

clavatum and *L. complanatum* should be so extended as to include Iowa, as shown by Professor Shimek's recent list of Iowa Pteridophyta.

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MUSEUM NOTES.

PUBLICATIONS OF THE CARNEGIE MUSEUM.

WITH the issue of No. 1 of the *Annals of the Carnegie Museum*, this rapidly growing institution enters upon its career as a museum of publication; the publications are to appear as *Annals* and *Memoirs*, the first in octavo form, the second in quarto, and they are to be published from time to time as material is provided. In the 'Museum Notes,' with which this number of the *Annals* begins, it is stated that the Museum is to re-open the quarry at Como, Wyoming, where Professor Marsh obtained a number of his best specimens, including a number of skulls of Dinosaurs. The first systematic paper is by E. B. Williamson, on 'The Crayfish of Allegheny County, Pa.,' and describes six species. John A. Shafer gives a 'Preliminary List of the Vascular Flora of Allegheny County, Pennsylvania,' stating that it is issued largely as an incentive to others to participate in the preparation of a fuller, more complete catalogue. While the order of arrangement is that of Gray's Manual, the author states that this is selected merely as a matter of convenience and that he is fully in accord with the nomenclature of the most recent authors. The data on which the species are admitted to the list are indicated by means of signs. J. B. Hatcher notes 'Some New and little known Fossil Vertebrates,' showing that *Platacodon nanus* is unmistakably a fish and describing the character of the dermal covering of *Claosaurus*. Of special interest is a description of the principal characters of a primitive rhinoceros, *Trigonias osborni*, of which Mr. Hatcher was so fortunate as to secure an almost complete example, the species having been founded on the anterior part of the upper jaw and a ramus of the lower jaw. The dentition was noted as of a primitive type since three incisors and a canine were present on either side of the upper jaw. The rest of

the skeleton agrees with this, the superior molars being simple in their structure, while there are four digits in the forefoot. D. A. Atkinson gives a list of 'The Reptiles of Allegheny County, Pennsylvania,' prefacing the paper with the remark that civilization means the destruction of a certain portion of the natural fauna of a region and that many species now rare in Allegheny County must have formerly been abundant, while two species have been exterminated within the last forty years, these being the prairie and the mountain rattlesnakes. In all, thirty-four species of reptiles are recorded. The concluding paper of the part is by R. W. Shufeldt on the 'Osteology of the Herodiones,' and contains a detailed description of the native genera of the group and with some foreign forms.

THE FIELD COLUMBIAN MUSEUM.

THE *Annual Report of the Director* of the Field Columbian Museum for 1899 1900 shows a marked increase of the collections in the line of anthropology, mainly in the way of material collected from the Hopi Indians and from the western States, through expeditions sent out. In botany is noted the accession of the Patterson herbarium of 30,000 North American plants, and a series of a thousand specimens from California and Colorado. A special form of herbarium case is described and figured which is said to combine freedom of access with security from insects and the exclusion of dust. Good progress has been made in cataloguing and labeling and a large number of books and pamphlets have been added to the library, making the present total somewhat over 24,000 titles. Two courses of eight lectures each were given during the year. The total number of visitors is not stated, but we are told that there was an increase of 42,595 over the previous year. The frontispiece of the report is an excellent portrait of the late George M. Pullman, and there are a number of full-page plates showing some of the ethnological and anthropological exhibits, among them two of Mr. Akeley's fine groups of African antelopes.

THE SOUTH AFRICAN MUSEUM.

PARTS IV. and V. of the *Annals of the South African Museum* are to hand, the former con-

taining a detailed description of 'The Anatomy of *Opisthopatus cinctipes* Purc., with notes on other, principally South African, Onychophora,' by W. F. Purcell, including the color variations, number of legs and distribution of the species. Part V. contains a 'Description of New Species of South African Pselaphidæ,' by Achille Roffray; 'Description of Seven New Species of the Family Mutillidæ,' by L. Péringue, and 'Description of a New Species of the Genus *Japyx*,' by the same author.

F. A. L.

AQUATIC RESOURCES OF THE HAWAIIAN ISLANDS.

IN compliance with a resolution of Congress, Hon. George M. Bowers, United States Commissioner of Fish and Fisheries, is arranging to send an expedition to the Hawaiian Islands to make a comprehensive study of the fishes and other aquatic resources of those islands. The investigations will be under the immediate direction of Dr. David Starr Jordan, President of Stanford University, and Dr. Barton W. Evermann, the ichthyologist of the Commission, who will have the assistance of a number of experts.

It is the intention to make the investigations sufficiently comprehensive to enable the Commission to publish a very exhaustive report on the subject. The investigations during the present summer will be by shore parties and will pertain chiefly to the following lines:

1. A thorough qualitative and quantitative study of the commercial and shore fishes, mollusks, crustaceans and other aquatic animals and plants. Attention will be given to the actual and relative food values and commercial importance of the different species, their migrations, spawning time and place, food, feeding habits, enemies, maximum and average size, and other important facts in their life-histories.

2. The methods, extent and history of the fisheries, the kinds of apparatus used, the manner of using each and the species taken in each; the manner of caring for, and disposing of, the catch; the statistics of the fisheries, value of each kind of apparatus; number and nationality

of people engaged in fishing; quantity and value of each species caught, and prices paid the fisherman, also the wholesale and retail prices; and changes in the methods of the fisheries since the coming of Americans, Europeans and Asiatics to the islands will be investigated.

3. The development of proper and just fishery laws will receive special consideration; the history of fishery legislation, including the system of tabu, and the present laws and methods with reference to each species covered by any law, special or general, and the possibility of trade in fishery products with the United States, improvement in the methods of the fisheries, and the methods of handling and marketing the fish will receive careful consideration. Attention will also be given to the possibility of fish-cultural operations with reference to such species as may be in danger of extinction or serious diminution.

Drs. Jordan and Evermann will sail for Honolulu May 30th and remain until September, when they will return to America and submit a preliminary report to Commissioner Bowers. Subsequently, they will return to Honolulu with the *Albatross* and make a study of the deep-water fauna of the islands.

The other members of the present expedition will be Dr. O. P. Jenkins, of Stanford University, Messrs. E. L. Goldsborough and John N. Cobb, of the United States Fish Commission, and Messrs. A. H. Baldwin and C. B. Hudson, who will paint in life colors the more important food-fishes of the islands. Messrs. Hudson and Baldwin are the artists who made the very accurate and beautiful colored drawings reproduced in Dr. Evermann's recent book on the Fishes and Fisheries of Porto Rico, of which Congress ordered the printing of an extra edition of 7,500 copies. It is expected that the Hawaiian report will be even more handsomely illustrated than is the report on Porto Rican fishes.

4. Mr. William H. Ashmead, Assistant Curator, Division of Insects, U. S. National Museum, will also accompany the expedition, and will make special efforts toward increasing our knowledge of the insect fauna of the archipelago.