

In Part IV. Dr. Dall has greatly enlarged on the subject, giving a complete synopsis of many of the leading generic groups of American Tertiary species. Upwards of 500 species and varieties are enumerated, including 152 new to science. These are shown on 13 plates containing 244 figures.

The Pliocene fauna is closely allied to the recent, and Dr. Dall in his investigation has been obliged to make so many changes in nomenclature, that the work is indispensable to the paleontologist and conchologist.

In 1893 Professor Dall edited the republication of Conrad's 'Fossils of the Medial Tertiary of the United States' a work of 136 pages and 49 beautifully executed plates. In 1898 he wrote for the Transactions (Vol. 5), Notes on the Paleontological Publications of Professor William Wagner. Several plates prepared by Professor Wagner in 1839, but never published with text, were found in the Institute library. The plates were new species of fossils from the Carolinas for which credit was given in Brown's Index Paleontologicus, but there was no record of the original paper.

Professor Wagner doubtless had the plates prepared for the Journal of the Academy of Natural Sciences, and afterwards contented himself with sending the plates to his correspondents.

THOMAS L. MONTGOMERY.

PHILADELPHIA, Nov. 10, 1899.

THE CARNEGIE INSTITUTE.

THE fourth annual celebration of Founder's Day, of the Carnegie Institute at Pittsburg, was held on November 2d. President Arthur T. Hadley, who was the guest of honor, presented an address upon 'Modern Changes in Educational Ideals.'

Mr. Samuel H. Church, the secretary of the Board of Trustees, read the annual report of the progress of the year in all departments of the Institute, stating that a considerable plot of land had been secured to the east of the buildings for additions already planned, which are to provide space for a permanent picture gallery, an art school, and for the scientific museum.

The department of paleontology, recently established under the curatorship of Dr. Wortman, has progressed rapidly. The expedition

to Wyoming this summer has resulted in the securing of a large collection of unusually fine fossil bones of extinct vertebrates.

Several addresses upon art were given, and the announcement was made of the prizes awarded for paintings entered in the Carnegie Institute exhibit for 1899.

Dr. J. L. Wortman then reported on the work of the museum in paleontology.

HARLAN I. SMITH.

ALCOHOL AS FOOD.*

BULLETIN No. 69 of the Office of Experiment Stations of the U. S. Department of Agriculture gives the first detailed accounts of a number of experiments lately made by the Department in coöperation with Wesleyan University and the Storrs Experiment Station, under the immediate direction of Professor W. O. Atwater. These experiments were made with men in the Atwater-Rosa respiration calorimeter described in Bulletin No. 63 of the Office Experiment Stations. The object of the inquiries is the study of the laws of nutrition. Each experiment lasts from four to twelve days, during which time the man under experiment lives day and night in the chamber of the calorimeter. He has different kinds and amounts of food, and is under different conditions of activity, from actual rest to severe muscular or mental work. The results show how the body uses its food, what materials are needed for its support, and how different food materials compare in nutritive value. The six experiments reported in Bulletin No. 69 were made with a variety of dietaries and in two of them alcohol made a part of the diet.

The general plan of the experiments consists first in finding a diet of ordinary food materials, such as meat, potatoes, bread, and coffee, which is sufficient to meet the demands of the man's body when he is at rest, and in determining just how much of the different materials must be added to meet the increased demands when the man is engaged in more or less severe muscular work. Arrangements are made by which all the food and drink supplied to the body, and

* From the Division of Publications, United States Department of Agriculture.