowned kinglet from Mr. J. H. Bowles, of Tacoma, Washington; and 15 eggs, including 4 of *Epidonax griseus*, not previously represented in the Museum, from Mr. W. L. Chambers, of Santa Monica, California. Mr. Outram Bangs presented an egg of *Urubitinga gundlachi* from Cuba.

Work on the fifth part of the Manual of North American Birds was continued by Mr. Robert Ridgway, curator, assisted by Mr. Riley, aid, and the manuscript on four families of passerine birds was completed. The working up of the humming-bird and woodpecker families and the family Micropodidæ was nearly finished, but the goatsuckers still require to be studied. In connection with this investigation, 6,386 specimens were borrowed from other museums for purposes of comparison. A descriptive list of the birds of Uganda, Africa, was prepared by Dr. C. W. Richmond for the use of Dr. E. A. Mearns, and also of about 200 Javan birds for the use of Mr. William Palmer. Doctor Richmond added about a thousand cards to the catalogue of genera and species of birds during the year.

Specimens of birds to the number of 930 were lent for examination, including 114 representatives of the genus *Piaya*, to Mr. Witmer Stone, of the Academy of Natural Sciences of Philadelphia, for use in the revision of the cuckoos; and 65 Korean and other Asiatic birds to the Carnegie Museum of Pittsburg, for purposes of identification.

The cases containing the reserve collections of bird skins and eggs, 304 in number, were fireproofed with sheet steel, requiring the temporary removal of their contents and imposing a considerable task upon the staff. At least 8,000 labels were prepared, mainly for the East Indian collection from Dr. W. L. Abbott, the Costa Rican specimens from the Museum-Zeledon expedition, and the Philippine specimens from Dr. E. A. Mearns, U. S. Army. Toward the close of the year the collection of birds' eggs, occupying 70 quarter-unit cases, was removed to the new building for storage.

Reptiles and batrachians.—The reptiles collected in the Philippines by Dr. Paul Bartsch while with the steamer *Albatross* are especially interesting, since in large part they were obtained on islands from which the Museum had previously no material. A number of Philippine specimens, chiefly of rare species, were also contributed by Maj.

J. M. T. Partello, U. S. Army. Dr. R. E. B. McKenney, of Washington, District of Columbia, presented 52 specimens from Panama, and Dr. C. T. Forsyth-Major, of London, 8 specimens from Corsica. There were received in exchange from Mr. Thomas Barbour, of Cambridge, Massachusetts, 72 specimens from various parts of the world, including topotypes and other important material, and from Mr. J. Hurter, of St. Louis, Missouri, a series of rare salamanders and other valuable specimens.

Dr. Leonhard Stejneger, curator of the division, continued his investigation of the reptile fauna of the Philippine Islands. The collection of toads was studied by Miss Mary C. Dickerson, of New York, in connection with her work on North American tailless batrachians. Mexican reptiles were examined by Dr. S. E. Meek, of the Field Museum of Natural History; South American specimens by Mr. Thomas Barbour; and turtles by Dr. O. P. Hay.

Fishes.—Besides the large collections from the Bureau of Fisheries, previously referred to, mention should be made of a series of Florida fishes collected by Mr. Barton A. Bean, assistant curator, who, as in several previous years, was invited by Mr. W. H. Gregg to accompany him on his yacht *Orian*, which cruised, this season, from St. Augustine to Molasses Key. There were also received specimens of fishes obtained on the expedition of Dr. S. E. Meek to Central America and during the explorations of Mr. H. J. Brown and Mr. W. D. Filmer about Newcastle and Lake Macquarie, New South Wales.

Over 11,500 specimens of fishes were catalogued, labeled, and installed. Special attention was given to labeling and recording types and other rare specimens recently received. A large number of earthenware jars were procured and the specimens which, on account of their size, had previously been kept in copper tanks were transferred to them, with the view of preventing further discoloration from contact with the metal.

Five lots of fishes were lent for study. Mr. C. V. Burke examined the liparid fishes from America and Japan, occupying a table in the laboratory for about four months; and the naturalists of the Bureau of Fisheries and Dr. Theodore Gill had constant access to the collections. Mr. B. A. Bean and Mr. A. C. Weed described new species of selachians. The former also identified the Costa Rican fishes received the previous year, and continued his study of the Florida fishes, as did Mr. Weed his work on the pickerels.

Insects.—This division received several large and important gifts, of which the most noteworthy came from Mr. William Schaus, who added to his previous donations about 18,000 butterflies and moths from Costa Rica and other tropical countries. Mr. H. L. Viereck, of the Bureau of Entomology, U. S. Department of Agriculture,

and Mr. J. C. Crawford, assistant curator of the division, presented their valuable private collections of Hymenoptera. Mr. Viereck's collection contains about 2,400 specimens, mostly bees, including types of more than 50 species and paratypes of some 50 more. Mr. Crawford's collection consists of about 2,700 specimens, with many types and paratypes. The Bureau of Entomology transmitted large collections as in past years. Those reported as of most importance are 2,383 Diptera from Florida and South Carolina, collected by Mr. C. H. T. Townsend; 1,038 miscellaneous insects from Santa Catalina Island, California; 1,000 insects from Alabama, obtained by Mr. H. H. Smith; and 400 mosquitoes from Dublin, New Hampshire, collected by Mr. A. Busck. From Lord Walsingham and Mr. F. D. Godman there were received, partly as a gift and partly in exchange, about 600 micro-lepidoptera from Central America, chiefly cotypes of species described in the *Biologia Centrali-Americana*. Four hundred and twenty Coleoptera from the same general region were obtained from Mr. Godman in exchange. About 5,000 Venezuelan insects were purchased, and the Washington Biologists' Field Club added to its previous donations about 1,000 insects from Plummer's Island, Maryland.

The entire collection of Orthoptera was transferred to drawers adapted to the new standard racks, and some progress was made in the same direction with the Lepidoptera, Coleoptera, and Hymenoptera. The investigations of Doctor Dyar and Mr. Knab on mosquitoes, mentioned in last year's report, were continued and brought nearly to completion. Loans of insects to specialists for investigation numbered 20 and comprised 4,389 specimens. The largest lot, containing 1,500 tropical American ants, was sent to Dr. William M. Wheeler, of the Bussey Institution, Boston. Prof. A. L. Melander, of Pullman, Washington, obtained 326 Diptera of the family Borboridæ. Orthoptera of the family Forficulidæ, to the number of 328 specimens, were lent to Mr. Malcom Burr, of Eastry, England, and 305 Hemiptera to A. L. Montandon, of Bucharest, Roumania. Mr. G. C. Champion, of London, received 298 beetles for use in connection with the *Biologia Centrali-Americana*, and Prof. H. T. Fernald, of Amherst, Massachusetts, 350 Sphegidæ and Ophioninæ for study.

Mollusks.—The heirs of the late Chief Engineer Herschel Main, U. S. Navy, presented a valuable collection of about 1,500 marine shells, which had been obtained in different parts of the world. A very interesting lot of land shells from Cuba and another from the Isthmus of Darien, including new species, were donated by Mr. A. E. Heighway. Among the purchases which comprise some of the most important accessions should be mentioned a series of recently described shells of Japan, a series of rare land and fresh-water shells from Toukin, China, and land shells from the mountains of Venezuela.

About 6,000 lots of specimens were catalogued and labeled. Dr. William H. Dall and Dr. Paul Bartsch completed their monograph of the Pyramidellidæ, which has been in progress for about twelve years. Doctor Dall also prepared a report on a collection of mollusks from Peru, containing nearly 900 species. Doctor Bartsch continued work on the collection of South African shells presented by Lieut. Col. W. H. Turton, of England. Among persons not connected with the Museum who made use of the collections, may be mentioned Miss M. C. Breen, of Washington, Dr. H. A. Pilsbry, of Philadelphia, and Dr. V. Sterki, of Pittsburg. The assistant curator was absent on detail with the steamer *Albatross* in the Philippine Islands during the early part of the year, as elsewhere explained.

Marine invertebrates.—The large amount of material transferred by the Bureau of Fisheries has been noted on a previous page. Mention may here be made of a series of over 400 crabs from the Gulf of Siam, received from the Zoological Museum of Copenhagen, Denmark, partly as a gift and partly in exchange. It comprises specimens of 20 genera and 66 species not previously represented in the National Museum, among them being 9 cotypes. Fifty negatives of types of corals described by Ellis and Solander were obtained from the University of Glasgow, Scotland.

One of the principal subjects of routine was the transfer to the regular catalogues of the data relating to specimens formerly in the custody of Prof. A. E. Verrill. A cataloguer was employed for six months especially for this work. As in previous years, a large amount of time was occupied in selecting, invoicing, and packing specimens sent out for study and identification, and in caring for them on their return. These transactions are of great benefit to the Museum as well as to the various zoologists concerned. The sendings are seldom loans in a strict sense, but consist in most cases of unidentified material which it is of great advantage to the Museum to have studied and identified, and, indeed, without the gratuitous cooperation of specialists, it would be impossible to make headway in many groups. During the year specimens were forwarded under these conditions to 28 naturalists in the United States and other parts of the world. The general collection of unidentified fresh-water sponges was transmitted to Dr. N. Annandale of Calcutta, India, who is monographing the fresh-water sponges of the world. Dr. J. A. Ashworth, of Edinburgh, who is working up the Arenicolidæ, obtained the use of 36 lots of specimens. The unidentified Atyidæ were sent to Prof. E. L. Bouvier, of the Museum of Natural History, Paris, and the unnamed compound ascidians from the Pacific Ocean north of California, to Dr. A. G. Huntsman for examination in connection with his studies of the ascidians of British Columbia. Dr. R. C. Osburn, of New York, received the collection of bryozoans from

southern New England to assist him in his work on the bryozoans of eastern North America. Additional specimens of barnacles were sent to Doctor Pilsbry; of parasitic copepods to Dr. C. B. Wilson; and of ophiurans to Dr. H. L. Clark.

Reference was made in the report for 1907 to the arrangements made with Dr. J. A. Cushman, of the Boston Society of Natural History, to sort out, identify, and prepare sets of the foraminifera of the North Pacific Ocean from the large collections of the Museum, mainly secured by the Bureau of Fisheries steamer *Albatross*, and to prepare a monograph on the group. This work has progressed steadily during the last two years, a large number of microscopic slides and illustrations has been prepared, and the manuscript is reported to be well advanced. The material furnished to Doctor Cushman last year comprised samples of ocean bottom obtained by the steamer *Albatross* in 1906, the U. S. steamers *Nero* and *Alert*, and a few others.

The several groups of marine invertebrates collected by Mr. Owen Bryant, of Cohasset, Massachusetts, during a cruise to Labrador, were sent to the following zoologists who have kindly offered to identify the species and describe such as are new: Dr. W. R. Coe, Dr. J. Percy Moore, Dr. J. H. Gerould, Dr. L. J. Cole, Dr. H. A. Pilsbry, Mr. R. W. Sharpe, Dr. R. C. Osburn, Dr. W. A. Herdman, Dr. J. P. McMurrich, Prof. C. C. Nutting, and Dr. R. W. Miner. Similarly, the sponges and crustaceans of Peru presented by Dr. R. E. Coker on behalf of the Peruvian Government were submitted to Dr. H. V. Wilson, Dr. N. Annandale, Dr. H. A. Pilsbry, Dr. A. O. Walker, and Miss A. L. Weckel.

Comparative anatomy.—A complete card catalogue of the collection of cetaceans was prepared. In the latter part of the year all the skeletons and other material belonging to the division were removed from the rented storage buildings, the majority being transferred to the new Museum building in packing boxes and the remainder to the taxidermists' shed south of the Smithsonian building. A card catalogue of the latter, covering the contents of over 60 packing boxes, was made for reference. The cleaned skeletons were brought to the present Museum building, numbered, labeled, and put in cases. At present this division is not manned, the work being carried on personally by the head curator with the aid of preparators and others.

Plants.—The largest accessions to the National Herbarium were obtained by exchange, and include 3,000 plants, chiefly New Mexican, from the Agricultural College of New Mexico; 1,427 plants, mainly rare cacti and herbarium specimens from the West Indies, from the New York Botanical Garden; 579 plants from the Bureau of Science, Manila, including duplicates of many new species; and 248 examples, mostly ferns, from the British Museum. Of purchases, the most

important were 235 Philippine and 889 Mexican plants. The Carnegie Institution of Washington presented 97 plants; Mr. F. E. Lloyd, 194 Mexican plants; and Mr. E. I. Applegate, 360 specimens from Oregon. Capt. John Donnell Smith, of Baltimore, who in 1905 presented about 100,000 mounted specimens to the Smithsonian Institution with the understanding that certain parts of the collection might be retained in Baltimore for a short time, transferred about 7,000 sheets of ferns in March of the past year.

Specimens to the number of 15,513 were stamped and incorporated in the permanent herbarium, making the total number so disposed of since the transfer of the herbarium to the Museum in 1894, 347,874. The number of specimens mounted was 15,580. Forty unit herbarium cases, comprising 960 pigeonholes, were added to the stack, increasing the number of pigeonholes in use to 11,818. Many of the cases were fireproofed with a covering of sheet metal, which required the removal of the contents of several cases at a time, and engaged much of the attention of the assistants for a long period. The work was not completed at the close of the year.

The increase of routine work left little time for scientific investigations on the part of the associate and assistant curators. Doctor Rose continued studies on the cacti and other Mexican and Central American plants and Mr. Maxon on ferns. The latter also edited the manuscript on ferns left by the late Dr. L. M. Underwood. The director of the New York Botanical Garden and the curator of its herbarium spent some time at the National Museum. Mr. W. W. Eggleston, of Rutland, Vermont, made studies of the genus *Crataegus*, and Miss Alice Eastwood, of San Francisco, of California plants. Dr. J. M. Coulter, head professor of botany, University of Chicago, remained here several months at work on a manual of botany and also prepared in collaboration with Doctor Rose a supplement to their monograph of North American Umbelliferæ. The large series of specimens of violets was examined by Dr. Ezra Brainerd, ex-president of Middlebury College, Vermont. The botanists of the Department of Agriculture made extensive use of the herbarium during the year.

About 2,400 specimens of plants, exclusive of those borrowed by botanists in the government service, were lent to twenty botanists and botanical institutions. The largest lots sent out were as follows: 1,153 ferns of the genus *Dryopteris* to Mr. C. C. Christensen, of Copenhagen, Denmark; 131 specimens of the genus *Plantago* to Prof. E. L. Morris, of Washington, District of Columbia; 111 specimens of Vittaria and 57 ferns to Mr. R. C. Benedict, of New York; 117 ferns of the genus *Asplenium* to Miss W. J. Robinson; 317 miscellaneous plants to Mr. W. W. Eggleston, of Rutland, Vermont; 273 specimens of the genus *Usnea* to Mr. R. H. Howe, jr., of Concord, Massachusetts.

Preparators.—The chief taxidermist finished for the exhibition series the mounting of the markhor mentioned in last year's report, and also of 3 elk heads, a mink, and 7 other small mammals. The preparation of a takin, a large Chinese antelope, was nearly completed. He also made a special experimental mounting of 4 skulls of large mammals with horns, as a basis for deciding upon the method to be adopted for the installation of such specimens in the new building. Among other work performed by the chief taxidermist and his assistant was the preparation and repair of many specimens for both the exhibition and reserve collection, and the preliminary treatment of skins for mounting in the future. Of 183 animals received from the National Zoological Park, comprising 84 mammals, 56 birds, and 43 reptiles, the skins and skulls of all but 20 were preserved, and 38 skeletons were made.

The principal work by the bird taxidermist was in continuation of remounting valuable skins from the exhibition series and repairing skins belonging to the study series, the number of which was large.

The osteological preparator mounted skeletons of a hog and a vampire, and with an assistant cleaned 21 skeletons, chiefly large mammals, roughed out 32 more, cleaned 954 skulls, and also 28 sets of antlers. Various repairs were made and much miscellaneous work was done, including the moving of all the specimens tools, and equipment from the rented buildings.

The chief modeler and general preparator was detailed for work in the field for the greater part of the year, first to collect fossils in the Calvert Cliffs, Maryland, and afterwards to accompany Mr. Owen Bryant on an expedition to Java, where he was at the close of the year. Before leaving for Java he put together most of the fossil skulls and other large pieces which he had obtained in Maryland, and made a report on this material.

DEPARTMENT OF GEOLOGY.

Systematic and applied geology.—Of nine collections of rock specimens transferred by the United States Geological Survey, the most important came from the Bradshaw Mountains of Arizona, the Sugar Loaf district and the Silverton and Boulder quadrangles of Colorado, and Goldfield, Nevada. Two valuable gifts consisted of a specimen of gold ore from Messrs. Taylor and Price, of Goldfield, and 5 jars of Mexican graphite from the United States Graphite Company, of Saginaw, Michigan.

With the exception of a study of the origin of certain copper ores, begun by the assistant curator, Dr. F. B. Laney, most of the research work was carried on by the head curator, Dr. George P. Merrill, and has mainly related to petrography and the composition of stony meteorites. Doctor Merrill also visited the phosphate regions of

Tennessee and the quarry regions of Bowling Green, Kentucky, and Kettle River, Minnesota, securing small collections at each place.

Mineralogy.—The more noteworthy additions consisted of specimens of the new minerals hillebrandite and spurrite, donated by Dr. F. E. Wright, of the Carnegie Institution of Washington, and of some fine examples of epidote, datolite, quartz, and beryl, the gift of Mr. C. S. Bement, of Philadelphia. A beautiful series of California tourmalines, both cut and in the rough, was deposited by Mr. A. E. Heighway.

Studies were carried on relative to the chemical nature of meteorites, and two papers were published. The assistant curator of the division, Mr. Wirt Tassin, also rendered important service in connection with the construction of the new Museum building, especially with reference to the metal work of the windows, roofs, and dome.

Invertebrate paleontology.—The principal accessions of the year have been as follows: A large series of Cambrian fossils from the Rocky Mountain region, collected by the Secretary of the Institution, Dr. Charles D. Walcott, with the help of the assistant curator, Mr. L. D. Burling; about 3,000 Paleozoic fossils from the Appalachian Valley and central Tennessee, by the curator of the division, Dr. Ray S. Bassler; and a collection of Tertiary fossils from the Coalinga district, California, containing the types described by Mr. Ralph Arnold, transferred by the United States Geological Survey.

The registration of the Bryozoa in the biologic series was completed. The Hambach collection received the previous year was arranged and a portion of it registered and numbered. Altogether some 13,727 specimens were placed in permanent museum form, and the catalogue of type material received during the year was kept up to date. Some 40 trays of graptolites, 330 boxes of other Paleozoic, and 38 of Mesozoic fossils have been removed from storage and placed in condition for examination. A great mass of graptolite material, including a large collection transferred from the United States Geological Survey, has been carefully overhauled and worked up during the year, and a large number of duplicates and worthless specimens eliminated. The collection now occupies about 200 standard drawers. The Cambrian and Ordovician portions of this collection have been studied and identified by Dr. E. O. Ulrich, of the United States Geological Survey, and the material from later formations by the curator of the division.

Doctor Bassler completed a bulletin on the stratigraphy of Appalachian Virginia, and another on the Dendroid Graptolites of the Niagaran dolomites at Hamilton, Ontario, besides a joint monograph with Doctor Ulrich on the Cambrian bivalved crustaceans.

Vertebrate paleontology.—Of especial interest among the accessions to this division was a large amount of material obtained by

Mr. A. C. Silberling from the Fort Union beds of Sweet Grass County, Montana, partly for the United States Geological Survey and partly under the auspices of the National Museum. This collection contains over 300 small and fragmentary specimens, representing many new and little-known mammalian forms, and is considered of great importance, both geologically and paleontologically. A fossil rhinoceros skull, obtained from Mr. E. Pfizenmayer, of St. Petersburg, Russia, forms a valuable addition to the exhibition series. Two accessions, transferred through the head curator of biology, comprise a very considerable and interesting series of cetacean remains, chiefly from the Miocene at Calvert Cliffs, Maryland, including some new discoveries.

Mr. James W. Gidley, custodian, prepared and made a preliminary study of about 100 specimens of the small mammals from the Fort Union beds, examining collections at the American Museum of Natural History in connection with this work. He also described *Basilosaurus* from the southern coastal plain, and devoted considerable time to the restoration of the skull of this form, with the view of installing an entire skeleton with the exhibition series in the new building. Other researches in progress or completed by Mr. Gidley related to *Ptilodus*, Basal Eocene mammals, a specimen of *Glyptodon* from Texas, and the foot and limb structure in mammals.

The work of Mr. Charles W. Gilmore, custodian of fossil reptiles, has been largely directed to the preparation of materials for exhibition. The more important pieces so far made ready are fairly complete skeletons of *Camptosaurus browni* Gilmore and *Ceratosaurus nasicornis* Marsh. The skull and neck of a *Tylosaurus* and the wing of a large *Pteranodon* have also been prepared for exhibition. The models of the ceratopsian skulls received in exchange from the Yale Museum a year ago have been arranged for exhibition.

A card catalogue of the materials now in storage belonging to this division has been prepared and is considered to be fairly complete. Mr. Gilmore completed his study begun the previous year on the camptosaurian material, and a paper entitled "A new Rhynchocephalian from the Jurassic of Wyoming." He also began a report on the extinct reptilian fauna of North Carolina. During June he examined the laboratory and workshop equipment of the Carnegie Museum at Pittsburg, with reference to fitting up similar quarters in the new building.

Paleobotany.—This division received only two accessions that need be mentioned in this connection—one of 26 specimens, including 6 types, from the Kootanie beds; the other comprising over 200 specimens of fossil wood from Arizona, which have been placed in the hands of Prof. E. C. Jeffrey, of Harvard University, for study. No

changes in the exhibition series have been made. The specimens were, however, removed from the shelves and the entire exhibit cleaned and rearranged. The work of renumbering and cutting down the study series has been carried on as usual, and all the collections from the Potomac formation have been thus revised.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

Eighty-two regular sets, consisting of geological specimens only to the number of 7,739, were distributed during the year for educational purposes. In addition about 1,300 specimens of geology, marine invertebrates, and fishes were sent out in special sets for the same purpose. There were lent for study to specialists not officially connected with the Museum staff 18,412 specimens from the department of biology and 576 specimens from the department of geology.

Exchanges were carried on as usual with scientific institutions and individuals, and for this purpose 10,084 duplicate specimens were used, 3,552 being geological, 530 anthropological, and 6,002 zoological and botanical.

The extent of the exchange relations with institutions abroad is indicated by the following list: The British Museum of Natural History, London, England; the University of Glasgow, Scotland; the Muséum d'Histoire Naturelle, Elbeuf, France; the Königl. Zoologisches Museum, Berlin, and the Königl. Botanischer Garten und Museum, Dahlem, Steglitz bei Berlin, Germany; the Jardin Botanique de l'État, Brussels, Belgium; the Botaniśk Museum and the Zoologisches Museum, Copenhagen, Denmark; the Naturhistoriska Riksmuseum, Stockholm, and the Botanischer Garten, Upsala, Sweden; the Bergen Museum, Bergen, Norway; the Rijks Museum van Natuurlijke Histoire, Leiden, Holland; the Botanisches Museum, Université de Lausanne, Switzerland; the Museo de Ciencias Naturales, Madrid, Spain; the Regia Museo Zoologico, Turin, Italy; the K. K. Naturhistorisches Hofmuseum, Vienna, Austria; the Indian Museum and the Royal Botanic Garden, Calcutta, India; the Royal Botanic Gardens, Peradeniya, Ceylon; the Department of Agriculture, Buitenzorg, Java; the Selangor State Museum, Kuala Lumpur, Federated Malay States.

Exchanges were also carried on with the following individuals in foreign countries: Prof. W. A. Herdman, Liverpool, Mr. Edward Lovett, Croydon, Mr. R. Shelford, Oxford, and Mr. Alfred O. Walker, Ulcombe, Maidstone, Kent, England; Mr. William Eagle Clarke, Edinburgh, Scotland; Mr. Stanislas Meunier and Dr. Emile G. Racovitza, Paris, France; Professor von Hansemann, Berlin, and Count Hans von Berlepsch, Cassel, Germany; Dr. J. H. Bonnema, The Hague, Holland; Mr. Friedrich Hendel, Vienna, Austria; Prof.

Lajos Méhely, Budapest, Hungary; Prof. E. Monaco, Portici, Naples, Italy; Dr. H. Christ, Basel, and Messrs. Grebel, Wendler & Co., Geneva, Switzerland; Rev. Father Saturio Gonzales, Santo Domingo de Silos, Spain; Mr. C. J. Gabriel, Abbotsford, Melbourne, Australia; Dr. Eugenio Giacornelli, La Rioja, Argentina; Señor Juan Tremoleras, Montevideo, Uruguay; Mr. Federico Eichlam, Guatemala.

MISCELLANEOUS.

VISITORS.

The number of visitors to the National Museum building during the year 1908–9 was 245,187, a daily average of 783; and to the Smithsonian building 198,054 persons, a daily average of 632.

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

Number of visitors during the year ending June 30, 1909.

Year and month.	Museum building.	Smithsonian building.	Year and month.	Museum building.	Smithsonian building.
1908.			1909.		
July	13,545	11,327	January	12,006	9,085
August	21,094	17,795	February	15,702	11,403
September	21,210	18,938	March	54,408	43,686
October	18,866	15,475	April	25,353	19,957
November	14,399	12,753	May	17,495	13,279
December	14,015	10,758	June	17,094	13,598
			Total	245,187	198,054

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

Year.	Museum building.	Smithsonian building.	Year.	Museum building.	Smithsonian building.
1881	150,000	100,000	1896–97	229,606	115,709
1882	167,455	152,744	1897–98	177,254	99,273
1883	202,188	104,823	1898–99	192,471	116,912
1884 (half year)	97,661	45,565	1899–1900	225,440	133,147
1884–85 (fiscal year)	205,026	105,993	1900–1901	216,556	151,563
1885–86	174,225	88,960	1901–2	173,888	144,107
1886–87	216,562	98,552	1902–3	315,307	181,171
1887–88	219,665	102,863	1903–4	220,778	143,988
1888–89	374,843	149,618	1904–5	235,921	149,380
1889–90	274,324	120,894	1905–6	210,886	149,661
1890–91	286,426	111,669	1906–7	210,107	153,591
1891–92	269,825	114,817	1907–8	299,659	237,182
1892–93	319,930	174,188	1908–9	245,187	198,054
1893–94	195,718	103,910			
1894–95	201,741	105,658	Total	6,519,187	3,757,645
1895–96	180,505	103,670			

PUBLICATIONS.

The publications issued during the year consisted of the annual report for 1908, volumes 34 and 35 and part of volume 36 of the Proceedings, Bulletins 62, 63 and 64, and 7 parts of two volumes of Contributions from the National Herbarium. Volume 34 of the Proceedings contained 17 papers; volume 35, 28 papers; and the uncompleted volume 36, 35 papers; a total of 80 papers, all of which were separately printed and distributed in small advance editions for the early information of specialists.

The titles of the bulletins were as follows: No. 62, "Catalogue of the Type-Specimens of Mammals in the United States National Museum, including the Biological Survey Collection," by Marcus W. Lyon, jr., and Wilfred H. Osgood; No. 63, "A Monographic Revision of the Coleoptera Belonging to the Tenebrionide Tribe Eleodiini Inhabiting the United States, Lower California, and Adjacent Islands," by Frank E. Blaisdell, sr.; and No. 64, "A Critical Summary of Troost's Unpublished Manuscript on the Crinoids of Tennessee," by Miss Elvira Wood, of Columbia University, New York.

The following papers appeared as parts of Volumes XII and XIII of the Contributions from the National Herbarium: Volume XII.—Part 4, "The Mexican and Central American Species of Sapium," by Henry Pittier; Part 5, "New or Noteworthy Plants from Colombia and Central America," by Henry Pittier; Part 6, "Catalogue of the Grasses of Cuba," by A. S. Hitchcock; Part 7, "Studies of Mexican and Central American Plants, No. 6," by J. N. Rose; Part 8, "The Allioniaceæ of the United States, with Notes on Mexican Species," by Paul C. Standley; and Part 9, "Miscellaneous Papers," containing "Thompsonella, a New Genus of Crassulaceæ from Mexico," by N. L. Britton and J. N. Rose; "Rediscovery of Echeveria Carnicolor," "Three New Species of Crassulaceæ from Guatemala," "Rediscovery of Cereus Nudiflorus," "A Species of Pereskia from Guatemala," "New Species of Opuntia from Arizona," "Echinocereus Baileyi, a New Cactus from Oklahoma," "Nopalea Lutea, a New Cactus from Guatemala," "Conzattia, a New Genius of Cæsalpiniaceæ," and "Two New Species of Acacia of the Series Filicinæ," all by J. N. Rose; and "A New Spleenwort from China," by William R. Maxon. Volume XIII.—Part 1, "Studies of Tropical American Ferns, No. 2," by William R. Maxon.

In addition to the above, 9 papers based upon Museum material, the majority of which were by members of the Museum staff, were published in the Quarterly Issue of the Smithsonian Miscellaneous Collections. Several papers which had appeared in publications of previous years and for which there is still a constant demand were reprinted.

The editorial office is charged with all printing for the Museum, which comprises, besides the publications, much miscellaneous work. The most important of the latter is probably the furnishing of labels for the collections, although there are many forms of blanks to be supplied, and the binding of books for the library is also included.

LIBRARY.

The library, which is limited to the subjects belonging within the scope of the Museum, has received many important gifts. Dr. Charles A. White, Dr. William H. Dall, and Dr. Charles W. Richmond have, as usual, presented a large number of scientific publications of value in completing sets and the series of authors' separates. From the estate of the late Dr. Otis Tufton Mason, through the liberal interpretation of his bequest by the executor, Dr. E. B. Pollard, the Museum has obtained Doctor Mason's working library relating to anthropology besides other volumes of a general character, and also his manuscript notes which are destined to be of much service. Another noteworthy gift consisted of about 1,000 pamphlets on mineralogy and kindred subjects from Mr. Wirt Tassin, for several years a member of the staff as assistant curator of mineralogy. Additions were made by Mr. William Schaus to his notable collection for which a special bookplate has been engraved, and acknowledgments are also due to Dr. E. A. Schwarz, Mr. Wilfred H. Osgood, Dr. O. P. Hay, and Dr. W. P. Hay for numerous contributions. A complete collection of the entomological writings of the late Dr. William H. Ashmead, together with his manuscript notes, was secured by purchase.

The Museum library contains 36,244 volumes and 56,010 unbound papers, the additions during the year having comprised 2,680 books, 3,671 pamphlets, and 227 parts of volumes. There were catalogued 1,280 books, 1,400 complete volumes of periodicals, and 4,213 pamphlets. About 1,800 volumes were sent to the Government Printing Office for binding.

PHOTOGRAPHY.

The photographic laboratory is not only exceptionally well equipped for its manifold purposes, but has been fortunate in retaining for over forty-five years the services of Mr. T. W. Smillie, whose experience and successful results have placed him in the foremost rank of scientific photographers. The laboratory has, however, always been inadequate in size and adaptation for the quality of work expected of it, and in view of the opportunity offered by the prospective transfer of the contents of adjoining rooms to the new building its rehabilitation was begun just before the close of the fiscal year.

An important piece of special work accomplished during the year was the preparation of an exhibit for the Alaska-Yukon-Pacific

Exposition, illustrating the history of photography from about 1824 to the present time. This required the making of numerous bromide enlargements and photographs in color by the most recent methods. Mr. Smillie also invented a process for producing by synthesis a white coating on fossils and other like objects of which it is desired to photograph the form without regard to color. This process has been patented in the interest of the Government and the public at large. Mr. Smillie continues to act as the advisor of the Civil Service Commission in all examinations in which the subject of photography is involved. The routine work of the year consisted in making 791 negatives, 1,599 silver prints, 1,190 velox prints, 3,097 blueprints, and 31 lantern slides.

CONGRESSES AND MEETINGS.

International Congress on Tuberculosis.—The new building for the National Museum, although still in a very unfinished state, was christened by the sixth gathering of this important congress, which remained in session from September 21 to October 12, 1908. The attendance was large and notable, and the proceedings were indicative of the energetic fight which is being waged against the white plague. The use of the building was secured for the purpose through a special act of the United States Congress, which also appropriated sufficient funds for the necessary preparations. The space occupied consisted of the middle hall and both sets of ranges in the first and second stories, a part of the basement, and one of the open courts. One-half of the middle hall was set apart as a general assembly room, while the remainder of the floor area was divided by wooden partitions into apartments for sectional meetings and the exhibition of specimens.

One of the important features of the congress was an exhibition illustrating the spread of tuberculosis among the American Indians, contributed by the Smithsonian Institution in conjunction with the Office of Indian Affairs. Of the appropriation of $25,000 for participation by the Government in the congress, $1,000 was allotted to the Smithsonian Institution, and Dr. Aleš Hrdlička, assistant curator of physical anthropology in the National Museum, who had already made a study of the subject, was detailed to conduct additional observations under the joint auspices of the Institution and the Office of Indian Affairs. He was in the field from the beginning of July until the 1st of September, 1908, accompanied by a bacteriologist, and visited the Menominee, Sioux, Quinault, Hupa, and Mohave tribes. In three of the tribes over 100 families were examined, and in the case of the Hupas every member of the tribe. The exhibit resulting from this investigation comprised charts, maps, photographs, etc., covering the screen walls of a space 18 by 40 feet square, to which were added two lay-figure groups from the collection of the Museum, representing

the conditions under which the Indians lived in 1850. In this manner were illustrated the great prevalence of tuberculosis to-day among the tribes referred to, and the changes in their mode of living from the middle of the last century when this dread disease is said not to have prevailed. This exhibit was awarded a gold medal, and later was displayed in greater part at the American Museum of Natural History in New York, and in Philadelphia.

The International Association of Medical Museums, which has recently started upon an important work, also held its second meeting in connection with the Tuberculosis Congress. The advisability of affiliation with the American Association of Museums was one of the subjects discussed, and by invitation Mr. Rathbun, assistant secretary of the Institution, spoke upon the scope and purposes of the latter organization, of which he is a member.

International Fishery Congress.—This congress held its fourth meeting in Washington from September 22 to 26, 1908, using the large assembly halls in the New Willard Hotel for most of its regular sessions and social functions. The invitation had been extended by the Bureau of Fisheries on behalf of the United States Government, and was joined in by the American Fisheries Society, which also assembled in Washington at the same time for its annual meeting. A small appropriation was made by the United States Congress to aid in covering the necessary expenses, and many of the scientific bureaus of the Government having interests pertaining to fishery matters participated.

The membership was larger than at the two previous congresses, numbering more than 400. Fifteen countries were represented officially and 11 others by delegates of societies or by individuals. Besides the delegates on the part of this Government, 43 States and Territories and 20 American societies, clubs, and other institutions sent representatives. The president of the congress was Dr. Herman C. Bumpus, director of the American Museum of Natural History, and the secretary-general, Dr. Hugh M. Smith, United States Deputy Commissioner of Fisheries. In view of its scientific relations with the fisheries, the Smithsonian Institution took an active part, being represented by Dr. Theodore N. Gill and Dr. Frederick W. True, on behalf of the Institution proper, and by Mr. W. de C. Ravenel and Dr. Leonhard Stejneger, on behalf of the National Museum. Mr. Richard Rathbun, assistant secretary of the Institution, served as a delegate at large of the Government.

At the business sessions an excellent programme was carried out, many of the communications presented being especially important. On the first day the foreign delegates were received at the Department of State, and the opening meeting was held in the hall of the National Geographic Society. Among the general functions were

receptions by the President, at the White House, and the Secretary of Commerce and Labor, at his residence; luncheons by the American Fisheries Society, the Blue Ridge Rod and Gun Club, and the Alaska Packers' Association, and a dinner at the Raleigh Hotel. After the close of the meeting excursions were made to a number of interesting fishing centers.

Among the prizes offered in competition for essays on fishery subjects was one of the value of $200 tendered by the Smithsonian Institution for a dissertation on "International regulations of the fisheries on the high seas, their history, objects, and results." The National Museum also joined with the Bureau of Fisheries in preparing an exhibit appropriate to such a congress. The former assembled a large series of models of fishing boats and specimens of the useful fishes, reptiles, and batrachians; the latter brought together examples of the apparatus used in the fisheries and fish culture and specimens of the different kinds of aquatic invertebrates of commercial value.

The next meeting of the congress will be held in Rome, Italy, in 1911, the fiftieth anniversary of the unification of that country, the invitation having been extended by the Italian Fisheries Society and the city of Rome. The Fisheries Congress has a permanent organization, with headquarters in Paris, under the presidency of Prof. Edmond Perrier, director of the National Museum of Natural History of France. The first meeting was held in Paris in 1900, the second in St. Petersburg in 1902, and the third in Vienna in 1905.

Pan-American Scientific Congress.—Among the delegates appointed to represent the United States at this congress, held at Santiago, Chile, from December 25, 1908, to January 5, 1909, was Mr. William H. Holmes, Chief of the Bureau of American Ethnology and curator of prehistoric archeology in the National Museum. The report of Mr. Holmes on the work of the congress belongs elsewhere, but it may be said here that throughout his trip he kept the interests of the Museum constantly in mind and made many observations which will be of value in the future installation of collections. Arrangements were also entered into for the exchange of specimens.

Fifteenth International Congress of Orientalists.—Dr. Paul Haupt, professor of Semitic philology in Johns Hopkins University and associate of the Museum in historic archeology, represented the Smithsonian Institution and National Museum at the Fifteenth International Congress of Orientalists, held in Copenhagen, Denmark, from August 14 to 20, 1908. Doctor Haupt was also a delegate on behalf of the United States Government at the same congress, serving in conjunction with Dr. C. R. Lanman, of Harvard University, Prof. Morris Jastrow, of the University of Pennsylvania, and Prof. A. V. W. Jackson, of Columbia University.

Centenary celebration of the London Geological Society.—Dr. Arnold Hague, of the United States Geological Survey, acted as the representative of the Smithsonian Institution and National Museum at the centenary celebration of the London Geological Society, September 26 to 28, 1908.

National Academy of Sciences.—The annual meeting of the National Academy of Sciences was held in Washington from April 21 to 23, 1909. Accommodations in the Smithsonian building were furnished for the business sessions of the academy, while one of the halls in the Museum building was fitted up as a lecture room for the public meetings, at which many interesting scientific papers were read.

EXPOSITIONS.

Alaska-Yukon-Pacific Exposition, Seattle, Washington.—By an act approved May 27, 1908, Congress authorized an exhibition by the Government at the Alaska-Yukon-Pacific Exposition, beginning on June 1 and closing on October 15, 1909, and appropriated for that purpose the sum of $200,000, to be expended under the direction of a board of managers composed of three persons in the employ of the Government. This board was charged with the selection, purchase, preparation, transportation, arrangement, safe-keeping, exhibition, and return of such articles and materials as the heads of the several departments and the Secretary of the Smithsonian Institution, respectively, might decide should be embodied in the exhibition. To aid the people of Alaska, Hawaii, and the Philippine Islands in making and maintaining appropriate and creditable exhibits of the products and resources of their territories, an additional appropriation of $150,000 was provided, to be disbursed under the Secretary of the Interior and the Secretary of War. The Secretary of the Treasury was, furthermore, directed to erect the necessary buildings, for which an appropriation of $250,000 was made. Mr. Jesse E. Wilson, Mr. W. de C. Ravenel, and Mr. W. M. Geddes were appointed as the members of the government board of managers, Mr. Wilson being named as chairman and Mr. Geddes as secretary and disbursing officer. Mr. Ravenel, administrative assistant of the National Museum, was also designated as the special representative of the Institution and Museum.

In accordance with the provisions of the act, it was the province of the Smithsonian Institution and National Museum to exhibit such articles or material of an historical nature as would impart a knowledge of our national history, especially with reference to Alaska, Hawaii, the Philippine Islands, and that part of the United States west of the Rocky Mountains. Of the appropriation of $200,000, $24,000 was allotted to this exhibit, for which about 10,000

square feet of space in the main government building were assigned. Its preparation was begun as soon as possible after the organization of the board, and the installation was practically completed by June 1, when the exposition opened. The principal idea kept in view was to present an outline of our national achievements and progress, and of the facts connected with the development of the western part of the United States and the outlying possessions.

The collection has been classified in several groups, beginning with 190 portraits of eminent persons connected with the discovery and history of America, Alaska, the Hawaiian and the Philippine Islands, and with photographs and paintings of historic scenes and landmarks. Historic vessels, like the Viking ship, the *Santa Maria*, the *Half Moon*, and the *Mayflower*, are represented by models, as are the early achievements with steam, including John Fitch's steamboat, which plied on the Delaware in 1786, the *Clermont*, first used by Fulton on the Hudson in 1807, the *Phoenix* and the *Savannah*, and also the primitive methods of land transportation in America, as well as early railway locomotives, such as the John Bull, the Stourbridge Lion, etc. The medallic history of the country is illustrated by copies of 23 medals struck in honor of the Presidents of the United States and of others commemorative of important events, and American cartography by a series of maps; while information regarding the expansion of the country is furnished by facsimiles of a number of treaties.

The influence of various religious sects in the settlement of the Pacific coast and Alaska is indicated by means of paintings of Spanish missions, of models of mission buildings, relics, and other interesting objects, an excellent model of St. Michael's cathedral in Sitka, photographs of churches and clergy, and a collection of religious books connected with Russian missionary efforts in Alaska; and by a collection of portraits of persons conspicuous in the establishment and growth of the Church of the Latter-Day Saints, models of their temple and tabernacle in Salt Lake City, a chart showing their migrations from Vermont to Utah and other places, and a number of relics.

An exhibit which attracts much attention relates to the ancient pueblos of the southwest. It includes a painting of the prehistoric ruin of Casa Grande in bird's-eye view, and models of three of the rectangular structures, known as compounds, containing the buildings used for the performance of sacred rites and as habitations of medicine men and chiefs. Cliff-dwelling architecture is portrayed in a model of the mummy cave in northeastern Arizona. Modern pueblo and California Indian family life are depicted by groups of Zuni and Hupa Indians engaged in their customary occupations.

The culture, customs, and industries of the people of southeastern Alaska are illustrated by lay figures of an Eskimo man and woman,

a model of a log house, characteristic objects carved in wood, and a number of historical paintings lent by Mr. T. J. Richardson, as well as of photographs by Lieut. G. T. Emmons, U. S. Navy. The appearance and habits of the Philippine Islanders are represented by life-size family groups of the Negritos of Zambales and the Igorots of Bontoc, together with a large number of objects pertaining to the arts, customs, and industries of the Tagals, Moros, and Bagobos. Bearing upon the general history of the islands is a series of photographs exhibiting the natives, their family life and occupations, buildings, and churches.

The history of Hawaii is partly illustrated by a model of a village of the early inhabitants, who lived in grass-thatched houses grouped in villages, presided over by a chief and a priest. With this exhibit there is also shown a large ethnological collection brought together by Mr. N. B. Emerson as the result of many years' work. The church, settlement, and school work of the Hawaiian Evangelical Association is set forth by a series of photographs of their buildings. A life-sized family group, oil paintings, photographs, and a number of objects depict the habits and customs of the Samoans and the inhabitants of Guam and the Marianne Islands.

The history of photography begins with the earliest permanent photographs and includes examples of nearly all of the most important discoveries and inventions up to the present time. Many of the objects were made by the inventors of the processes and others in the Museum laboratory. The collection of colored photographs is especially fine, commencing with the tinting, followed by an elaborate coloring of the photograph by hand, and the patented processes for transferring the film to a colored base, which finally led to the almost perfect photographs in color, as made by Ives, Wood, Lippmann, and Miley, and the autochromes produced in the Museum laboratory by Mr. T. W. Smillie.

The history of medicine, prepared by Dr. J. M. Flint, U. S. Navy, consists mainly of photographs and biographical sketches of noted physicians, beginning with the time of Capt. John Smith and ending with the twentieth century. The experiments conducted by Major Walter Reed for the prevention of yellow fever in Cuba in 1901 are also illustrated.

International Photographic Exhibition at Dresden, Germany.— This exhibition, which is being held in the Exhibition Palace at Dresden, under the patronage of the King of Saxony and the joint auspices of the Government of Saxony and the city of Dresden, opened in May and will continue into October, 1909. An invitation to participate, extended through the German ambassador at Washington, in November, 1908, was accepted by the Institution, and the contribution, which was sent in due time, consisted of 25 enlarged

photographs and transparencies prepared from negatives in the collection of the National Museum and the Bureau of American Ethnology.

ORGANIZATION AND STAFF.

It is with deep regret that I announce the death of Prof. Otis Tufton Mason, head curator of the department of anthropology, which occurred on November 5, 1908, after a connection with the Institution and Museum of nearly forty years. His associates and friends in the several branches of the Institution met at the Museum the following day to pay respect to his memory, and his funeral took place on November 7. Dr. Walter Hough was designated to assume his duties as acting head curator.

I have also to record the decease of Dr. William H. Ashmead on October 17. This distinguished authority on the Hymenoptera entered the service of the Museum as assistant curator of the division of insects on July 1, 1897, a position which he continued to fill until April 27, 1908, when failing health, due to overwork, led to his retirement from active duties.

The resignation on October 10, 1908, of Dr. Cyrus Adler, as assistant secretary of the Smithsonian Institution, in charge of library and exchanges, was equally a misfortune for the Museum, in whose affairs he always maintained an active interest, having served as curator of the divisions of historic archeology and historic religions. These two divisions have since been combined under the former title and placed in charge of the assistant curator, Dr. I. M. Casanowicz. On October 12 Doctor Adler was given the honorary title of associate in historic archeology. Mr. T. T. Belote, appointed aid on July 30, 1908, was promoted to assistant curator of the division of history on February 15, 1909. The position of aid in the division of physical anthropology was filled by the designation of Mr. T. F. Lane on April 8, 1909.

In the department of biology, Mr. Gerrit S. Miller, jr., who had been in the temporary service of the British Museum for nearly two years by a special arrangement, assumed his former position as assistant curator of mammals on November 1, but was promoted to be curator of that division on June 16, 1909, replacing Doctor True, who, as head curator of the department, had been filling both positions. Mr. J. H. Painter, aid in the division of plants, and a young botanist of great promise, met death by accidental drowning in the Potomac River on December 6, 1908. The vacancy caused by this sad occurrence was left open until June 1, 1909, when it was filled by the appointment of Mr. Paul C. Standley.

Lieut. Col. Edgar A. Mearns, surgeon, U. S. Army, whose relations to the Museum have so often been referred to in these reports, and

who is now serving as chief naturalist on the Smithsonian expedition to British East Africa, was, on December 31, designated as honorary associate in zoology. Mr. Austin Hobart Clark, formerly of the Bureau of Fisheries, was made a collaborator in the division of marine invertebrates on November 30. Mr. D. H. Clemons succeeded Mr. H. S. Barber as aid in the division of insects on December 7. Mr. David B. Mackie, general aid in biology, resigned on November 16.

The position in the division of geology which has been vacant for some time was filled on January 1 by the appointment of Dr. F. B. Laney as assistant curator. Mr. Wirt Tassin, who has been assistant curator of mineralogy since 1894, resigned on May 31, to engage in private business.

The following account of the relations of Professor Mason to the Museum has been prepared by Doctor Hough:

"Professor Mason's connection with the Smithsonian Institution began in 1872, when he was attracted by its aims and the facilities which it afforded for the advancement of his studies, and Secretary Henry directed his enthusiasm into the field of American ethnology. This bond of union with the Smithsonian was only severed by death. In 1874 he was appointed collaborator in ethnology and gave such time as could be spared from his duties as teacher in Columbian College to assembling from the collections of the Museum of the Institution those objects which related to man and cataloguing and arranging them in the upper hall of the Institution building. During the following year the prehistoric collections were given into the charge of Dr. Charles Rau, and Professor Mason was permitted to devote his entire time to ethnology, which he did with indefatigable energy. Of the pioneer work of these years one can not speak with too great appreciation. Early in this period he laid the foundation of systematic ethnology in America so firmly that his comprehensive classification stands to this day, and realizing the future needs of the National Museum, which was yet in embryo, he expanded ethnology on the lines of culture history, wherein the science lends itself to the exhibition of tangible results of man's activities. Here was his great work, and this branch of the Museum will always be indebted to his forethought in planning for its future extension.

"The Centennial Exhibition of 1876 was signalized by the exhibition of numerous ethnological and archeological collections gathered under the guidance of a manual of directions for collectors prepared by Professor Mason in 1874. In 1872 Professor Mason began the collection of Indian tribal names, which eventually was taken up by the Bureau of American Ethnology, and had its fruition in the Handbook of American Indians, the first volume of which was published before his death. The tribal synonomy was also extended to embrace

all the tribes of the earth, to which he constantly added data from the published works of travelers and by conversation with explorers. On July 1, 1884, he was appointed curator of ethnology in the reorganized museum. He immediately improved his opportunities in arranging the collections, taking up one class of objects at a time, installing it in scientific order, preparing labels, and finally publishing the results of his researches. He took a special interest in the geographic distribution of ethnological artifacts. His first major publications, Throwing-Sticks in the National Museum and Basket-Work of the North American Aborigines, mark an epoch in the history of ethnology. The idea which Professor Mason had in mind was that each invention takes on tribal modifications the sum of which is the range of variation; and these, over and above the environmental causes of variation, may give clew to the origin of the invention and will reconstruct an interesting chapter of human thought. The order of arrangement for study was geocultural, and the descriptions according to natural history methods; the specimens thus accurately worked up became types. These papers evidently grew out of the plan adopted by Professor Mason in arranging the material under his charge. His associates often heard his injunction to 'put like with like, and tribes and localities will take care of themselves.'

"The monographs cited were the forerunners of a series appearing at frequent intervals, the last, a Vocabulary of Malaysian Basketwork, based on the W. L. Abbott collections, issuing from the press on the day of his funeral. They are of the greatest value to students, and being based on accurate scientific description can never be superseded. The immediate and wide recognition of these works was due to the fact that they conveyed a message in an intelligible, even a literary form. The ardent desire to say the last word on the specimens under study led him to so thoroughly examine their structure and function that he was as familiar with them as were their original makers, and this proficiency he exacted of himself before he published his results. His skill in the dissection of aboriginal handiwork, especially in the textile art, was marvelous, and the mastery of intricate detail seemed to have a fascination for him, bringing out his unusual powers as a mathematician.

"The work of Professor Mason attracted great attention and gave to students of ethnology throughout the world an interest in the National Museum. Articles from his productive pen appeared in numerous scientific journals and the Progress of Anthropology which appeared in the annual reports of the Smithsonian Institution required an intimate knowledge of the bibliography and advance of the science. These summaries of annual progress alone form a textbook on anthropology. The two books which Professor Mason pub-

lished privately, namely, Woman's Share in Primitive Culture and The Origin of Inventions, show his wonderful grasp of the details of his science and these books still exert a world-wide influence. It was due to Professor Mason's initiative that the Anthropological Society of Washington was founded in 1879. He wrote its constitution and remained deeply interested in it until the close of his life. He was connected with many learned societies, and for eighteen years was a member of the United States Geographic Board.

"Much of the contribution of Professor Mason to the science of anthropology was due to his fondness for teaching, and most persons who came in contact with him carried away some of his enthusiasm. Without doubt he inspired greater activity in the science of ethnology than any other man of his generation. He was essentially an educator in every action and thought. He placed at the disposal of the science and of workers in the science his knowledge as a linguist, a mathematician, and inspired teacher. He was a systematist of the first order and strove always for the extension of knowledge, but with all his absorption in scientific work he found time to think of others and give to every inquirer all the assistance in his power. He was gentle, kindly, honorable, brave, and patient, a combination rarely found. His personality radiated good cheer. His every thought of the Museum was to make it more educational. The history of Professor Mason is bound up in the history of the National Museum and Smithsonian Institution, and his pioneer work will still be a potent influence on anthropology when his name ceases to be remembered among men."

THE MUSEUM STAFF.

[June 30, 1909.]

CHARLES D. WALCOTT, Secretary of the Smithsonian Institution, Keeper *ex officio*.

RICHARD RATHBUN, Assistant Secretary, in charge of the U. S. National Museum.

W. DE C. RAVENEL, Administrative Assistant.

SCIENTIFIC STAFF.

DEPARTMENT OF ANTHROPOLOGY:

Walter Hough, Acting Head Curator.

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

Division of Physical Anthropology: Aleš Hrdlička, Assistant Curator; T. F. Lane, Aid.

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

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

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

Division of Graphic Arts: Paul Brockett, Custodian.

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

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

Division of History: A. Howard Clark, Curator; T. T. Belote, Assistant Curator.

Associates in Historic Archeology: Paul Haupt, Cyrus Adler.

DEPARTMENT OF BIOLOGY:

Frederick W. True, Head Curator.

Division of Mammals: G. S. Miller, Jr., Curator; Marcus W. Lyon, Jr., Assistant Curator.

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

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

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

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

Division of Insects: L. O. Howard, Curator; J. C. Crawford, Assistant Curator; D. H. Clemons, Aid.

Section of Hymenoptera: J. C. Crawford, in charge.

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

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

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

Section of Lepidoptera: Harrison G. Dyar, Custodian.

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

Section of Arachnida: Nathan Banks, Custodian.

Section of Hemiptera: Otto Heidemann, Custodian.

DEPARTMENT OF BIOLOGY—Continued.

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

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

Division of Plants (National Herbarium): Frederick V. Coville, Curator; J. N. Rose, Associate Curator; W. R. Maxon, Assistant Curator; P. C. Standley, Assistant Curator.

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

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

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

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

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

DEPARTMENT OF GEOLOGY:

George P. Merrill, Head Curator.

Division of Physical and Chemical Geology (Systematic and Applied): George P. Merrill, Curator; F. B. Laney, Assistant Curator.

Division of Mineralogy: F. W. Clarke, Curator.

Division of Invertebrate Paleontology: R. S. Bassler, Curator; Lancaster D. Burling, Assistant Curator.

Mesozoic Collection: T. W. Stanton, Custodian.

Cenozoic Collection: W. H. Dall, Associate Curator.

Madreporarian Corals: T. Wayland Vaughan, Custodian.

Division of Vertebrate Paleontology:

Mammalian Collection: James W. Gidley, Custodian.

Reptilian Collection: Charles W. Gilmore, Custodian.

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

Associate in Mineralogy: L. T. Chamberlain.

Associate in Paleontology: Charles A. White.

Associate in Paleobotany: Lester F. Ward.

DEPARTMENT OF MINERAL TECHNOLOGY:

Charles D. Walcott, Curator.

NATIONAL GALLERY OF ART:

William H. Holmes, Curator.

ADMINISTRATIVE STAFF.

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

Disbursing Agent, W. I. Adams.

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

Editor, Marcus Benjamin.

Editorial Clerk, E. S. Steele.

Assistant Librarian, N. P. Scudder.

Photographer, T. W. Smillie.

Registrar, S. C. Brown.

Property Clerk, W. A. Knowles.

LIST OF ACCESSIONS TO THE COLLECTIONS DURING THE FISCAL YEAR 1908–9.

[Except when otherwise indicated, the specimens were presented or were transferred by bureaus of the Government in accordance with law.]

ABBOTT, WILLIAM L., Singapore, Straits Settlements: An extensive and valuable collection of ethnological and natural history specimens obtained principally in the southeastern part of Borneo, including birds from the islands in the Java Sea, among which are several species new to the Museum collection (49011); a large and interesting collection of natural history specimens, baskets, bark-cloth, and other ethnological material from the southwestern part of Borneo (49618).

ABRAMS, LE ROY, Stanford University, Cal.: Living plant *Dudleya*, from California (50192); 600 plants from the southern part of California (50207: purchase).

ACADEMY OF NATURAL SCIENCES, Philadelphia, Pa.: Type of *Thaumophilus virgatus* (49552); 129 specimens of humming birds and swifts (50181). Loan.

ADAMS, CHARLES W., Lovelock, Nev.: 2 samples of kaolin (49449).

ADAMS, HENDRICK L., Harrisburg, Pa.: About 20 specimens of parasitic Hymenoptera (50031).

ADAMS, RICHARD C., Washington, D. C.: Relics of the Delaware and Cherokee Indians, embracing a silver pipe, silver tomahawk, war-club with silver plate, cedar flute with silver plates, a wampum belt, and a Delaware Indian war bonnet (49797: loan).

ADAMS, WALLACE, Yuma, Ariz.: Head ornament of a Yuma Indian (50060).

ADLER, CYRUS, Smithsonian Institution: Three bows from the Soudan (49196); leather bag from North Africa (49454).

AERIAL EXPERIMENT ASSOCIATION (through Dr. Alexander Graham Bell): A series of 76 enlarged photographs vividly portraying the experiments of Orville Wright with the aeroplane of the Wright Brothers at Fort Myer, Va., during September, 1908 (50243).

AGRICULTURE, DEPARTMENT OF:

Bureau of Animal Industry: Three colts—hybrids between a female donkey and a Grevy's zebra (49115; 49209; 49244); skin and skeleton of a female Grevy zebra (49275).

Bureau of Biological Survey: 2 specimens of cacti, *Opuntia* and *Mamillaria*, and 1 *Nolina* (49043); 38 birds' eggs from Nova Scotia, Maine, and California (49068); specimen of cactus, *Opuntia*, from New Mexico (49122); 2 living plants from New Mexico and Chihuahua, Mexico, collected by E. A. Goldman (49138); 3 specimens of Lepidoptera (49169); 2 specimens of *Mamillaria* from New Mexico, collected by Vernon Bailey, and a specimen of *Echinocereus* obtained by E. A. Goldman in New Mexico (49174); 2 specimens of living plants, *Opuntia*, collected in New Mexico by E. A. Goldman (49204); 4 plants from New Mexico, collected by E. A. Goldman (49236); 9 specimens of cacti collected by Vernon Bailey in Arizona,

AGRICULTURE, DEPARTMENT OF—Cont'd.
and 2 specimens of *Opuntia* obtained by E. A. Goldman in New Mexico (49279); 4 specimens of cacti, *Mamillaria*, from New Mexico, collected by Vernon Bailey (49335); 5 specimens of cacti collected in New Mexico by Vernon Bailey and E. A. Goldman (49397); 71 plants collected in Wisconsin and Maryland by W. L. McAtee (49613); 26 specimens, representing 3 species of land shells (49989); 3 eggs of *Pipilo fuscus mesoleucus* (50014); 310 specimens of grasses from the southern and southeastern parts of the United States, collected by Vernon Bailey, E. A. Goldman, and A. H. Howell (50123); 2 living cacti from Colorado, collected by Merritt Cary (50176); 2 eggs of turkey vulture, *Cathartes aura septentrionalis*, from Illinois (50180); 3 specimens of living cacti from New Mexico (50213); 8 specimens of living cacti (50283).

Bureau of Chemistry: Collection of crude drugs gathered in New York and named by Dr. H. H. Rusby (49711).

Bureau of Entomology: 2 specimens of Lepidoptera (48979); 2 specimens of *Limnothrips avenæ*, collected on oats by Mr. Hyslop (49021); 6 Lepidoptera, cocoons, eggs, larvæ, etc., from Melrose Highlands, Massachusetts (49030); 8 parasitic Hymenoptera from Guelph, Ontario (49102); 40 specimens of Hymenoptera collected or bred by E. M. Ehrhorn (49113); 25 insects from Arizona (49178); 34 insects collected by T. D. A. Cockerell (49183); 180 insects collected in China by F. N. Meyer (49313); 5 specimens of Hymenoptera from Natal, South Africa (49326); 945 specimens of Hemiptera collected by members of the Bureau engaged in boll weevil work (49328); 25 specimens of isopods, *Porcellio rathkei*, from Santa Ana, California (49340); 9 Hymenoptera (type and paratypes of *Ceratulus spectabilis*, from Texas (49418); 37 specimens of living cacti from Texas (49425); isopods collected by H. O. Marsh at Avalon, Catalina Island, California (49519); 2,383 specimens of Muscoidean flies, etc., collected in Florida and South Carolina by Mr. and Mrs. Charles H. T. Townsend (49523); 16 specimens of Tachinidæ (Diptera) from Tennessee (49606); 1,038 insects from California (49643); 6 specimens of Diptera from the cotton boll weevil investigation laboratory (49669); 9 specimens of sowbugs, *Porcellio scaber*, from East Sound, Washington (49677); 150 specimens of Hymenoptera from Kansas (49739); about 250 specimens of Hymenoptera bred from the golden-tail moth (49775); 3 specimens of Lepidoptera, *Xylomiges hicnalis* (49993); about 1,000 insects collected by H. H. Smith in Alabama (50055); 400 mosquitoes from Dublin, New Hampshire, collected by A. Busck (50248).

Bureau of Plant Industry: 7 plants, *Agave* and *Samuela*, from Mexico (48951); 75 specimens of plants from Guatemala, collected by W. A. Kellerman (48972); 8 specimens of cacti from Arizona, collected by C. V. Piper (49111); specimen of *Opuntia fragilis* from North Dakota, collected by C. R. Ball (49147); 648 specimens of grasses from various localities (49265); a living plant from Nevada, collected by F. B. Headley (49336); 2 specimens of *Opuntia* from Texas, collected by C. R. Ball (49355); specimen of *Juncus subtilis* from Quebec, obtained by J. Fletcher (49362); 23 specimens of plants from China, collected by F. N. Meyer (49411); letter files of Dr. George Vasey, botanist of the Department of Agriculture from 1872 to 1893; also a collection of drawings made by F. A. Walpole (49463); model of a pumping apparatus used in Central China for irrigating and draining purposes; also a photograph showing the use of the apparatus (49469); specimen of *Acanthopanax*

AGRICULTURE, DEPARTMENT OF—Cont'd.
ricinifolium (49537); specimen of *Garrya fremontii* (49541); 2 packages of seeds of cacti, *Opuntia*, from Chile (49617); 109 plants collected in Alaska by C. W. H. Heidemann (49707); 2 plants, *Juncus*, from Illinois (49883); 51 plants from various localities (49894); plant from Nevada (49934); 18 plants from California (49950); specimen of living cactus collected in Texas by E. C. Greene (50160); 5 living specimens of cacti from Arizona, collected by E. W. Hudson (50190).

Forest Service: Specimen of cactus, *Opuntia*, collected in Utah by Ivar Tidestrom (48939); 2 specimens of cactus, *Opuntia*, from Utah, collected by Ivar Tidestrom (49871); 2 specimens of plants, *Medicago lupulina* and *Thlaspi arvense*, collected in Oregon by A. W. Sampson (49069); 204 plants from Oregon, collected by F. V. Coville (49099); 120 specimens of plants from Flagstaff, Arizona, collected by G. A. Pearson (49556); 350 plants collected by Messrs. Sampson and Jardin in Oregon and Washington (49945).

Weather Bureau: 2 bryozoans taken from a cable at a depth of 31 fathoms, off the coast of California (50005). (See also under Buitenzorg, Java, Department of Agriculture.)

ALEXANDER, CHARLES P., Johnstown, N. Y.: Moth, *Acleris cinderella* (49959).

ALLAIRE, C. B., San Antonio, N. Mex.: 2 specimens of cactus, *Opuntia*, from New Mexico (48962); 16 specimens of living cacti, *Opuntia*, from New Mexico (49042).

ALLARD, H. A., Washington, D. C.: Salamanders from Georgia and a lizard (49627); landshells representing 2 species from the northern part of Georgia (49908); 3 specimens of *Opuntia* from Georgia (49984); batrachians, one snake from Thompson's Mill, Georgia (50089); 440 plants collected in the vicinity of Thompson's Mill (50168).

ALLARD, H. A.—Continued.

AMERICAN MUSEUM OF NATURAL HISTORY, New York City: 330 birds' skins, Formicariidæ (48954: loan); 148 birds' skins, Formicariidæ, Trochilidæ and Tyrannidæ (49098: loan); 4 photographs of a skull of *Bassaricyon* from Nicaragua (49206); 3 Tarasco crania (49428: exchange); 246 specimens of Dendrocolaptidæ and Furnariidæ (49432: loan); collection of Negrito ethnological material (49593: loan); 2 birds' skins, Formicariidæ (49724: loan); 12 specimens of *Deudrocolaptes validus* (49754: loan).

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, New York City, on behalf of subscribers: Oil painting of Rear-Admiral George W. Melville, U. S. Navy, by Sigismond de Ivanowski (50141).

ANDERSON, R. W., Uvalde, Tex.: 6 plants, *Jussiæa suffruticosa* from Texas (49542); 2 specimens of cacti from Texas (49781); 6 specimens of living cacti from Texas (49839; 49895).

ANDREWS, Dr. E. A., Johns Hopkins University, Baltimore, Md.: 6 specimens of shrimps, *Penæus setiferus* from New Orleans and *P. brasiliensis* from an unknown locality (49904).

ANTHONY, H. E., Portland, Oreg.: 2 shrews, *Sorex* (49608).

APPLEGATE, ELMER I., Klamath Falls, Oreg.: 360 plants from Oregon (49986).

ARIZONA, UNIVERSITY OF, Tucson, Ariz.: 16 specimens of plants from Arizona (48928: loan).

ARNOLD ARBORETUM, Jamaica Plain, Mass.: 175 plants, *Crataegus*, mainly from Missouri and Arkansas (49793: exchange).

ARONHIME, Mrs. BENJAMIN, Washington, D. C.: 2 old silver coins (49930).

ATKINS, CHARLES G., East Orland, Me.: 4 specimens of the common eel, *Anguilla chrysypa* (49268).

BACHSCHMID, W. H., Smithsonian Institution: Cape May warbler, *Dendroica tigrina* (49256).

BAILEY, VERNON. (See under H. H. Hotchkiss.)

BAKER, C. F., Museu Goeldi, Para, Brazil: 48 specimens of *Perilampus*, Hymenoptera, from North, Central, and South America (49058: loan); Lepidoptera, Coleoptera, and Neuroptera from São Paulo (49135); 24 specimens of Lepidoptera (49923); specimen of *Selaginella* from California (50027); 35 specimens of Diptera (50183).

BAKER, Dr. FRED., San Diego, Cal.: Specimen of *Turbonilla* (*Mormula*) *tridentata* from Ocean Beach, San Diego (50051).

BAKER, Hon. HENRY D., American consul at Hobart, Tasmania: Specimen of rat kangaroo, *Potorous* (50132).

BALL, RAY, Reading, Kans.: Meteorite from Admire, Kansas, weighing 1.55 kilograms (49330: purchase).

BANGS, OUTRAM, Boston, Mass.: 958 birds' skins. Formicariidæ and Dendrocolaptidæ, 3 specimens of Pipridæ from Costa Rica, 637 specimens of wood hewers and ant thrushes, principally from Mexico, Central America, and Colombia; 302 specimens of wood hewers and ant thrushes from Costa Rica, humming birds and swifts (49159; 49160; 49372; 49378; 50233: loan); 11 skins of *Basileuterus* from Costa Rica, specimen of *Lalcles osburni* from Jamaica (49565; 49584); 160 birds from Costa Rica (49948: exchange); egg of *Urubitinga gundlachi* from Cuba (49999).

BANIGAN, E. T., Cody, Nebr.: Specimen of fulgurite (49824).

BANKS, NATHAN, Department of Agriculture, Washington, D. C.: 4 specimens of Hymenoptera from Palmerlee, Arizona (49136); 22 specimens

BANKS, NATHAN—Continued.
of Hymenoptera from Arizona (49368); paratype of *Helorimorpha fisheri* from the District of Columbia (50049).

BARBOUR, THOMAS, Museum of Comparative Zoology, Cambridge, Mass.: Reptiles and batrachians from South America, West Indies, Borneo, and the Philippine Islands (50204); reptiles and batrachians from the East Indies (50234); reptiles and batrachians from the West Indies and South America (50257). Exchange.

BARNES, W. X., Stanton, Tex.: Vinegerone (Spider) *Eremobates pallipes* (49163).

BARRINGER, D. M., Philadelphia, Pa.: Californite from Boville, California (49293).

BARROTT, A. F., Washington, D. C.: Skull and vertebræ from a mound near Bassett, Mississippi County, Arkansas (49878); 2 skulls from a mound on the Dickson farm near Bardstown, Mississippi County, Arkansas (50023). Exchange.

BARTLETT, HARLEY HARRIS, Cambridge, Mass.: 46 specimens of peat mosses, *Sphagnum*, from various parts of the United States (49893: exchange).

BARTRAM, EDWIN B., Wayne, Pa.: Plant from North Carolina (50017).

BAUMBERGER, J. P., San Francisco, Cal.: 71 specimens of Hymenoptera, chiefly from California (49732).

BEAN, Dr. ROBERT BENNETT, Philippine Medical School, Manila, P. I.: Anatomical specimens from the Philippine Islands (49637).

BEAN, Dr. TARLETON H., New York City: Specimen of whitefish, *Argyrosomus tullibee*, from Oneida Lake, New York (through the Bureau of Fisheries) (49786).

BEARS, J. T., Tulare, Cal.: 17 specimens of living cacti cultivated in California (49388: exchange).

BEATTY, J. H., Chicora, S. C.: Pupa of *Citheronia regalis* (49804).

BELDEN, H. A., Washington, D. C.: Drum or gong from the interior of Burma (49520: loan).

BELL, Dr. ALEXANDER GRAHAM. (See under Aerial Experiment Association.)

BELL, EDWARD W., U. S. National Museum: 20 old coins (49521).

BELL, Mrs. WILLIAM H., Washington, D. C.: Photographs illustrating the life and environment of the San Blas Indians (49800).

BEMENT, C. S., Philadelphia, Pa.: Epidote from Alaska; doubly terminated tourmaline crystal from California; datolite from Westfield, Massachusetts; smoky quartz and microline from Colorado; pink beryl from Mesa Grande, California; and 2 Chinese coins coated with secondary carbonates (50024).

BENEDICT, Dr. J. E., U. S. National Museum: Specimen of star-nosed mole, *Condylura cristata* (50099).

BENEDICT, J. E., jr., Woodside, Md.: Snakes from Maryland (50164; 50256).

BENGUIAT AND SON, Hadji Ephraim, Edgewater, N. J.: Laver of copper with two brass handles, used in the synagogue (49032); collection of objects used in Jewish religious ceremonials, consisting of a German silver gilt engraved talisman of the time of Louis XV; French silver gilt pointer (yad) of the time of Louis XVI; silver gilt tablet engraved with the Decalogue (part of the breastplate of Torat); 3 silver gilt bells (part of breastplate of Torat); silver triple chain (part of breastplate); 4 silver gilt engraved slides (part of breastplate) (49327); 2 glazed pottery vases with Hebrew inscriptions (49622); Jewish ceremonial objects, consisting of a silver Hanukah lamp, silver oil lamp with extinguishers, manuscript book of Ecclesiastes, and head-gear cowl in velvet and bullion (49710). Loan.

BENJAMIN, MARCUS, U. S. National Museum: Campaign buttons, medals, etc. (49133).

BENS, Rev. H. G., Lehr, N. Dak.: Gypsum crystals from section 14, township 131, range 68, in McIntosh County, North Dakota (50045).

BERGEN, NORWAY, BERGEN MUSEUM: 6 specimens of *Antedon petasus*, 3 specimens of *Hathrometra sarsii* and of *H. norregicus* (50187: exchange).

BERLEPSCH, Count HANS VON, Schloss Berlepsch, Bez. Cassel, Germany: 43 birds' skins from tropical America (49911: exchange).

BERLESE, A., Florence, Italy: 4 specimens of *Acerentomon maius* (49762).

BERLIN, GERMANY, KÖNIGL. BOTANISCHES MUSEUM: Flower of *Opuntia microcarpa* (49706: loan).

BERLIN, GERMANY, KÖNIGL. BOTANISCHER GARTEN UND MUSEUM: Specimen and a photograph of *Dasylirion hookeri* (49304: exchange).

BERLIN, GERMANY, K. ZOOLOGISCHES MUSEUM: German fresh water bryozoans representing 5 species (49198); 19 specimens representing 5 species of foreign Ascidians (49344). Exchange.

BERRY, P. D., Grand Cañon, Ariz.: 3 specimens of cacti from the Grand Cañon, Arizona, through C. V. Piper, of the Department of Agriculture (50043).

BETHEL, M. E., Denver, Colo.: 22 plants, Umbelliferæ and *Cratægus*, from Colorado (49769); 3 specimens of cactus, *Opuntia*, with about 100 specimens of *Asphondylia betheli*, bred from the same (50195).

BIEDERMAN, C. R., Palmerlee, Ariz.: Ores from Palmerlee (49500).

BIELER, S., Musée Agricole, Lausanne, Switzerland: Photograph of a specimen of *Ursus formicarius* (50174).

BIOLLEY, PABLO, San José, Costa Rica: 100 plants from Costa Rica (50028: purchase).

BLAIR, GIST, Washington, D. C.: Large oil portrait of Gustavus Vasa (50131: loan). (See also under Mrs. V. L. W. Fox.)

BLAIR, GIST, and Miss ELLEN DEQ. WOODBURY, Washington, D. C.: Bound volume entitled "Fox's Mission to Russia" (50136).

BLANKINGSHIP, O. F., Richmond, Va.: 25 slides of diatoms (49086).

BLUMER, J. C., Tucson, Ariz.: 400 plants from the Chiricahua Mountains, Arizona (48932: purchase); specimen of *Opuntia* from Arizona (49140); specimen of living cactus, *Opuntia*, from Arizona (49220); 50 specimens of plants from Arizona (49281: exchange); specimen of *Opuntia* from Arizona (49395); 45 specimens of ferns from the Chiricahua Mountains, Arizona (49412); 534 plants from Arizona (49889: purchase); 3 plants from Arizona (50185).

BOBBETT, WALTER, Berkeley, Cal.: 11 prints in color (49916).

BOEKE, Dr. J., University of Leiden, Leiden, Holland: Crustaceans from the Dutch West Indies (49680: loan).

BONNEMA, Dr. J. H., The Hague, Holland: About 100 specimens representing 31 species of Russian Ordovician Ostracoda (50069: exchange).

BOSTON SOCIETY OF NATURAL HISTORY, Boston, Mass.: 2 types of *Anabates atriaticollis* (49699); 4 type specimens of *Taraba immaculatus* (49832). Loan.

BOTANISCHER GARTEN. (See under Upsala, Sweden.)

BOTANISK MUSEUM. (See under Copenhagen, Denmark.)

BÖVING, A. G., Royal Zoological Museum, Copenhagen, Denmark: 14 vials of larvæ of Coleoptera, *Donacia* and *Paussus* (49443).

BOWIE, Mrs. WILLIAM, Washington, D. C.: 2 wedding mantillas, 2 panuelos, and 2 strips of lace from Isla de Panay, Philippine Islands (49654).

BOWLES, J. H., Tacoma, Wash.: Nest and 8 eggs of western golden-crowned kinglet, *Regulus satrapa olivaceus* (49760: exchange).

BRADFORD, Mrs. S. M., Avery Island, La.: 62 baskets made by the Chetimacha Indians of Louisiana (49747: purchase).

BRADLEY, EDSON, Washington, D. C.: Embroideries, velvets, and lace of the XVI, XVII, and XVIII centuries (49981: loan).

BRAKELEY, J. TURNER, Hornerstown, N. J.: 23 vials of mosquito larvæ, eggs, and adults (49029).

BRANDEGEE, T. S., Berkeley, Cal.: 500 plants from Mexico, collected by C. A. Purpus (49890: purchase).

BRANNER, J. C., Stanford University, Cal.: 5 specimens representing 3 species of land shells from Brazil (49790).

BRAUN, Miss Annette F., Cincinnati, Ohio: 6 specimens of Lepidoptera, including the types of 2 species of *Lithocolletis* (49644).

BRETT, WALTER, Ontario, Canada: Young eels, *Anguilla chrysypa*, from near the mouth of Salmon River, Bedford, Nova Scotia (49826).

BRIDWELL, ARTHUR, Baldwin, Kans.: Specimen of bird tick, *Ornithocthona erythrocephala* (50202).

BRIMLEY, C. S., Raleigh, N. C.: 40 salamanders from North Carolina (48937); turtles from the western part of Georgia (50280). Purchase.

BRIMLEY, H. H., Raleigh, N. C.: 6 photographs of a Right whale, 39 feet long, *Balæna glacialis*, stranded at Cape Lookout, North Carolina, in May, 1909 (50182).

BRINTON, Mrs. E. S., Washington, D. C.: Antique Russian sconce candelabra (49465: purchase).

BRISCOE, EDWARD J., Pernambuco, Brazil: Drawings of rock inscriptions from Brazil (50106).

BRITISH COLUMBIA, BIOLOGICAL STATION, Departure Bay (through George W. Taylor): 12 specimens representing 3 species of sponges, and 3 specimens representing 3 species of starfishes (49577); hermit crabs (49630).

BROADWELL, WILLIAM H., Newark, N. J.: 11 specimens of Lepidoptera (49384).

BRODIE, WILLIAM, Provincial Museum, Toronto, Canada: 4 specimens of *Trigona* from Mexico (49752).

BROOKLYN INSTITUTE OF ARTS AND SCIENCES, Brooklyn, N. Y.: Dagger of Bear Man, Pomo Indian tribe, California, obtained by Mr. Stewart Culin (49562); skeleton of Matamata tortoise, *Chelys fimbriata*, from Caicara, Orinoco River, Venezuela, collected by G. K. Cherrie in 1907 (49910). Exchange.

BROOKS, FRED. E., Morgantown, W. Va.: 2 Braconids, *Sigalphus curculionis* (49683).

BROWN, HENRY J. (through Hon. T. G. B. Killmaster, U. S. Consul at Newcastle, New South Wales): Natural history specimens, including a Wavatak plant, collected by the donor and Mr. W. D. Filmer in Newcastle and Lake Macquarie (49865).

BROWN, HERBERT, Tucson, Ariz.: Specimen of living plant, *Echinocereus rigidissimus* from Arizona (49188); specimen of cactus (49254); living specimen of cactus, *Opuntia*, from Arizona (50159).

BRYANT, JOHN, Cohasset, Mass.: Eskimo kiak and outfit (49468).

BRYANT, OWEN, Cohasset, Mass.: A mummied egg of the Great Auk, with fragments of shells, bones, etc., and a collection of polished pebbles ("gizzard stones") from Funk Island (49377); invertebrates from Labrador (49379); skin and skull of a weasel, *Putorius*, from Newfoundland; a marine annelid, nymph of *Corisa* sp.; specimen of *Agabus infuscatus*, and a *Thysanura* (49390); invertebrates, mammals, fishes, and plants collected in Labrador in 1908 (49529); invertebrates and mollusks collected in Labrador in 1908 (49535); a mandarin's coat (49972).

BUITENZORG, JAVA, DEPARTMENT OF AGRICULTURE (through U. S. Department of Agriculture): 512 plants from Java (49317: exchange).

BURRALL, H. D., Douglas, Ariz.: 3 plants from Arizona (49610).

BUSH, B. F., Courtney, Mo.: 250 plants from Missouri and other localities (49749: purchase); living specimens of cactus, *Opuntia*, from Missouri (49902); specimen of cactus, *Opuntia*, collected by E. J. Palmer (50000).

BUSHNELL, D. I., jr., Washington, D. C.: 3 specimens of medicine used by the Choctaw Indians (50085).

BUYSMAN, M., London, England: 30 specimens of ferns from Java (49652: purchase).

BYOR, A. J., Searles, Cal.: Powellite on scheelite (50153).

CABEZAS, Señor D. JUAN, Carolina, Porto Rico (through Bureau of American Ethnology): Carved stone pestle found near Carolina, Porto Rico (49527).

CABRERA, ANGEL, Madrid, Spain: 3 Spanish mammals, including type of *Sciurus infuscatus* (49493); skin and skull of *Galemys* and skulls of 3 specimens of *Genetta* (50166).

CALCUTTA, INDIA, INDIAN MUSEUM: Freshwater sponges representing 19 species from India (50044: exchange).

CALCUTTA, INDIA, ROYAL BOTANIC GARDEN: 55 plants, chiefly from the Malay Peninsula (50264: exchange).

CALIFORNIA, UNIVERSITY OF, Berkeley, Cal.: Fragment of type of *Ribes tularense* (49221: exchange); 3 plants, *Bursera*, from Mexico 49589); 5 specimens of plants, *Pteridophytes*, from Mexico (49605); fragmentary specimen of *Alicella tridon* var. *humillima*, from California (49884: exchange); specimen of fern, *Anemia*, from Mexico (50110: exchange); 340 specimens of North American plants (50112: exchange); specimen of living cactus, *Cereus schenckii*, from Mexico (50116: exchange).

CALVILLA, Señor YGNACIO, Tucson, Ariz.: Living cactus, *Mamillaria brownii*, from Arizona (49653).

CAMBRIDGE, MASSACHUSETTS, MUSEUM OF COMPARATIVE ZOOLOGY: 3 specimens of Formicariidæ (48944: loan); 2 cotypes of *Ophiozona gymnopora* (49657: exchange); crinoid, *Himerometra pardophora*, cotype, from off Manning River, New South Wales (49954); 26 specimens of orthopterous insects, including 17 cotypes (50076: exchange); about 1,686 skins of humming birds and swifts, including those from Mr. Outram Bang's private collection (50233: loan); 57 specimens representing 19 species of decapod crustaceans collected by Thomas Barbour in 1906–7 in Dutch East India and British India (50267).

CAMP, J. H., Paris, Tex.: Invertebrate fossils (49555).

CAMP, S. H., Jackson, Mich.: 9 sheets of *Laciniaria* from Michigan (49310).

CARDIN, W. O., Miami, Okla.: 4 specimens of lead and zinc ores (50220).

CARMODY, P., Port of Spain, Trinidad, West Indies: 12 parasitic Hymenoptera (49684).

CARNEGIE INSTITUTION, Washington, D. C.: Specimen of cactus, *Opuntia*, collected in Arizona by D. T. MacDougal, director of the Laboratory of Carnegie Institution (48959: exchange); 2 specimens of cactus, *Opuntia*, from Arizona (48983); Indian relics exhumed on the island of San Lorenzo, in the harbor of Callao, Peru (49018); 3 boxes containing 10 specimens of cacti obtained by D. T. MacDougal (49070); through D. T. MacDougal, a jar of fruits of *Opuntia* from Arizona (49093); through Roswell H. Johnson, Carnegie Institution Station for Experimental Evolution, Cold Spring Harbor, Long Island, New York, a set of North American Ladybird beetles, showing variations in the *Hippodamia convergens quinquesignata* group (49101); through D. T. MacDougal, 7 plants from Arizona (49250: exchange); flower bud of a cactus from Arizona (49772).

CARNEGIE MUSEUM, Pittsburgh, Pa.: 419 specimens of Formicariidæ (49107: loan); 3 specimens of Caprimulgidæ from Costa Rica (49158: loan); 6 specimens of Jurassic fossils (49391: exchange); 403 specimens of Dendrocolaptidæ (49489: loan); 519 birds' skins, Trochilidæ and Micropodidæ (50212: loan).

CARTER, W. R., Jacksonville, Fla.: Butterfly, *Papilio ajax* (49050).

CARY, E. S. (See under A. S. Haines.)

CASA GRANDE EXCAVATIONS, 1908: About 500 specimens including stone implements, pottery, basketry, fabrics, etc., resulting from explorations and excavations made by Dr. J. Walter Fewkes at the Casa Grande Ruins, Arizona, in 1908, under an act of Congress approved March 4, 1907 (49619).

CASEY, Miss S. P., Washington, D. C.: Makah wallet from Cape Flattery, Washington, collected by Admiral Wilkes in 1838 (48933: loan).

CAUDELL, A. N., U. S. National Museum: 6 specimens of amphipods and isopods from Surf, California (50081).

CHAMBERS, W. LEE, Santa Monica, Cal.: 15 birds' eggs from California and Lower California (49574: exchange); nest and 5 eggs of Lawrence's goldfinch, *Astragalinus lawrencei* (50118: exchange); marine shells representing 8 species from the breakwater at San Pedro, California (50210).

CHANUTE, OCTAVE, Chicago, Ill.: Models of Chanute's "bi-plane gliding machine," 1896 (49697); Chanute's "multiple wing gliding machine," 1896 (49922); Chanute's "oscillating wing gliding machine," 1901–2 (50019).

CHASE, THOMAS, Philadelphia, Pa.: Historical objects which belonged to John Hancock and his grandnephew, the late Thomas G. Chase, together with relics of the civil war (50278: loan).

CHERRY, ADAM, Wilkes-Barre, Pa.: 6 stone implements from Carbon and Luzerne counties (50093).

CHESTERFIELD, A. A., Sweetsburg, Quebec, Canada: 65 birds' eggs and a nest from British America (49853).

CHINA, IMPERIAL GOVERNMENT OF: A handsome celadon colored porcelain vase of the Yung-chêng period (49609); also a peachblow vase, an exquisite product of the K'ang-hsi period, presented through His Excellency T'ang Shao-Yi, a special ambassador to the United States (49638).

CHRISMAN, MORRIS, Tucson, Ariz.: 2 snakes from the region of Santa Catalina Mountains, Arizona (49623).

CHRIST, Dr. H., Basel, Switzerland: 62 specimens of ferns, mainly from Costa Rica (49604); 10 specimens of ferns from Mexico and Costa Rica (49841; 50124). Exchange.

CHRISTIERNSSON, W. E., Keystone, S. Dak.: Specimen of spodumene (49082).

CHUBB, Mrs. CHARLES ST. J., Washington, D. C.: Specimen of mistletoe, *Phoradendron californicum*, and of Ocotillo, *Fouquieria splendens* (49840).

CLAPP, GEORGE H., Pittsburgh, Pa. About 30 cotypes of *Bifidaria tuba intuscostata*, from Arizona (49536); 2 cotypes of *Ashmunella kochii* from New Mexico (49712).

CLARK, ALFRED C., New York City: Berliner gramophone, with certain improvements invented by Alfred C. Clark in 1898 (49940; loan).

CLARK, HON. HERBERT E., U. S. vice-consul, Jerusalem, Syria: 37 flint implements from the "Plain of Bethlehem," Jerusalem (50010); a fine series of photographs illustrating the donor's private collection of prehistoric objects from the "Plain of Bethlehem" (50198).

CLARK, H. W., Bureau of Fisheries, Washington, D. C.: 2 specimens of *Botrychium* from the District of Columbia (49390).

CLARK, JOHN H., New Orleans, La.: Portrait of Audubon (49486).

CLARKE, F. W. (See under B. J. Stanwood.)

CLARKE, WILLIAM EAGLE, Royal Scottish Museum, Edinburgh, Scotland: 12 specimens of field mice, *Apodemus fridariensis*, from Fair Isle, Scotland (49897; exchange).

CLEMENS, Rev. JOSEPH, Fort Douglas, Utah: About 200 specimens of land, freshwater, and marine shells from the Philippine Islands (50011).

CLOUGH, L., East Concord, N. H.: Garnet nodule (49722).

COCKERELL, T. D. A., Boulder, Colo.: Hymenoptera, *Elasmospoma* sp., from Boulder (49003); 3 specimens of Hymenoptera, *Monodontomerus montivagus* from Boulder (49077); 8 insects (49201); 5 cotypes of *Veronicella agassizi*, 1 odontophore of *Coryphella iodinica*, mounted slide (49693); 40 specimens of Hymenoptera, Diptera, and Lepidoptera (49764); 21 specimens of Hymenoptera and Diptera from Boulder (49788); 9 plants from England and the United States (49985); 2 cotypes of *Nomada vexator*, cotypes of a Cecidomyid and parasites of same, from Colorado (50074); 15 plants from various localities (50161); about 40 insects from Colorado (50249).

COLLINS, F. S., Malden, Mass.: Fascicle XXXI of "Phycotheca Boreali Americana" (49538; purchase).

COLLINS, Rev. MARK A., Waynesboro, Pa.: Hide bottle from the west coast of Africa, with paint and pulverized mineral substance used by the natives for painting their eyebrows (49731).

COMMERCE AND LABOR, DEPARTMENT OF: *Bureau of Fisheries:* 369 samples of ocean bottom collected by the steamer Albatross between 1883 and 1888; also 169 microscopic slides mounted by Prof. L. A. Lee (48967); type and 1 cotype of algæ, *Achochætium hoytii*, from Fort Macon Breakwater, Beaufort, North Carolina (49072); 23 lots of Pacific sponges, Geodidæ and Erylidæ, types

COMMERCE AND LABOR, DEPARTMENT OF—Continued.

of Lendenfeld, from the Hawaiian Islands, Panama, and other localities (49217); *Alcyonaria* from California (49218); fish food, *Hyalella knickerbockeri*, from Pond C., Mammoth Spring, Arkansas (49246); reptiles and batrachians from Washington and Oregon, collected by John T. Nichols (49227); 174 sheets of marine algæ from the vicinity of Beaufort, North Carolina (49513); 2 boxes of *Echini* (49302); 27 sheets of plants from Alaska, collected by F. M. Chamberlain (49325); 144 samples of ocean bottom obtained by the steamer Albatross in the northwestern Pacific in 1906 (49331); 3 Cottoid fishes collected by Fred. Patching, Loring, Alaska (49445); crayfishes, insects, plants, and snails from Crab Creek, Oregon, collected by John T. Nichols (49499); 21 specimens of plants collected by F. M. Chamberlain, in the vicinity of Loring, Alaska (49540); about 250 species of mollusks collected by the steamer Albatross in the eastern part of the Pacific Ocean in 1891, 1904, and 1906 (49543); 310 specimens of Maryland fishes (49561); type and 2 cotypes of the Cyprinodont, *Platypæcilus nelsoni* (49573); collection of fishes made in the Canal Zone, by August Busck and Allan H. Jennings (49673); first series of Medusæ of the steamer Albatross Eastern Pacific Expedition of 1904–5 (49746); 587 fishes collected in the western part of New York and the northern part of Ohio by A. J. Woolman in 1893 (49766); skin of *Orthorhamphus magnirostris* from Palaui Island, Philippine group (49779); Medusæ collected by the Albatross in the Philippine Islands and identified by Dr. A. G. Mayer (49876); 115 herbarium specimens collected at Great and Ellis lakes, North Carolina, during the summer of 1905, by William H. Brown (49888); 3 specimens of young *Coryphæna*, presumably *hippurus*, collected by the Fish Hawk at Key West subsequent to 1899 (49974); miscellaneous collections of fishes, reptiles, and other invertebrates (49976); brachiopods from 18-mile creek, near Westport, Kentucky, and miscellaneous fossils from Harrod's Creek, near Madison, Indiana, collected by J. F. Boepple (50157); type specimen of Medusa, *Pegantha clara*, collected by the steamer Fish Hawk at Station 7068, September, 1899 (50197); type specimen of *Rhinoscopelus occanicus* (50205).

COMMERCE AND LABOR, DEPARTMENT OF—Continued.

COMPERE, GEORGE, Perth, West Australia: 2 specimens of Diptera, *Dacus zonatus*, from Manila, Philippine Islands (49880).

COOK, MEL T., Newark, Del.: 2 plants from Cuba (49782).

COOK, Prof. O. F., Department of Agriculture, Washington, D. C.: 32 lichens and 7 ferns from various localities (49447); 2 vials containing Isopods from Key West; also 52 insects from Florida (49546).

COOKE, Miss J. M., Point Loma, Cal.: Marine shells representing 6 species from California and the Gulf of California (50199).

COOLIDGE, KARL R., Palo Alto, Cal.: 4 specimens of Lepidoptera (49563).

CONNOR, FRANK L., Chicago, Ill.: Fossil wood from Lindenwold, Camden County, New Jersey (49763).

COOPER, Dr. J. L., Fort Worth, Tex.: Specimen of scavenger beetle, *Strategus julianus* (48981).

COPENHAGEN, DENMARK, BOTANISK MUSEUM: Specimen of fern, *Asplenium*, from Mexico (49360); 45 specimens of plants, *Pteridophyta*, collected by F. Liebmann in Central America (49525); 3 ferns from Mexico, with 2 sketches by Carl Christensen (50037); 2 specimens of ferns, *Schizæa*, from Brazil (50109). Exchange.

COPENHAGEN, DENMARK, ZOOLOGISCHES MUSEUM: Bat, *Myotis dasycneme* from Denmark (50015); 414 specimens representing 138 species of crabs from the Gulf of Siam (50057). Exchange.

CORY, Miss KATE T., New York City: 4 Hopi pahos, or prayer sticks (50209).

COX, Captain W., U. S. Army, Leyte, P. I.: Beetles from the Philippine Islands (48946; 49002; 49345).

CRANE, W. E., Brooklyn, N. Y.: About 100 specimens of Cretaceous bryozoans from Faringdon, England (48559: exchange).

CRAWFORD, J. C., U. S. National Museum: 72 specimens of Hymenoptera, 70 of *Bombus* and 2 cotypes of *Psithyrus* (48942); about 310 Hymenoptera, *Halictus*, from North America, containing over 100 determined species, and the types of 20 species, and paratypes or cotypes of 19 species (49104); 17 Hymenoptera from Palmerlee, Arizona, collected by C. R. Biederman (49125); 10 bees, including 1 type specimen (49172); about 2,330 Hymenoptera, including type specimens from Europe, Central America, and other regions (49651); 49 specimens of Hymenoptera collected in Costa Rica by M. A. Carriker (49733).

CROFUTT, W. A., Washington, D. C.: 10 specimens of *Cryptozoon* from the Saratogan rocks of Saratoga, New York (49190).

CROMWELL, DAVID W., New York City: A valuable and interesting collection of about 20,000 postage stamps gathered from all parts of the world and arranged in 12 albums (49053); stamps representing the 1908 issues of Turk's Island, Argentine Republic, Guatemala, Brazil, Switzerland, and Ceylon (49315); 17 official postage stamps, issue of 1908, from Ecuador, Brazil, Iceland, Danish West Indies, and Chile (49383); 88 postage stamps (49727; 49835; 49907; 50033). Deposit.

CROSBY, F. W., Washington, D. C.: Battle axe made from a conch shell, found in a mound off the western coast of Florida; sponge from the Anclote sponge fishery on the same coast (49784).

CROSSLEY, A. W., Washington, D. C.: A lariat captured from the Snake Indians during General Howard's campaign (49776: purchase).

CULVER, CHARLES, Washington, D. C.: Squid from the coast of Virginia (49238).

CURL, Mrs. H. C., Washington, D. C.: Wicker basket made by the Indians of the Chucunaque River district, Panama (49807).

DAHLEM, STEGLITZ BEI BERLIN, GERMANY, KÖNIGL. BOTANISCHER GARTEN UND MUSEUM: Specimen of *Nolina hookeri* from cultivation, with photograph (49885); specimen of fern, *Anemia*, from Mexico (50126). Exchange.

DALL, Dr. WILLIAM H., U. S. Geological Survey, Washington, D. C.: Marine and land shells representing 7 species from the Isle of Springs, Maine (49145); iron lance head found by the Rev. C. H. A. Dall in the ruins, after the great fire in the Tower of London, 1841 (49737).

DARLING, Miss NANCY, Woodstock, Vt.: 5 specimens of ferns from Vermont (49867: exchange).

DAVIDSON, Dr. A., Los Angeles, Cal.: Specimen of *Gormannia obtusata* from California (49041); specimen of *Dudleya* from California (49094); living plant, *Dudleya*, from California (49109); plant, *Allotropa virgata*, from California (49121); specimens of *Pisidium* from Round Meadow, Sequoia National Park, California (49427); 4 specimens of *Ribes* (50230); 3 living specimens of *Sedum* and *Dudleya* (50281).

DAVIS, WILLIAM T., New Brighton, N. Y.: 2 specimens of *Orchelimum*, Orthoptera (49367).

DEAM, C. C., Bluffton, Ind.: 51 plants from Florida (49946; exchange); 2 plants, *Laciniaria*, from Florida (49687).

DE GOLIA and ATKINS, San Francisco, Cal.: 2 samples of pyrophyllite (49012).

DETWILER, JOHN Y., New Smyrna, Fla.: 5 small photographs of sperm whales, stranded near New Smyrna (49382).

DETWILER, Miss L. C., Jersey City, N. J.: 2 plants from Coahuila, Mexico (49108).

DE WITT, Dr. J. C., Hamlin, Ark.: Small piece of tow cloth (49639).

DEYROLLE, Les fils D'EMILE, Paris, France: Mounted skeleton of a Chinese deer, *Elaphurus davidianus* (49235; purchase).

DICKINSON, R. B., Kettle River Quarries Company, Minneapolis, Minn.: A 6-inch cube of Kettle River sandstone (49751).

DODD, W. H., Langtry, Tex.: Specimen of living rock cactus, *Anhalonium*, from Texas (49338).

DODGE, BYRON E., Davison, Mich.: Iron axe (48934; loan).

DODGE, C. K., Port Huron, Mich.: 12 plants from Michigan (49502).

DODGE, HARRISON H., Mount Vernon, Va.: Model of the original house at Mount Vernon, as erected by Lawrence Washington in 1743 (50084).

DODGE, PICKERING, U. S. Engineer Office, Washington, D. C.: An Egyptian water jar (49341).

DORIA, Marquis G., Museo Civico di Storia Naturale, Genoa, Italy: Bat, *Amorphochilus schnablii*, from Peru (49457).

DOUGLASS, WILLIAM B., Washington, D. C.: Relics of cliff dwellers from Utah and Colorado (50262).

DOWELL, PHILIP, Port Richmond, Staten Island, N. Y.: 92 plants from the District of Columbia and vicinity (49205).

DU BOIS, E., Bluffton, S. C.: Larva of a Yucca borer (49992).

DUGÈS, Dr. A., Guanajuato, Mexico: Skin of *Pyranga erythromelas* (48991); pocket gopher, *Platygeomys tylorhinus*, from Mexico (49949).

EASTMAN, GEORGE, Rochester, N. Y.: Speed kodak No. 4 A (49628).

EBERHARDT, CHARLES C., Barranquilla, Colombia, South America: Photographs relating to the Indians of Peru (49307).

ECKIS, D. O., Dillon, Colo.: Mummied specimen of acadian or saw whet owl, *Claux acadicus*, from Colorado (50080).

EDGERTON, C. W., Baton Rouge, La.: Specimen of clover, *Trifolium suarcolens*, collected by B. Railback (50100).

EDWARDS, Hon. THOMAS J., Daisy, Ga.: Powder gourd carried through the Revolutionary War by his great grandfather (49882: loan).

EGGLESTON, W. W., Washington, D. C.: 221 plants, *Crataegus*, from New York and Connecticut (49802).

EICHLAM, FEDERICO, Guatemala, Guatemala: 15 specimens of living plants from Guatemala (49308); 10 living specimens of cacti, *Opuntia pumila*, from Guatemala (49635); cactus seeds from Guatemala (50111). Exchange.

ELBEUF, FRANCE, MUSÉUM D'HISTOIRE NATURELLE: Prehistoric flint implements from the vicinity of Elbeuf (49696; exchange).

ELMER, A. D. E., Bureau of Science, Manila, P. I.: 549 specimens of plants from the Philippine Islands (48977: loan); 309 specimens of Philippine plants (49149: purchase).

ELY, CHARLES R., Washington, D. C.: 65 specimens of Lepidoptera (49296); 6 Braconidæ, Hymenoptera, from East River, Connecticut (49430).

ENDICOTT, J. D., Cañon City, Colo.: Samples of chalcedonic replacements of fossil bones (?) (50053).

ENGLEHARDT, GEORGE P., Brooklyn, N. Y.: 11 specimens of Lepidoptera (50151).

ERNST, Miss HELEN AMORY, Washington, D. C.: An interesting collection of specimens of "East Indian" and "Lowestoft" porcelain (45357: loan). (See also under Mrs. William Wharton.)

ESHNAUR, Mrs. W. H., Terminal Island, Cal.: 17 specimens representing 5 species of marine shells from Terminal Island (50095).

EVANS, G. L., Richland, Iowa: Arrow points, axes, and stone knife (49620).

FALL, Prof. H. C., Pasadena, Cal.: 4 beetles, including a cotype (49494).

FAWCETT, G. L., Porto Rico Agricultural Experiment Station, Mayaguez, Porto Rico: 7 specimens of Hymenoptera (49787).

FEATHERSTONHAUGH, Dr. THOMAS, Washington, D. C.: 4 watch movements (50007; 50229).

FELIPPONE, Dr. FLORENTINO, Montevideo, Uruguay: 35 specimens representing 8 species of land and freshwater shells from Uruguay and other localities; also 4 crabs, *Uca urugua-yensis* (49079).

FELT, Dr. E. P., Albany, N. Y.: 4 mosquitoes, Diptera (49321).

FENYES, Dr. A., Pasadena, Cal.: 10 Phengodid beetles from Cardoba and Cuernavaca, Mexico (49811: exchange).

FERGUSON, JOHN H., Western State Hospital, Staunton, Va.: A specimen of chert (49401).

FERNALD, Dr. H. T., Amherst, Mass.: 8 cotypes of *Cecidomyia foliora* (48966).

FERRIER, W. F., Mammoth, Cal.: Type specimen of *Lissoprion ferrieri* and other specimens of the species (49633).

FERRISS, JAMES H., Joliet, Ill.: Specimen of *Asplenium* from Arizona (49110); 2 rattlesnakes from Cochise County, Arizona (49485).

FESTA, Dr. ENRICO, Turin, Italy: 19 mammals from Italy (49995).

FIELD MUSEUM OF NATURAL HISTORY, Chicago, Ill.: 74 specimens of Formicariidæ (48945: loan); specimen of *Magnolia* from Mexico (49184: loan); 6 specimens of fishes, *Cichlasoma dorii*, *C. guttulatum*, and *C. managuense* from Central America (49242: exchange); 80 specimens of Dendrocolaptidæ (49505: loan); fragment of a fossil sponge from the Cretaceous, 2 photographs of fossil sponges, and 4 photographs of fossil crabs (49869); 277 specimens of Trochilidæ and Micropodidæ (50277: loan).

FLETT, J. B., Tacoma, Wash.: 5 plants from Washington (49933).

FOLSOM, J. W., Urbana, Ill.: About 40 specimens of *Aphanura cockei* (49089).

FOOTE MINERAL COMPANY, Philadelphia, Pa.: Native silver with cobaltite; kornerupine (48950: purchase).

FORSYTH-MAJOR, Dr. C. T., London, England: Reptiles and batrachians from Corsica (49474).

FORT, TOMLINSON, Chattanooga, Tenn.: 2 photographs of Indian mortars found in the sandstone near Waldens Ridge, about 16 miles from Chattanooga (49929).

FOSTER, A. S., Hoquaim, Wash.: Hydroids, bryozoans, and fragment of a plant (48986); 55 plants from Washington (49123); 29 specimens of plants from Washington (49186); 57 specimens of plants from Washington (49337).

FOX, Dr. CARROLL, Oakland, Cal.: 25 slides of fleas from San Francisco (49877).

FOX, Mrs. V. L. W., bequest of (through Mr. Gist Blair, executor): The following articles presented by the Emperor of Russia to the late Hon. G. V. Fox: 2 silver medals; a gold medal; silver-mounted leather case which held the diploma of citizenship of Moscow; diploma of citizenship of Moscow, framed; a memorial picture of Novgorod; silver salver; salt cellar in the shape of an

Fox, Mrs. V. L. W.—Continued.
antique chair; malachite casket containing the diploma of citizenship of St. Petersburg; gold snuffbox; book "Sacre d'Alexandre 2nd;" 4 volumes "Antiquities de l'Empire de Russie;" 2 volumes "Musée de Tsarskoe Selo du Collection d'Armes;" volume "National Costumes" (50021; bequest).

Frailé, M., Department of Agriculture, Washington, D. C.: 12 specimens of plants from Spain (49175).

Frampton, Eugene, Punxsutawney, Pa.: Luna moth, *Actias luna* (49092).

Franklin, Dr. H. J., St. Anthony Park, Minn.: Slide of cotypes of *Aleurodothrips fasciapennis* (49961).

Fretz, C. D., Sellersville, Pa.: 45 plants, *Crataegus*, from Pennsylvania (49887; exchange).

Frye, T. C., Washington, D. C.: Plant, *Juncus oregonus*, from Washington (49936).

Fukai, Takeshi, Konosu, Saitama, Japan: About 100 specimens of Hymenoptera from Japan (50144).

Fuller, F. Wesley, West Quincy, Mass.: 6-inch sphere of lipardite, and a 3-inch sphere of jasper hematite (49578; purchase).

Furness, Dr. Henry, Malone, N. Y.: A single-barrel gun, formerly owned by Daniel Webster (49846).

Gabaldon, Briceño & Sons, Merida, Venezuela: Insects and shells from Venezuela (49939; purchase).

Gaillard, Col. D. Du B., U. S. Army, Culebra, Canal Zone: Plant, *Bixa*, from Panama (49935); fruits of the plant *Erythrina* from Panama (50189).

Gabriel, Charles J., Abbotsford, Melbourne, Victoria, Australia: 57 specimens, representing 13 species of marine shells, from Victoria (49081); 67 specimens, representing 28 species of marine shells, from Australia (49451; exchange).

Gaither, Mrs. H. Marcia, Falls Church, Va.: Solid shot found 70 years ago in the Gaither family residence, Howard County, Maryland (49034).

Garfield, Hon. James Rudolph, Washington, D. C.: Tile from the spot in the floor of the old Pennsylvania Railway Station, Washington, D. C., where General Garfield was standing at the time of his assassination (49837).

Garman, H., Lexington, Ky.: Plant, *Hydrocotyle*, from Kentucky (49748).

Garrett, Harrison, Tippah, Miss.: Ceremonial object found by the donor in 1887 near Tippah (50133).

Gatlin, B. B., Deming, N. Mex.: Specimen of whip-tail scorpion, *Thelyphonus giganteus* (49031).

Gatton, Joseph M., Clarendon, Va.: Small tile from the Pennsylvania Railway Station, Washington, D. C., indicating the place where President Garfield fell at the time of his assassination (49105).

Gee, Prof. N. Gist, Santuck, S. C.: Collection of old Chinese coins and casts of coins (49015).

Gerould, Dr. J. H., Hanover, N. H.: Crab, *Calappa flammea*, from Falmouth, Massachusetts (49713).

Giacornelli, Eugenio, La Rioja, Argentina: 17 specimens of Lepidoptera (49856; exchange).

Gibson, Arthur, Central Experimental Farm, Ottawa, Canada: Specimen of Lepidoptera, the type of *Psilocorus fletcherella* (49545); specimen of *Hepialus hyperboreus* (49645).

Gilder, Robert F., Omaha, Nebr. (through J. E. Wallace): 3 skulls, fragments of bones and a small piece of sandstone from Nebraska (49164); skull and fragments of human bones from the "Wall mound," Sarpy County, Nebraska (49243); disk from a human skull and probably of fetishistic significance, from Long's hill, near Florence, Arizona (50087).

GILLETTE, CASSIUS E., Philadelphia, Pa.: Small celt from Nicaragua (49851).

GIRAULT, A. A., Urbana, Ill.: Specimen of Lepidoptera, *Callopistria floridensis* (49001); 8 specimens of Hymenoptera, cotypes of 2 species, from Carbondale, Illinois (49024); 2 cotypes of *Trichoporus aucoriridis*, and 4 parasitic Hymenoptera cotypes of 2 species (49740); 2 cotypes of *Pediobioidea cyanea*, Hymenoptera (49765); 4 cotypes of Hymenoptera (49925).

GLASGOW, UNIVERSITY OF, GALSGOW, SCOTLAND: Negatives of the type specimens of Ellis and Solander's species of corals (50012: exchange).

GODBEY, S. M., Nashville, Tenn.: Specimen of *Caryocrinus ornatus* from Newsom, Tennessee (49956); exchange).

GODMAN, F. D., London, England: 420 specimens of named Coleoptera from Central America, including cotypes (49966: exchange). (See also under Lord Walsingham.)

GOLL, GEORGE P., Philadelphia, Pa.: Plant, *Cereus triangularis*, from the Bahama Islands (48968).

GONZALES, Rev. Father SATURIO, Santo Domingo de Silos, Provincia Burgos, Spain: 16 mammals and a bird from Spain (50082: exchange; a wild boar, purchase).

GOODE, Mrs. G. BROWN, Middletown, Conn.: Set of Italian playing cards (49202); nine medals, gold, silver, and bronze, awarded to the late Dr. G. Brown Goode (49906: loan).

GOODWIN, J. W., Gordonsville, Va.: Little blue heron, *Florida cærula*, from Virginia (49027).

GOUGH, HARRY, White Plains, Md.: Indian paint cup (atone), (49224); 7 arrowpoints and knives (49602).

GOULD, Mrs. A. B., Boston, Mass.: Stone implements and carvings from Porto Rico (49528).

GOWARD, GUSTAVUS, Washington, D. C.: Chinese porcelain folding screen (48935: loan).

GRAY HERBARIUM, Cambridge, Mass.: Specimens of *Talauma* and *Magnolia* from Central and South America (49146: loan); 5 specimens of ferns (49354: loan); 7 sheets of *Paroscla* (*Dalea*) (49438: loan); 12 sheets of Mexican *Cratægi* (49551: loan); specimen of Mexican *Cratægus* (49590: loan); 83 specimens of tropical American ferns (49698: loan); 54 plants (49792: loan); fragment of a plant from Mexico (49842: exchange).

GREBEL, WENDLER AND COMPANY, Geneva, Switzerland: 99 grams of the Girgenti meteorite (48995: purchase); 523 grams of the Lime Creek meteorite (49324: exchange).

GREEN, EDWARD, U. S. National Museum: Brown bat, *Vespertilio fuscus* (49947).

GREEN, FRANK, Washington, D. C.: 2 fragments of pottery and an arrowhead (49402).

GREER, D. M., Limestone Island, New Zealand: Fossil shark's teeth (49777).

GRIPP, C. W., San Diego, Cal.: Marine shells representing 10 species from California (49323).

HAGUE, Mrs. ARNOLD, Washington, D. C.: A yard of round point Honiton lace, and a cape of Mechlin lace (50146: loan).

HAINES, A. S., Westtown, Pa.: Specimen of fern, *Camptosorus*, from Virginia, and photograph furnished by E. S. Cary (50108).

HALL, M. C., Department of Agriculture, Washington, D. C.: Microscopic slide of parasitic copepods from *Roccus lineatus*, Potomac River (49789).

HALLER, J. S., Cuba, Nebr.: 3 specimens of *Laciniaria* from Nebraska (49413).

HAMILTON, JAMES, Tombstone, Ariz.: Vesuvianite (49533).

HAMLIN, HOMER, Los Angeles, Cal.: Portions of a fossil species of rabbit (49626); bone whistle from California (49742: loan).

HAMMATT-DICKEY COMPANY, Jacksonville, Fla.: Set of three models of the Cullinan diamond cut from rock crystal (49261: purchase).

HANLEY, Mrs. M. L., Washington, D. C.: Adult female specimen of praying mantis, *Stagmomantis carolina* (49165).

HANNIBAL, HAROLD, San Jose, Cal.: Specimens of *Gonidea* and *Lucina* from California (49287); shells (49322).

HANSEMANN, Prof. VON, Berlin, Germany: Anatomical specimen (49295); 5 skulls, with brains (50142: exchange).

HANSEN, JOHN, Washington, D. C.: 8 watch movements (49576).

HARDING, Right Rev. ALFRED, Washington, D. C.: 6 books damaged by termites (50097).

HARPER, R. M., University, Ala.: 4 specimens of ferns from Alabama (49387).

HARRIMAN, Mrs. JAMES, Washington, D. C. (through Mrs. J. W. Pinchot): Excellent examples of Venetian and Rose point lace (49599: loan).

HARRINGTON, Lady, Adis, Ababa, Abyssinia, via Aden: 57 birds' skins from Abyssinia (49075).

HARRIS, Dr. J. V., Key West, Fla.: 2 larvæ of Lepidoptera, *Megalopyge opercularis* (49166); cocoons of *Apantcles* sp., with adults of the same species (49938; 50073).

HARRIS, W., Hope Gardens, Kingston, Jamaica: Stem of *Cyathea arborea* (49514).

HASSE, Dr. H. E., Sawtelle, Cal.: 6 plants from California (48960); 2 specimens of cactus, *Opuntia littoralis*, from California (48982); 2 specimens of *Opuntia* from California (49095).

HAUF, Mrs. HARRIET, Lancaster, Pa.: 2 small plaster reliefs supposed to represent Napoleon I and the Empress Josephine (49507).

HAUPTMANN, JOHANN, Washington, D. C.: Great horned owl, *Bubo virginianus* (49738).

HAY, Prof. W. P., Washington, D. C.: Turtles from Choptank Creek, Maryland (50271).

HAYHURST, PAUL, Roslindale, Mass.: 2 types of *Hyaloptcrus dactylidis* (50231).

HAZLETT, Miss M. E., East Liverpool, Ohio: Brooch and earrings of woven human hair, mounted in gold (50025: loan).

HEADLEY, F. B., Fallon, Nev.: Specimen of cactus, *Opuntia*, from Nevada (50137).

HEARNE, J. W., Howard University, Washington, D. C.: 2 snakes from South America (49332).

HEBARD, MORGAN, New Haven, Conn.: 44 specimens of Orthoptera (49848: exchange).

HEIDEMANN, OTTO, Department of Agriculture, Washington, D. C.: 2 specimens of Hemiptera, *Saldoida cornuta*, from Florida (48936); 2 types of *Corizus indentatus*, type of *C. tuberculatus* and cotype of *C. validus* (49289); 7 specimens of Hemiptera, types of 3 species (49572).

HEIGHWAY, A. E., Mina Constancia, Vinales, Pinar del Rio, Cuba: Minerals and about 2,000 recent shells (49130); gem tourmalines, chrysoprase, etc., from California (49868: deposit); knit bag of fiber, made by Indians of the Atrato River, Colombia, South America (49874); about 50 specimens of land shells representing 5 species, from the Isthmus of Darien, two of the species being new (50272).

HELLER, A. A., Reno, Nev.: 2 specimens of Apiaceæ from Nevada (49365); 12 ferns from Nevada and California (49771); 400 plants from Nevada and California (49850: purchase); specimen of *Opuntia basilaris ramosa* (50265).

HENDEL, FRIEDRICH, Vienna, Austria: 26 specimens representing 21 species of European Diptera (48975: exchange).

HENDERSON, JUNIUS, University of Colorado, Boulder, Colo.: 20 specimens of *Orcohelix haydeni* and varieties from Colorado (49866).

HERDMAN, Prof. W. A., Liverpool, England: 6 specimens, representing 6 species, of crinoids from Ceylon and the Red Sea (50260: exchange).

HERNANDEZ, J. V., Claremont, Cal.: 57 specimens of ferns collected in the vicinity of Para, Brazil, in 1908 (49614).

HERRICK, Prof. GLENN W., College Station, Tex.: 23 mosquitoes (49103); 20 specimens of parasitic Hymenoptera (49615).

HESTER, LOUIS G., Houston, Tex.: 3 specimens of Texas marble (49097).

HIATT, W. L., Fruita, Colo.: 2 fragments of dinosaur bones (49723).

HILLIARD, GEORGE R., Springfield, Ohio: 2 specimens of Orthoptera (49137); 12 specimens of Orthoptera, *Diestrammena marmorata* (49155); 17 specimens of Orthoptera, *Diestrammena marmorata* and 1 specimen of Coleoptera, *Pinotus carolinus* (49161).

HINKLEY, A. A., Du Bois, Ill.: 250 specimens representing 44 species of land and fresh-water shells from Mexico (40104: exchange).

HIRASE, Y., Kyoto, Japan: 70 species of Japanese shells, including many cotypes of Pilsbry's species (50274: purchase).

HITCHENS, Capt. GEORGE D., Brighton, Va.: Specimen of shearwater, *Puffinus*, from Smiths Island, Virginia (50156).

HITT, Mrs. ROBERT R., Washington, D. C.: 7 pieces of old lace, including specimens of point d'Argentan, point de Milan, point de Venise, and Malines (49598: loan).

HOCHDERFFER, GEORGE, Flagstaff, Ariz.: 2 specimens of *Mamillaria* from Arizona (48929).

HODGE, Dr. E. R., Army Medical Museum, Washington, D. C.: 3 Apache baskets (49482: exchange).

HOLCOMBE, W. E., Columbiana, Ala.: Four-legged chicken (50103).

HOLLISTER, NED, Washington, D. C.: Fern from Maryland (49806).

HOLM, FRITS V., Smithsonian Institution: A complete rubbing, in four pieces, of the inscription on the famous Nestorian tablet, now in the "Peilin" or "Forest of Tablets" in Sian-fu, capital of Shensi, Western China (49501); specimen of limestone from Fu-ping-hsian, Shensi Province, China (49795).

HOLM, Dr. THEODOR, Brookland, D. C.: 11 specimens of plants in alcohol (48984); 2 jars and 10 test tubes of plants in alcohol from the District of Columbia and vicinity (49239); 5 plants in alcohol collected in the District of Columbia (49264: exchange); specimen of *Cardamine intermedia* from Brookland, D. C. (49983); 30 plants from various localities (50122).

HOLMES, Dr. S. J., University of Wisconsin, Madison, Wis.: 4 vials and 14 slides of isopods, types of 4 species (49631).

HOLMES, W. H., Washington, D. C.: Stone implements from Turkey Point, Chesapeake Bay, Maryland (49150).

HOLSINGER, S. J., Meteor, Ariz.: Small iron meteorite with shale in which it was originally embedded (49715).

HOPKINS, Dr. R. D. (See under West Virginia Agricultural Experiment Station.)

HOPKINS, ROBERT T., Nashville, Tenn.: Polished slab of stalagmite (49292).

HORTON, Mrs. MARY, Cumberland Md.: Canteen used by the donor's husband, David Horton, throughout the civil war (49087).

HOSLEY, Mrs. H. H., Washington, D. C.: Sword and belt presented to the late Commander Harry H. Hosley, U. S. Navy, by the Larchmont Yacht Club of New York, on his return from towing the dry dock

HOSLEY, Mrs. H. H.—Continued.
Dewey to the Philippine Islands; also 4 cablegrams of congratulations (49151: loan).

HOTCHKISS, H. H. (through Mr. Vernon Bailey, Bureau of Biological Survey, Department of Agriculture): Indian skull and a grooved stone axe which was hidden at its base, found in the ruins of an old pueblo in Tom Moore Canyon, near Diamond Bar Ranch, in Gila National Forest, New Mexico (50163).

HOUGH, WALTER, U. S. National Museum: Flint lock pistol made in Richmond, Va., in 1808 (49420: loan); Remington carbine (50088).

HOWARD UNIVERSITY MEDICAL SCHOOL, Washington, D. C.: Anatomical specimens (49621; 49813; 49931).

HUBBELL, ROYAL, Hawks Park, Fla.: 5 photographs of sperm whales stranded near Mosquito Inlet Light Station, Ponce Park, Fla. (49404: purchase).

HUDSON, Dr. J. W., Ukiah, Cal.: Pomo Indian ceremonial feather headdress or mask, "guk tsu" or "Big head" (49965: purchase).

HUIDEKOPER, Mrs. FREDERICK W., Washington, D. C.: Tintypes of General McClellan and General Siegel, and other articles (49603).

HUNGATE, J. W., Cheney, Wash.: 90 insects (49415).

HUNT, GAILLARD, Library of Congress, Washington, D. C.: A cane, once the property of Toussaint L'Ouverture (49134).

HUNT, Mrs. RICHARD M., New York City: Collection of embroidered pictures from the XVII and XVIII centuries (49421: loan).

HUNTER, WILLIAM, Washington, D. C.: Fern from Rock Creek Park, Washington, D. C. (49361).

HUOT, JOE, Henderson, Cal.: 2 specimens of invertebrate fossils (49074).

HURTER, JULIUS, St. Louis, Mo.: Reptiles and batrachians (49088; 49634); 19 salamanders (49969: exchange).

INDIAN MUSEUM. (See under Calcutta, India.)

INDIANA UNIVERSITY, Bloomington, Ind.: Mammals from Mitchell, Ind. (49872).

INSLEY, H. R., Paymaster, U. S. Navy, Washington, D. C.: 2 raincoats worn by the Negritos of northwestern Luzon, near Aparri (49834).

INTERIOR, DEPARTMENT OF:

Office of Indian Affairs: A collection of negatives representing individuals of various Indian tribes, made by Dr. A. Hrdlička of the National Museum (49350); a pair of grass shoes found in a cave on Cottonwood Creek, about 30 miles northeast of San Carlos, Ariz. (49640).

Patent Office: Collection of firearms, mechanical models, etc. (49064); model of a percussion keyboard instrument (49276).

U. S. Geological Survey: Small collection of Kootanie plants obtained by C. A. Fisher (48992); 3 boxes of rocks collected in the Bradshaw Mountains by Drs. Palache and Jaggar (49291); rocks from the Sugar Loaf district, Colorado, obtained by R. D. George (49306); specimens of pyroxenite collected near Grants Pass, Oreg.; of peridotite collected near Eight Dollar Mountain, Josephine County, Oreg.; and of hornblende andesite from the west base of Mount Shasta, California (49366); fragmentary vertebrate fossils collected by T. W. Stanton near the top of the Upper Cretaceous in North Dakota and Montana (49381); vertebrate fossils, consisting chiefly of teeth and jaws of small mammals, obtained by A. C. Silberling from the lower Tertiary strata in the Fish Creek region of Sweetgrass County, Mont. (49393); rocks and feldspar crystals from Goodsprings, Nev. (49394); 57 specimens of trachyte from Gray Rock Peak, Engineer Mountain quadrangle, Colorado; 24 specimens of quartz-porphyry and 25 specimens of monazite-porphyry from Alpine Gulch, San Cristobal quadrangle; and 63

INTERIOR, DEPARTMENT OF—Cont'd.
specimens of rhyolite from Sparling Gulch, Lake City quadrangle, Colorado (49496); 30 small lots of Cretaceous and Tertiary vertebrate fossils, mostly fragmentary, collected by field parties in Montana, Wyoming, Colorado, and New Mexico (49517); 66 specimens of rocks from the Silverton quadrangle, Colorado (49518); 4 specimens of fragmentary vertebrate fossils from the Rico formation, Permian(?), collected by Whitman Cross (49531); a collection of measuring instruments (49676); rocks from the Boulder quadrangle, Colorado, collected by W. H. Weed (49695); 3 fossil teeth of a horse, collected by L. W. Stephenson (49709); invertebrate fossils from the Coalinga district, Fresno and Kings counties, Cal., and adjacent region, collected by Ralph Arnold and Robert Anderson (49757); vertebra and other fragmentary bones of a dinosaur from Donkey Creek, near Moorcroft, Wyo., collected by R. W. Stone (49816); specimens of pyrrhotitic peridotite from Knox County, Me. (50039); fossil woods collected in the region of the petrified forest of Arizona by F. H. Knowlton, L. F. Ward, and David White (50203); collection illustrating the report of F. L. Ransome on the geology and deposits of the Goldfield district (50216).

INTERIOR DEPARTMENT AND BUREAU OF AMERICAN ETHNOLOGY: Archeological objects collected by J. Walter Fewkes, of the Smithsonian Institution, in connection with the excavation and restoration of certain prehistoric ruins in the Mesa Verde National Park of Colorado (49735).

INTERNATIONAL MARITIME EXPOSITION, Bordeaux, France: Diploma awarding the "Grand Prix" to the National Museum for its exhibits (49994).

JACKSON, E. P., Covington, Va.: Silver pin (49743: loan).

JAMES, J. E., Pittston, Pa.: 22 specimens of fossil plants from the anthracite series of Pennsylvania (49849).

JAMES, Mrs. JULIAN, Washington, D. C.: A volume entitled "Biographical Sketches of the Bailey-Myers-Mason families, 1776–1905" (49943); lace embroidery cape and a collection of nine miniatures (50250). Loan.

JELINCK, M. W., Fairview, Nev.: Rocks and ores (49167).

JENNINGS, Mrs. HENNEN, Washington, D. C.: An old piece of altar lace and a copy of a fine piece of old Bruges lace (49554: loan).

JENNEY, CHARLES E., Fresno, Cal.: 4 beetles and 2 flies: *Alaphus pallidus*, *Lucilia sericata*, *Sarcophaga* sp., *Bembidium cruvale*, *Bradycellus rupestris*, and *Elcodes* (*Desecogenia*) *marginata* (48980); 7 insects from Fresno (49254).

JERVEY, Mrs. JEAN B. W., Washington, Barracks, Washington, D. C.: Sea shells from the coast of Mindanao, Philippine Islands, and the islands off the coast, collected by James Postell Jervey, jr. (49038).

JESUP, Mrs. MORRIS K., New York City (through Mrs. Richard G. Lay): Italian chasuble of the 18th century (49629: loan).

JEWETT, STANLEY G., Portland, Oreg.: Rat, melanistic specimen of *Mus norvegicus* (50020).

JOANNIS, L'ABBE J. DE, Paris, France: 2 cotypes of *Mendesia echidna* (49830).

JOHNSON, Prof. D. S., Baltimore, Md.: Living specimen of plant, *Dion spinulosa* (49783).

JOHNSON, J. CHESTER, Marine Mills, Minn.: Small arrowpoints from a mound on the shore of Rice Lake, Washington County, Minn. (50061: exchange).

JOHNSON, Prof. O. B., Seattle, Wash.: 8 hermit crabs and a specimen of *Matuta* sp. (49223).

JOHNSON, ROSWELL H. (See under Carnegie Institution.)

JOHNSTON, Miss LOUISE, Wooster, Ohio: Baby's cap, straw sandals, and a drum, made and used by the Iu or Iao tribes of the northwestern part of Canton Province, China (49051).

JONES, FRANK NORTON, Wilmington, Del.: 19 specimens of Lepidoptera from Bermuda (50145).

KARITZKY, A. M., Nueva Gerona, Isle of Pines, Cuba: Plant from the Isle of Pines (50186).

KARST, Miss ESTHER, Debruce, N. Y.: A transfer print, on glass, of the Smithsonian Institution (49569).

KAVANAUGH, Miss K., Washington, D. C. (through Miss E. R. Scidmore): Old Chinese ivory white teapot (50063: loan).

KEANEY, Mrs. C. E., Spokane, Wash.: Barnacle, *Mitella polymerus* (49553).

KEEP, Mrs. FREDERIC A., Washington, D. C.: A piece of Binche lace, about the year 1700, and a piece of Valenciennes lace of the early 18th century (50149).

KEUFFEL AND ESSER COMPANY, New York City: A modern sundial (49473).

KEW, LONDON, ENGLAND, ROYAL BOTANIC GARDENS: Specimen of *Diplora integrifolia* from the Salomon Islands (49480: loan); specimen of plant, *Mespilus stipulosa* (49649: loan); drawing of *Crataegus quitensis* (49768).

KIMBALL, Miss LAURA F., National City, Cal.: 2 plants, *Selaginella*, from California (49636: exchange).

KINDLE, E. M., U. S. Geological Survey, Washington, D. C.: Marine shells including about 45 species and varieties, from Bering Strait and Eschscholtz, Alaska (49398); tusk of a mammoth from Point Hope, Alaska (49632: purchase).

KINGMAN, C. C., Reading, Mass.: 4 specimens of ferns from Massachusetts (49044).

KINGSLAND, Mrs. WILLIAM M., New York City: Piece of Flemish or Dutch "Diana lace" of the 17th century, 26" long; and a piece of Flemish lace of the 18th century, 36" long by 7" wide (49730).

KLAGES, EDWARD A., Crafton, Pa.: 5 skins of nun-birds, *Monasa*, from Venezuela (49583).

KLINGER, G. R., Lyons, Kans.: Snake, head of a fish and an insect from Guatemala (49400).

KNAB, FREDERICK, Department of Agriculture, Washington, D. C.: 250 specimens of Hymenoptera from Saskatchewan, Canada (49020); 33 specimens of Hymenoptera and 5 specimens of Hemiptera from Washington, D. C. (49056); 8 specimens of Hymenoptera from Virginia (49162); 14 specimens of Hymenoptera from the vicinity of the District of Columbia (49207); 70 specimens of Coleoptera from Peru (49018).

KNUT, S. P., Washington, D. C.: 5 objects of Egyptian antiquities (49522: loan).

K. K. NATURHISTORISCHES HOFMUSEUM. (See under Vienna, Austria.)

KÖNIGL. BOTANISCHER GARTEN UND MUSEUM. (See under Dahlem, Steglitz bei Berlin, Germany.)

KÖNIGL. BOTANISCHES MUSEUM. (See under Berlin, Germany.)

KÖNIGL. ZOOLOGISCHES MUSEUM. (See under Berlin, Germany.)

KUALA LUMPUR, FEDERATED MALAY STATES, SELANGOR STATE MUSEUM: 66 birds' skins from the Malay Peninsula (49085); 20 Malayan mammals (49212). Exchange.

LACHAM, R. E., Santiago, Chile: 15 ancient Chilean skulls, fragments of pottery, pestle, and grinding stone (49982).

LAFFERTY, R. F., Buena Vista, Colo.: Specimen of molybdic ocher (50152).

LAKE, WILMOT, Washington, D. C.: Specimen of stalagmitic marble from Harrisonburg, Va. (50219).

LAMB, Dr. D. S., Army Medical Museum, Washington, D. C.: 2 anatomical specimens (49487).

LAMSON-SCRIBNER, Prof. F., Department of Agriculture, Washington, D. C.: Skull of a wild hog from Culion, Philippine Islands, and a piece of red coral, *Tubipora*, from the shores of the island of Palawan (49346).

LANDALE, J. W., Washington, D. C.: 6 specimens of jasper and one of lava (49262).

LANE, Dr. M. M., Oxly, Mo.: 8 stone implements (49211).

LANEY, F. B., U. S. National Museum: Specimen of copper ore and one of volcanic rock (49844).

LANKESTER, C. H., San José, Costa Rica: 3 birds' skins from Costa Rica (49006); 83 birds' skins from Costa Rica (49007: loan); skin of *Thryophilus modestus* from Costa Rica (49650).

LATHAM, Miss S. E., Smithsonian Institution: Photograph of Dr. Charles Rau (49937).

LAUSANNE-OUCHY, UNIVERSITY OF LAUSANNE: 458 specimens of Old World plants representing 334 species of Leguminosæ and 124 Umbelliferæ (49271: exchange).

LAWTON, EDWIN M., Washington, D. C.: Horn spoon (50244).

LAY, Mrs. RICHARD G. (See under Mrs. Morris K. Jesup.)

LEDYARD, Miss MURRAY, Washington, D. C.: Embroidered Filipino piña scarf (50064: loan).

LEFFINGWELL, E. DE K., Chicago, Ill.: Implements from some old Eskimo dwellings near Barter Island, Alaska (49796); 2 polar bear cubs, 2 brown bear skins, 25 weasels, 50 lemmings, and a hawk (49852); modern ethnological material from Alaska (49952: loan).

LEIDEN, HOLLAND, MUSEUM VAN NATUURLIJKE HISTOIRE: 4 bats, *Myotis dasycneme*, from Holland (49900: exchange).

LEITER, Mrs. L. Z., Washington, D. C.: Collection of Hindu, Genoese, and French embroideries and woven art fabrics (50092: loan).

LELAND STANFORD JUNIOR UNIVERSITY, Stanford University, Cal.: Type specimen of *Hippocampus barbouri* (49429: exchange).

LEWIS BEAR DRUG COMPANY, Pensacola, Fla.: Specimen of *Laciniaria* (49320).

LEWIS, Lieut. GEORGE C., U. S. Army, Edna, Tex.: Batrachians from Texas (50047).

LIGHT, SOL F., Atsugi Machie, Kanagawaken, Japan: 10 insects (49582).

LIGHTON, W. R., Vandervoort, Ark.: Chert implements from a village site in the Platte Cañon of Wyoming (49870).

LINTON, Dr. EDWIN, Washington, Pa.: Isopods from the Tortugas (49955); 2 specimens of isopods, *Cymodoce astrum*, from the Tortugas (50002).

LIRA, DIAS, Santiago, Chile: Earthenware vessel, perforated stone, pitted stone, and globular stone (49980).

LLOYD, F. E., Zacatecas, Mexico: 42 specimens of living cacti from Zacatecas (48938); nests of a bee, *Anthidium* sp. (49014); 2 specimens of cactus (49124); 25 specimens of plants from Zacatecas (49141); 260 specimens of living and dried plants from Zacatecas (49189; 49263); 108 plants from the northern part of Zacatecas (49503); 16 living species of cacti from Mexico (50016); specimen of cactus, Cereus sp., and a living specimen of *Selenocereus* (50026; 50282).

LODING, H. P., Mobile, Ala.: 25 beetles representing 7 species (48957: exchange).

LOESENER, TH., Dahlem, Steglitz bei Berlin, Germany: 613 plants from South Africa, collected by R. Schlechter (49241: purchase).

LONDON, ENGLAND, BRITISH MUSEUM (NATURAL HISTORY): 25 Phengodid beetles (49022: loan); 5 Phengodid

LONDON, ENGLAND, BRITISH MUSEUM (NATURAL HISTORY)—Continued.
beetles, *Phengodes minor*, *Ptorthodius mandibularis*, and *Euryopa fusca*, from Central America (49023; exchange); 218 specimens of Ordovician bryozoans (49171; loan); 248 specimens of Cuming's Philippine plants (49477; exchange); 6 specimens of Phengodidæ (49881); 2 specimens of *Platythelphusa armata* from Lake Tanganyika (50143; exchange).

LORING, MRS. MALEK ADDEL, Chicago, Ill.: Pistol belt and pair of Colt's revolvers which belonged to the late Mr. Loring (49019).

LOVETT, EDWARD, Croydon, England: Religious and medicinal amulets (59016; purchase); colored woodcut of a panoramic view of the Lord Mayor's show (49440; exchange).

LUCAS, F. A., The Museum, Brooklyn Institute of Arts and Sciences, Brookyn, N. Y.: Skeletons of *Carpodacus amplus*, *Junco insularis*, *Sapinetes guadaloupensis*, and *Pipilo consobrinus*, from Guadalupe Island, California, collected by W. E. Bryant (49991).

LUNELL, Dr. J., Leeds, N. Dak.: 10 specimens of *Luciniaria* from North Dakota (49436); 11 sheets of *Luciniaria* (49547; loan); 170 plants from North Dakota (49597; exchange).

LUSBY, G. B., Olivet, Md.: Larva of a night flying moth, *Catocala* sp. (48963).

LUTTRELL, C. F., Austin, Tex.: Specimen of cactus, *Opuntia*, from Nevada (48926).

MACDOUGAL, Dr. D. T., Washington, D. C.: 9 plates of Australian plants (49203). (See also under Carnegie Institution and New York Botanical Garden.)

MACGILLIVRAY, Dr. A. D., Ithaca, N. Y.: 6 specimens of Hymenoptera, including type of *Scolioneura slossonia* (49419).

MCATEE, W. L., Washington, D. C.: 27 specimens of plants, mainly *Viburnum*, chiefly from the District of Columbia and vicinity (49143); 15 specimens of *Viburnum* from the District of Columbia and vicinity (49376); type specimen of *Heliorimorpha fisheri* from the District of Columbia (50050); 140 sheets of plants from Washington and vicinity (50232).

MCCLENDON, Dr. J. F., University of Missouri, Columbia, Mo.: Shrimps, *Typton tortugæ* sp. nov., from Tortugas, Florida (49616); 15 specimens of Alpheidæ named by Dr. H. Coutière (50253).

MCCRACKEN, Miss I., Stanford University, Cal.: 28 specimens of Hymenoptera (49736).

MCDONALD, F. E., Peoria, Ill.: 27 specimens of *Luciniaria* from Illinois (49219).

MCGOWAN, P. J., & SONS, McGowan, Wash.: Skull of Steller's sea lion, *Eumetopias stelleri* (49127).

MCGREGOR, RICHARD C., Manila, P. I.: 2 specimens of minerals and a rock from Unimak Island, Alaska; coralline limestone from near San Fernando (49913); ethnological material from Alaska and the Philippine Islands (49920).

MCKENNEY, Dr. R. E. B., Washington, D. C.: 3 beetles from Costa Rica (49607); 6 bats, a shrimp, *Bithynis olfersii*, and reptiles from Panama 49714); reptiles from Panama (49726); reptiles, batrachians, and about 185 insects from Punta de Pena, Bocas del Toro, Panama (49758); hummingbird, *Phæthornis*, from Bocas del Toro (50127).

MCKINNON, ANGUS, Boston, Mass. (through A. E. Stewart): Rocks from Nova Scotia (50279).

MCLANE, MRS. ALLAN, Washington, D. C.: A very interesting collection of chinaware and porcelain (49417; loan).

MACKENSEN, BERNARD, San Antonio, Tex.: 23 specimens of cacti and living cacti from Texas (49282; 49318; 49587; 49838; 50114; 50276).

MACKIE, D. B., Manila, P. I.: 9 ferns from China and Japan (49891).

MACOUN, JOHN, Ottawa, Canada: 200 specimens of Canadian mosses (49481: purchase).

MADRID, SPAIN, MUSEO DE CIENCIAS NATURALES: 13 specimens of mammals of the genera *Genetta*, *Lepus*, *Meriones*, *Gerbillus*, *Rhinolophus*, and *Hipposideros* (50134: exchange).

MAIN, Mrs. CHARLOTTE E., Washington, D. C.: Natural history material collected by the late Lieut. Commander Herschel Main, U. S. Navy (49942).

MANILA, PHILIPPINE ISLANDS, BUREAU OF SCIENCE: 261 birds from the Philippine Islands (49431); 579 specimens of Philippine fungi (49601). Exchange.

MANN, DR. ALBERT, Department of Agriculture, Washington, D. C.: 9 specimens of *Razoumofskya pusilla* from Connecticut (49280).

MARINELLI, G., Chesapeake Beach, Md.: Fish hawk, or osprey, *Pandion haliatus carolinensis* (50070).

MARSHALL, ERNEST, Laurel, Md.: Fishes and a snake from Maryland (48993); skulls of a mink, *Lutreola*; a fox, *Urocyon*; and 2 muskrats, *Fiber*, from Maryland (49705); skulls of 4 muskrats, a mink, and an opossum (49829); little yellow rail, *Coturnicops noveboracensis* (49863); red-winged blackbird, *Agelaius phoeniceus* (49899).

MARSHALL, GEORGE, U. S. National Museum: 4 tree frogs from Laurel, Maryland (48989); 5 specimens of water lilies, *Castalia*, from Maryland (49375).

MARSHALL, J. R., Washington, D. C.: Specimen of granite (49193).

MARTIN, P. B., Marietta, S. C.: Mole cricket infested by fungus parasite (50167).

MARVIN, DR. M. F., U. S. Army, Fort Mansfield, R. I.: 4 specimens of *Salpa cordiformis* (49225; 49352).

MARYLAND GEOLOGICAL SURVEY, Baltimore, Md.: 30 types of Miocene bryozoans (49298: deposit); Silurian fossils from Maryland (50067: loan).

MATTHES, F. E., U. S. Geological Survey, Washington, D. C.: About 50 insects found on snow in Rock Creek Park, Washington, D. C. (49571).

MAYER, DR. A. G., Tortugas, Fla.: Young specimens of *Cyanea arctica* from Woods Hole (49864).

MAYNARD, GEORGE C., U. S. National Museum: Collection of Richmond newspapers printed in 1865 (49530).

MEARNS, DR. E. A., U. S. Army, Fort Totten, N. Y.: 163 birds' skins from the Philippine Islands (49433); skulls and bones of Moros (49483); reptiles and batrachians from Fort Totten (49484); 15 birds' skins from Fort Totten (49491); 2 specimens of *Polygyra thyroides bucculenta* and 2 fishes from Fort Totten (49498); mammals from Fort Totten, and skulls of 2 raccoons, *Procyon lotor*, from Gunston, Va. (49566); 4 insects from the Philippine Islands (49915).

MÉHELY, Prof. LAJOS, Muséum National Hongrois, Budapest, Austria-Hungary: 2 specimens of bat, *Myotis bechsteinii*, from Hungary (50094: exchange).

MEINERT, DR. FREDERICK V. A., Copenhagen, Denmark: 17 named mosquitoes from Denmark and Greenland (49495).

MERRICK, F. E., New Brighton, Pa.: 57 specimens of Lepidoptera (49915).

MERRITT, MELVIN L., Grundy Center, Iowa: Skeleton of a tamarao, *Bubalus mindorensis*, from the Philippine Islands (50169).

METROPOLITAN MUSEUM OF ART, New York City: Human bones from the 12th Dynasty cemetery, at Lisht, Egypt, collected under the direction of Mr. Albert M. Lythgoe (49258).

METZ, CHARLES W., Claremont, Cal.: 35 specimens of Lepidoptera (49843; 49924; 50077).

MEUNIER, STANISLAS, Muséum of Natural History, Paris, France: 61 grams of the Orgueil, France, meteorite (50254; exchange).

MEXICAN GOVERNMENT (through the Mexican Ministry of Public Instruction and Fine Arts): Reproduction of the tablet of the Cross from Palenque (49675).

MEYER, FRANK N., Department of Agriculture, Washington, D. C.: Concretions, rock, and a fossil shell from the Loess of North China (49353); clay, wire, and silk yarn models of insects, reptiles, etc., made in the northern part of China (49359); Chinese prints and a banknote; fragments of shells, etc., from China (49472); raincoat made from sedges and grasses, and worn by Chinese and Manchurian peasants (49728).

MEYRICK, EDWARD, Marlborough, England: 2 Lepidoptera, cotypes of *Mnesarchara loxoscia* and *M. paracosma* (49442).

MICHIGAN, UNIVERSITY OF, Ann Arbor, Mich.: Frogs from Michigan (49624).

MILLER, B. L., Lehigh University, Bethlehem, Pa.: About 2,000 specimens of Eocene bryozoans from Wilmington, N. C. (49131).

MILLER, CHARLES W., Shawnee-on-Delaware, Pa.: About 60 specimens of Hymenoptera parasitic on Diptera found in birds' nests (49112); 16 specimens of *Nasonia brevicornis*, bred from *Protocalliphora* from the nest of a catbird (49152).

MILLER, GERRIT S., jr., U. S. National Museum: Lizard and a snake from Maryland (50090).

MILLER, GERRIT S., jr., U. S. National Museum. (See under Oldfield Thomas, British Museum (Natural History), London, England.)

MILLER, Mrs. GERRIT S., jr., Washington, D. C.: Marine shells from Agay, Var, France (50139).

MILLER, HERMAN C., Washington, D. C.: Specimens of an alligator ant from Brazil, attacked by a fungus (50266).

MILLS, W. P. COMPANY, Sitka, Alaska (through A. G. Shoup, deputy U. S. marshal): Skin and skull of a glacier bear (49441: purchase).

MILLWARD, Hon. RUSSELL HASTINGS, Army and Navy Club, Washington, D. C.: Pom-pom shell found near the Town Hall, Ladysmith, Natal, South Africa (49799).

MINOR, F. O., New Orleans, La.: Specimen of *Thalessa lunator* (49222).

MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: Type specimen of *Opuntia phæacantha;* 2 specimens of cacti, types of *Opuntia bulbispina* and *O. schottii;* 16 sheets of *Opuntia* from the southwestern part of the United States; 3 sheets of *Opuntia tenuispina;* 3 sheets of *Cereus*, type specimens (48927; 48978; 49035; 49117; 49476; loan); 2 specimens of ferns from Jamaica (49773; exchange).

MITCHELL, Miss EVELYN G., Washington, D. C.: Lizard from Manassas, Va. (49073).

MITCHELL, IRVINE, St. Louis, Mo.: Autograph letter of President Grant (49759).

MITCHELL, Hon. J. D., Victoria, Tex.: 9 specimens representing 2 species of *Bulimulus* from Medina County, Tex. (50188).

MITCHELL, J. H., Bisbee, Ariz.: 12 "jumping beans," containing larvæ of Lepidoptera (49120); specimen of plant, *Jatropha macrochiza* (50129).

MOLTKE, Countess CARL VON, Danish Legation, Washington, D. C.: Three pieces of Danish drawn muslin work, probably of the late 17th or early 18th century; an old Danish silver tankard and teapot, and a plate, modern Danish, from Copenhagen (49679; loan).

MONACO, Prof. E., Portici, Naples, Italy: Volcanic ash and sublimation products from Vesuvius (49277; exchange).

MOORE, CLARENCE B., Philadelphia, Pa.: 25 boxes of bones from Arkansas (49815); 13 boxes of aboriginal bones and skulls from Louisiana (49958); skulls from Jones Landing, Franklin Parish, La. (50058).

MORENO, DR. FRANCESCO P., Buenos Aires, Argentina: Hatchet made by a Guayaquil Indian of Paraguay, South America (49998).

MORGAN, ELIAS F., New London, Conn.: Model of the original Georgia cotton gin introduced by the father of the donor in 1860 (49998).

MORGAN, MRS. LAURA KILPATRICK, Amsterdam, Netherlands: Photograph of Major-General Kilpatrick lying in state; 3 pieces of china (49691: loan).

MORHART, CURT, Ensfeld, Doolnstein, Germany: Specimen of *Cypripidium calceolus* from Europe (49045: exchange).

MORRISON, R. E., Benson, Ariz.: Beetle, *Alaus zunianus* (48973).

MORSE, A. P., Wellesley College, Wellesey, Mass.: Larvæ of sawfly, *Cræsus latitarsus* (49173); 3 specimens of Orthoptera (49625); 2 grasshoppers, *Morsea californica*, adult and nymph, and a wingless locustid, *Ceuthophilus lamellipes* (49671).

MOTTER, DR. M. G., Washington, D. C.: Spider from Hot Springs, Ark. (49200).

MULLIKEN, MRS. HARRY SANDERSON, Mapimi, Mexico: A set of 35 pieces of English Spode china (50148: loan).

MUSEO DE CIENCIAS NATURALES. (See under Madrid, Spain.)

MUSÉUM D'HISTOIRE NATURELLE. (See under Elbeuf, France.)

MUSÉUM D'HISTOIRE NATURELLE. (See under Paris, France.)

MUSEUM VAN NATURLIJKE HISTOIRE. (See under Leiden, Holland.)

NATIONAL SOCIETY OF THE COLONIAL DAMES OF AMERICA, Washington, D. C.: Pocket perspective glass formerly owned by Gen. George Washington, and 2 recorded papers establishing the authenticity of the relic, sent to the society by Mrs. P. E. Yeatman, Norfolk, Va. (49010); colonial relics lent to the society by Mrs. Hoswell Randall Hoes (49444); colonial relics of the Allston family of South Carolina, lent to the society by Mrs. John Julius Pringle, née Allston: pair of silver pendant earrings, an old reading glass and cloth tester, a pearl handled lorgnette, a gold and jet mourning ring, and a mourning ring which belonged to Esther Pyatt prior to 1772 (50040). Loan.

NATIONAL SOCIETY OF THE DAUGHTERS OF THE AMERICAN REVOLUTION, Washington, D. C.: Framed photograph of Mrs. Elvira A. Williams, one of the three "Real Daughters," lent to the society by Mrs. John A. Watling (49988: loan).

NATURHISTORISKA RIKSMUSEUM. (See under Stockholm, Sweden.)

NAVY DEPARTMENT: Relics of the Jeannette expedition to the Arctic in 1879 (49434: loan); engrossed resolution and gold medal presented to the commander-in-chief of the U. S. Atlantic Fleet by the Philippine Art Association (49871); gold cup won by the baseball team of the U. S. S. Kentucky, at Amoy, China (50255).

NEBRASKA, UNIVERSITY OF, Lincoln, Nebr.: 22 specimens of *Luciniaria* from Nebraska, South Dakota, and Colorado (49240).

NELSON, AVEN, Laramie, Wyo.: Specimen of plant, *Angelica* (50046: exchange); 12 living specimens of *Echinocactus simpsonii* (50208).

NEVIN, DR. ROBERT J., estate of: 15 mounted heads of animals from South Africa, shot by Dr. Nevin and presented by his heirs, through Mr. John Nevin Sayre, executor (50041).

NEWCOMBE, C. F., Victoria, British Columbia: 4 specimens of Canadian plants (49750; exchange).

NEWGARDEN, GEORGE J., jr., Washington, D. C.: Albino chipmunk, *Tamias striatus* (49233).

NEW MEXICO COLLEGE OF AGRICULTURE AND MECHANIC ARTS, Agricultural College, N. Mex.: 67 specimens of plants, *Thalictrum* (49591; loan); 4 plants, *Selaginella*, from New Mexico (49658; 49674; exchange); 3,020 plants, principally from New Mexico (49755; 50222; exchange).

NEW YORK BOTANICAL GARDEN, New York City: Specimen of *Opuntia* from Arizona, collected by Dr. MacDougal (49040); 101 specimens of plants from the West Indies (49071; exchange); 2 specimens of cacti from the West Indies and Central America (49422; exchange); 3 sheets of plants, *Parosela* (*Dalea*) (49437; loan); 52 specimens of ferns from the Southern States (49446; exchange); plant, *Juncus bufonius*, from Jamaica (49478; exchange); 51 specimens of plants, mainly from South America, from the O. Kuntze herbarium (49588; exchange); 148 specimens of plants, mainly ferns from tropical America (49659; exchange); 900 plants from Jamaica, British West Indies (49810; exchange); plant from Guadeloupe (49970; exchange); 12 specimens of living cacti from Florida and Cuba (50029; exchange); 139 plants from Bermuda (50107; exchange); 18 specimens of plants, and 16 photographs, mainly of cacti from Florida, Cuba, etc. (50193; exchange); 3 living plants, chiefly cacti (50258).

NEW YORK STATE MUSEUM, Albany, N. Y.: 8 graptolites (49694; loan).

NEW YORK ZOOLOGICAL SOCIETY, New York City: Chimpanzee, *Anthropithecus* (50237).

NICHOLS, Dr. HENRY J., U. S. Army. (See under Captain Irving Rand, U. S. Army.)

NIGHTINGALE, Rev. ROBERT C., Norfolk, England: 11 pieces of flint intended to illustrate the process of working out a scraper (49416).

NUNENMACHER, F. W., Goldfield, Nev.: 5 specimens and 3 larvæ of *Zarhipis*, Coleoptera (49091).

OCOCK, BERT., Marengo, Ill.: 8 copper nodules (49774).

OLDENBURG, C. F., Seattle, Wash.: Photograph of a deer skull in a tree (48955).

OLDROYD, Mrs. T. S., Long Beach, Cal.: 45 specimens of marine shells representing 5 species, from San Pedro, Cal. (49267).

ORCUTT, C. R., San Diego, Cal.: 2 specimens of plants, *Opuntia basillaris albiflora*, from California (49176); 2 specimens of plants from Durango, Mexico (49423); 3 specimens of living Cactaceæ from Lower California and Mexico (49539).

ORD, Mrs. JAMES T., San Diego, Cal.: Cap and saber which belonged to the late Capt. James T. Ord, U. S. Army, and were used by him during the Spanish-American war (49464; loan).

OSBURN, Prof. RAYMOND C., Barnard College, Columbia University, New York City: 15 specimens representing 6 species of isopods from Tortugas, Fla. (49414).

OSTERHOUT, GEORGE, New Windsor, Colo.: Fragment of a plant (50052; exchange).

OVERMAN, EDWARD, St. Louis, Mo.: 3 Scarabæid larvæ with fungus parasites (49814).

OWENS, THOMAS M., Washington, D. C.: Skeleton from China, obtained by Dr. William Dunlop Owens, U. S. Navy (50059).

PAEZ, Miss C. V. and José A., New York City: A wreath made of egg shell porcelain, and another of red, blue, and yellow immortelles (48985; loan).

PAGE, Hon. JOHN H., secretary of Arizona: A copy of the Revised Statutes of Arizona for 1901, damaged by termites (50008).

PAGE, Mrs. THOMAS NELSON, Washington, D. C.: Border of a priest's robe, and a fichu of point d'appliqué worn by the Archduchess Marie Louise (49600; loan).

PALMER, EDWARD, Department of Agriculture, Washington, D. C.: Ethnological objects made by the Tarahumara Indians, Chihuahua, Mexico (49033); 137 specimens of living cacti from Mexico (49046; purchase); fresh water and land shells representing 3 species from Mexico (49080); about 50 specimens of plants from the northern part of Mexico (49142); 389 plants from Chihuahua, Mexico (49148; purchase).

PALMER, JOSEPH, U. S. National Museum: Set of European balances and 7 weights; an old frame surgical saw which once belonged to Prof. Spencer F. Baird (50251).

PARIS, FRANCE, MUSÉUM D'HISTOIRE NATURELLE: Cotype of *Potamon rodolphianus* from the Rothschild collection in British East Africa (49274); type specimen of *Forbesiocrinus nobilis* (49753; loan).

PARISH, S. B., San Bernardino, Cal.: 11 specimens of *Juncus* from California (49647; loan).

PARKER, Dr. A. C., Altman, N. Y.: Beetle, *Plagionotus speciosus* (48964).

PARLIN, JOHN A., Cincinnati, Ohio: Slab of buff marble from Yale, Ky. (49825).

PARROTT, Prof. P. J., Agricultural Experiment Station, Geneva, N. Y.: 5 specimens of Coleoptera, *Polydrosus impressifrons*, from Geneva (49106).

PARTELLO, Maj. J. M. T., U. S. Army, Malabang, Mindanao, P. I.: A small collection of insects from the Philippine Islands (49049); black scorpion (49090); moth from Panay Island (49128); 15 insects (49156); scorpion from the Philippine Islands (49257); lizards, skin of a snake, and insects from the Philippine Islands (49311); 2 lizards from Mindanao (49374); 57 insects (49406); egg of the native mallard, *Anas luzonica* (49490; 43 insects (49612); about 25 specimens of marine and freshwater shells from the vicinity of Mindanao; insects (49794); egg of a mound fowl, *Megapodius cumingi* (49833); reptiles, insects, a bird's egg and a lotus flower (50140); snakes, frogs and insects (50179); insects from Parang (50246).

PATCHING, FRED., Loring, Alaska: Fishes and an amphibian (49944).

PATE, W. F., Lebanon, Ky.: Specimen of a fossil tree, *Dadoxylon*, of the Devonian period (49460; purchase).

PATTEN, Miss JULIET C., Washington, D. C.: 2 specimens of *Laciniaria* from Virginia (49249); 66 specimens of maples collected in the United States (50125; exchange); 2 living specimens of *Sedum* from England (50259).

PAUL, CHARLES H., Glendive, Mont.: Bones of *Elephas columbi* (49247).

PAYN, ELIAS J., Olympia, Wash.: Imperfect skull of Steller's sea lion, *Eumetopias stelleri* (50009).

PAYNE, ELIS, Dunmor, Ky.: Indian pipe bowl from Kentucky (49734).

PAZOS, JOSÉ H., San Antonio de los Baños, Cuba: 60 insects from Cuba, Hymenoptera and Diptera (49057).

PENDLETON, ROBERT L., Saratoga, Cal.: 40 specimens of grasses, *Phalaris lemmoni*, from California (49356; exchange).

PERADENIYA, CEYLON, ROYAL BOTANIC GARDENS: 391 plants from Ceylon (49116; exchange).

PERKINS, R. C. L., Honolulu, Hawaiian Islands: Types of 7 species of *Strepsiptera* and 4 unnamed specimens (50054).

PERRY, Dr. GEORGE N., Washington, D. C.: Tooth of a mammoth from Missouri River, Montana (49170).

PERUVIAN GOVERNMENT: Birds' skins and eggs, mollusks, crustaceans, mammals, reptiles and insects, collected by Dr. R. E. Coker for the Peruvian Government and forwarded to the U. S. National Museum for identification and report; 10 lots of crustaceans, collected in Peru by Dr. Coker and received through Dr. E. A. Andrews, Johns Hopkins University (49549).

PFIZENMAYER, E., St. Petersburg, Russia: Skull of a fossil rhinoceros (49392: purchase).

PHALEN, W. C. Washington, D. C.: Perforated soapstone implement from Ivy Log, Union County, Ga. (49342).

PICKEN, A., Norfolk, Va.: Specimen of *Leptocephalus* sp. (50215).

PILSBRY, Dr. H. A., Philadelphia, Pa.: 38 living specimens of *Helix memoralis* from Burlington, N. J. (49252); specimen of shell, *Streptostyla bartschi*, from Mexico (49917); land and fresh water shells representing 8 species from Mexico (50214).

PINCHOT, Mrs. JAMES W., Washington, D. C.: 6 old engravings representing the "Stations of the Cross;" Chilean feather flowers; fans and birds; fan with spray of feather flowers; fan with yellow feathers; 5 sprays of feather flowers and birds; 4 humming birds and a bird's nest (49557); collar and jabot of Italian pillow lace; cap of Italian lace, 17th century; piece of lace, Reticella, old Italian (49655: loan); collar and two cuffs of point de Bruxelles lace, XIX century; a small piece of old Argentan lace, and a collar of point d'Angleterre (50147: loan). (See also under Baroness Speck von Sternburg, Mrs. Frederick F. Thompson, and Mrs. James Harriman.)

PINNEY, A. H., Washington, D. C.: Lizard and 4 snakes from Panama (49312; 49475).

PIPER, A. E., Washington, D. C.: 12 specimens of *Planorbis* and *Lymnæa* from Nevada (49039).

PIPER, C. V., Department of Agriculture, Washington, D. C.: 101 specimens of plants collected in Washington by J. B. Flett (49479). (See also under P. D. Berry.)

POND, Dr. ELEANOR J., Washington, D. C.: Plants from various parts of the United States (49396).

PORTER, Mrs. H. K., Washington, D. C.: Collection of embroideries and appliqués (49506: loan).

PORTERFIELD, WILSON, Silver City, N. Mex.: Arrowpoint of white quartz found near Silver City (49380).

PORTO RICO, GOVERNOR OF, Government House, San Juan, Porto Rico: 2 bronze medals struck in commemoration of the landing of Ponce de Leon in Porto Rico (49957).

PRETZ, HAROLD W., Allentown, Pa.: Plants from Pennsylvania (48986: loan).

PURPUS, Dr. C. A., Zimapan, Huatusco, Vera Cruz, Mexico: 4 specimens of *Dioon purpusii* from Puebla, Mexico (49266); 1 specimen and 2 packets of seeds of plants from Mexico (49424); 3 living plants, *Sedum botterii*, from Zacuapam (49901); flower of *Sedum botterii* from Mexico (49960); specimen of fern, *Polypodium* from Mexico (50034).

PURVIANCE, J. W., Selmer, Tenn.: Specimen of cephalopod, *Baculites compressus* (49875).

QUEROL, Señor AGUSTIN, Madrid, Spain: One of the small plaster models submitted by the donor in competition for the Columbus Memorial (40236).

RACOVITZA, Dr. EMILE G., Laboratoire d'Anatomie Comparée, Sorbonne, Paris, France: 3 specimens of isopods, *Syspatus hvericornis*, from Corsica (49334: exchange).

RAGAN, N. H., Department of Agriculture, Washington, D. C.: Samples of cinnabar from San Luis Obispo, Cal. (49455).

RALSTON, R. L., Hartranft, Tenn.: 2 specimens of fossil wood, probably *Cordaites*, from the mine of the Mingo Coal and Coke Company (50102).

RAND, Capt. IRVING, U. S. Army, and Dr. Henry J. Nichols, U. S. Army, Manila, P. I.: 2 heads of Moros (49270).

RATHBUN, Miss M. J., U. S. National Museum: Specimens of *Dicmictylus* from Fitzwilliam, N. H. (49083).

READ, FRANK E., Bocas del Toro, Panama: Ethnological, zoological, and botanical material from Bocas del Toro (49855).

REAMS, J. H., Accokeek, Md.: Human bones from a burial site at the mouth of Piscataway Creek, Maryland (49471).

REED, Rear Admiral ALLEN V., U. S. Navy (retired), Washington, D. C.: Handkerchief of Ñanduti (spider-web) lace, from Paraguay (50218: loan).

REED, Mrs. ANNIE, Somerville, N. J.: 5 unmounted photographs of the Karok Indians of California (50086).

REED, F. M., Riverside, Cal.: Specimen of *Hasseanthus elongata* from California (48970).

REED, W. V., Atlanta, Ga.: Specimen of Hymenoptera from Tallapoosa, Ga. (49025).

REGIA MUSEO ZOOLOGICO. (See under Turin, Italy.)

RENSHAW, A. MINOR, Philadelphia, Pa.: White whale, *Delphinapterus leucas*, from the St. Lawrence River (49245).

RICE, A. P., U. S. National Museum: A violoncello with body of compressed paper and carved wooden head and pegs, made by the great grandfather of the owner (50196: loan).

RICE, GEORGE G., Lo Lo, Mont.: Shrew, *Sorex personatus* (49898).

RICE, H., Truxillo, Honduras, Central America: 3 specimens of Coleoptera, *Ocrosinus longimanus* and *Megasoma elephas* (49153); lizard, *Corythophanes cristatus* (49195).

RICHARDS, Rev. E. H., Elyria, Ohio: Ethnological objects from Inhambane, East Africa (50066: purchase).

RICHMOND, Dr. C. W., U. S. National Museum: Autograph letter of Isidore Geoffroy St. Hilaire (49343).

RIDGWAY, JOSEPH K., Barnegat, N. J.: Skull and vertebræ of a stranded killerwhale, *Orcinus orca* (49919: purchase).

RIDGWAY, ROBERT, U. S. National Museum: Reptiles, crustaceans, shells, insects, and mammals collected near Olney, Illinois (49373).

RIDGWAY, Mrs. ROBERT, Washington, D. C.: Ferns from Costa Rica (49067).

RILEY, J. H., U. S. National Museum: 2 birds' skins from Virginia (49346); young woodcock, *Philohela minori* (50071).

ROBINSON, C. H., Washington, D. C.: Copy of "Osterwald's Bible," containing only the books of the Old Testament (50065).

ROBINSON, Maj. WIRT, U. S. Army, West Point, N. Y.: 30 grasshoppers and 20 other insects from Bocas del Toro, Panama (49452); 412 specimens of insects from Panama, Costa Rica, and Ceylon (50048).

ROTHWELL-JACKSON, CHARLES L., Moorfield, Bolton, England: Slides of foraminifera (50038).

RODGERS, JOSIAH, Elizabeth City, N. C.: Specimen of sucking fish, *Echeneis naucrates* (48094).

RODRIQUEZ, E., Monterey, Mexico: 8 plants from Mexico (50117).

ROGERS, MARK, Covington, Ind.: Specimen of *Pecopteris dentata* (49703).

ROGERS, SHOBER, Fallon, Nev.: 2 specimens of plants, *Anagra trichocalyx*, from Nevada (49426).

ROLLE, HERMAN, Berlin, Germany: Shells, principally from Tonkin (50273: purchase).

ROMINE, E. T., Owego, N. Y.: 20 specimens of Devonian fossils from Owego (50175).

ROOSEVELT, Hon. THEODORE, President of the United States: An old royal Turkish saddle cover used in the processions of the Sultan (49316); an antique Japanese armor, presented to the President by the Japanese Emperor after the Peace Conference at Portsmouth (49688: loan); a Turkish saddle (49381: loan).

ROOSEVELT, Mrs. THEODORE, The White House: Silver gilt bowl with dragon handle, and silver model of a Chinese war junk (49560: loan).

ROSENBERG, W. F. H., London, England: 5 birds' skins (49028); skin of *Parasidornis rudolphi* (49037); 2 birds' skins (49084); 2 birds' skins, *Miro traversi* and *M. dannefordi* (49273); 33 crabs from Natal (49526). Purchase.

ROSENSTOCK, Dr. E., Gotha, Germany: 289 specimens of ferns, mainly tropical American (50030: exchange).

ROUSSELET, C. F., London, England: 24 slides of Rotifers (50261: purchase).

ROWLETT, Mrs. S. C., Randolph, Va.: Plant, meadow rue, *Thalictrum* sp., from Virginia (50178).

ROWLEY, J., Palo Alto, Cal.: 2 shrews, *Sorex vagrans* (49828).

ROYAL BOTANIC GARDEN. (See under Calcutta, India.)

ROYAL BOTANIC GARDEN. (See under Kew, London, England.)

ROYAL BOTANICAL GARDENS. (See under Peradeniya, Ceylon.)

RUFFIN, J. N., Buenos Aires, Argentina: Suit of Tobo Indian clothing, with bow and arrows; coat of mail worn by a Tobo Indian chief, Paraguay, South America (40245: purchase).

SAGE, Mrs. DEAN, Albany, N. Y.: Piece of Flemish bobbin lace (49912).

ST. CLAIR, DAN, Gatun, Canal Zone: Geological specimens from cuts for the Gatun locks; French fire axe found on the surface at the lock site, and 3 iron shots from Porto, Fort Lorenzo; gift: Spanish oil jar and a sea fan; loan (50217).

SAUNDERS, C. F., Pasadena, Cal.: Specimen of *Selaginella parishii* from California (49364).

SAVAGE, E. B., Ocala, Fla.: Larva of a fly, *Microdon* (50003).

SAXTON, Mrs. MATILDA G., Washington, D. C.: War club, model of a tepee and of an Alaskan skin-covered canoe; 2 fossil teeth from South Carolina (50200).

SCATTERGOOD, Miss M. E., Morristown, N. J.: 3 specimens of cotton grass, *Eriophorum virginicum;* white cedar, *Chamaecyparis thyoides;* moss, *Usnea barbata* (49185).

SCHAUS, WILLIAM, San José, Costa Rica; Central America: About 7,000 specimens of Lepidoptera (48941; 49055; 49237; 49926); about 1,000 specimens of Lepidoptera from Costa Rica (49253); 10,000 specimens of Lepidoptera (butterflies and Sphingidæ) (49928).

SCHMITTER, Dr. FERDINAND, U. S. Army, Jefferson Barracks, Mo.: Beaver's tooth, weasel skin, and two magic stones used as fetishes by the Upper Yukon Indians (50201); ethnological objects from the Upper Yukon, Alaska (50235).

SCHULTZ, ALFRED R., Rock Springs, Wyo.: 3 specimens of living cacti, *Opuntia* (49139).

SCHULTZ, MARY A. M., Barto, Pa.: Nest of a wasp (49708).

SCHUYLER, REMINGTON, Woodstock, N. Y.: Indian skull and a stone axe (49671).

SCHWARZ, Dr. E. A., Department of Agriculture, Washington, D. C.: A large number of pamphlets, periodicals, etc., 2 microscopes, and photographic portraits of Dr. John L. Le Conte and Dr. C. V. Riley (49767).

SCHWEYER COMPANY (HENRY A.), Easton, Pa.: Sample of "Sylvan" green marble from near Easton (49448).

SCIDMORE, Miss E. R., Washington, D. C.: 10 Chinese rosaries; Chinese "Imperial Seat," or throne chair, and footstool; 2 carved blackwood doors with dragon panels (Chinese) and carved center piece; brass padlock with key (50062; loan). (See also under Miss K. Kavanaugh.)

SCUDDER, N. P., U. S. National Museum: Mole, *Condylura* (49896).

SEIGENTHALER, H. N., Springfield, Ohio: 9 specimens of West Indian shells (50036).

SELANGOR STATE MUSEUM. (See under Kuala Lumpur, Federated Malay States.)

SHAFFER, CHARLES, Glen Echo, Md.: Great blue heron, *Ardea herodias*, in immature plumage (49272).

SHANKS, OLIVER, Bowen, Ill.: 4 geological specimens (49210).

SHANTZ, H. A., Akron, Colo.: 3 specimens of plants, *Opuntia*, from Colorado (48969).

SHARPE, R. W., Brooklyn, N. Y.: About 35 specimens representing 3 species of Ostracoda, types of *Spirocypris tuberculata*, *Cythere americana*, and *C. papillosa* (49199).

SHAW, S. ALBERT, Hampton, N. H.: 32 specimens of insects (49789).

SHEAR, W. L., Clarendon, Va.: Archeological specimens from the Spruce Tree House, Mesa Verde ruins, Colorado (50072).

SHELDON, F. B., Ashland, Va.: Lizard, *Ophisaurus ventralis*; salamander, *Ambystoma opacum*, from Hanover County, Virginia (49453).

SHELFORD, R., Oxford, England: 4 specimens of Orthoptera (49410; exchange).

SHELFORD, V. E., Lawrence, N. Y.: Isopods (49646).

SHELTON, O. S., Wolfe City, Tex.: Portions of a skeleton of a glyptodont (49678).

SHINICK, T. J., Albuquerque, N. Mex.: Mexico hairless cat, *Felis domestica* (49575).

SHOUP, A. G. (See under Mills, W. P., Company.)

SHUCK, F. E., Gatun, Canal Zone: Loaded shell excavated during work on the Panama Canal in July, 1906 (48974).

SHUFELDT, Dr. R. W., New York City: Fragments of vertebrate fossils from Kansas (49408).

SHUTTS, Mrs. GEORGE C., Whitewater, Wis.: Triple nest of a yellow warbler, and a double nest of another bird, showing the manner in which they evade hatching eggs of the cowbird (49778).

SILBERLING, A. C., Melville, Mont.: Vertebrate fossils from Sweet Grass County, Mont. (49409; collected for the Museum).

SILVESTRI, Dr. F., Portici, Italy: Isopods and amphipods from North America and the Hawaiian Islands (49685).

SIMMS, J. H., Washington, D. C.: Anatomical specimen (49921).

SIMPSON, Mrs. W. D., Columbia, S. C.: Specimen of "American chameleon," *Anolis carolinensis* (49594).

SIMPSON, W. W., Taochow, Kansu Province, China: 2 goat antelopes and a badger from the western part of China (49181; purchase).

SKEELS, H. C., Lanham, Md.: 547 specimens of plants from the United States (49319).

SLATER, Mrs. W. A., Washington, D. C.: Examples of Spanish drawn work, Honiton, Mechlin, old Valenciennes, Burano and Blonde lace; piece of old lace said to have been one of Cardinal de Rohan's sleeve ruffles (49953; loan).

SLIGH, W. H., Washington, D. C.: Specimen of *Liguus fasciatus* from Neuvitas, Cuba (50018); 3 barnacles from a turtle's back, collected in Honduras (50079).

SMITH, Prof. CALVIN RAE, Brooklyn, N. Y.: 15 watch movements (49971).

SMITH, F. S. KEY, Washington D. C.: A photograph of Charles Wilson Peale's oil painting of Francis Scott (49405).

SMITH, Dr. HUGH M., Bureau of Fisheries, Washington, D. C.: 3 Chinese combs from Hongkong (48987); 3 lizards and 2 frogs from Ceylon (48988); land, freshwater, and marine shells from Ceylon (49467); six-shot double-action revolver (49548); 5 baskets from the Philippine Islands (49568); musical instrument from Benguet, Luzon, Philippine Islands (49905); knit purse from Jolo, Philippine Islands (50022); specimen of *Meleagrina maxima* (50119).

SMITH, Prof. JOHN B., New Brunswick, N. J.: 3 specimens of Hymenoptera, *Spilocryptus extrematus* (49100); slide of *Culex perturbans* (49119).

SMITH, R. J., Milpitas, Cal.: 6 ferns and 3 specimens of *Selaginella* from California (49248; 49363).

SMITHSONIAN INSTITUTION:

Rocks and meteoric material collected at Meteor Crater, Arizona, by George P. Merrill in May, 1908 (48965); 376 specimens including 135 duplicates of plants from California, collected by Miss Alice Eastwood (49309); microscopic slide of *Protococcus*, "Red Snow," from near Cape York, Greenland, prepared by Dr. Goodsell (49339); 16 pieces of pottery collected by W. R. Johnston, Tolchaco, Ariz. (49741); medal issued by the Wyoming Historical and Geological Society of Wilkes-Barre, Pa., February 11, 1908, in commemoration of the centennial of the first use of Wyoming coal (49856).

SMITHSONIAN INSTITUTION—Cont'd.

Astro-Physical Observatory: Portion of a large quartz crystal (49977).

Bureau of American Ethnology: Skull of a Quileute Indian and other bones, presented to the bureau by Albert B. Reagan, La Push, Wash. (48997); collection of West Indian antiquities purchased from C. W. Branch, of St. Vincent, British West Indies (49052); collection of Indian relics from Moosehead Lake, presented by J. D. McGuire (49347); cache of flaked stone objects from Moosehead Lake, Maine, purchased from F. Wilson (49348); collection of bones obtained by J. D. McGuire, and Dr. Aleš Hrdlička at Piscataway Creek, Maryland (49349); articles used by the Chitimacha Indians, and collected in Charenton, La., by Dr. John R. Swanton (49570); flint blade from a kaolin mine at Dry Branch, near Macon, Ga., presented by James D. Morgan (49817); fragments of a human cranium found in a mound near Everton, Ark., presented by Dr. J. S. Reich (49818); fragment of a polished stone implement, said to have been found near Jellico, Tenn., and presented by A. P. Dalton, Arabia, Ohio (49819); fragments of pottery from Coden, Ala. (49820); stone implements from Tiahuanaco, Bolivia, and an earthenware vessel from Nazca, Peru, collected by W. H. Holmes (49821); turtle shell rattle from the Seneca Indians of Grand River Reservation, Ontario, Canada, collected by J. N. B. Hewitt (49822); fragments of earthenware pottery, known as "salt vessels," from the vicinity of Shawneetown, Ill., presented by R. Moore, Equality, Ill. (49823); bronze medal struck in commemoration of the 50th anniversary of the founding of the Societa Ligure di Storia Patria of Genoa, Italy (50032). (See also under Señor D. Juan Cabezas and Interior Department.)

SMITHSONIAN INSTITUTION—Cont'd.

National Zoological Park: Egyptian flamingo, *Phoenicopterus antiquorum* (48947); roe deer, *Capreolus capræa* (48948); 2 specimens of Capuchin monkey, *Cebus hypoleucus* (48949); iguana, *Cyclura cyclura* (49059); Indian buffalo, *Bos bubalus;* mountain beaver, *Aplodontia phaca;* 2 specimens of yagnarundi cat, *Felis yagnarundi* (49060); common macacque, *Macacus cynomolgus;* rhesus monkey, *Macacus rhesus;* gray fox, *Vulpes virginianus* (49031); crowned pigeon, *Goura coronata;* redhead duck, *Aythya americana;* shell parrakeet, *Melopsittacus undulatus;* demoiselle crane, *Anthropoides virgo;* rufous tinamou *Rhynchotus rufescens* (49062); chachalaca, *Ortalis vetula;* wood duck, *Aix sponsa;* 3 specimens of shell parrakeet, *Melopsittacus undulatus;* white Java sparrow, *Munia oryzivora* (49226); 2 specimens of gopher snake, *Spilotes corais couperii;* diamond rattlesnake, *Crotalus adamanteus;* pine snake, *Pituophis melanoleucus;* mohave snake, *Chionactis occipitalis* (49227); 3 specimens of tiger, *Felis tigris;* hairy armadillo, *Dasypus villosus;* swift fox *Vulpes velox* (49228); brushtailed rock kangaroo, *Petrogale penicillata* (49229); orang, *Simia satyrus* (49230); 2 specimens of yellow-breasted toucan, *Ramphastos carinatus;* crested screamer, *Chauna cristata* (49231); Virginia deer, *Cariacus virginianus* (49255); cougar, *Felis concolor oregonensis* (49283); lynx, *Lynx rufus maculatus;* 2 specimens of swift fox, *Vulpes velox* (49284); North American otter, *Lutra canadensis* (49285); coach-whip snake, *Bascanium flagelliforme;* 4 specimens of diamond rattlesnake, *Crotalus adamanteus* (49286); iguana, *Cyclura;* Gila monster, *Heloderma suspectum* 49287); tocard toucan, *Ramphastos toco;* chattering lory, *Lorius garrulus* (49288); crested screamer, *Chauna cristata* (49508); mule deer, *Odocoileus macrotis* (49509); 9-banded armadillo, *Tatusia novemcincta;* common skunk, *Mephitis;* red bellied wallaby, *Macropus;* monkey, *Cercopithecus cephus* (?) (49510); Marmoset, *Hapale* (?) common skunk, *Mephitis mephitica;* double yellow head amazon, *Amazona leraillanti;* weeper capuchin monkey, *Cebus capuchinus;* rhesus monkey, *Macacus rhesus* (49511); iguana, *Cyclura;* diamond rattlesnake, *Crotalus adamanteus;* pine snake, *Pituophis melanoleucus* (49512); aoudad, *Ovis tragelaphus* (49661); Anubis baboon, *Papio anubis* (49662); peafowl, *Pavo cristatus* (49663); cariama, *Cariama cristata;* crested screamer, *Chauna cristata* (49664); coypu, *Myocastor coypus* (49665); diamond rattlesnake, *Crotalus adamanteus;* gopher snage, *Spilotes corais couperii;* iguana, *Cyclura,* sp.; 2 specimens of pine snake, *Pituophis melanoleucus* (49666); mynah, *Gracula,* sp.; shell parrakeet, *Melopsittacus undulatus;* sandhill crane, *Grus mexicana;* shorteared owl, *Asio accipitrinus;* American coot, *Fulica americana* (49667); harlequin snake, *Elaps fulvius;* pine snake, *Pituophis melanoleucus;* gopher snake, *Spilotes corais couperii* (49716); harbor seal, *Phoca vitulina* (49717); yagnarundi cat, *Felis yagnarundi;* capybara, *Hydrochærus capybara* 49718); bay lynx, *Lynx rufus* (49719); 3 specimens of gray fox, *Urocyon cinereo-argenteus;* black bear, *Ursus americanus;* lion, *Felis leo* (49720); redhead duck, *Aythya americana;* capuchin monkey, *Cebus hypoleucus* (49744); coach-whip snake, *Bascanium flagelliforme* (49745); cacomistle, *Bassariscus astuta* (49858); yaguarundi cat, *Felis yagnarundi* (49859); Maguari stork, *Euxenura maguari* (49861); screech owl, *Megascops asio;* bob white, *Colinus virginianus;* yellow-breasted toucan, *Ramphastos carin-*

SMITHSONIAN INSTITUTION—Cont'd.

atus; European white stork, *Ciconia ciconia* (49860); diamond rattlesnake, *Crotalus adamanteus;* banded rattlesnake, *Crotalus horridus;* American crocodile, *Crocodilus americanus* (49862); pine snake, *Pituophis melanoleucus* (50224); red-shouldered hawk, *Buteo lineatus;* bald eagle, *Haliætus leucocephalus;* redheaded duck, *Aythya americana;* roe deer, *Capreolus capræa* (50225); European white stork, *Ciconia ciconia;* European white swan, *Cygnus gibbus;* roseate cockatoo, *Cacatua roseicapilla* (50226); 2 specimens of pronghorn antelope, *Antilocapra americana;* coypu, *Myocastor coypus;* spotted lynx, *Lynx rufus maculatus;* monkey, *Cebus capuchinus* (50227); crested screamer, *Chauna cristata;* yaguarundi cat, *Felis yaguarundi;* Canada lynx, *Lynx canadensis;* spider monkey, *Ateles,* sp.; two-toed sloth, *Cholæpus didactylus* (50228); gray spider monkey, *Ateles geoffroyi* (50238); European white stork, *Ciconia ciconia;* demoiselle crane, *Anthropoides virgo;* pelican *Pelecanus,* sp.; rufus tinamou, *Rhynchotus rufescens;* bare-eyed cockatoo, *Cacatua gymnopis* (50239); bison, *Bison americanus;* 2 specimens of hairy armadillo, *Dasypus villosus* (50240); Guinea baboon, *Papio sphinx;* Panama curassow, *Crax panamensis;* pine snake, *Pituophis melanoleucus* (50241); rufous tinamou, *Rhynchotus rufescens;* common rhea, *Rhea americana;* boat bill, *Cancroma cochlearia;* 2 specimens of American beaver, *Castor canadensis;* viscacha, *Lagostomus trichodactylus;* American beaver, *Castor canadensis* (50242); burrowing owl, *Spcotyto c. hypogæa;* European owl, *Strix pratincola* (50275).

National Museum, collected by members of the staff: Bales, Ernest N.; Weasel, *Putorius,* sp. (48931). Bartsch, Paul: 408 birds' skins from the Philippine Islands, collected on the Albatross Philippine expedition, 1907–8 (49803). Bassler, R. S.: About 3,000 specimens of Paleozoic invertebrate fossils (48958). Bean, Barton A.: Fishes obtained in 1908 (49581); crustaceans from Florida (49692). Burling, L. D.: 20 specimens of Carboniferous fossils from Turtle Mountain, British Columbia (49208). Hrdlička, Aleš: Ethnological objects made by the Menominee Indians (49017); ethnological material obtained by from the Oglala Indians (49096); skeleton of domestic cat (49260); pine mouse, *Microtus pinetorum* (49301); 5 young rabbits, *Sylvilagus floridanus mallurus,* from the vicinity of Cleveland Park (50184); 15 anatomical specimens (50269). Lane, Talbot F.: Anatomical specimens (50006; 50130). Lyon, M. W., jr.: 3 mammals (48953); red bat, *Lasiurus borealis* (49000). Marshall, George: Brown bat, *Eptesicus fuscus* (49078); skull of a muskrat, *Fiber zibethicus* (49580); 2 weasels, *Putorius* sp. (49596). Maxon, W. R.: 2 living plants from Jamaica (48940). Merrill, George P.: Rocks and minerals from Lewiston and Auburn, Me. (49177); samples of oolitic limestone from Bowling Green, Ky. (49232); samples of phosphates from Hickman County, Tenn. (49805). Palmer, William: Rattlesnake, *Crotalus horridus,* from the Peaks of Otter, Bedford County, Va. (49544). Rathbun, Miss M. J.: Newt from New Hampshire (49214). Ridgway, Robert: Birds, mammals, reptiles, marine invertebrates, plants, and birds in alcohol from Costa Rica collected for the Museum during the Museum-Zeledon expedition (49066). Riley, J. H.: 2 specimens of red squirrel *Sciurus hudsonicus loquax* (48930; 49009). Stejneger, Leonhard: Toad from Delaware (49215). True, F. W.: 3 specimens of box elder *Negundo negundo,* from Maine (49251); fossil vertebrate material chiefly from Calvert Cliffs, Maryland (50263); fossil vertebrate material from Calvert Cliffs, Maryland, collected for the Museum by Dr. True,

SMITHSONIAN INSTITUTION—Cont'd.
William Palmer, and D. B. Mackie, July–October, 1908 (50270). Washington, Charles S.: Tree frog, *Hyla versicolor*, from the Maryland shore of Chesapeake Beach (48943); 8 specimens of rocks covered with barnacles, from Chesapeake Beach (48952); green snake *Ophcodrys aestivus*, from Burrville, D. C. (49026). Weed, A. C.: Parasitic copepods from *Merluccius* sp. (49611).

Models made in the Anthropological Laboratory: Casts of stone and pottery objects (48998); model of the Temple of Xochicalco (49054); model of dog and travois, Plains Indians (49063); cast of an arrow-shaft straightener (49351); cast of a carved stone effigy pipe from a mound near Meadville, Pa. (49809).

SORNBERGER, CHARLES B., Garrett Park, Md.: Mink, *Lutreola* (49154).

SOUBEIRAN, ALBERT, St. Gilles, Gard, France: 2 bearded tits, *Panurus biarmicus*, with 6 young and a nest; also skin of *Sylvia* (49492).

SOWERBY AND FULTON, London, England: 12 specimens representing 7 species of marine and fresh water shells from Florida (48999).

SPALDING, TOM., Provo, Utah: 400 specimens of Lepidoptera (49314: purchase); 2 specimens of Lepidoptera (49329).

STAADT, L., Reims, Marne, France: 215 specimens of Tertiary mollusks of France (49459: exchange).

STANDIFER, W. S., Gatun, Canal Zone: Fossil and recent shells from the site of the locks at Gatun (50068).

STANDLEY, PAUL C., U. S., National Museum: 6 specimens of living plants from New Mexico (49144); 4 specimens of living plants, *Mamillaria macromeris*, from New Mexico (49187); 780 plants from New Mexico (49504: purchase); 337 specimens of plants from the United States and Sweden (50191); 500 plants from the Pyrenees, collected by P. Bubani (50223).

STANWOOD, B. J. (through F. W. Clarke, U. S. Geological Survey): Specimen of meteoric stone from Imperial, Cal. (49369).

STATE DEPARTMENT:
Replica in glass of the Cullinan diamond (49179).
Copper bell found in a cave in the valley of Naco, vicinity of Santa Cruz de Yojoa, Honduras (49845).
Photographs accompanying a report of the American consul at Tamsui, Formosa, entitled "Savage affairs in Formosa" (49932).

STATEN ISLAND ASSOCIATION OF ARTS AND SCIENCES, New Brighton, N. Y.: 2 moths (50128: exchange).

STEAD, DAVID G., Fisheries Department, Sydney, New South Wales: 7 picture postals from New South Wales illustrating the aboriginal mystic Bora ceremony (49997).

STEARNS, ELMER, El Paso, Tex.: 13 specimens of living cacti from Texas (50113).

STEELE, E. S., U. S. National Museum: 409 plants from Augusta County, Va. (49892: 300 purchased, 109 presented); 67 plants mainly from the vicinity of Washington, D. C. (49903).

STERNBERG, CHARLES H., Lawrence, Kans.: Dermal covering of *Trachodon* (49672: purchase).

STERNBURG, Baroness SPECK VON, Washington, D. C. (through Mrs. James W. Pinchot): 10 pieces of antique velvet stuffs and embroideries, collected in China by the late Baron Hermann Speck von Sternburg, and presented to the National Museum in his memory (49450).

STEPHENS, Mrs. KATE, San Diego, Cal.: About 50 specimens representing 17 species of marine shells from Alaska (49294).

STEWART, A. E. (See under Angus McKinnon.)

STOCKHOLM, SWEDEN, NATURHISTORISKA RIKS MUSEUM: Specimen of fern, *Anemia ciliata*, from Brazil (50120: exchange).

STONESTREET, GEORGE D., New York City: Roughly shaped stone implement found near Christiania, southeastern Transvaal, South Africa (49689).

STRICKER, W. O., U. S. National Museum: 2 specimens of brown bat, *Vespertilio fuscus* (49879).

STUHR, F. A., Portland, Oreg.: Photograph of a bear captured in Oregon (49458).

SUKSDORF, W. N., Bingen, Wash.: 10 specimens of cactus, *Opuntia*, from Washington (50115).

SURFACE, H. A., Harrisburg, Pa.: 2 cotypes of *Scsia rhododendri* (49756).

SURR, GORDON, San Bernardino, Cal.: Specimen of oxide of lead (49721).

SUTER, HENRY, Auckland, New Zealand: 51 specimens of shells, representing 20 species and including 8 cotypes, from New Zealand (49191).

SWETT, L. W., Bedford, Mass.: 4 specimens of Lepidoptera (49047).

TAFT, J. S., & COMPANY, Keene, N. H.: 3 specimens of "Hampshire ware" (49305).

TAGORE, Rajah Sir SOURINDRO MOHUN, Rajbaty, Calcutta, India: Manuscript of the Sanscrit epic "Mahabharata," in Bengali characters, written about 200 years ago (50150).

TASKER, HENRY, Smithsonian Institution: Short-tailed shrew, *Blarina* (49642).

TASSIN, WIRT, U. S. National Museum: Japanese pocket lantern (49990); a diamond crystal weighing 10½ carats (50001); 4 specimens of kunzite (50004).

TAYLOR, Miss ELIZABETH, Little Compton, R. I.: 100 plants from Arctic Norway (49886).

TAYLOR, GEORGE W. (See under British Columbia, Biological Station.)

TAYLOR, the Misses MARY and K., Department of Agriculture, Washington, D. C.: 10 plants from the Hawaiian Islands (49770).

TAYLOR & PRICE, Goldfield, Nev.: Specimen of gold ore (49941).

THAYER, Hon. JOHN E., Lancaster, Mass.: 53 birds' eggs, 14 sets, from Mexico (49036); 2 eggs of *Antrostomus guadlachi*, and an egg and nest of *Calypte helenæ* from Cuba (50013). Exchange.

THOMAS, OLDFIELD, British Museum (Natural History), London, England, and GERRIT S. MILLER, jr., U. S. National Museum: European mammals, birds, reptiles, insects, plants, and mollusks (49564).

THOMPSON, CHARLES S., Buena Vista, Colo.: 2 birds' skins from Colorado (49005).

THOMPSON, Mrs. FREDERICK F., New York City (through Mrs. James W. Pinchot): Lace collar, point de Raguse (49798).

THORNTON, Dr. WILLIAM, Bluefields, Nicaragua: 3 beetles, 2 species of flies, and some ticks (49076, 50154).

TILDEN, Miss JOSEPHINE E., Minneapolis, Minn.: 50 specimens of algæ, comprising fascicle I, Century VII, American algæ (50042; purchase).

TIPPING, RONALD, and Miss EMELINE, Brevard, N. C.: Salamanders from North Carolina (49048).

TIPTON, THOMAS B., Richards, Mo.: Specimen of albino tree sparrow, *Spizella monticola* (49686).

TITCOMB, JOHN W., Bureau of Fisheries, Washington, D. C.: Nest of an oven bird, *Furnarius rufus*, from the province of Buenos Aires, Argentina, South America (50138).

TOWNSEND, C. H. T., U. S. National Museum: 4 specimens of plants collected in Florida (49648).

TRACY, S. M., Biloxi, Miss.: 5 specimens of cactus, *Opuntia*, and 12 specimens of *Viburnum* from Mississippi (48951; 49585); 292 plants from the Gulf States (49996; purchase).

TRASK, Mrs. BLANCHE, Avalon, Cal.: 3 centipedes and a scorpion (50194).

TREASURY DEPARTMENT:

Material obtained through the U. S. Public Health and Marine-Hospital Service:

Honolulu, Hawaiian Islands: 46 rodents, including specimens of *Mus musculus*, *M. rattus*, *M. alexandrinus*, and *M. norvegicus* (50155).

Oakland, Cal.: 2 specimens of rat, *Mus alexandrinus* (49975).

San Francisco, Cal.: 27 small mammals (49259); 7 rodents from California (49371); meadow mouse, *Microtus* (50078).

San Juan, P. R.: 28 specimens of *Monophyllus portoricensis* and 1 of *Chilonycteris* from Porto Rico (50056).

TREMOLERAS, Señor JUAN, Montevideo, Uruguay: Skin of *Prion desolatus* (49118; exchange).

TRUITT, J. A., Loma, Colo.: Fossil bone with agate structure (49462).

TUBERCULOSIS CONGRESS, 1908, Washington, D. C.: A collection of fabrics and other ethnological objects, selected by Dr. Aleš Hrdlička, of the National Museum, on account of their association with tuberculosis among the Indians (49349; purchased out of a special appropriation to enable the U. S. Government to participate in the Congress).

TUCKER, E. S., Dallas, Tex.: 5 specimens of Diptera, types of Oscinidæ (49013).

TURIN, ITALY, REGIA MUSEO ZOOLOGICO: 18 specimens of European moles, *Talpa*, skull and mounted head of a Spitzbergen reindeer, *Rangifer spitzbergensis* (49157; exchange).

TURNER, H. W., San Francisco, Cal.: Specimens of cinnabar and associated minerals from Terlingua, Tex. (49534).

TURTLE, J. E., U. S. Snag Boat, Pine Barren, Fla.: Bones of a Zeuglodon and shells of fossil bivalves from Florida (50035).

TUTTLE, WINIFRED, Pleasant Lake, Ind.: Specimen of *Cicada canicularis* (49168).

TWIBELL, J. H., Montpelier, Ind.: Archeological objects from Blackford County, Ind. (49197).

TYLER, C. A., Garnett, Kans.: White muskrat, *Fiber zibethicus*, from Kansas (50221; purchase).

UTAH, UNIVERSITY OF, Salt Lake City, Utah: Collection of bones from burial mounds on Alkali Ridge, Utah (49269; exchange).

ULKE, T., Washington, D. C.: Valve of *Anodonta cataracta* from Virginia Beach, Va. (49192).

U. S. GOVERNMENT BOARD, JAMESTOWN EXPOSITION, 1907: Diplomas awarded the Smithsonian Institution and U. S. National Museum by the Jamestown Tercentennial Exposition, 1907 (49836).

U. S. GRAPHITE COMPANY, Saginaw, Mich.: 5 jars of graphite from Mexico (50101).

UPSALA, SWEDEN, BOTANISCHER GARTEN: 175 plants from South America, collected by Prof. Robert E. Fries (50162; exchange).

VAIL, BENJAMIN, Washington, D. C.: Book from the folding room of the Capitol, showing destructive work of termites, *Termes flavipes* (49004).

VAN DUZEE, E. P., Buffalo, N. Y.: 13 specimens, types, and cotypes of 9 species of Hemiptera (49927); 21 types and 8 cotypes of Hemiptera (50075).

VICKERS, ERNEST W., Ellsworth, Ohio: 2 photographs of birds' nests and eggs (49808).

VIENNA, AUSTRIA, K. K. NATURHISTORISCHES HOFMUSEUM: 200 specimens, centuries 15 and 16 of "Kryptogamæ exsiccatæ" (49660; exchange).

VIERECK, H. L., Washington, D. C.: About 100 specimens of Hymenoptera (49967); about 2,300 specimens of Hymenoptera, mostly of the genus *Andrena*, including a number of types, paratypes, and a few cotypes (49968).

VIETT, GEORGE F., Norfolk, Va.: 25 prints representing the ruins of Persepolis, and maps of countries around the Mediterranean Sea (49470).

VINTON, F. H. and H. A., Bedford, Mass.: Spinet made by Joseph Mahoon, London, England, about the middle of the 17th century (49656).

VOLK, DOUGLAS, New York City: Manuscript pages by the late Leonard W. Volk, describing, in part, his experience in making the casts of Abraham Lincoln's hands (50083).

VOLKART, HENRY, St. Gallen, Switzerland: Complete weaving apparatus from Tunis (49670).

WALCOTT, ARTHUR S., New York City: Suit of Korean armor (49386: loan).

WALCOTT, BENJAMIN STUART, Washington, D. C.: 60 specimens of Devonian fossils from the Genesee shales at Seneca Lake, New York (49550).

WALCOTT, Dr. CHARLES D., Secretary, Smithsonian Institution: Nickle medalet in commemoration of the first production of malleable nickle in 1865, adorned with bust of Joseph Wharton, president of the International Nickle Company.

WALCOTT, CHARLES D., jr., Provo, Utah: Skin and skull of a black bear, *Ursus americanus*, from the head of the north fork of Provo River and Deer Creek, Utah (49370).

WAILES, Dr. L. A., New Orleans, La.: Hercules beetle, *Megalosoma elephas*, and a "rear horse" or "praying mantis," *Charadodis*, from Guatemala (49461).

WALDRON, Mrs. JAMES MCCLELLAN, Yonkers, N. Y.: Silver tablespoon which belonged in the Shelton family for nearly 300 years (49299).

WALKER, ALFRED O., Ulcombe, Maidstone, Kent, England: 2 specimens of amphipod, *Stenothoe gallensis*, from Ceylon (50170: exchange).

WALKER, BRYANT, Detroit, Mich.: 2 specimens of *Truncilla lenior* from Alabama (49403).

WALKER, Dr. JAMES R., Pine Ridge Agency, S. Dak.: Skulls of 2 Sioux Indians, from a burial place on Pine Ridge Reservation (49114).

WALKER MUSEUM, University of Chicago, Chicago, Ill.: Copies of plates of "New York Paleontology," volumes VI and VII (49358: exchange); 19 specimens of graptolites (49690: loan).

WALLACE, J. E., Omaha, Nebr.: Skull from Wallace Mound, Nebraska (49333). (See also under Robert F. Gilder.)

WALLIS, W. W. (See under A. C. Weed.)

WALSINGHAM, Lord, Merton Hall, Thetford, England, and Mr. F. DUCANE GODMAN, London, England: About 600 specimens of Microlepidoptera, including many cotypes, principally from Central America (49516: gift and exchanges).

WAND, Y. S., Fort William McKinley, Manila, P. I.: Specimen of Lepidoptera, *Attacus atlus* (49180).

WAR DEPARTMENT:

Fragmentary illuminated copy of the Koran, taken from a hostile Moro cotta near Masibay, Mindanao, P. I. (49847).

U. S. Military Academy: 18 photographs of Indian paintings by P. Rindisbacher (50098).

Army Medical Museum: Anatomical specimens (49812).

WARD, HENRY H., East Orange, N. J.: Gun cap battery used on the Atlantic cable in 1866 (49466).

WARD, ROWLAND, London, England: Mounted forest pig, *Hylochœrus*, from Africa (49234: purchase).

WARD, WILLIAM M., Newport News, Va.: Four varieties of American flags, with apparatus for displaying them (49497: deposit).

WARREN, EDWARD R., Colorado Springs, Colo.: Type specimen of *Eutamias quadrivittatus animosus* (50172).

WASHBURN, Miss GEORGIENA A., Stafford Springs, Conn.: Mineral water from Stafford Springs (49681).

WASHINGTON, FRANK B., Oakland, Cal.: Moth from near Alta, Placer County, Cal. (49129).

WASHINGTON BIOLOGISTS' FIELD CLUB, Washington, D. C.: About 1,000 insects from Plummers Island, Maryland, collected during 1908 (49515).

WASHINGTON, CHARLES S., U. S. National Museum: Parasitic copepods taken from specimens of whiting (49558); 2 turtles from Maryland (50171).

WEBB, JOHN S., Disputanta, Va.: 2 immature black terns *Hydrochelidon nigra surinamensis* (49126).

WEBER, CHARLES M., Palawan Island, Philippine group: Snake and shells from the Philippine Islands (49182).

WEED, A. C., U. S. National Museum: Fishes and worms from New York (49290); parasitic copepods from *Merluccius bilinearis* (49407); isopod, *Livonoea ovalis*, from the Washington fish market (49532); fishes and leeches from the Potomac River, near Chain Bridge, District of Columbia (50173).

WEED, A. C., and W. W. WALLIS, U. S. National Museum: 3 young pickerel, 2 larval minnows, eel, and 4 parasitic leeches from near Chain Bridge, District of Columbia (50105).

WEINBERG, FRANK, Woodside, Long Island, N. Y.: 12 specimens of living plants (49303: exchange).

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION, Morgantown, W. Va. (through Dr. R. D. Hopkins, Department of Agriculture): Butterfly, *Anthocharis olympia*, from the original type locality (49700).

WHARTON, Mrs. WILLIAM, Groton, Mass. (through Miss Helen Amory Ernst, Washington, D. C.): Lowestoft blue helmet-shaped cream pitcher (49385: loan).

WHITE, C. A., Clarkson, Ky.: Photograph of a portion of the donor's collection of Indian relics (49987).

WHITE, Dr. R. A., Hatchechubbee, Ala.: Tooth of an extinct species of shark, *Lamna elegans* (49827).

WILCOX, Dr. GLENN A., San Francisco, Cal.: 25 specimens of cacti from Mexico and Guatemala (49791; 50121).

WILCOX, WALTER, Washington, D. C.: Platinum print (49488).

WILKIE, Rev. WILLIAM B. Y., Dunedin, Fla.: Moth, *Ecpantheria deflorata* (49951).

WILLIAMS, Col. C. A., U. S. Army, Fort Logan, Colo.: An alcyonarian coral (49668).

WILLIAMS, FRANCIS, San Francisco, Cal.: Cotype of *Eriocrania cyanospersella* (50247).

WILLIAMS, MORRIS, Philadelphia, Pa.: Specimens of *Stigmaria verrucosa*, *Calamites suckowii*, and *Calamodendron approximatum* (49702); specimen of *Stigmaria* (50206).

WILLIAMS, Mrs. NORMAN, Washington, D. C.: A collar of so-called "ivory" lace made in Bohemia for the Jubilee of Pope Leo 13th; 2 pieces of old Flemish lace, a piece of old Valenciennes, and a piece of Italian lace (49729: loan).

WILLIAMS, R. S., New York Botanical Garden, New York City: 3 birds' skins from Darien, Panama (50211).

WILLIAMS, STEPHEN R., Miami University, Oxford, Ohio: Specimens of *Scutigerella immaculata* from Oxford (49682).

WILLIARD, T. E., U. S. National Museum: Examples of cone in cone structure from Antlers, Oklahoma (49194).

WILMER, Lt. Col. L. WORTHINGTON, Lothian House, Ryde, Isle of Wight, England: About 150 green sand fossils (49132); set of the stamps presented by King Edward VII to members of the "League of Mercy" (49567); 19 specimens of invertebrate fossils from the Chalk of Brighton, England (49579).

WILSON, H. G., Montpelier, Ind.: Concretion (49435).

WINKLEY, Rev. H. W., Danvers, Mass.: Specimens of Rissoidæ from Massachusetts (49300); 2 types of Pyramidellidæ recently described by Dr. Bartsch (49964).

WOGLUM, R. S., Whittier, Cal., 3 specimens of Hymenoptera from the southern part of California (50158).

WOOD, N. R., U. S. National Museum: Vertebrate fossils, chiefly cetacean, from Auburndale, Fla. (49909).

WOODBURY, Miss ELLEN C. DEQ. (See under Gist Blair.)

WOOLDRIDGE, EDGAR, Lakeport, Cal.: Birds' eggs from Lake County, Cal. (49725); 3 specimens of obsidian and 1 of volcanic tuff (49785).

WOOLLEY, CLAUDE L., Baltimore, Md.: Aluminum sun dial (49873); aluminum sun dial bearing the following inscription: "Gather ye rosebuds while you may" (50252).

WOOTON, E. O., Agricultural College, N. Mex.: 17 specimens of Allioniaceæ from New Mexico (48996); specimen of *Delphinium* from New Mexico (49586). Exchange.

WORTHINGTON, W. W., Shelter Island Heights, N. Y.: 6 specimens of *Cerion glans coryii* from Acklin, Bahamas (50135).

WREN, T. H., Sage, Ark.: Bannerstone of banded slate found by J. T. Wilson near La Crosse, Ark. (49641).

WRIGHT, Dr. A. H., Cornell University, Ithaca, N. Y.: Eggs of 9 species of frogs (49595).

WRIGHT, Dr. F. E., Washington, D. C.: 2 specimens of hillebrandite and 3 of spurrite (49914).

WRIGHT, G. V., Forest Glen, Md.: Snake, *Diadophis punctatus*, from Maryland (49216).

WYETH, Lieut. Col. M. C., U. S. Army, Washington, D. C.: Spiders, insects, and a centipede from Samar Island, Philippine group (50096).

WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, Wilkes-Barre, Pa.: Medal issued February 11, 1908, by the society in commemoration of the centennial of the first use of Wyoming coal (49857).

WYOMING, UNIVERSITY OF, Laramie, Wyo.: 2 fragmentary specimens of plants from Utah (50177).

YALE UNIVERSITY, New Haven, Conn.: 30 specimens of ferns of the D. C. Eaton Herbarium (49592; loan); casts of fore and hind feet of the type specimen of *Camptosaurus dispar* (48990; exchange).

YATES, FRED. W., Santa Barbara, Cal.: Photograph of the late Dr. Lorenzo Gordon Yates, presented in behalf of his heirs (50165).

YELLOWSTONE NATIONAL PARK, Yellowstone Park, Wyo.: Skin of and skeleton of a buffalo, *Bison bison*, and 6 antlers and a skull of an elk, *Cervus* (49973); mounted head of a bison, *Bison bison* (50091).

ZELEDON, Mrs. AMPARO DE, San José, Costa Rica: Ferns from Costa Rica (49065).

ZELEDON, JOSÉ C., San José, Costa Rica: 66 birds' skins, mostly Formicariidæ and Dendrocolaptidæ, from Costa Rica (49008; loan).

ZELENY, Dr. CHARLES, Bloomington, Ind.: 2 specimens of shrimp, *Palæmon tenuicornis* (49962).

ZOOLOGISCHES MUSEUM. (See under Copenhagen, Denmark.)

LIST OF PUBLICATIONS OF THE U. S. NATIONAL MUSEUM ISSUED DURING THE FISCAL YEAR 1908–9, INCLUDING PAPERS PUBLISHED ELSEWHERE WHICH RELATE TO THE COLLECTIONS.

PUBLICATIONS OF THE MUSEUM.

ANNUAL REPORT.

Smithsonian Institution | United States National Museum | — | Report on the progress and condition of the U. S. National | Museum for the year | ending June 30, 1908 | (Seal) | Washington | Government Printing Office | 1909

8vo., pp. 1–138, pls. 1–3.

PROCEEDINGS.

Smithsonian Institution | United States National Museum | — | Proceedings | of the United States National Museum | — | Volume XXXIV | — | (Seal) | Washington | Government Printing Office | 1908

8vo., pp. i–xiv, 1–777, pls 1–CV, figs. 1–78.

Smithsonian Institution | United States National Museum | — | Proceedings | of the | United States National Museum | — | Volume XXXV | — | (Seal) | Washington | Government Printing Office | 1909

8vo., pp. i–xvi, 1–757, pls. I–XCI, figs. 1–201.

BULLETINS.

Smithsonian Institution | United States National Museum | Bulletin 62 | — | Catalogue of the type-specimens of mammals in the United States | National Museum, including the | Biological Survey collection | by | Marcus Ward Lyon, Jr. | Assistant Curator, Division of Mammals, U. S. National Museum | and | Wilfred Hudson Osgood | Assistant, Bureau of Biological Survey, U. S. Department of Agriculture | (Seal) | Washington | Government Printing Office | 1909

8vo., pp. i–x, 1–325.

Smithsonian Institution | United States National Museum | Bulletin 63 | — | A monographic revision of the Coleoptera belonging to the Tenebrionide tribe Eleodiini inhabiting | the United States, Lower California, and adjacent islands | By | Frank E. Blaisdell, Sr. | Of San Francisco, California | (Seal) | Washington | Government Printing Office | 1909

8vo., pp. i–xi, 1–524, pls. 1–13, figs. 1–8.

Smithsonian Institution | United States National Museum | Bulletin 64 | — | A critical summary of Troost's | unpublished manuscript on | the crinoids of Tennessee | by | Elvira Wood | Of Columbia University, New York City | (Seal) | Washington | Government Printing Office | 1909

8vo., pp. i–xi, 1–150, pls. 1–15.

PAPERS PUBLISHED IN SEPARATE FORM.

FROM VOLUME 34 OF THE PROCEEDINGS.

No. 1614. On some new and old species of carboniferous fossils. By George H. Girty. pp. 281–303, pls. XIV–XXI.

No. 1615. On a collection of feather stars, or comatulids, from Japan. By Austin Hobart Clark. pp. 305–319.

No. 1616. Decorative designs of Alaskan needle-cases: a study in the history of conventional designs, based on materials in the U. S. National Museum. By Franz Boas. pp. 321–344, pls. XXII–XXX.

No. 1617. Descriptions of new cretaceous and tertiary fossils from the Santa Cruz Mountains, California. By Ralph Arnold. pp. 345–390, pls. XXXI–XXXVII.

No. 1618. Description of a new isopod genus of the family Dajidae. By Harriet Richardson. pp. 391, 392.

No. 1619. Remarks on the horns and on the systematic position of the American antelope. By Marcus Ward Lyon, jr. pp. 393–402, pls. XXXVIII, XXXIX.

No. 1620. Description of a new brittle star from the upper miocene of the Santa Cruz Mountains, California. By Ralph Arnold. pp. 403–406, pl. XL.

No. 1621. The late Niagaran strata of west Tennessee. By William F. Pate and Ray S. Bassler. pp. 407–432.

No. 1622. On the occurrence of calcium sulphide (Oldhamite) in the Allegan meteorite. By Wirt Tassin. pp. 433, 434.

No. 1623. The nomenclature of the recent crinoids. By Austin Hobart Clark. pp. 435–542.

No. 1624. Descriptions of the Alcyonaria collected by the U. S. Bureau of Fisheries steamer Albatross in the vicinity of the Hawaiian Islands in 1902. By Charles C. Nutting. pp. 543–601, pls. XLI–LI.

No. 1625. On a collection of fishes from Fiji, with notes on certain Hawaiian fishes. By David Starr Jordan and Mary Cynthia Dickerson. pp. 603–617.

No. 1626. Mammals collected in eastern Sumatra by Dr. W. L. Abbott during 1903, 1906, and 1907, with descriptions of new species and subspecies. By Marcus Ward Lyon, jr. pp. 619–679, pls. LII–LVI.

No. 1627. Descriptions of two new species of Pleistocene ruminants of the genera Ovibos and Boötherium, with notes on the latter genus. By James Williams Gidley. pp. 681–684, pls. LVII–LIX.

No. 1628. On meteoric chromites. By Wirt Tassin. pp. 685–690.

No. 1629. A new rabbit cestode, Cittotænia mosaica. By Maurice C. Hall. pp. 691–699.

No. 1630. The collection of Jewish ceremonial objects in the United States National Museum. By Cyrus Adler and I. M. Casanowicz. pp. 701–746, pls. LX–CV.

FROM VOLUME 35 OF THE PROCEEDINGS.

No. 1631. Vocabulary of Malaysian basket-work: a study in the W. L. Abbott collections. By Otis T. Mason. pp. 1–51, pls. I–XVII.

No. 1632. Descriptions of some new mosquitoes from tropical America. By Harrison G. Dyar and Frederick Knab. pp. 53–70.

No. 1633. Some new isopoda of the superfamily Aselloidea from the Atlantic coast of North America. By Harriet Richardson. pp. 71–86.

No. 1634. The axial canals of the recent Pentacrinitidæ. By Austin Hobart Clark. pp. 87–91.

No. 1635. Descriptions of eighteen new species and two new genera of fishes from Japan and the Riu Kiu Islands. By John Otterbein Snyder. pp. 93–111.

No. 1636. The homologies of the arm joints and arm divisions in the recent crinoids of the families of the Comatulida and the Pentacrinitidæ. By Austin Hobart Clark. pp. 113–131.

No. 1637. The formation of geodes, with remarks on the silicification of fossils. By Ray S. Bassler. pp. 133–154, pls. XVIII–XXIV.

No. 1638. Chœrodon in place of Chœrops for a labroid genus of fishes. By Theodore Gill. pp. 155, 156.

No. 1639. Description of new fossil liverwort from the Fort Union beds of Montana. By Frank Hall Knowlton. pp. 157–159, pl. XXV.

No. 1640. Descriptions of five species of North American fossil turtles, four of which are new. By Oliver P. Hay. pp. 161–169, pls. XXVI, XXVII.

No. 1641. New examples of American Indian skulls with low forehead. By Aleš Hrdlička. pp. 171–175, pl. XXVIII.

No. 1642. Descriptions and figures of some land and fresh-water shells from Mexico, believed to be new. By William Healey Dall. pp. 177–182, pls. XXIX, XXX.

No. 1643. Notes on two rare California fishes, Rimicola eigenmanni and Plagiogrammus hopkinsi. By John Otterbein Snyder. pp. 183–186.

No. 1644. A generic revision of American moths of the family Œcophoridæ, with descriptions of new species. By August Busck. pp. 187–207.

No. 1645. A revision of some species of Noctuidæ heretofore referred to the genus Homoptera Boisduval. By John B. Smith. pp. 209–275, pls. XXXI–XXXVI.

No. 1646. New American Paleozoic ostracoda. Preliminary revision of the Beyrichiidæ, with descriptions of new genera. By Edward O. Ulrich and Ray S. Bassler. pp. 277–340, pls. XXXVII–XLIV.

No. 1647. Descriptions of fossil crabs from California. By Mary J. Rathbun. pp. 341–349, pls. XLV–XLIX.

No. 1648. On certain genera and species of carnivorous dinosaurs, with special reference to Ceratosaurus nasicornis Marsh. By Oliver P. Hay. pp. 351–366.

No. 1649. Descriptions of new species of North American crambid moths. By William Dunham Kearfott. pp. 367–393.

No. 1650. Two new species of neotropical Orthoptera of the family Acrididæ. By James A. G. Rehn. pp. 395–398.

No. 1651. A further report on the ostracoda of the United States National Museum. By Richard W. Sharpe. pp. 399–430, pls. L–LXV.

No. 1652. North America parasitic copepods: A list of those found upon the fishes of the Pacific coast, with descriptions of new genera and species. By Charles Branch Wilson. pp. 431–481, pls. LXVI–LXXXIII.

No. 1653. Some new isopods of the family Gnathiidæ from the Atlantic coast of North America. By Harriet Richardson. pp. 483–488.

No. 1654. The Amphipoda collected by the U. S. Bureau of Fisheries steamer "Albatross" off the west coast of North America, in 1903 and 1904, with descriptions of a new family and several new genera and species. By Samuel J. Holmes. pp. 489–543.

No. 1655. Notes on the mammals and cold-blooded vertebrates of the Indiana University farm, Mitchell, Indiana. By Walter L. Hahn. pp. 545–581.

No. 1656. Generic names applied to birds during the years 1901 to 1905, inclusive, with further additions to Waterhouse's "Index Generum Avium." By Charles W. Richmond. pp. 583–655.

No. 1657. A revision of the kingfisher genus Ramphalcyon (Pelargopsis). By Harry C. Oberholser. pp. 657–680.

No. 1658. Alcyonaria of the Californian coast. By Charles C. Nutting. pp. 681–727, pls. LXXXIV–XCI.

FROM VOLUME 36 OF THE PROCEEDINGS.

No. 1659. The American species of snapping shrimps of the genus Synalpheus. By Henri Coutière. pp. 1–93.

No. 1660. On the skull and the brain of Triceratops, with notes on the brain-cases of Iguanodon and Megalosaurus. By Oliver P. Hay. pp. 95–108, pls. 1–3.

No. 1661. On Brazilian grasshoppers of the subfamilies Pyrgomorphinæ and Locustinæ (Acridinæ of authors). By James A. G. Rehn. pp. 109–163.

No. 1662. Descriptions of three new species of Cisco, or lake herring (Argyrosomus), from the Great Lakes of America; with a note on the species of Whitefish. By David Starr Jordan and Barton Warren Evermann. pp. 165–172.

No. 1663. The isopod crustacean, Ancinus depressus (Say). By Harriet Richardson. pp. 173–177.

No. 1664. A new American jurassic crinoid. By Frank Springer. pp. 179–190, pl. 4.

No. 1665. Description of two species of fossil turtles, Toxochelys stenopora and Chisternon ? interpositum, the latter hitherto unknown. By Oliver P. Hay. pp. 191–196, pl. 5.

No. 1666. Osteology of the jurassic reptile Camptosaurus, with a revision of the species of the genus, and descriptions of two new species. By Charles W. Gilmore. pp. 197–332, pls. 6–20.

No. 1667. The collection of rosaries in the United States National Museum. By Immanuel M. Casanowicz. pp. 333–360, pls. 21–30.

No. 1668. Comatilia, a remarkable new genus of unstalked crinoids. By Austin Hobart Clark. pp. 361–367.

No. 1669. Description of a new species of leatherback turtle from the Miocene of Maryland. By William Palmer. pp. 369–373, pl. 31.

No. 1670. Four new species of isopods from the coast of California. By S. J. Holmes and M. E. Gay. pp. 375–379.

No. 1671. Notes on two slugs of the genus Veronicella. By W. W. Robbins and T. D. A. Cockerell. pp. 381–384, pl. 32.

No. 1672. Anyam Gila (Mad weave): a Malaysian type of basket work. By Otis T. Mason. pp. 385–390.

No. 1673. On a collection of recent crinoids from the Philippine Islands. By Austin Hobart Clark. pp. 391–410.

No. 1674. Description of some bees in the U. S. National Museum. By T. D. A. Cockerell. pp. 411–420.

No. 1675. Description of a new isopod of the genus Jaeropsis from Patagonia. By Harriet Richardson. pp. 421, 422.

No. 1676. Ammodiscoides, a new genus of arenaceous foraminifera. By Joseph A. Cushman. pp. 423–424, pl. 33.

No. 1677. Description of a new whitefish (Coregonus oregonius) from McKenzie River, Oregon. By David Starr Jordan and John Otterbein Snyder. pp. 425–430.

No. 1678. The isopod crustacean Acanthoniscus spiniger Kinahan redescribed. By Harriet Richardson. pp. 431–434.

No. 1679. Additions to the list of Philippine birds, with descriptions of new and rare species. By Edgar Alexander Mearns. pp. 435–447.

No. 1680. Remarks on the insectivores of the genus Gymnura. By Marcus Ward Lyon, jr. pp. 449–456, pls. 34–37.

No. 1681. Description of a new snake from Panama. By Leonhard Stejneger. pp. 457, 458.

No. 1682. Description of a new skate (Dactylobatus armatus) from deep water off the southern Atlantic coast of the United States. By Barton A. Bean and Alfred C. Weed. pp. 459–461, pl. 38.

No. 1683. A list of birds collected by Dr. Paul Bartsch in the Philippine Islands, Borneo, Guam, and Midway Island, with descriptions of three new forms. By Edgar Alexander Mearns. pp. 463–478.

No. 1684. Additional notes on mammals of the Rhio-Linga Archipelago, with descriptions of new species and a revised list. By Marcus Ward Lyon, jr. pp. 479–491, pl. 39.

No. 1685. Revision of the Crinoid family Comasteridæ, with descriptions of new genera and species. By Austin Hobart Clark. pp. 493–507.

No. 1686. A new squirrel from Direction Island, South China Sea. By Marcus Ward Lyon, jr. pp. 509, 510.

No. 1687. The thorax of insects and the articulation of the wings. By Robert Evans Snodgrass. pp. 511–595, pls. 40–69.

No. 1688. Descriptions of new genera and species of fishes from Japan and the Riu Kiu Islands. By John Otterbein Snyder. pp. 597–610.

No. 1689. Notes on the fossil mammalian genus Ptilodus, with descriptions of new species. By James Williams Gidley. pp. 611–626, pl. 70.

No. 1690. Fresh-water sponges in the collection of the United States National Museum. Part 1. Specimens from the Philippines and Australia. By Nelson Annandale. pp. 627–632.

No. 1691. Descriptions of seventeen new species of recent crinoids. By Austin Hobart Clark. pp. 633–651.

No. 1692. Dragonflies of the Mississippi Valley collected during the pearl mussel investigations on the Mississippi River, July and August, 1907. By Charles Branch Wilson. pp. 653–671.

No. 1693. Four new species of the Crinoid genus Rhizocrinus. By Austin Hobart Clark. pp. 673–676.

No. 1694. Descriptions of two new species of electric rays, of the family Narcobatidæ, from deep water off the southern Atlantic coast of the United States. By Barton A. Bean and Alfred C. Weed. pp. 677–680.

FROM VOLUME 12 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 4. The Mexican and Central American species of Sapium. By Henry Pittier. pp. i–v, 159–169, pls. x–xvii, figs. 7–10.

Part 5. New or noteworthy plants from Colombia and Central America. By Henry Pittier. pp. i–vii, 171–181, pls. xviii, xix, figs. 11–19.

Part 6. Catalogue of the grasses of Cuba. By A. S. Hitchcock. pp. i–xi, 183–258.

Part 7. Studies of Mexican and Central American Plants—No. 6. By Joseph N. Rose. pp. i–ix, 259–302, pls. xx–xxvii, figs. 20–48.

Part 8. The Allioniaceæ of the United States, with notes on Mexican species. By Paul C. Standley. pp. i–ix, 303–389, pls. xxviii–xliii, figs. 49–67.

Part 9: Miscellaneous papers: Thompsonella, a new genus of Crassulaceæ from Mexico. By N. L. Britton and J. N. Rose. pp. 191, 192, pls. xliv, xlv. Rediscovery of Echeveria carnicolor. By J. N. Rose. p. 393, pl. xlvi. Three new species of Crassulaceæ from Guatemala. By J. N. Rose. pp. 395, 396, pls. xlvii, xlviii. Rediscovery of Cereus nudiflorus. By J. N. Rose. pp. 397, 398, pls. xlix–li. A species of Pereskia from Guatemala. By J. N. Rose. p. 399, pls. lii–liv. New species of Opuntia from Arizona. By J. N. Rose. pp.

401, 402, pl. LV. Echinocereus baileyi, a new cactus from Oklahoma. By J. N. Rose. p. 403, pls. LVI, LVII. Nopalea lutea, a new cactus from Guatemala. By J. N. Rose. p. 405, pl. LVIII. Conzattia, a new genus of Cæsalpiniaceæ. By J. N. Rose. pp. 407, 408, pl. LIX. Two new species of Acacia of the series Filicinæ. By J. N. Rose. p. 409. A new spleenwort from China. By William R. Maxon. p. 411, pl. LX.

FROM VOLUME 13 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 1. Studies of tropical American ferns—No. 2. By William R. Maxon. pp. i–vii, 1–43, pls. 1–9, one fig.

CLASSIFIED LIST OF PAPERS BASED WHOLLY OR IN PART ON THE NATIONAL COLLECTIONS.

MUSEUM ADMINISTRATION.

RATHBUN, RICHARD. Report on the progress and condition of the U. S. National Museum for the year ending June 30, 1908.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1908, pp. 1–138.

ETHNOLOGY, ARCHEOLOGY, PHYSICAL ANTHROPOLOGY.

ADLER, CYRUS, and I. M. CASANOWICZ. The collection of Jewish ceremonial objects in the United States National Museum.

(U. S. Nat. Mus.), 1908, XXXIV, No. 1630, Sept. 28, 1908, pp. 701–746, pls. LX–CV.

Contains a description of 230 specimens of the Jewish section with an explanation of the beliefs and rites connected with them.

BOAS, FRANZ. Decorative designs of Alaskan needlecases: A study in the history of conventional designs, based on materials in the U. S. National Museum.

Proc. U. S. Nat. Mus., XXXIV, No. 1616, July 15, 1908, pp. 321–344, pls. XXII–XXX, figs. 1–16.

One of the characteristic objects of Eskimo art is the tubular ivory or bone needlecase. It is found wherever the Eskimo live, and on account of its wide range, the needlecase is subject to graded variations of the primary form, as though following the modifications which plants and animals undergo by changes in environment, hence giving material for an interesting study in the history of conventional designs.

CASANOWICZ, I. M. The collection of rosaries in the United States National Museum.

Proc. U. S. Nat. Mus., XXXVI, No. 1667, April 17, 1909, pp. 333–360, pls. 21–30.

A description of 104 rosaries with a discussion of their nature and use among the Hindus, Chinese, Tibetans, Japanese, Mohammedans, and Roman Catholics.

FEWKES, J. WALTER. [Report on excavations and repair of the Spruce Tree House, Mesa Verde National Park, Colorado, in May and June, 1908, to the Secretary of the Interior.]

Reports of the Superintendent of the Mesa Verde National Park and J. Walter Fewkes in Charge of Excavation and Repair of Ruins to the Secretary of the Interior, 1908. Washington, 1908, pp. 15–30, pls. I–IV.

An account of the excavation and repair of the Spruce Tree House, one of the largest ruins of the Mesa Verde National Park. During the course of this work an exhaustive study of every feature of the ancient pueblo was

FEWKES, J. WALTER—Continued.

made, and for the first time an accurate ground plan was secured. The repairs leave the ruin as it appeared before the demolition by vandals, and preserve it as a type ruin for educational purposes.

HOLMES, WILLIAM H. The Tomahawk.

Am. Anthropologist (n. s.) x, No. 2, April-June, 1908, pp. 264–276, figs. 79–88.

Much uncertainty surrounds the nomenclature of the aboriginal stone ax and hatchet, the name tomahawk having been applied loosely by the whites to numerous forms of native implements and weapons, such as the celt-hatchet, the grooved ax, the falchion-like club, the spiked club and the globe-headed club. There is no evidence in literature to show that the natives applied the term to any single form exclusively, or in fact that they actually applied it to either the grooved ax or the celt-hatchet, *casse-magnus* being the only term definitely applied to the native stone hatchet in the literature of the colonists.

——— The First Pan-American Scientific Congress, held in Santiago, Chile, December 25, 1908–January 6, 1909.

Science (n. s.) XXIX, No. 742, March 19, 1909, pp. 441–448.

The paper contains a historical review of the inception of the Congress, an account of its personnel and of the meetings. The Congress, it is felt, has fully justified the plans of its projectors.

HOUGH, WALTER. Otis Tufton Mason.

Am. Anthropologist (n. s.) X, No. 4, Oct.–Dec., 1908, pp. 661–667, pl. XLVI.

An obituary notice of the life and work of the late Head Curator of Anthropology in the U. S. National Museum, who was for nearly forty years identified with the work of the Smithsonian Institution.

HRDLIČKA, ALEŠ. Physical anthropology and its aims.

Science (n. s.) XXVIII, No. 706, July 10, 1908, pp. 33–43.

HRDLIČKA, ALEŠ. Physical anthropology and its aims.

The Anat. Record, II, No. 5, Aug., 1908, pp. 182–195.

This paper is based only in a general way on the National Museum collections. It is the annual address of the writer as President of the Anthropological Society of Washington, given under the auspices of the Washington Academy of Sciences, Feb. 11, 1908. It refers to the history of physical anthropology, the actual status of that branch of science, to its accomplishments, and the scope of its future activities.

——— Report on a collection of crania from Arkansas.

Jour. Acad. Nat. Sci., Phila., XIII, 1908, pp. 558–563.

The paper gives the results of the examination of 12 interesting crania from Arkansas and Jefferson counties in Arkansas. Six of the crania were of various degrees of artificial, intentional deformation of the "flat-head" type. The undeformed skulls of the collection were all brachycephalic, belonging to the same type.

——— Contributions to the knowledge of tuberculosis in the Indian.

The Southern Workman, XXXVII, No. 11, Nov., 1908, pp. 626–634.

Contains in full the paper on tuberculosis among Indians read by the writer before the Sixth International Congress on Tuberculosis, held September, 1908, in Washington. (See notes on the same paper in final form published as Bulletin 42, Bureau of American Ethnology.)

——— Tuberculosis in the Indian. (An abstract of the foregoing paper.)

Charities and the Commons, XXI, No. 6, Nov. 7, 1908, pp. 245–247.

——— Tuberculosis among certain Indian tribes of the United States.

Bull. 42, Bur. Am. Eth., 1909, pp. i–vii, 1–48, pls. 1–22.

Final report of the writer's investigations into the subject of tuberculosis among the Indians during the summer of 1908. Relates particularly to the Menomi-

HRDLIČKA, ALEŠ—Continued.

nce, Oglala Sioux, Quinaielt, Hupa, and Mohave, and to the Phœnix Indian School. Besides this, the article includes data on tuberculosis gathered by the physicians of other reservations. The study has shown a great prevalence of the disease among the Indians examined, and has made clear the utmost need of practical steps being taken for curbing it.

To the article is appended an annotated bibliography.

——— New examples of American Indian skulls with low forehead.

Proc. U. S. Nat. Mus., xxxv, No. 1641, Nov. 9, 1908, pp. 171–175, pl. xxviii, 1 fig.

The paper gives account of two skulls with low foreheads, recently received by the National Museum, and points out that the feature may in different specimens be due to different causes, and have unlike significance.

——— Physiological and medical observations among the Indians of southwestern United States and northern Mexico.

Bull. 34, Bur. Am. Eth., 1908, pp. i–ix, 1–460, pls. i–xxviii, figs. 1, 2.

The work gives observations, principally of medical and physiological nature, gathered by the writer on his various expeditions to the Indians in question. It deals with vital statistics of the Indians, their environment, food and drinks, habits, various bodily functions (from childhood to senility), social abnormalities, medical observations, and series of measurements with other determinations of the Indian children, as well as the adults. To it are appended a list of the native foods, tables of detailed measurements and observations, and an annotated bibliography.

——— Otis Tufton Mason.

Science (n. s.) xxviii, No. 726, Nov. 27, 1908, pp. 746–748.

Obituary notice of Professor Mason, including a brief sketch of his life and scientific activities.

HRDLIČKA, ALEŠ. Report on the skeletal remains (recovered from the Earth-Lodge Ruins in Eastern Nebraska).

Am. Anthropologist (n. s.) ii, No. 1, pp. 79–84, Jan.–Mar., 1909.

Included in the paper of Mr. Robert F. Gilder on Excavations of Earth-Lodge Ruins in Eastern Nebraska. (Ibid., p. 56 et seq.)

This is a description of the skeletal remains from Nebraska collected and donated to the National Museum in 1908 by Mr. Gilder.

MCGUIRE, JOSEPH D. Ethnological and archeological notes on Moosehead Lake, Maine.

Am. Anthropologist (n. s.), x, No. 4, Oct.–Dec., 1908, pp. 549–557, pls. xxxiii, xxxiv.

The paper deals with the ethnology of the region about Moosehead Lake, which was the territory of the Abnaki, and describes various classes of artificially worked stone found on the beach exposed during low water. The specimens are of rhyolite and comprise the less familiar partly worked or rejected types, and spearpoints, arrowpoints, knives, scrapers, and awls.

MASON, OTIS TUFTON. Anyam Gila (Mad weave): A Malaysian type of basketwork.

Proc. U. S. Nat. Mus., xxxvi, No. 1672, May 6, 1909, pp. 385–390, figs. 1–11.

The paper treats of a type of basket weaving in which three sets of pandanus strips, forming rhombs, are used. This weave is only found in Malaysia.

——— Vocabulary of Malaysian basketwork: A study in the W. L. Abbott collections.

Proc. U. S. Nat. Mus., xxxv, No. 1631, Nov. 7, 1908, pp. 1–51, pls. i–xviii, figs. 1–41.

The paper is a detailed study of the basketry in the Abbott collection and was prepared in order to settle upon a definite nomenclature for the entire Malay region, including the Philippine Islands. The materials which occur in

MASON, OTIS TUFTON—Continued.

good quality and in profusion, the shapes, structural parts and technic and particular weaves are described, and terms suggested for those features in which the Maylaysian art differs from that of America.

ROPER, DANIEL C. Supply and distribution of cotton for the year ending August 31, 1908.

Bull 97, Bureau of the Census, Department of Commerce and Labor. Washington, 1908.

Under the historical and descriptive section of the report use is made of the synoptic history of devices and inventions employed in the manufacture of cotton

ROPER, DANIEL C.—Continued.

which forms an exhibit in the National Museum, and this publication of the illustration and labels is the first publication of any portion of the series in the synoptic exhibit that has appeared.

SMILLIE, T. W. Recent progress in color photography.

Rep. Smithsonian Inst., 1907, pp. 231–237, pl. 1.

Reviews the efforts to produce color photographs during the past hundred years by the ablest photographic chemists and gives details of the modern processes by which success has been attained. The illustration is a photochrome from a specimen in the Museum.

MAMMALS.

ANDERSON, KNUD. Twenty new forms of Pteropus.

Ann. Mag. Nat. Hist., 8th ser., II, Oct., 1909, pp. 361–370.

Based partly on material in the U. S. National Museum.

——— A monograph of the Chiropteran genera Uroderma, Enchisthenes and Artibeus.

Proc. Zool. Soc. London, Sept., 1908, pp. 204–319, figs. 40–59.

An elaborate review of the genera in question, based on 213 specimens from the U. S. National Museum and 272 specimens from the British Museum.

DIXON, JOSEPH. A new Harvest Mouse from the salt marshes of San Francisco Bay, California.

Proc. Biol. Soc. Washington, XXI, Oct. 20, 1908, pp. 197, 198.

Describes *Reithrodontomys raviventris*, a new species. The comparisons made are based on material in the Biological Survey collection.

GOLDMAN, E. A. Five new woodrats of the genus Neotoma from Mexico.

Proc. Biol. Soc. Washington, XXII, June 25, 1909, pp. 139–141.

Based on material in the Biological Survey collection. New subspecies: *Neotoma intermedia*

GOLDMAN, E. A.—Continued.

pretiosa, *N. intermedia perpallida*, p. 139; *N. intermedia vicina*, *N. abbreviata*, p. 140; *N. ferruginea chamula*, p. 131.

HAHN, WALTER L. Notes on the mammals and cold-blooded vertebrates of the Indiana University Farm, Mitchell, Indiana.

Proc. U. S. Nat. Mus., XXXV, No. 1655, Dec. 7, 1908, pp. 545–581.

Annotated list of 14 fishes, 17 amphibians, 18 reptiles, and 27 mammals known to occur on the University Farm, near Mitchell, Lawrence Co., Indiana. A series from the specimens collected was presented to the U. S. National Museum.

HOLLISTER, N. Two new bats from the southwestern United States.

Proc. Biol. Soc. Washington, XXII, March 10, 1909, pp. 43, 44.

Two new species: *Myotis occultus*, p. 43 and *M. baileyi*, p. 44, are described, chiefly from material in the Biological Survey collection.

HOWELL, ARTHUR H. Description of a new bat from Nickajack Cave, Tennessee.

Proc. Biol. Soc. Washington, XXII, March 10, 1909, pp. 45–47.

A new species *Myotis grisescens*, is described, chiefly from material in the Biological Survey collection.

LYON, MARCUS WARD, jr. Remarks on the horns and on the systematic position of the American antelope.

Proc. U. S. Nat. Mus., XXXIV, No. 1619, Aug. 11, 1908, pp. 393–402, pls. XXXVIII, XXXIX.

Historical and descriptive account of the shedding of the horns in the prongbuck. The genus *Antilocapra* is regarded as forming a separate subfamily of the *Bovidæ*.

———. Mammals collected in eastern Sumatra by Dr. W. L. Abbott during 1903, 1906, and 1907, with descriptions of new species and subspecies.

Proc. U. S. Nat. Mus., XXXIV, No. 1626, Sept. 14, 1908, pp. 619–679, pls. LII–LVI, figs. 1–4.

List of 72 species and subspecies, 16 of which, belonging to the genera *Tragulus*, *Sciurus*, *Mus*, *Arctogalidia*, *Paradoxurus*, *Felis*, *Tupaia*, *Crocidura*, *Presbytis*, and *Niadius*, are new.

———. The authority for the name Nycticebus menagensis.

Proc. Biol. Soc. Washington, XXII, April 17, 1909, p. 89.

The author holds that the name of the Philippine Slow lemur should be *Nycticebus menagensis* Lydekker, 1893.

———. Remarks on the Insectivores of the genus Gymnura.

Proc. U. S. Nat. Mus., XXXVI, No. 1680, May 27, 1909, pp. 449–456, pls. 34–37.

Three forms of *Gymnura* are recognized, one of which is new.

——— Additional notes on mammals of the Rhio-Linga Archipelago; with descriptions of new species and a revised list.

Proc. U. S. Nat. Mus., XXXVI, No. 1684, June 1, 1909, pp. 479–491, pl. 39.

The mammal fauna of the archipelago is brought up to date. Three new forms belonging to the genera *Ratufa*, *Mus*, and *Galeopterus* are described.

——— and WILFRED HUDSON OSGOOD. Catalogue of the Type-Specimens of Mammals in the United States

LYON, MARCUS WARD, jr., and WILFRED HUDSON OSGOOD—Continued.

National Museum, including the Biological Survey Collection. By Marcus Ward Lyon, jr., Assistant Curator, Division of Mammals, U. S. National Museum and Wilfred Hudson Osgood, Assistant, Bureau of Biological Survey, U. S. Department of Agriculture (Seal) Washington Government Printing Office 1909.

Bull. U. S. Nat. Mus., No. 62, Jan. 27, 1909, pp. i–x, 1–325.

An annotated list of the type specimens (including holotypes, cotypes, lectotypes and chirotypes) of 1,405 named forms of mammals known to be in the National Museum on July 1, 1908 (692 belonging to the Museum collection proper and 713 to the collection of the Biological Survey).

MILLER, GERRIT S., jr. The generic name Nycteris.

Proc. Biol. Soc. Washington, XXII, April 17, 1909, p. 90.

The author holds that the name *Nycteris* Borkhausen must replace *Lasiurus* for an American genus of bats, and that *Petalia* must replace *Nycteris* for the Old World group to which the latter name is commonly applied.

——— Note on the Vespertilio oxygnathus of Monticelli.

Annuario del Museo Zoologico della R. Università di Napoli, (n. s.) III, No. 3, April 26, 1909, pp. 1, 2.

The species mentioned in the title is shown to be different from *Myotis myosotis*. The paper is based principally on material in the U. S. National Museum and the British Museum.

——— Twelve new European mammals.

Ann. Mag. Nat. Hist., 8th ser., III, May, 1909, pp. 415–422.

Twelve new mammals of the genera *Sorex*, *Crocidura*, *Sciurus*, *Erotomys*, *Microtus*, *Pitymys*, and *Mus* are described. The paper is based on material in the U. S. National Museum and in the British Museum.

NELSON, E. W., and E. A. GOLDMAN. Eleven new mammals from Lower California.

Proc. Biol. Soc. Washington, XXII, March 10, 1909, pp. 23–28.

Eleven new forms belonging to the genera *Eutamias*, *Ammospermophilus*, *Thomomys*, *Vulpes*, *Bassariscus*, *Sorex*, and *Myotis* are described, chiefly from material in the Biological Survey collection.

OSGOOD, W. H. The status of Sorex merriami, with description of an allied new species from Utah.

Proc. Biol. Soc. Washington, XXII, April 17, 1909, pp. 51–53.

Sorex leucogenys, a new species, is described from material in the Biological Survey collection.

——— Revision of the mice of the American genus Peromyscus.

North Am. Fauna, No. 28, April 17, 1909, pp. 1–285, pls. I–VIII, figs. 1–12.

A monographic revision, based on examination of more than 27,000 specimens, the majority of which are in the collections of the United States National Museum and the Biological Survey. One hundred and forty-three forms are recognized, 14 of which are described as new. It is interesting to note that this paper is based on a much larger number of specimens than any monograph of a single genus of mammals hitherto published.

——— (See also under Marcus Ward Lyon, jr.)

PREBLE, E. A. A biological investigation of the Athabaska-Mackenzie region.

North Am. Fauna, No. 27, Oct. 26, 1908, pp. 1–574, pls. I–XXV, figs. 1–16.

PREBLE, E. A.—Continued.

This paper contains a fully annotated list of the mammals of this region, numbering 100 species and subspecies, one of the latter being new. The material on which this paper is based belongs principally to the Biological Survey collection.

TRUE, F. W. Observations on living White whales (Delphinapterus leucas); with a note on the dentition of Delphinapterus and Stenodelphis.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 3, No. 1864, Apr. 28, 1909, pp. 325–330, pl. XXIII.

——— Occurrence of the Killer whale (Orcinus orca) on the New Jersey coast.

Science (n. s.), XXIX, May 14, 1909, pp. 790, 791.

——— The fossil cetacean, Dorudon serratus Gibbes.

Bull. Mus. Comp. Zool., LII, No. 4, Sept., 1908, pp. 65–78, pls. 1–3.

——— On the classification of the Cetacea.

Proc. Amer. Philos. Soc., XLVII, No. 189, Nov., 1908, pp. 385–391.

——— A further account of the fossil sea lion, Pontolis magnus, from the Miocene of Oregon.

Prof. Papers U. S. Geol. Surv., No. 59, April 2, 1909, pp. 143–148, pls. 21–23.

WARREN, E. R. A new chipmunk from Colorado.

Proc. Biol. Soc. Washington, XXII, June 25, 1909, pp. 105, 106.

The new form is named *Eutamias quadrivittatus animosus*. The type was presented to the U. S. National Museum by the author.

BIRDS.

AMERICAN ORNITHOLOGISTS' COMMITTEE ON NOMENCLATURE. Fourteenth supplement to the American Ornithologists' Union check-list of North American Birds.

Auk, XXV, No. 3, July, 1908, pp. 343–399.

AMERICAN ORNITHOLOGISTS' COMMITTEE ON NOMENCLATURE—Continued.

Comprises a statement of the changes made in the A. O. U. check-list since the publication of the previous supplement. The changes are divided into five categories, and cover about three hundred rulings of the committee.

BANGS, OUTRAM. A new tyrant-bird from the Santa Marta region of Colombia.

Proc. Biol. Soc., Washington, XXI, July 27, 1908, pp. 163, 164. *Rhynchocyclus sulphurescens exortivus* (p. 163) is described as new.

CARY, MERRITT. New records and important range extensions of Colorado birds.

Auk, XXVI, No. 2, April, 1909, pp. 180–185. Notes on 38 species and subspecies.

CHERRIE, GEO. K. New birds from the Orinoco Region and from Trinidad.

Mus. Brooklyn Inst. Arts and Sci., Sci. Bull., I, No. 16, June 30, 1909, pp. 387–390.

Formicivora cano-fumosus (p. 387), *Planesticus fumigatus aquilonalis* (p. 387), *Pachyrhamphus marcidus* (p. 389), and *Anoplops rufigula palidus* (p. 390), are new forms, and *Inezia* (p. 390) is proposed as a new genus.

COURT, EDWARD J. Treganza Blue heron.

Auk, XXV, No. 3, July, 1908, pp. 291–296, pls. V, VI.

Ardea herodias treganzai (p. 291) is described as new, and notes on its habits and nesting are given.

DEARBORN, NED. Catalogue of a collection of birds from British East Africa.

Field Mus. Nat. Hist., Pub. 135, *Orn. Series*, I, No. 4, May, 1909, pp. 141–190, and map.

A list of 228 species with notes. *Alethe akeleyæ* (p. 170) is designated as new.

GODMAN, F. DU CANE. A | Monograph | of the | Petrels | (Order Tubinares) | By | F. Du Cane Godman | (two lines of titles) | with hand-coloured plates | by J. G. Keulemans | in five parts | Part IV. | Witherby & Co. | 326 High Holborn, London | April 1909. (cover title)

Folio, pp. 233–296, pls. 67–84.

Accounts of 22 species with colored illustrations of 18 of them.

GOLDMAN, E. A. The Virginia rail (Rallus virginianus) breeding in Mexico.

Condor, X, No. 4, July, 1908, p. 181.

First record of the nesting of the Virginia rail in Mexico.

——— Summer birds of the Tulare Lake Region.

Condor, X, No. 5, Sept. 1908, pp. 200–205.

Notes on 83 species collected or observed in the Tulare Lake region, in the summer of 1907.

GRINNELL, JOSEPH, and others. Birds and mammals of the 1907 Alexander Expedition to Southeastern Alaska.

Univ. of Calif. Pub. in Zool., 5, No. 2, Feb. 18, 1909, pp. 171–264, pls. 25, 26, figs. 1–4.

The part of this paper which relates to the birds, by Joseph Grinnell, covers pp. 181–244. A fully annotated account of 99 species met with on the expedition, of which the following are described as new: *Lagopus alexandræ* (p. 204), *L. dixoni* (p. 207), *Buteo borealis alascensis* (p. 211), *Picoides americanus fumipectus* (p. 217), *Loxia curvirostra sitkensis* (p. 223), and *Planesticus migratorius caurinus* (p. 241).

——— Three new Song sparrows from California.

Univ. of Calif. Pub. in Zool., 5, No. 3, April 9, 1909, pp. 265–269.

Melospiza melodia maxillaris (p. 265) and *M. m. sanctorum* (p. 268) are described as new, and *M. m. gouldii* (Baird) is revived as a form from the Marin region of California.

HOWELL, ARTHUR H. Notes on the summer birds of northern Georgia.

Auk, XXVI, No. 2, April, 1909, pp. 129–137.

Notes on 76 species (including 13 forms first recorded from the State in the breeding season), based chiefly upon field observations of the author in the summer of 1908.

——— Agelaius phœniceus fortis in Louisiana.

Auk, XXVI, No. 2, April, 1909, p. 192.

First record of this form from Louisiana.

KNOWLTON, FRANK H. American Nature Series | Group I, Natural History | Birds of the World | A popular account | By | Frank H. Knowlton, Ph. D. | United States National Museum | (two lines of titles) | with a chapter on the anatomy of birds | by | Frederic A. Lucas | Curator-in-Chief, Brooklyn Institute of Arts and Sciences | the whole edited by | Robert Ridgway | Curator of Birds, United States National Museum | with 16 Colored Plates and 236 illustrations | (design) | New York | Henry Holt and Company | 1909

Pp. i-xiii, 1-873, 16 pls., figs. 1-236.

A popular treatise on the birds of the world.

MEARNS, EDGAR ALEXANDER. Additions to the list of Philippine birds, with descriptions of new and rare species.

Proc. U. S. Nat. Mus., XXXVI, No. 1679, May 22, 1909, pp. 435-447.

Three species are added to the Philippine avifauna, and the following are diagnosed as new: *Phapitreron samarensis* (p. 436), *Muscadivores palmasensis* (p. 436), *Otus steeri* (p. 437), *Prioniturus malindangensis* (p. 437), *Yungipicus siasiensis* (p. 438), *Rhinomyias ruficauda mindanensis* (p. 439), *Cryptolopha malindangensis* (p. 440), *Pseudotharrhaleus malindangensis* (p. 441), *Brachypteryx malindangensis* (p. 441), *Hylocrpe apoensis basilanica* (p. 442), *Zosterops goodfellowi malindangensis* (p. 443), *Cyrtostomus jugularis mindanensis* (p. 443), *C. j. woodi* (p. 444), *Pyrrhula steeri* (p. 445), *Dicrurus balicassius mindorensis* (p. 447), and *Chibia cagayanensis* (p. 447).

The hitherto unknown females of *Cyrtostomus jugularis dinagatensis* and *Anthreptes cagayanensis* are also described.

———A list of birds collected by Dr. Paul Bartsch in the Philippine Islands, Borneo, Guam, and Midway Island, with descriptions of three new forms.

Proc. U. S. Nat. Mus., XXXVI, No. 1683, May 27, 1909, pp. 463-478.

A partly annotated list of the birds collected by Dr. Paul Bartsch, who accompanied the U. S. Bureau of Fisheries steamer "Albatross" on its Philippine expedition. The following are new: *Ramphalcyon capensis smithi* (p. 466), *Pycnonotus goiavier suluensis* (p. 470), and *Collocalia bartschi* (p. 476).

NELSON, E. W. A new thrush from Mexico.

Proc. Biol. Soc. Washington, XXII, April 17, 1909, pp. 49, 50.

Catharus mexicanus smithi (p. 49) is diagnosed as new.

OBERHOLSER, HARRY C. A synopsis of the genera and species of Cygninæ.

Auk, VIII, pt. 1, July 1, 1908, pp. 1, 2.

A synopsis of the recent and fossil forms of this group. *Clangocycnus* (p. 3) is a new subgenus.

———A new Great Horned owl from Venezuela, with notes on the names of the American forms.

Bul. Brooklyn Inst. Arts and Sci., Sci. Bull. I, No. 14, Sept. 15, 1908, pp. 371-374.

Bubo virginianus scotinus (p. 371) is diagnosed as new, and a list of the 18 American forms recognized by the author is given.

———A revision of the Kingfisher genus Ramphalcyon (Pelargopsis).

Proc. U. S. Nat. Mus., XXXV, No. 1657, Feb. 9, 1909, pp. 657-680.

The author recognizes 19 species and subspecies, of which the following are indicated as new: *Ramphalcyon capensis isoptera* (p. 671), *R. c. mesoca* (p. 674), *R. c. cyanoptera* (p. 676), and *R. c. hydrophila* (p. 677). *Pelargopsis* Gloger, 1842, as the generic name of this group, is found to be invalidated, and *Ramphalcyon* Reichenbach, 1851, is adopted in its place.

PALMER, T. S. The Black rail (Creciscus jamaicensis) in the District of Columbia.

Auk, XXVI, No. 2, April, 1909, p. 190.

Records of 4 specimens of this species from the District of Columbia.

PREBLE, EDWARD A. A biological investigation of the Athabaska-Mackenzie region.

North Am. Fauna, No. 27, Oct. 26, 1908, pp. 1–574, pls. I–XXV; figs. 1–16.

A list of 296 species and subspecies ascertained to occur in the Athabaska-Mackenzie region, based chiefly upon investigations by the author and his assistants in 1901 and 1903–4, but including many published and mss. records of earlier explorers. Extended notes are given under many species (pp. 251–500).

RICHMOND, CHARLES W. Generic names applied to birds during the years 1901 to 1905, inclusive, with further additions to Waterhouse's "Index Generum Avium."

Proc. U. S. Nat. Mus., XXXV, No. 1656, Dec. 16, 1908, pp. 583–655.

An alphabetic list of about 550 generic names, with indications of the derivations, type species, and systematic position of each. An index, arranged alphabetically under families, is appended. The following names are new: *Pliocatus* (p. 592), *Gnorimopsar* (p. 584), and *Notiomystis* (p. 634).

——— A reprint of the ornithological writings of C. S. Rafinesque. Part I.

Auk, XXVI, No. 1, Jan., 1909, pp. 37–55.

A reprint of the ornithological matter in Rafinesque's "Analyse de la Nature," published in Palermo in 1815, with notes, followed by an alphabetical list of the new genera of birds proposed in this work.

RIDGWAY, ROBERT. Diagnoses of some new forms of neotropical birds.

Proc. Biol. Soc. Washington, XXI, Oct. 20, 1908 pp. 191–196.

Thryorchilus basulloi (p. 191), *Coryphotriccus alboritiatus distinctus* (p. 191), *Thamnophilus doliatus pacificus* (p. 193), *T. d. yucatanensis* (p. 193), *Dysithamnus mentalis septentrionalis* (p. 193), *D. m. oberi* (p. 193), *Thamnistes anabatinus saturatus* (p. 193), *Drymophila grisea margaritensis* (p. 194), *Myrmeciza boucardi panamensis* (p. 194), *Myrmelastes cassini* (p. 194), *Gymnocichla nudiceps sanctamartæ* (p. 194), *Formicarius moniliger intermedius* (p. 194), *F. m. panamensis* (p. 195), *Delattria henrica salvini* (p. 195), *D. h. brevirostris* (p. 195), and *Sticopsis tobagensis* (p. 195) are diagnosed as new, and a note is offered on *Thamnophilus doliatus* and its variations.

RIDGWAY, ROBERT—Continued.

——— New genera, species and subspecies of Formicariidæ, Furnariidæ, and Dendrocolaptidæ.

Proc. Biol. Soc. Washington, XXII, April 17, 1909, pp. 69–74.

The following genera, species, and subspecies are diagnosed as new: *Megastictus* (p. 69), *Myrmopagis* (p. 69), *Rhoporchilus* (p. 69), *Myrmochilus* (p. 69), *Myrmoderus* (p. 70), *Phaenostictus* (p. 70), *Hylophylax* (p. 70), *Oropezus* (p. 70), *Hylopezus* (p. 71), *Premnornis* (p. 71), *Dryoctistes* (p. 71), *Phacellocnemus* (p. 71), *Schoeniophylax* (p. 71), *Acrorchilus* (p. 71), *Hylactistes* (p. 72), *Rhopoctites* (p. 72), *Automolus cervinigularis hypophaeus* (p. 72), *Acrorchilus erythrops griseigularis* (p. 72), *Synallaxis albescens hypoleuca* (p. 73), *Dendrocolaptes validus costaricensis* (p. 73), *Xiphorhynchus flavigaster yucatanensis* (p. 73), *X. punctigula insolitus* (p. 73), *X. lacrymosus rostratus* (p. 73), *Picolaptes affinis neglectus* (p. 73), *Campylorhamphus chapmani* (p. 74), *Myrmeciza zeledoni* (p. 74), and *M. berlepschi* (p. 74).

RILEY, J. H. Notes on the Broad-winged hawks of the West Indies, with description of a new form.

Auk, XXV, No. 3, July, 1908, pp. 268–276.

Four subspecies of *Buteo platypterus* are recognized from the West Indies, of which *B. p. insulicola* (p. 273), from Antigua, is described as new.

——— On the name of the Antillean Killdeer.

Proc. Biol. Soc. Washington, XXII, April 17, 1909, p. 88.

Oxyechus vociferus rubidus is proposed as a substitute name for *Charadrius torquatus* Linnæus, 1766 (*nec* Pontoppidan 1763).

STONE, WITMER. A review of the genus Piaya Lesson.

Proc. Acad. Nat. Sci. Phila. for 1908, Jan. 4, 1909, pp. 492–501.

The author recognizes 13 species and subspecies, of which the following are noted as new: *Piaya cayana cancæ* (p. 499), *P. c. boliviana* (p. 501),

REPTILES AND BATRACHIANS.

STEJNEGER, LEONHARD. Hvorfra kom Vestnorges eiendommelige dyr og planter?

Naturen, XXXII, Juli-August, pp. 193–202; Sept. pp. 269–277.

A reply to Prof. Jörgensen's review, in a previous number of "Naturen", of the author's paper "The origin of the so-called Atlantic animals and plants of Western Norway", published in the Smithsonian Misc. Colls., XLVIII, pt. 4, No. 1699, May 4, 1907, pp. 458–513.

——— Om Vestlandshesten fra zoologisk standpunkt.

Norsk Veterin. Tidskr., XXI, Jan., 1909, pp. 11–17.

A reply to Mr. Baashuus-Jessen's review in a previous paper of certain parts of the author's paper cited above.

STEJNEGER, LEONHARD. Description of a new snake from Panama.

Proc. U. S. Nat. Mus., XXXVI, No. 1681, May 27, 1909, pp. 457, 458.

Mesopeltis longifrenis, new species; type, No. 38750, U.S.N.M.

——— Batrachians and Reptiles [of the Princeton University Expeditions to Patagonia, 1896–1899].

Reports, Princeton University Expeditions to Patagonia, 1896–1899, III, Pt. ii, pp. 211–224.

Liolaemus hatcheri, new species; type, No. 36912, U.S.N.M.

HAHN, WALTER L. Notes on the mammals and cold-blooded vertebrates of the Indiana University Farm, Mitchell, Indiana.

Proc. U. S. Nat. Mus., XXXV, No. 1655, Dec. 7, 1908, pp. 545–586.

FISHES.

BEAN, BARTON A. The proper name of the American eel, Anguilla rostrata (Le Sueur).

Science (n. s.), XXIX, No. 752, May 28, 1909, pp. 871, 872.

——— Description of a new skate (Dactylobatus aramtus) from deep water off the southern Atlantic coast of the United States.

Proc. U. S. Nat. Mus., XXXVI, No. 1682, May 27, 1909, pp. 459–461, pl. 38.

——— and ALFRED C. WEED. Descriptions of two new species of Electric rays of the family Narcobatidæ, from deep water off the southern Atlantic coast of the United States.

Proc. U. S. Nat. Mus., XXXVI, No. 1694, June 24, 1909, pp. 677–680, one fig.

DICKERSON, MARY CYNTHIA. (See under David Starr Jordan.)

EVERMANN, BARTON W., and E. L. GOLDSBOROUGH. Notes on some fishes from the Canal Zone.

Proc. Biol. Soc. Washington, XXII, June 25, 1909, pp. 95–103, figs. 1–3.

Cheirodon gorgonæ is described as new.

EVERMANN, BARTON W. and J. T. NICHOLS. Notes on the fishes of Crab Creek, Washington, with description of a new species of trout.

Proc. Biol. Soc. Washington, XXII, June 25, 1909, pp. 91–94, figs. 1, 2.

Salmo eremogenes is described as new.

——— (See also under David Starr Jordan.)

GILL, THEODORE. The Genesis of the Museum [of the Brooklyn Institute].

Report, Mus. Brooklyn Inst. Arts. and Sci., 1907, August 27, 1908, pp. 100–105.

Reminiscenses of the Brooklyn Institute and zoology in Brooklyn during 1854 and several years later. The primitive nature of the grounds of the present buildings is noticed. Reference is made to J. Carson Brevoort in connection with the Smithsonian Institution.

——— The story of the Devil-fish.

Smithsonian Misc. Colls. 52, Quar. issue, Pt. 2, No. 1816, Oct. 15, 1908, pp. 155–180, figs. 40–55.

An account of the giant ray, *Manta rampyrus*, giving the popular names, the form and the man-

GILL, THEODORE—Continued.

ner of its derivation from the sharks, its movements in general, its progression and use of its head-fins or caropteres, its food and adaptations therefor, its pairing and its viviparity.

——— Chœrodon in place of Chœrops for a Labroid genus of fishes.

Proc U. S. Nat. Mus., XXXV, No. 1638, Oct. 31, 1908, pp. 155, 156.

It is shown that the name *Chœrodon* of Bleeker (1847) should replace *Chœrops* of Ruppell (1852).

——— Systematic zoology; its progress and purpose.

Rep. Smithsonian Inst., 1907, No. 1842, Jan. 20, 1909, pp. 449–471, pls. I–XIV.

Address delivered before the International Zoological Congress with modifications and additions. The progress of zoology is considered under the following captions: John Ray; The beginnings of systematic zoology; Carl von Linné; Linnaean classes; Linnaean genera; Linnaean nomenclature; Georges Léopold Chrétien Frédéric Dagobert Cuvier; Cuvier and paleontology; Cuvier and anatomy; Cuvier's successors; Embryology; Philosophical zoology; Development theory; Sequence of groups; Histology; Gradual delimitation of genera; The old and the new; Prospects and needs. Fourteen portraits are published.

——— Recent discoveries in the history of the common eel.

Science, (n. s.) XXVIII, No. 728, Dec. 11, 1908, pp. 845, 846.

A record of the discoveries by J. Schmidt of Leptocephali of the eel over water of the depth of 1,000 meters and by K. Gemzöe of the age of eels indicated by the scales. The conclusion is that "an eel must be from 8 to 10 years old before it assumes the livery of maturity and descends into the ocean to reproduce its kind".

——— Life history of the common eel.

Trans. Am. Fisheries Soc., 1908, pp. 115–121.

Stenographer's report of oral communication on the breeding habits of the eel. The results of Johann Schmidt's are especially referred to.

GILL, THEODORE. The Selachians admitted as a distinct class.

Science, (n. s.) XXIX, No. 735, Jan. 29, 1909, pp. 193, 194.

The author had claimed class-rank for the Selachians since 1873; Hubrecht in Nov., 1908, and Regan in Jan., 1909, have also urged class-rank for the group.

——— The Archer-fish and its feats.

Smithsonian Misc. Colls., 52, Quar. issue, No. 1861, Mar. 25, 1909, pp. 277–286, figs. 58–60.

An account of the habits of the Archer-fish (*Toxotes jaculator*), based mainly on the accounts given by N. Zolotnitsky.

The chief characteristics of the Toxotids and their habitat, and the old accounts by Hommel and others are noticed; then follow statements about their swimming and leaping, the use of the eyes, the changes of color, their food and the manner of shooting insects out of the water, and their care in confinement. The necessity for further observations is urged.

——— Some notes on oral gestation in Cichlid fishes.

Science, (n. s.) XXIX, No. 747, April 23, 1909, p. 676.

Old observations of Wyman and Putnam made in 1863 are contrasted with some made by Pellegrin in 1908. While the former claimed that in Arius "it was the male that took charge of the egg", in the Cichlids "it is the female". Pellegrin thought that while in the Cichlids of Syria the female exercised buccal incubation, the male did so in the American Geogaphagi. It was considered by the present writer to be "improbable that the American species differ so decidedly from the African" and Syrian.

——— Classification of the true fishes.

Science, (n. s.) XXIX, No. 751, May 21, 1909, pp. 837, 838.

The extant true fishes (Pisces or Teleostomes) are considered to be referable to 4 subclasses, Dipnoi with 1 order, Crossopterygii with 1, Chondroganoidei with 2, and Teleostei with 31.

GOLDSBOROUGH, E. L. (See under Barton W. Evermann.)

HAHN, WALTER L. Notes on the mammals and cold-blooded vertebrates of the Indiana University Farm, Mitchell, Indiana.

Proc. U. S. Nat. Mus., XXXV, No. 1655, Dec. 7, 1908, pp. 545–581.

JORDAN, DAVID STARR, and MARY CYNTHIA DICKERSON. On a collection of fishes from Fiji, with notes on certain Hawaiian fishes.

Proc. U. S. Nat. Mus., XXXIV, No. 1625, Sept. 14, 1908, pp. 603–617, figs. 1–6.

Cypsilurus agilbyi and *Abudefduf cornelii* are described as new.

——— and BARTON W. EVERMANN. Descriptions of three new species of Cisco, or Lake Herring (Argyrosomus) from the Great Lakes of America, with a note on the species of Whitefish.

Proc. U. S. Nat. Mus., XXXVI, No. 1662, Mar. 3, 1909, pp. 165–172, figs. 1–3.

Argyrosomus oriensis, *A. huronius* and *A. zenithicus* are described as new.

JORDAN, DAVID STARR, and JOHN OTTERBEIN SNYDER. Description of a new Whitefish (Coregonus oregonius), from McKenzie River, Oregon.

Proc. U. S. Nat. Mus., XXXVI, No. 1677, May 15, 1909, pp. 425–430, one fig.

NICHOLLS, JOHN T. (See under Barton W. Evermann.)

SNYDER, JOHN OTTERBEIN. Notes on two rare California fishes, Rimicola eigenmanni and Plagiogrammus hopkinsi.

Proc. U. S. Nat. Mus., XXXV, No. 1643, Oct. 31, 1908, pp. 183–186.

——— Descriptions of eighteen new species and two new genera of fishes from Japan and the Riu Kiu Islands.

Proc. U. S. Nat. Mus., XXXV, No. 1635, Oct. 30, 1908, pp. 93–111.

——— Descriptions of new genera and species of fishes from Japan and the Riu Kiu Islands.

Proc. U. S. Nat. Mus., XXXVI, No. 1688, June 18, 1909, pp. 597–610.

——— (See also under David Starr Jordan.)

WEED, ALFRED C. (See under Barton A. Bean.)

MOLLUSKS.

BARTSCH, PAUL. Pyramidellidæ of New England and the adjacent region.

Proc. Bost. Soc. Nat. Hist., 34, No. 4, Feb., 1909, pp. 67–113, pls. 11–14.

A monograph of the Pyramidellid fauna of New England, in which all the species of the region are described and most of them figured. *Menestho striatula* Couthouy is removed from the *Pyramidellidæ* and placed in the new genus *Couthouyella* of the family *Eulimidæ*. The following are new: *Pyramidella winkleyi*; *Turbonilla bushiana abyssicola*, *elegantula branfordensis*, *buteonis*, *cascoensis*, *edwardensis*, *mighelsi* n. n., *summeri*, *verrelli*, *vinæ*, *whitearesi*, *winkleyi* and *winkleyi senilis* new var.; *Odostomia trifida bedequensis*, *bushiana*, *hendersoni*, *morseana*, n. n., *bisuturalis orilleensis*, *willisi* and *winkleyi*.

BARTSCH, PAUL. Ein Besuch die Vulkan Taal auf der Insel Luzon in den Philippinen.

The Technologist, XIV, No. 1, Jan., 1909, pp. 19, 20.

An abstract of a lecture on a visit to Taal Volcano.

——— Meine Reisen in den Philippinen.

The Technologist, XIV, No. 6, June, 1909, p. 135.

Abstract of a lecture on the Philippines.

DALL, WILLIAM HEALEY. Some new brachiopods.

Nautilus, XXII, No. 3, July, 1908, pp. 28–30.

Terebratula (*Liothyris*) *sakhalinensis*, *Laqueus morsei*, and *Eudesia raphaëlis* var. *albida*, from the Japan and Okhotsk seas, are described as new.

DALL, WILLIAM HEALEY. A new West Indian Nitidella.

Nautilus, XXII, No. 3, July, 1908, pp. 31, 32.

Nitidella hendersoni from Cuba is described as new.

——— A gigantic Solemya and a new Vesicomya.

Nautilus, XXII, No. 7, Nov., 1908, pp. 61–63.

Solemya (Acharax) bartschii, 24 cm. long, and *Vesicomya ticaonica* are described from specimens dredged by the "Albatross" in the Philippines.

——— Notes on Planorbis and its subdivisions.

Proc. Malacol. Soc. London, VIII, pt. 3, Oct., 1908, p. 141.

This paper comprises notes on nomenclature and comparisons of American and European species.

——— Zur Terminologie der Mollusken Skulptur.

Nachrichts-Blatt der Deutsch. Malak. Gesell., heft IV, Oct., 1908, pp. 158, 159.

This is a reprint of the note on terminology printed in Smithsonian Misc. Colls., L, Quar. issue, No. 1727, July 9, 1907, pp. 139–173.

——— The Patagonian Fauna. Results of the Hamburg Magellan Expedition.

Am. Naturalist, XLII, No. 500, Aug., 1908, pp. 562–565.

A summary of the published results of this expedition.

——— Another large Miocene Scala.

Nautilus, XXII, No. 8, Dec., 1908, pp. 89, 81.

Epitonium (Acrilla) atwoodi from Alaska Peninsula is described as new. The new subgenera *Arctoscala (groenlandica* Perry) and *Catenoscala (oregonensis* Dall) are indicated.

——— Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer "Albatross," from October, 1904, to March, 1905: Lieut. Comm. L. M. Garrett, U. S. N., commanding. XIV. The Mollusca and Brachiopoda.

Bull. Mus. Comp. Zool., XLIII, No. 6, Oct., 1908, pp. 203–487, pls. 1–22.

This memoir comprises a monograph of the deep sea Mollusca and Brachiopoda, hitherto collected on the western coast of South America between Panama and the Magellan Straits, together with a few species collected by the Albatross from shallower water during the same series of explorations. The relation to each other of the two faunas, Caribbean and Pacific, is discussed; lists of the shore shells at Cocos, Easter, Manga Reva, and Flint Islands are given; the species of the genus *Argonauta* are revised; and the characteristics of the Eastern Pacific fauna are discussed. A very large number of new species are described and figured, and a few new genera, subgenera, or sections are proposed, of which the following list contains a census. Various anatomical notes accompany the descriptions.

The following group names are proposed in this work: Section *Archivesica* of the genus *Vesicomya*; genus *Basiliola* of the *Rhynchonellidæ*; subgenera *Borsonella*, *Phymorhynchus*, *Irenosyrinx*, and *Surculina* in *Turritidæ*; subgenus *Cylichnium* of *Cylichnella* Gabb; section *Empleconia* of the genus *Limopsis*; *Eocyclina*, new generic name for *Cyclina* Deshayes; *Ferminoscala* subgenus of *Epitonium*; *Kataleismia*, section of *Yoldia*; *Leucophysema*, section of *Bullaria*; *Minormalletia*, section of *Malletia*; *Panocochlea*, subgenus of *Clanculus*; *Pascula*, subgenus of *Trophon*; *Pelagodiscus*, new section for *Discinisca atlantica*; *Sabatina*, subgenus of *Sabatia*; *Spinula*, subgenus of *Leda*; *Thalassoplanes*, subgenus of *Troschelia*; *Tritonoharpa vexillata*, new genus and species of *Septidæ*.

The following new species are described: *Acteon estuarinus*, *mazatlanicus* and *panamensis*; *Alectrion catallus*, *exsarcus*, *goniopleura* and *miser*; *Aligena borniana*, and *pisum*; *Amusium malpelonium*; *Arca endemica*, *nucleator*, and *pompholyx*; *Architectonica radialis*; *Bathysciadium pacificum*; *Borsonia agassizii*, *cor-*

DALL, WILLIAM HEALEY—Continued.

onadoi, dicgensis, and *saccai; Bullaria morgana, Bursa calcipicta; Cadulus peruvianus; Callistochiton periconis; Cancellaria californica, corbicula, cropleura*, and *microsoma; Capulus chilensis; Cerithiodcrma pacifica; Cetoconcha smithii; Chlamys pasca; Clanculus rubidus; Clathurella oraviana, panamella, plicatella; Clinura monochorda*, and *peruviana; Cocculina agassizii, diomedæ*, and *nassa; Columbella fusideus; Corbula ira, Corneocyclas magellanicus; Cuspidaria panamensis, planetica, pscustes; Cyclichnella atahualpa, inca*, and *pizarro; Daphnella blanda, cortezi, imparella; Dentalium panamense* and *peruvianum; Drillia decenna; Epitonium brunneopictum, ferminianum*, and *turbinum; Fusinus fragilissimus* and *panamensis; Gemmula benthina, eldorana, esuriens, hcrilda, pernodata, scrilla*, and *riccllа; Glyphostoma immaculata* and *thalassoma; Hemithyris strcbeli; Hipponix delicata; Ircnosyrinx crebristriata* and *leonis; Ischnochiton ophioderma; Leda acrita, agapea, calcar, calcarella, callimene, cordyla, lobula, loshka, peruviana*, and *rhytida; Lepidopleurus abbreviatus; incongruus* and *opacus; Leptothyra panamensis; Leucosyrinx clionella* and *erosina; Lima diomedæ, similaris*, and *suteri; Limopsis diazi, dicgensis, juarezi, mabilleana, stimpsoni*, and *zonalis; Liotia californica* and *pacis; Lyonsia panamensis; Lyonsiella pccifica, Macoma hesperus* and *hupeana; Malletia arciformis, benthima, inequalis, peruviana*, and *truncata; Mangilia ectolaca, enecila, cuora, genilda morilla, and sedillina; Myonera garretti; Natica othello*, and *sectbra; Nucula agujana, chrysocoma, colombiana, panamina, pigafetta taniolata*, and *tanneri; Oocorys elcrata* and *rotunda; Pecten cocosensis, liriope, miser, neoccanicus, panamensis, pasca, polyleptus*, and *rotundus; Petaloconchus complicatus; Phascolus patagonicus; Pholadidæ minuscula; Pleurotomella altina, clarinda, dinora, cyrcgia, esilda, isogonia, occanica, parella polystephanus*, and *xylona; Polymices aguajanus, constrictus, crawfordianus, litorinus, pardoanus, strebeli*, and *vaginatus; Poromya chilensis, equatorialis*, and *perla; Prolocardia panamensis; Ptychactus californicus; Rochefortia mabilleі* and *rochebrunei; Scaphander cylindrellus, decapilatus*, and *planeticus; Seguenzia occidentalis*, and *stephanica; Solarieла equatorialis* and *galapagana; Solemya agassizii* and *panamensis; Solenosteira elegans; Sphenia subequalis; Stilifer bathymetræ; Strombina edentula; Sureulina blanda; Tellina chrysogona* and *fluctigera; Terebra balanorum, bridgesi, lucana, panamensis, pedroana*, and *stylus; Thais nesiotes; Tindaria atossa, compressa, mexicana, panamensis, salaria, smirna*, and *thea; Tritonoharpa vexillata; Trophon citricus; Troschelia mörchii; Turris armilda, dolenta, dotella, fusinella, notilla*, and *resina; Turritella mariana; Vesicomya donacia; Volutolysius amabilis; Xylophaga mexicana; Yoldia chilenica, dicella, granula, indolens, infrequens, leonilda, mantana, panamensis*, and *vinculа.*

DALL, WILLIAM HEALEY—Continued.

——— Descriptions and figures of some land and freshwater shells from Mexico, believed to be new.

Proc. U. S. Nat. Mus., XXXV, No. 1642, Nov. 10, 1908, pp. 177–182, pls. XXIX, XXX.

This paper contains descriptions of some new Mexican land shells in the National Museum, with figures; a new section, *Crossostephanus*, of *Calocentrum* Crosse & Fischer, is proposed for a new species, *C. Palmeri* Dall and Bartsch; *Streptostyla bartschii, S. toyuca, S. jilitlana*, and *Euglandina livida*, are described as new, *Anodonta coarctata* Anton, *Lampsilis (Proptera) salinasensis* Simpson, and *Diplodon websteri* Simpson are figured. The latter was described from New Zealand, but had never been figured.

——— National Antarctic Expedition. Zoology.

Science (n. s.) XXVIII, No. 730, Dec. 25, 1908, pp. 923, 924.

A review of this important contribution to Antarctic zoology.

——— A new species of Pholadomya.

Nautilus, XXII, No. 11, Mar., 1909, pp. 115–117.

This is an amplification of a diagnosis published in 1907, in Smithsonian Misc. Colls., Quar. issue, p. 172, which had been overlooked by the editor; and this ac-

DALL, WILLIAM HEALEY—Continued.

count of *Pholadomya pacifica* (which was written first) by an accident was published two years later.

——— Resultats du Voyage du S. Y. Belgica. Rapports Scientifiques. Zoology.

Science (n. s.) XXIX, No. 741, Mar. 12, 1909, pp. 421, 422.

A review of the reports of the Belgica expedition to the Antarctic.

——— Biographical memoir of William More Gabb, 1839–1878.

Nat. Acad. Sci. Biographies, VI, March, 1909, pp. 347–361, with portrait.

A biography of a former valued collaborator of the National Museum, together with a bibliography of his scientific writings, read befor the Academy in November, 1908.

——— Further data on Poli's Generic Names.

Proc. Malacol. Soc. London, VIII, pt. 4, April, 1909, pp. 251, 252.

A supplement to a paper by Jukes Browne in the June issue of the periodical, correcting some errors and adding some new data.

——— Paradione n. n. vice Chionella.

Proc. Malacol. Soc. London, VIII, pt. 4, April, 1909, p. 197.

Paradione is proposed for *Chionella* Cossman, preoccupied by Swainson.

——— Some new South American Landshells.

Smithsonian Misc. Colls., 52, Quar. issue, pt. 3, No. 1866, May 11, 1909, pp. 361–364, pl. XXXVII.

Some new shells in the National Museum from South America are described and figured. *Pleurodonte (Labyrinthus) tenuelum*, *Helicina heighwayana*, and *Odontostomus branneri* are described as new, and *Odontostomus sectilabris* Pfeiffer is figured for comparison.

——— Fru Signe Rink.

Science (n. s.) XXIX, No. 751, May 21, 1909, p. 806.

A brief obituary notice of an old correspondent of the National Museum.

DALL, WILLIAM HEALEY. Contributions to the Tertiary Paleontology of the Pacific Coast, I. The Miocene of Astoria and Coos Bay, Oregon.

Prof. Paper, U. S. Geol. Surv., No. 59, April, 1909, pp. 1–278, pls. I–XXIII.

This paper, based on material in the National Museum, contains a historical discussion of the exploration of the geology of Astoria and Coos Bay; a summary of stratigraphical observations by the author and Dr. J. S. Diller, of the Survey; a geological map and section of the exposures at Coos Bay; a systematic account of the Miocene invertebrate fauna; a description by Dr. F. W. True of a fossil sea lion discovered in the Coos Bay Miocene, with a summary of the described species of fossil sea lions; twelve appendices containing reprints of the text of as many rare and out of print papers on Pacific Coast Tertiary Paleontology by Conrad, Shumard, and Carpenter; a bibliography of papers on Post Eocene Pacific coast Tertiary and recent invertebrates, taking up the subject where it was left by Carpenter in his British Association report of 1864, and carrying it to 1905, together with a few later papers. This paper was completed, except for a few additions to the bibliography, in May, 1907, and the delay in its publication will account for the absence of certain references in the text which might otherwise be expected.

The descriptive portion includes the revision of the nomenclature, under the International Code, of certain groups of the *Volutidæ*, the *Fasciolariidæ*, the *Muricidæ*, the *Scalidæ*, the *Cassididæ*, the *Doliidæ*, the *Trichotropidæ*, the *Littorinidæ*, the *Calyptraeidæ*, the *Naticidæ*, the *Turbinidæ*, and *Trochidæ*.

The new forms described and figured are as follows: *Scaphander conradi*, *S. oregonensis*; *Turris cooscnsis*, *cammani*, *coli*, and *impecunia*; *Bathytoma gabbiana*; *Cancellaria oregonensis*, *arnoldi*, and *hemphilli*; *Miopleiona oregonensis*; *Fusinus cooscnsis*; *Chrysodomus imperialis*, *postplanatus*, and *bairdii*; *Liomesus sulculatus*; *Molopophorus gabbi*; *Purpura perponderosa*; *Epitonium rugiferum*, *condoni*, and *oregonense*; *Gyrineum mediocre* (and

DALL, WILLIAM HEALEY—Continued.

var. *corbiculatum*); *Argobuccinum cammani* and *cooscnse*; *Pricne pacifica*; *Cymatium pacificum*; *Phalium turricula*, and *aquisulcatum*; *Eudolium oregoncnse*; *Cerithiopsis excelsus*; *Littorina petricola*; *Architectonica blanda*; *Natica consors*; *Polinices galianoi*; *Ampullina oregoncnsis*; *Astrea precursor*; *Tegula stantoni*; *Calliostoma cammani*; *Turcica gabbi*; new subgenus of *Margarites*, *Pupillaria*, with sections of *Lirularia* and *Cidarina*; *Margarites condoni*; *Turcicula washingtoniana* and *columbiana*; *Nucula townsendi*, n. n. for *N. cuneiformis* Conrad, not Sower-

DALL, WILLIAM HEALEY—Continued.

by; *Leda whitmani*; *Yoldia strigata*; *Glycymeris grewingki*, *conradi*, and *gabbi*; *Mytilus ficus*; *Modiolus directus* and *inflatus*; *Venericardia castor*; *Cardium coosense*; *Chione bisculpta*; *Venus parapodema* and *cusifera*; *Tellina cygenia*, *aragonia*, and *nuculana*; *Macoma astori* and *molinana*; *Solen conradi*; *Spisula precursor*; *Mulinia oregoncnsis*; *Panomya chrysis*; *Thracia condoni*; *Dentalium conradi* and *petricola*; *Hemithyris astoriana*; *Discinisca oregoncnsis*; *Balanus* var. *cooscnsis*; *Serpula ? octoforis*; and *Scutella oregoncnsis* (W. B. Clark).

INSECTS.

BLAISDELL, FRANK E. Smithsonian Institution | United States National Museum | Bulletin 63 | — | A monographic revision of the Coleoptera belonging to the Tenebrionide tribe Eleodiini inhabiting the United States, Lower California, and adjacent islands | By | Frank E. Blaisdell, Sr. | Of San Francisco, California | (Seal) | Washington | Government Printing Office | 1909

Bull. U. S. Nat. Mus., No. 63, June 24, 1909, pp. i–xi, 1–524, pls. 1–13, figs. 1–8.

Descriptions are given of 1 new genus, 7 new subgenera, 18 new species, and 12 new varieties.

BUSCK, AUGUST. Descriptions of two new Gelechiidæ from California.

Ent. News, XIX, No. 7, July, 1908, pp. 316, 317.

——— Two new stenomid moths from the Eastern United States.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 111, 112.

——— A generic revision of American moths of the Family Œcophoridæ, with descriptions of new species.

Proc. U. S. Nat. Mus., XXXV, No. 1644, Oct. 31, 1908, pp. 187–207.

Five new genera and five new species described.

CAUDELL, A. N. Family Locustidæ, Subfamily Decticinæ.

Genera Insectorum, Fasc. 72, Aug. 15, 1908, pp. 1–43, pls. I, II.

One new genus is described and the genera of the world tabulated, with a list of species.

——— Gryllodes sigillatus Walk. (= poeyi Sauss.) in Washington, D. C.

Psyche, XV, No. 5, Oct. 1908, p. 96.

——— A Cockroach new to the United States.

Ent. News, XIX, No. 10, Dec. 1908, p. 463.

COQUILLETT, D. W. Rediscovery of Bibionid genus Eupeitenus.

Ent. News, XX, No. 3, March, 1909, p. 106, one fig.

CRAWFORD, J. C. Notes on some Chalcidoidea.

Can. Ent., XLI, No. 3, Mar. 1909, pp. 98, 99.

One new genus and one new species are described.

——— The entomological writings of William Harris Ashmead, with an index to the new genera described by him.

Proc. Ent. Soc. Wash., X, Nos. 3, 4, June 10, 1909, pp. 131–156.

DYAR, H. G. Notes on a few apparent cases of synonomy in Lepidoptera.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 30–35.

——— Notes on the species of Acrobasis, with descriptions of new ones.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 41–48.

Seven new species are described.

——— Notes on some American Cochlidiidæ, with descriptions of new species.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 48–52.

Six new species are described.

——— Descriptions of some new moths from Southern California.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 52–60, one fig.

Two new genera and 16 new species are described.

——— A further note on the Sloth moth.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 81, 82.

——— A new Saturnian moth from the southwest.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 82, 83.

——— A review of the North American Chrysauginæ.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 92–96.

Three new genera and 2 new species are described.

——— A review of the North American Pyralinæ.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 96–102.

One new genus and 5 new species are described.

——— Descriptions of 11 new North American Pyralidæ, with notes on a few others.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 112–118.

DYAR, H. G. The larvæ of Lerina incarnata Walk.

Proc. Ent. Soc. Wash., X, Nos. 3, 4, June 10, 1909, p. 162.

——— and FREDERICK KNAB. Notes on mosquito work.

Can. Ent., XL, No. 9, Sept. 1908, pp. 309–312.

——— ——— Descriptions of some new mosquitoes from tropical America.

Proc. U. S. Nat. Mus., XXXV, No. 1632, Oct. 30, 1908, pp. 53–70.

Thirty-two new species are described.

——— ——— Descriptions of some new species and a new genus of American mosquitoes.

Smithsonian Misc. Colls., 52, Quar. issue, pt. 2, No. 1822, Jan. 12, 1909, pp. 253–266, fig. 56.

One new genus and 35 new species are described.

——— ——— Mosquito comment.

Can. Ent., XLI, No. 3, March, 1909, pp. 101, 102.

One new species is described.

HEIDEMANN, OTTO. Two new species of North American Tingitidæ.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 103–108, pl. IV.

——— New species of Tingitidæ and description of a new Leptoglossus.

Bull. Buffalo Soc. Nat. Sci., IX, March, 1909, pp. 231–238.

HOWARD, L. O. Another Chalcidoid parasite of a tick.

Can. Ent., XL., No. 7, July, 1908, pp. 239–241, fig. 14.

A new genus and a new species are described.

——— On two new species of parasites of Aleyrodidæ.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 63–65.

——— A new genus and species of Mymaridæ.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 68–70, fig. 11.

HOWARD, L. O. Upon the Aphis-feeding species of Aphelinus.

Ent. News, XIX, No. 8, Oct., 1908, pp. 365–367.

Two new species are described.

——— A key to the species of Prospaltella, with table of hosts and descriptions of four new species.

Ann. Ent. Soc. Amer., I, No. 4, Dec., 1908, pp. 281–284.

KNAB, FREDERICK. Swarming of a Reduviid.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, p. 7.

——— The early stages of Sayomyia punctipennis Say.

Proc. Ent. Soc. Wash., X, Nos. 1, 2, Sept. 15, 1908, pp. 36–40, figs. 5–8.

——— (See also under H. G. Dyar.)

CRUSTACEANS.

COUTIÈRE, HENRI. The American species of snapping shrimps of the genus Synalpheus.

Proc. U. S. Nat. Mus., XXXVI, No. 1659, Jan. 30, 1909, pp. 1–93, figs. 1–54.

Divides the genus *Synalpheus* into 6 groups, 64 species, and 32 subspecies, of which 4 groups, 25 species, and 21 subspecies are American. Discusses the interrelations of the different groups, gives keys and definitions and detailed figures of each American form. Closes with a list of extra-American species in the National Museum, and descriptions of new extra-American species not in the Museum, but mentioned in the paper.

GAY, M. E. (See under S. J. Holmes.)

HOLMES, SAMUEL J. The Amphipoda collected by the U. S. Bureau of Fisheries steamer Albatross off the west coast of North America in 1903 and 1904, with descriptions of a new family and several new genera and species.

Proc. U. S. Nat. Mus., XXXV, No. 1654, Nov. 20, 1908, pp. 489–543, figs. 1–46.

The collections studied embrace the amphipods obtained during the salmon investigations in 1903 and the cruise off southern California in 1904. Of the 38 species included, 25 are considered new; there are also 7 new genera and 1 new family.

HOLMES, S. J., and M. E. GAY. Four new species of isopods from the coast of California.

Proc. U. S. Nat. Mus., XXXVI, No. 1670, April 27, 1909, pp. 375–379, figs. 1–6.

HOLMES, S. J., and M. E. GAY—Cont'd.

The type material was collected at San Diego and vicinity by Dr. S. J. Holmes and presented to the U. S. National Museum. One of the figures was added by Dr. Harriet Richardson.

RATHBUN, MARY J. Description d'une nouvelle espèce de Pinnotheres de Porto Rico.

Bull. Mus. d'Hist. Nat., Paris, March, 1909, No. 2, pp. 68–70, one fig.

Description of a specimen of *Pinnotheres, P. serrei*, collected in Porto Rico by P. Serre, and sent to the U. S. National Museum for determination.

——— Collections recueillies par M. Maurice de Rothschild dans l'Afrique orientale anglaise. Crabes d'eau douce nouveaux.

Bull. Mus. d'Hist. Nat., Paris, May, 1909, No. 3, pp. 101–105.

A notice preliminary to the regular report of the expedition, in which the new forms will be figured. Of the 3 species of *Potamon* noted, 2 are described as new.

Part of the material is in the National Museum.

——— New crabs from the Gulf of Siam.

Proc. Biol. Soc. Wash., XXII, June 25, 1909, pp. 107–114.

Preliminary descriptions of 27 new species of crabs collected in the Gulf of Siam by Dr. Theodor Mortensen, 1899–1900. Also, new names are given to four old species.

RICHARDSON, HARRIET. Isopodes (2e Mémoire), in Expédition Antarctique Française (1903–1905) commandée par le Dr. Jean Charcot. Ouvrage

RICHARDSON, HARRIET—Continued.

publié sous les auspices du Ministère de l'Instruction Publique sous la direction de L. Joubin, Professeur au Muséum d'Histoire Naturelle, Paris. July, 1908, pp. 1–8, figs. 1–11.

This paper is based on material received subsequently to the first memoir on the same collection. Five new species are described, and 8 others are noted.

——— Description of a new isopod genus of the family Dajidæ.

Proc. U. S. Nat. Mus., XXXIV, No. 1618, Aug. 10, 1908, pp. 391, 392, figs. 1–3.

Colophryxus norangliæ, new genus and species, from deep water off the southern coast of New England, collected by the U. S. Fish Commission steamer "Albatross" in 1884.

——— Some new isopods of the superfamily Aselloidea from the Atlantic coast of North America.

Proc. U. S. Nat. Mus., XXXV, No. 1633, Oct. 30, 1908, pp. 71–86, figs. 1–20.

Describes 2 new genera and 9 new species and gives 1 new generic name to material of the Aselloidea collected in the earlier years of the U. S. Fish Commission and returned to the National Museum in 1907 by Prof. A. E. Verrill.

——— Some new isopods of the family Gnathiidæ from the Atlantic coast of North America.

Proc. U. S. Nat. Mus., XXXV, No. 1653, Nov. 20, 1908, pp. 483–488, figs. 1–7.

Describes three new species from the material collected in the earlier years of the U. S. Fish Commission and returned to the National Museum in 1907 by Prof. A. E. Verrill.

——— The isopod crustacean, Ancinus depressus (Say).

Proc. U. S. Nat. Mus., XXXVI, No. 1663, March 3, 1909, pp. 173–177, figs. 1–9.

Historical review of the species *Ancinus depressus* (Say), and description of a specimen collected by the U. S. Fish Commission in 1885 and contained in the material returned in 1907 to the U. S. National Museum by Prof. A. E. Verrill.

RICHARDSON, HARRIET—Continued.

——— Description of a new isopod of the genus Jæropsis from Patagonia.

Proc. U. S. Nat. Mus., XXXVI, No. 1675, May 13, 1909, pp. 421, 422, one fig.

Jæropsis patagonicusis was taken in 58 fathoms on the east coast of Patagonia during the cruise of the U. S. Fish Commission steamer "Albatross" around the Horn in 1888.

——— The isopod crustacean Acanthoniscus spiniger Kinahan redescribed.

Proc. U. S. Nat. Mus., XXXVI, No. 1678, May 15, 1909, pp. 431–434, figs. 1–6.

Gives a history of the species, and describes and figures a specimen obtained by H. G. Hubbard in Jamaica.

SHARPE, RICHARD W. A further report on the Ostracoda of the United States National Museum.

Proc. U. S. Nat. Mus., XXXV, No. 1651, Nov. 19, 1908, pp. 399–430, pls. L–LXV.

Second paper on the Ostracoda of the U. S. National Museum. A revised summary of the species in the Museum is followed by descriptions and figures. Four species are considered new. One of the plates is colored, showing the natural appearance of three species representing three different genera.

WILSON, CHARLES BRANCH. North American Parasitic Copepods: a list of those found upon the fishes of the Pacific coast, with descriptions of new genera and species.

Proc. U. S. Nat. Mus., XXXV, No. 1652, Dec. 10, 1908, pp. 431–481, pls. LXVI–LXXXIII.

Based chiefly on material from the marine laboratory at La Jolla and from various expeditions conducted by the Bureau of Fisheries.

WILSON, CHARLES BRANCH—Continued.
Five new genera and 17 new species are described. Concludes with an alphabetical list of hosts, with the parasites found on each.

WOLTERECK, R. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. N., commanding. XVIII. Amphipoda.

Bull. Mus. Comp. Zool., LII, No. 9, June, 1909, pp. 145–168, pls. I–VIII.

Deals with the *Hyperiidea gammaroidea*; gives a table of the two tribes and subtribes, families and genera of the tribe *Primitiva*, in which 3 new genera, 5 new species, and 1 new subspecies are described.

WOLTERECK, R.—Continued.

ECHINODERMS.

AGASSIZ, ALEXANDER. Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commisson steamer Albatross, from August, 1899, to March, 1900, Commander Jefferson F. Moser, U. S. N., commanding. XI. Echini: The Genus Colobocentrotus.

Memoirs Mus. Comp. Zool., XXXVI, No. 1, Nov., 1908, pp. i–viii, 1–33, pls. 1–46.

Describes and figures in detail the species *Colobocentrotus mertensii*, *C. stimpsoni*, *Pedophora atrata*, and *P. pedifera*.

——— and HUBERT LYMAN CLARK. Hawaiian and other Pacific Echini. The Salenidæ, Arbaciadæ, Aspidodiadematidæ, and Diadematidæ.

Memoirs Mus. Comp. Zool., XXXIV, No. 2, Sept., 1908, pp. 43–134, pls. 43–59, figs. *a–d*.

Dealing exclusively with the families Salenidæ, Arbaciadæ, Aspidodiadematidæ, and Diadematidæ, this paper gives a general review of the genera and species in each of these families, especially in reference to the pedicellariæ, which structures are described in great detail, with numerous figures. Hawaiian species are treated at length and figured. A new genus, *Eremopyga*, is erected for *Astropyga denudata* de Meijere.

CLARK, AUSTIN HOBART. On a collection of Feather-Stars, or Comatulids, from Japan.

Proc. U. S. Nat. Mus., XXXIV, No. 1615, July 15, 1908, pp. 305–319.

Based on a collection made by Mr. Alan Owston, of Yokohama, off southern Japan, which was purchased by Mr. Frank Springer and deposited in the U. S. National Museum; two new species are described, one of which is referred to *Comaster*, the other to *Thalassometra*.

CLARK, AUSTIN HOBART—Continued.

——— The genus Ptilocrinus.

Am. Naturalist, XLII, No. 500, July 31, 1908, pp. 541–543.

A review of a paper by Dr. F. A. Bather of the British Museum describing a second species of *Ptilocrinus* from the antarctic regions. The distribution of the recent crinoids is discussed, whereby it is shown that the entire western coast of America from the antarctic regions to Bering Straits is purely antarctic in so far as the crinoids are concerned, and, therefore, that the discovery of a second species in the antarctic of a genus originally known from British Columbia was only to have been expected.

——— The Nomenclature of the Recent Crinoids.

Proc. U. S. Nat. Mus., XXXIV, No. 1623, Aug. 25, 1908, pp. 435–542.

A list of all the generic and specific names which have ever been applied to recent crinoids is given, with the correct first reference, type locality, and present location of types of species, and types of genera, together with the derivation of the names. Two new names are suggested to replace preoccupied names.

——— The Axial canals of the recent Pentacrinitidæ.

Proc. U. S. Nat. Mus., XXXV, No. 1634, Oct. 30, 1908, pp. 87–91, figs. 1–16.

Gives diagrams of the course of the axial canals in the genera

CLARK, AUSTIN HOBART—Continued.

Isocrinus, Endoxocrinus, and *Metacrinus*, and shows the development of the *Endoxocrinus* type from the others; small stems of *Isocrinus* are shown to resemble the stems of the Bourgueticrinidæ.

——— The homologies of the arm joints and arm divisions in the recent crinoids of the families of the Comatulida and the Pentacrinitidæ.

Proc. U. S. Nat. Mus., XXXV, No. 1636, Oct. 30, 1908, pp. 113–131, figs. 1–28.

The homologies of the arm divisions and of the proximal postradial elements are traced throughout the two groups considered. On the basis of arm structure the recognition of Lovén's *Phanogenia* as distinct from *Comaster*, and of four recent genera, *Isocrinus, Hypalocrinus, Endoxocrinus*, and *Metacrinus* of recent pentacrinites, are suggested.

——— Some points in the ecology of recent crinoids.

Am. Naturalist, XLII, No. 503, November, 1908, pp. 717–726.

Theories are suggested to account for the increase of size with depth, the restriction of littoral crinoids to regions of heavy precipitation, and the coloration of the crinoids.

——— The recent crinoids and their relation to sea and land.

Geog. Journ. XXXII, No. 6, Dec., 1908, pp. 602–607.

This is substantially a reprint of two papers in the American Naturalist, "The genus Ptilocrinus", and "Some points in the ecology of the recent crinoids".

——— New genera and species of crinoids.

Proc. Biol. Soc. Wash., XXI, Dec. 10, 1908, pp. 219–232.

Thirteen new species and one new genus are described from the collections of the Museum at Copenhagen, Denmark.

——— Preliminary notice of a collection of recent crinoids from the Philippine Islands.

Smithsonian Misc. Colls., 52, Quar. Issue, Pt. 2, No. 1820, Dec. 23, 1908, pp. 199–234.

Based on the first consignment of crinoids received from the steamer Albatross as the result of her work among the Philippine Islands. Two new genera, *Comatella* (Comasteridæ) and *Eumetra* (Antedonidæ) and 20 new species are described, the latter belonging to the genera *Metacrinus, Catoptometra, Eudiocrinus, Himerometra* (?), *Cyllometra, Oligometra, Calometra* (2), *Ptilometra, Charitometra, Perometra, Eumetra, Iridometra*, and *Trichometra*; one of the species of *Himerometra* is from Port Denison, Australia.

CLARK, AUSTIN HOBART—Continued.

——— A revision of the crinoid families Thalassometridæ and Himerometridæ.

Proc. Biol. Soc. Wash., XXII, Jan. 9, 1909, pp. 1–22.

The species referable to the families Himerometridæ and Thalassometridæ are distributed among 25 genera, of which 17 are new.

——— The genus Encrinus.

Ann. Mag. Nat. Hist., 8th ser., III, No. 15, March, 1909, pp. 308–310.

A discussion of the type species of *Encrinus*.

——— Two new Australian crinoids.

Proc. Biol. Soc. Wash., XXII, March 10, 1909, pp. 39–42.

Gives descriptions of two new crinoids from the collections of the German steamer Gazelle.

——— Red Sea crinoids.

Am. Naturalist, XLIII, April, 1909, pp. 253–256.

A review of a paper on the same subject by Mr. Herbert C. Chadwick, adding a large amount of historical data.

——— New recent crinoids from the Indian Ocean.

Proc. Biol. Soc. Wash., XXII, April 17, 1909, pp. 75–86.

Ten new species are described from the collections made by the Royal Indian Marine Surveying steamer Investigator, distributed among the different genera as follows: *Eudiocrinus, Dichrometra, Cyllometra, Calometra* (2), *Crotalometra, Pachylometra* (2), *Eumetra*, and *Metacrinus*.

——— The type of the genus Comaster.

Proc. Biol. Soc. Wash., XXII, April 17, 1909, p. 87.

The type of the genus *Comaster* is shown to be the somewhat anomalous species *Alecto multifida* J. Müller.

CLARK, AUSTIN HOBART. Phototaxis among crinoids.

Proc. Biol. Soc. Wash., XXII, April 17, 1909, p. 87.

Records the capture of an immature comatulid which had been attracted to a submerged electric light.

——— Systematic position of Oligometra studeri.

Proc. Biol. Soc. Wash., XXII, April 17, 1909, p. 88.

Oligometra studeri is shown to belong in reality to the genus Cyllometra.

——— The recent crinoids and their relation to sea and land.

Science (n. s.), XXIX, No. 747, April 23, 1909, p. 677.

The probable attitude of *Uintacrinus* when living is discussed, and the ecological value of certain types of coloration suggested.

——— Comatilia, a remarkable new genus of unstalked crinoids.

Proc. U. S. Nat. Mus., XXXVI, No. 1668, April 27, 1909, pp. 361–367.

The larger divisions of the unstalked crinoids are discussed, and a new comasterid, resembling in many respects species of other families, is described.

——— On a collection of recent crinoids from the Philippine Islands.

Proc. U. S. Nat. Mus., XXXVI, No. 1673, May 13, 1909, pp. 391–410.

The second consignment of crinoids received from the steamer Albatross, now at work among the Philippine Islands, is treated in detail; 9 new species are described, belonging to the genera *Phanogenia*, *Comanthus*, *Pontiometra*, *Cenometra*, *Ptilometra*, *Stenometra*, *Crotalometra* (n. gen.), *Pachylometra*, and *Iridometra*; underbasals are demonstrated in *Hypalocrinus naresianus*.

——— The crinoids of the "Gazelle" Expedition.

Zool. Anzeiger, XXXIV, Nos. 11, 12, June 1, 1909, pp. 363–370.

The crinoids collected by the German steamer Gazelle on the west coast of Australia and at Timor and New Guinea are discussed in detail. A discussion of the faunal relations of Australia, and a complete bibliography of works on Australian crinoids, are also included.

CLARK, AUSTIN HOBART—Continued.

——— Revision of the crinoid family Comasteridæ, with descriptions of new genera and species.

Proc. U. S. Nat. Mus., XXXVI, No. 1685, June 7, 1909, pp. 493–507.

The history of the family Comasteridæ—the genus *Actinometra* of P. H. Carpenter—is discussed, and the family is shown to be divisible into 11 definite generic types; 5 new genera and 3 new species (types of new genera) are described.

——— Descriptions of seventeen new species of recent crinoids.

Proc. U. S. Nat. Mus., XXXVI, No. 1691, June 19, 1909, pp. 633–651.

Descriptions are given of a number of new crinoids dredged by the Investigator, co-types of which have been deposited in the U. S. National Museum, together with those of a few species collected by the Albatross.

——— Four new species of the crinoid genus Rhizocrinus.

Proc. U. S. Nat. Mus., XXXVI, No. 1693, June 19, 1909, pp. 673–676.

The genus Rhizocrinus is shown to consist, not of two very variable species, with a very great geographical and bathymetrical range, as supposed by Carpenter, but of several very constant species, each occupying a comparatively small range. Four new West Indian species are described.

——— New recent Indian crinoids.

Proc. Biol. Soc. Wash., XXII, June 25, 1909, pp. 143–151.

Sixteen new crinoids, mainly from the collections made by the Royal Indian Surveying steamer Investigator, are described, as follows: In the family Comasteridæ, one species each of *Comatula* and *Comaster*; in the Himerometridæ, one of *Mariametra* (n. gen.); in the Colobometridæ, two of *Cenometra* and one of *Cyllometra*; in the Tropiometridæ, two of *Asterometra*; in the Thalassometridæ, one each of *Crotalometra*, *Thalassometra*, and *Pachylometra*; in the Antedonidæ, one each of

CLARK, AUSTIN HOBART—Continued.

Psathyrometra and *Trichometra;* in the Pentacrinitidæ, one of *Hypalocrinus*, and in the Bourgueticrinidæ, two of *Bathycrinus*.

Part of the material is in the U. S. National Museum.

CLARK, HUBERT LYMAN. (See under Alexander Agassiz.)

EDWARDS, CHARLES LINCOLN. Variation, development, and growth in "Holothuria floridana", Pourtalés, and in "Holothuria atra", Jäger.

Biometrika, VI, Nos. 2 and 3, Sept., 1908 (published July, 1908), pp. 236–301, pls. I–V, figs. B–K.

The introduction gives a history of the subject and the author's methods of study. Under each of the 2 species discussed, are given statistics concerning the form and size of body, development and growth, color, tentacles and ampullæ, pedicels and papillæ, thickness of body wall, calcareous spicules and ring, Polian vesicles, etc.

——— Biometry as a method in taxonomy.

Am. Naturalist, XLII, No. 500, Aug., 1908, pp. 537–540.

Demonstrates the value of biometry as a method in taxonomy and illustrates by means of the holothurians, *Holothuria floridana* and *H. atra*.

WORMS, CŒLENTERATES, ETC.

ANNANDALE, NELSON. Fresh-water sponges in the collection of the United States National Museum. Part. I. Specimens from the Philippines and Australia.

Proc. U. S. Nat. Mus., XXXVI, No. 1690, June 19, 1909, pp. 627–632, figs. 1–4.

Describes 3 species, of which 2, collected in the Philippine Islands, are new.

BIGELOW, HENRY B. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. N., commanding. XVI. The Medusæ.

Memoirs Mus. Comp. Zool., XXXVII, Feb., 1909, pp. 1–243, pls. 1–48.

Records 72 species (17 new) including excellent examples of several little-known genera. Describes a series of stages in the development of *Pegantha smaragdina*, and demonstrates the occurrence of internal budding in *Cunina* and *Pegantha*. Of the plates, 3 are charts showing the route of the Albatross and the distribution of the species.

CUSHMAN, JOSEPH A. Ammodiscoides, a new genus of arenaceous foraminifera.

Proc. U. S. Nat. Mus., XXXVI, No. 1676, May 13, 1909, pp. 423, 424, pl. 33.

Described from specimens from the Gulf of Mexico, 1,181 fathoms collected by the U. S. Fish Commission steamer Albatross and referred by Dr. Goës to *Ammodiscus incertus* d'Orbigny.

HALL, MAURICE C. A new rabbit cestode, Cittotaenia mosaica.

Proc. U. S. Nat. Mus., XXXIV, No. 1629, Sept. 15, 1908, pp. 691–699, figs. 1–6.

A full description of the species which has been found parasitic in *Sylvilagus pinetis* in Colorado.

NUTTING, CHARLES C. Descriptions of the Alcyonaria collected by the U. S. Bureau of Fisheries steamer Albatross in the vicinity of the Hawaiian Islands in 1902.

Proc. U. S. Nat. Mus., XXXIV, No. 1624, Sept. 12, 1908, pp. 543–601, pls. XLI–LI.

A systematic synopsis of Hawaiian Alcyonaria, a table showing their geographical and bathymetrical distribution, and a record of the dredging stations at which Alcyonaria were obtained, precede the discussion of species. Of the 68 species, 39 are new.

NUTTING, CHARLES C. Alcyonaria of the Californian coast.

Proc. U. S. Nat. Mus., XXXV, No. 1658, Feb. 20, 1909, pp. 681–727, pls. LXXXIV–XCI.

The material forming the basis of this paper is the collection obtained by the U. S. Fisheries steamer Albatross in 1904, supplemented by material in the laboratories of the University of California and of Stanford University. A table showing the bathymetrical and geographical distribution of Californian Alcyonaria is followed by a systematic discussion and description of species. Fourteen are described as new.

STILES, C. W. The occurrence of a proliferating cestode larva (Sparganum proloferum) in man in Florida.

Trans. Sixth International Dermatological Congress (New York, Sept. 9–14, 1907), II, pp. 549–564, pls. XXIX–XXXIV.

STILES, C. W. Soil pollution in hookworm disease.

N. Y. Med. Jour., LXXXVII, No. 16, April 18, 1908, p. 758.

(Presented before the American Society of Tropical Medicine, at Baltimore, Maryland, March 28, 1908.)

——— Uncinarial infection.

Brit. Med. Jour., London, I, No. 2474, May 30, 1908, p. 131.

(Presented before the fifth annual meeting of the American Society of Tropical Medicine, Baltimore, Maryland, March 28, 1908.)

——— Soil pollution and hookworm disease in the South; their results and their prevention.

Mobile Med. Surg. Jour., XII, No. 5, 1908, pp. 193–203.

OCEANOGRAPHY.

CASPARI, W. A. (See under John Murray.)

LEE, G. V. (See under John Murray.)

MURRAY, JOHN, and G. V. LEE. Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, on the U. S. Fish Commission steamer Albatross, from August, 1899, to March, 1900, Commander Jefferson F. Moser, U. S. N., commanding. XII.

Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. N., commanding. XVII.

MURRAY, JOHN, and G. V. LEE—Cont'd. The depth and marine deposits of the Pacific.

Memoirs Mus. Comp. Zool., XXXVIII, No. 1, June, 1909, pp. 1–169, pls. 1–5, maps I–III.

Comprises extracts from Dr. Agassiz's preliminary reports bearing on the bottom deposits, a detailed description of the bottom samples collected during his two last expeditions, a concise description of the depths of the Pacific as now known, of the distribution of the various marine deposits, and of the percentage of calcium carbonate in the deposits, followed by general conclusions, and an appendix by W. A. Caspari describing a palagonitic tuff and a peculiar red clay.

BOTANY.

BRITTON, N. L., and J. N. ROSE. Thompsonella, a new genus of Crassulaceæ from Mexico.

Contr. U. S. Nat. Herb., XII, pt. 9, May 10, 1909, pp. 391, 392, pls. XLIV, XLV.

BRITTON, N. L., and J. N. ROSE. A new genus of Cactaceæ.

Journ. N. Y. Bot. Gard., IX, No. 107, Nov., 1908, pp. 185–188, pls. XLVIII–LII, one fig.

GREENE, EDWARD L. New species of the genus Mimulus.
Leaflets, II, Feb. 6, 1909, pp. 1–8.

——— New Western Asteraceæ.
Leaflets, II, Feb. 6, 1909, pp. 8–13.

——— New composites from Oregon, Washington, and Idaho.
Leaflets, II, Feb. 6, 1909, pp. 14–20.

——— New plants from Arizona.
Leaflets, II, Feb. 6, 1909, pp. 20–24.

——— Novitates Boreali-Americanæ. II.
Repertorium novarum specierum regni vegetabilis auctore F. Fedde, Band V, Nos. 93–98, Aug. 20, 1908, pp. 241–244.
Consists of descriptions of 1 species of *Antennaria* and 11 species of *Arabis*.

——— Argemone pleiacantha Greene.
Repertorium novarum specierum regni vegetabilis auctore F. Fedde, Band VI, Nos. 113–118, Dec. 31, 1908, p. 161.
Description of one species.

——— Novitates Boreali-Americanæ. III.
Repertorium novarum specierum regni vegetabilis auctore F. Fedde, Band VII, Nos. 131–133, April 1, 1909, pp. 1–6.
Consists of descriptions of 17 species of *Aconitum*.

HITCHCOCK, A. S. Catalogue of the grasses of Cuba.
Contr. U. S. Nat. Herb., XII, Pt. 6, March 23, 1909, pp. i–xi, 183–258.

MAXON, WILLIAM R. A new spleenwort from China.
Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, p. 411, pl. LX.
Description of *Asplenium microtum* Maxon, allied to *A. trichomanes*.

——— Studies of tropical American ferns—No. 2.
Contr. U. S. Nat. Herb., XIII, Pt. 1, June 30, 1909, pp. i–vii, 1–43, pls. I–IX, one fig.
The subjects are treated under the following headings: Notes upon ferns recently collected in Guatemala by Baron von Türckheim, with descriptions of several new species; The bipinnate species of *Cyathea*; A revision of the West Indian species of *Polystichum*; Descriptions of new species; Miscellaneous notes.

MAXON, WILLIAM R.—Continued.

PITTIER, HENRY. The Mexican and Central American species of Sapium.
Contr. U. S. Nat. Herb., XII, Pt. 4, Oct. 6, 1908, pp. i–v, 159–169, pls. X–XVII, figs. 7–10.

——— New or noteworthy plants from Colombia and Central America.
Contr. U. S. Nat. Herb., XII, Pt. 5, Jan. 22, 1909, pp. i–vii, 171–181, pls. XVIII, XIX, figs. 11–19.

ROSE, JOSEPH N. A new Opuntia from Arizona.
Smithsonian Misc. Colls., 52, Quar. issue, Pt. 2, No. 1815, Oct. 6, 1908, p. 153, pl. XII.

——— On Opuntia Santa-Rita, a species of cactus of ornamental value.
Smithsonian Misc. Colls., 52, Quar. issue, Pt. 2, No. 1818, Dec. 29, 1908, pp. 195, 196, pl. XV.

——— Studies of Mexican and Central American plants—No. 6.
Contr. U. S. Nat. Herb., XII, Pt. 7, April 12, 1909, pp. i–ix, 259–302, pls. XX–XXVII, figs. 20–48.

——— Rediscovery of Echeveria carnicolor.
Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, p. 393, pl. XLVI.

——— Three new species of Crassulaceæ from Guatemala.
Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, pp. 395, 396, pls. XLVII, XLVIII.

——— Rediscovery of Cereus nudiflorus.
Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, pp. 397, 398, pls. XLIX–LI.

——— A species of Pereskia from Guatemala.
Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, p. 399, pls. LII–LIV.

ROSE, JOSEPH N. New species of Opuntia from Arizona.

Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, pp. 401, 402, pl. LV.

——— Echinocereus baileyi, a new cactus from Oklahoma.

Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, p. 403, pls. LVI, LVII.

——— Nopalea lutea, a new cactus from Guatemala.

Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, p. 405, pl. LVIII.

ROSE, JOSEPH N. Conzattia, a new genus of Cæsalpiniaceæ.

Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, pp. 407, 408, pl. LIX.

——— Two new species of Acacia of the series Filicinæ.

Contr. U. S. Nat. Herb., XII, Pt. 9, May 10, 1909, p. 409.

——— (See also under N. L. Britton.)

STANDLEY, PAUL C. The Allionaceæ of the United States with notes on Mexican species.

Contr. U. S. Nat. Herb., XII, Pt. 8, April 23, 1909, pp. i–ix, 303–389, pls. XXVIII–XLIII, figs. 49–67.

GEOLOGY AND MINERALOGY.

BASSLER, RAY S. Cement materials of western Virginia.

Economic Geology, III, No. 6, Aug.–Sept., 1908, pp. 503–524.

This article is a digest of the author's more extensive report published in "Mineral Resources of Virginia", in 1907.

——— The formation of geodes with remarks on the silicification of fossils.

Proc. U. S. Nat. Mus., XXXV, No. 1637, Nov. 7, 1908, pp. 133–154, pls. XVIII–XXIV.

Contains a discussion of geodes in general, followed by a description of siliceous geodes occurring in sedimentary rocks. The majority of such geodes are found either at the surface or along zones reached by surface waters, and their origin is ascribed to the infiltration and deposition of silica along the fractures of more or less crushed fossils. Continued deposition of silica from the surface waters and the expansive force of the crystals results in a hollow rounded mass or geode, with remnants of the fossil sometimes observable on the outside.

——— (See also under William F. Pate.)

MERRILL, GEORGE P. Notes on Brazilian igneous rocks.

Commissão de Estudos das Minas de Carvão de Pedra do Brazil | — | Relatorio Final | Apresentado a | S. Ex. o. Sr. Dr. Lauro Severiano Müller | Ministro da Industria, Viação E Obras Publicas | por | I. C. White | Chefe da Commissão | — | Traducção | de | Carlos Moreira | Ex-Secretario da Commissão | — | Rio de Janeiro | Imprensa Nacional | 1908.

Royal 8vo., pp. 221–225.

The paper gives a description of a series of rocks collected by Dr. I. C. White and referred to Dr. Merrill for identification. The rocks are classed as diabases, basalts, diorites, granites, and andesites.

MERRILL, GEORGE P.—Continued.

——— The composition of stony meteorites as compared with that of terrestrial igneous rocks, and considered with reference to their efficacy in world-making.

Amer. Jour. Sci., 4th ser., XXVII, No. 162, June, 1909, pp. 469–474.

The paper gives an average of 99 analyses of meteoric stones, comparing the same with the analyses of terrestrial igneous rocks, and comments on the insufficiency of such as world-building materials.

PATE, WILLIAM F., and RAY S. BASSLER. The late Niagaran strata of West Tennessee.

Proc. U. S. Nat. Mus., XXXIV, No. 1621, Aug. 18, 1908, pp. 407–432.

In this article, based upon field explorations by the U. S. National

PATE, WILLIAM F., and RAY S. BASSLER—Continued.

Museum, detailed sections of the strata are given, followed by a revised classification and composite section of the rocks of the area.

TASSIN, WIRT. On the occurrence of calcium sulphide (Oldhamite) in the Allegan meteorite.

Proc. U. S. Nat. Mus., XXXIV, No. 1622, Aug. 19, 1908, pp. 433, 434.

While working over some fragments of the Allegan, Michigan, meteoric stone, it was noted that certain portions gave a marked evolution of hydrogen sulphide under conditions that led to the belief that some other sulphide than troilite was present. Further

TASSIN, WIRT—Continued.

analysis led to the conclusion that the mineral thus decomposed was Oldhamite, though the same was not determined microscopically.

——— On meteoric chromites.

Proc. U. S. Nat. Mus., XXXIV, No. 1628, Sept. 15, 1908, pp. 685–690.

The writer gives the results of his own analyses on chromites from the Admire, Mt. Vernon, Cañon Diablo, Hendersonville, and Allegan meteorites, comparing them with other available analyses, and concludes that "the majority of the meteoric chromites contain magnesia and alumina; and that there is little, if any, relation existing between the amounts of the constituent oxides."

PALEONTOLOGY.

ARNOLD, RALPH. Descriptions of new Cretaceous and Tertiary fossils from the Santa Cruz Mountains, California.

Proc. U. S. Nat. Mus., XXXIV, No. 1617, Aug. 8, 1908, pp. 345–390, pls. XXXI–XXXVII.

Includes a discussion of the geologic formations of the Santa Cruz Mountains region, followed by descriptions and figures of 35 new species and 2 new varieties.

——— Description of a new brittle star from the Upper Miocene of the Santa Cruz Mountains, California.

Proc. U. S. Nat. Mus., XXXIV, No. 1620, Aug. 17, 1908, pp. 403–406, pl. XL.

Describes and figures *Amphiura sanctæcrucis*, sp. nov.

BASSLER, RAY S. The Nettelroth collection of invertebrate fossils.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 2, No. 1814, Sept. 23, 1908, pp. 121–152, pls. IX–XI.

Contains a biographical sketch of Henry Nettelroth, followed by a description of the geologic sections, with illustrations of the principal localities from which the bulk of the collection was obtained. A list of the types contained in the collection is included.

BASSLER, RAY S. Some noteworthy accessions to the Division of Invertebrate Paleontology in the National Museum.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 2, No. 1823, Jan. 30, 1909, pp. 267–269, pls. XVII, XVIII.

Describes and illustrates a slab of *Uintacrinus socialis*, recently deposited in the National Museum by Mr. Frank Springer, of Burlington, Iowa. Also records the acquisition, by gift from Mr. Springer, of the W. F. Pate collection of Paleozoic fossils, consisting of about 50,000 specimens.

——— (See also under Edward O. Ulrich.)

BRANNER, JOHN CASPER. (See under David Starr Jordan.)

GIDLEY, JAMES WILLIAMS. Descriptions of two new species of Pleistocene ruminants of the genera Ovibos and Boötherium, with notes on the latter genus.

Proc. U. S. Nat. Mus., XXXIV, No. 1627, Sept 15, 1908, pp. 681–684, pls. LVII–LIX.

Describes 2 new species of Pleistocene bovines, *Ovibos yukonensis* and *Boötherium sargenti*, and discusses briefly the relationships of the genus *Boötherium*.

GIDLEY, JAMES WILLIAMS—Continued. The new species *Oribos* is based on National Museum material from Alaska. The species Boötherium is founded on a specimen now in the Kent Scientific Museum of Grand Rapids, Michigan.

——— Notes on the fossil mammalian genus Ptilodus, with descriptions of new species.

Proc. U. S. Nat. Mus., XXXVI, No. 1689, June 19, 1909, pp. 611–626, pl. 70.

This article includes a revision of the species of the genus *Ptilodus*, and a new species is proposed with a detailed description of the skull, lower jaws, and such parts of the skeleton as are preserved in the type specimen. The affinities of the genus, and the relationships of the multituberculate group as a whole, are also briefly discussed, and a few notes are added on the probable habits of *Ptilodus*.

GILMORE, CHARLES W. Osteology of the Jurassic reptile Camptosaurus, with a revision of the species of the genus, and descriptions of two new species.

Proc. U. S. Nat. Mus., XXXVI, No. 1666, April 17, 1909, pp. 197–332, pls. 6–20, figs. 1–48.

The early part of the paper is devoted to a detailed account of the osteological structure of Camptosaurus, which is followed by a discussion of the genus and a systematic description and revision of the species. Two new species, *Camptosaurus browni* and *C. depressus*, are described. In conclusion, the geographical and geological distribution of the genus is discussed, with a few remarks on the restoration of *Camptosaurus*.

GIRTY, GEORGE H. On some new and old species of Carboniferous fossils.

Proc. U. S. Nat. Mus., XXXIV, No. 1614, July 14, 1908, pp. 281–303, pls. XIV–XXI.

Contains descriptions of 4 new genera, 11 new species, and 1 new variety of Carboniferous fossils, all of which are figured.

HAY, OLIVER P. The fossil turtles of North America.

Carnegie Institution of Washington, Washington, 1908, pp. 1–568, pls. 1–13, figs. 1–704.

This work is based partly on the materials in the paleontological collection of the U. S. National Museum, and it aims to give a detailed description of all the species, 266 in number, known up to the date of publication. Of these 76 species are new. Most of the species are figured. They are referred to the following superfamilies: *Amphichelydia*, *Pleurodira*, *Cryptodira*, and *Trionychoidea*. The descriptive part of the book is preceded by sections on the osteology of the living families of the order, on the modifications which turtles have undergone since their earliest appearance, on their primary and secondary characters, on the classification of the order, its derivation, and on the geographical and geological distribution.

——— On certain genera and species of carnivorous dinosaurs, with special reference to *Ceratosaurus nasicornis* Marsh.

Proc. U. S. Nat. Mus., XXXV, No. 1648, Oct. 31, 1908, pp. 351–366, figs. 1–4.

The paper here recorded deals first with the species referred by Marsh to the genus *Labrosaurus*, and a doubt is expressed as to the affinity of these species. The relationship of these species to Leidy's *Antrodemus valens* is questioned. The differences between *Allosaurus* and *Creosaurus*, both Marsh's genera, are discussed. The relationships of the genera *Deinodon*, *Dryptosaurus*, and *Albertosaurus* are considered. The greater part of the paper is devoted to a description of the skull which belongs to the type specimen of *Ceratosaurus nasicornis* Marsh.

———. Descriptions of five species of North American fossil turtles, four of which are new.

Proc. U. S. Nat. Mus., XXXV, No. 1640, Nov. 9, 1908, pp. 161–169, pls. XXVI, XXVII, figs. 1–3.

The fossil turtles here described

HAY, OLIVER P.—Continued.

are all in the U. S. National Museum. The hinder half of the carapace of *Glyptops plicatulus* (Cope) presents two suprapygals, instead of one. The sulci defining the scutes of the carapace are traceable without difficulty. *Hoplochelys cælata* is a dermatemyd from the Fort Union of Montana. *Echmatemys rivalis* comes from the Wasatch beds of Sweetwater County, Wyoming. It resembles *E. lativertebralis* (Cope). *Terrapene longiusula* is from the Upper Miocene or the Lower Pliocene of Phillips County, Kansas. It is represented by the skull, the shell complete, and some other parts of the skeleton. *Aspideretes granifer* is a trionychid from the Judith River beds of Montana. With the exception of the first, all of the species described are new.

———. On the skull and brain of Triceratops, with notes on the braincases of Iguanodon and Megalosaurus.

Proc. U. S. Nat. Mus., XXXVI, No. 1660, Feb. 6, 1909, pp. 95–108, pls. 1–3.

The paper describes first the identity of certain bones of the rear of the skull of *Triceratops*. The conclusion reached is that the bone which has hitherto been called the supraoccipital is really the parietal, while the true supraoccipital is ankylosed to the exoccipitals and forms the roof over the cavity for the medulla oblongata. The median bone of the great nuchal frill has hitherto been called the parietal, but is here regarded as either the coalesced supra-temporals or nuchal bones.

From the skull which had furnished Marsh with a cast of the brain cavity, a new cast was made, and this is described at length and figured. An attempt is also made to determine the boundaries of the various bones entering into the formation of the brain case.

———. Description of two species of fossil turtles, Toxochelys stenopora and Chisternon? interpositum, the latter hitherto unknown.

Proc. U. S. Nat. Mus., XXXVI, No. 1665, April 8, 1909, pp. 191–196, pl. 5.

The specimen of *Toxochelys stenopora* here described furnishes a large part of the carapace, nearly the whole of the plastron, all of the skull bones, and some of the limb bones. Most of the bones are in a disturbed condition, but those of the plastron are mostly in place. The epiplastra and the entoplastron are present, bones not hitherto known in the genus.

The specimen supposed to belong to *Chisternon* was found in the Fort Union formation, in Carbon County, Montana. It represents the anterior two-thirds of the shell.

JORDAN, DAVID STARR, and JOHN CASPER BRANNER. The Cretaceous fishes of Ceara, Brazil.

Smithsonian Misc. Colls., 52, Quar. issue, Pt. 1, No. 1793, April 29, 1908, pp. 1–29, pls. I–VIII.

KNOWLTON, FRANK HALL. Description of new fossil liverwort from the Fort Union beds of Montana.

Proc. U. S. Nat. Mus., XXXV, No. 1639, Nov. 9, 1908, pp. 157–159, pl. XXV.

———. The stratigraphic relations and paleontology of the "Hell Creek Beds", "Ceratops Beds", and equivalents, and their reference to the Fort Union formation.

Proc. Wash. Acad. Sci., XI, No. 3, Aug. 14, 1909, pp. 179–238.

MOODIE, ROY L. A contribution to a monograph of the extinct Amphibia of North America. New forms from the Carboniferous.

Journ. Geol., XVII, No. 1, Jan.-Feb., 1909, pp. 38–82, figs. 1–24.

PALMER, WILLIAM. Description of a new species of leatherback turtle from the Miocene of Maryland.

Proc. U. S. Nat. Mus., XXXVI, No. 1669, April 27, 1909, pp. 369–373, pl. 31.

Describes the new species *Psephophorus calvertensis*, the type specimen of which is in the National Museum collection. The paper closes with a list of the species referred to this genus.

RATHBUN, MARY J. Descriptions of fossil crabs from California.

Proc. U. S. Nat. Mus., XXXV, No. 1647, Nov. 14, 1908, pp. 341–349, pls. XLV–XLIX.

Based on material in the National Museum collected from the Tertiary and Cretaceous of California by Ralph Arnold. The following genera and species are described: *Loxorhynchus grandis* Stimpson, *Cancer fissus*, new species, *Branchiolambrus altus*, new genus and species, and *Archæopus antennatus*, new genus and species.

ULRICH, EDWARD O., and RAY S. BASSLER. New American Paleozoic ostracoda. Preliminary revision of the Beyrichiidæ, with descriptions of new genera.

Proc. U. S. Nat. Mus., XXXV, No. 1646, Nov. 10, 1908, pp. 277–340, pls. XXXVII–XLIV.

Contains a detailed discussion of the various genera of the family Beyrichiidæ, preceded by historical and other notes upon the family as a whole. Six new genera are proposed, while 7 groups are recognized in the genus *Beyrichia*.

WALCOTT, CHARLES D. Mount Stephen rocks and fossils.

The Canadian Alpine Journ., I, No. 2, Sept. 1908, pp. 232–248, pls. 1–4.

A semi-popular paper giving a detailed stratigraphic section of rocks exposed in Mount Stephen, near Field, British Columbia. Particular attention is paid to the fauna of the so-called "fossil bed" on the northwest face of the mountain, all of the characteristic and striking forms being figured. The paper is accompanied by photographs showing the general relations of the section, and of the "fossil-bed".

——— Cambrian geology and paleontology. No. 3. Cambrian Brachiopoda; descriptions of new genera and species.

Smithsonian Misc. Colls., LIII, No. 1810, Oct. 1, 1908, pp. 53–137, pls. 7–10.

Describes 5 new genera, 3 new subgenera, 58 new species, and 6 new varieties of Brachiopoda, three of the new species and one of the new varieties being from rocks of Ordovician age. The genus *Nevobolus* is redefined, described, and discussed.

WALCOTT, CHARLES D.—Continued.

——— Cambrian geology and paleontology. No. 4. Classification and terminology of the Cambrian Brachiopoda.

Smithsonian Misc. Colls., LIII, No. 1811, Oct. 13, 1908, pp. 139–165, pls. 11, 12.

This paper was published in advance of Monograph LI of the U. S. Geological Survey, on "Cambrian Brachiopoda", and contains diagrams showing the distribution of the families and the evolution of the genera of the Brachiopoda represented in the Cambrian rocks, together with a scheme of classification and a glossary of the terms used in describing the Brachiopoda. These will be incorporated in the introduction to the Monograph on the Brachiopoda.

——— Cambrian geology and paleontology. No. 5. Cambrian sections of the Cordilleran area.

Smithsonian Misc. Colls., LIII, No. 1812, Dec. 10, 1908, pp. 167–230, pls. 13–22.

Gives detailed stratigraphic sections of the rocks exposed in the House Range, Utah; near Waucoba Springs, California; near Barrel Spring, Nevada; in Blacksmith Fork Canyon, Utah; on the Dearborn River, Montana; and in Mount Bosworth, British Columbia; together with photographs showing the general relations of some of the sections, and the relations of some of the formations in detail.

WHITE, DAVID. Fossil flora of the coal measures of Brazil.

Commissão de Estudos das Minas de Carvão de Pedra do Brazil | — | Relatorio Final | Apresentado a | S. Ex. o. Sr. Dr. Lauro Severiano Müller | Ministro da Industria, Viação E Obras Publicas | por | I. C. White | Chefe da Commissão | — | Traducção | de | Carlos Moreira | Ex-Secretario da Commissão | — |

WHITE, DAVID—Continued.

Rio de Janeiro | Imprensa Nacional | 1908

Royal 8vo., pp. 337–617, pls. V–XIV.

WILLISTON, S. W. "The oldest known reptile." — Idodectes punctulatus Cope.

Journ. Geol., XVI, No. 5, July-Aug., 1908, pp. 395–400, figs. 1, 2.

Describes and figures under the name *Isodectes copei*, a specimen belonging to the National Museum formerly figured by Cope as *Isodectes punctulatus*.

WOOD, ELVIRA. A critical summary of Troost's | unpublished manuscript on | the crinoids of Tennessee | by | Elvira Wood | of Columbia University, New York City | (Seal) | Washington | Government Printing Office | 1909

Bull. U. S. Nat. Mus., No. 64, May 8, 1909, pp. i–vi, 1–150, pls. 1–15.

A study of Troost's manuscript upon the crinoids of Tennessee, in connection with his collection of these organisms now preserved in the U. S. National Museum.

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