

face was high in relation to the width, leptoprosopic." "The lower jaw had a well-defined angle, the body of the bone was massive in the males, and with a pronounced chin."

So much for this first memoir, which leaves to be desired only greater numbers of specimens from some of the counties and, especially with the relation to cranial capacity, estimates of height of the individuals. A second memoir, to contain an account of prehistoric Scottish skulls, as well as 'a discussion of the character of Scottish crania and heads in their general ethnographical relation to prehistoric races in Britain, and to the people of the adjoining part of the continent of Europe' is to follow.

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#### VERTEBRATE PALEONTOLOGY AT THE CARNEGIE MUSEUM.

THROUGH the continued generosity of Mr. Carnegie the usual activity has been maintained during the past year in the Department of Vertebrate Paleontology at this museum.

*The Bayet Collection of Fossils.*—Negotiations begun more than a year ago by the present writer resulted in July in the acquisition of the paleontological collections of Baron de Bayet of Brussels, Belgium. This collection is especially rich in Mesozoic vertebrates from Solenhofen, Cerin, Holzmaden, Lyme Regis and the province of Benevento, Italy; in Tertiary fishes and other vertebrates, invertebrates and plants from the famous locality of Monte Bolca, near Verona, Italy; from Armissan, near Narbonne, France; from the Belgian Tertiaries; from Sicily, etc. It also contains large and valuable collections of insects and other invertebrates from the Solenhofen beds of Bavaria, a superb collection of European cephalopoda from the Mesozoic and of Paleozoic trilobites and other invertebrates.

Though containing no types and little that is new to paleontology, its acquisition by an American museum is of importance as making accessible for the first time to American stu-

dents any considerable collection of European vertebrates without the necessity of a trip to Europe. Dr. C. R. Eastman has undertaken to prepare a memoir descriptive of the fishes in the collection, and it is the desire of the curator of the department to arrange for the treatment of the other groups in a similar manner by equally competent specialists, so that the material in the collection may be made known and available for purposes of comparison to students of paleontology.

It will doubtless be many years before a similar opportunity will present itself for acquiring at a single stroke so large and varied a collection of European fossil vertebrates, and American paleontologists are indebted to Mr. Carnegie for his generosity in supplying the funds necessary for the purchase of this valuable collection.

*Field Work during the Season of 1903.*—During the season just drawing to a close four parties have been engaged, under the general direction of the curator, in studying the geology and in collecting vertebrate and other fossils from various Tertiary, Mesozoic and other horizons of the west, chiefly in Kansas, Wyoming and Montana.

Pursuant to a general plan undertaken some time since, Mr. Earl Douglass has continued his explorations of the Tertiary lake basins of western Montana and has been successful in securing considerable collections representative of the fossil faunas and floras of those deposits. Of greatest importance among the results of his labors in that region may be mentioned the discovery of Oligocene beds referable to the White River and containing the remains of a rich and varied vertebrate fauna in a good state of preservation. Heretofore the White River formations of that region have yielded comparatively few and for the most part poorly preserved vertebrates. In addition to his work in the Tertiary Mr. Douglass was also able to make some interesting collections from, and observations relating to the Carboniferous and Permian(?) of that region.

During the earlier part of the season Mr. C. W. Gilmore was engaged in completing the

work in a Jurassic dinosaur quarry opened by him during the preceding season at the base of the Freezeout Mountains in southern Wyoming. After successfully completing this work he began, early in June, explorations in the chalk (Niobrara) of western Kansas, where he was joined by Dr. E. H. Sellards as assistant. It is the earnest desire of the curator of this department that the paleontological collections of the museum shall eventually represent in a creditable manner the faunas of all the more important fossil-bearing horizons of our own country at least. It was with the idea of acquiring such a representative collection of Niobrara fossils that the work in Kansas by Mr. Gilmore and Dr. Sellards was undertaken. Already some forty-five boxes of material have been collected and we hope to continue the work in this formation for some years.

Mr. W. H. Utterback completed the unearthing of the splendid skeleton of *Diplodocus*, discovered by him the preceding year in the Jurassic deposits on the Red Fork of Powder River at the foot of the Big Horn Mountains in central Wyoming. In this same region he also secured considerable portions of the skeletons of two other colossal Jurassic dinosaurs. In the latter part of August Mr. Utterback was transferred to central Montana to continue the work in the Cretaceous of that region carried on during the month of August by the present writer. In this field considerable new and interesting material has been discovered, coming chiefly from the Judith River beds.

*Research Work.*—In research, beside several shorter papers by the curator, Mr. Douglass and Mr. Gilmore, there have appeared or are now in press an important paper by Mr. Douglass on the vertebrate fauna of the Tertiary lake beds of Montana (*Annals Carnegie Museum*, Vol. 2, pp. 145–199 with Plate and 37 figures in the text); a paper by the present writer on the ‘Oligocene Canidæ’ (*Memoirs Carnegie Museum*, Vol. I., No. II., pp. 65–108, 6 plates and 7 figures in text) and another by the same author on the ‘Osteology of *Haplocanthosaurus*’ (*Memoirs Carnegie Mu-*

*seum*, Vol. II., No. I., pp. 1–75, 6 plates and 30 figures in text).

The most important additions to the exhibition series during the year have been the skeleton of *Daphænus felinus* mounted by Mr. A. S. Coggeshall and the skeletons of a Loup Fork camel and of an Oligocene sabretoothed cat (*Hoplophoneus*) mounted by Mr. O. A. Paterson. Two splendid skeletons of *Ichthyosaurus* have also been placed on exhibition.

Considerable progress has also been made in the preparation of casts of the skeleton of *Diplodocus carnegii* for exchange with other museums.

J. B. HATCHER,

*Curator Vertebrate Paleontology.*

CARNEGIE MUSEUM,  
October 6, 1903.

#### ETHNOLOGICAL AND ARCHEOLOGICAL SURVEY OF CALIFORNIA.

For several years the University of California, through its Department of Anthropology and by the liberal assistance of Mrs. Phoebe A. Hearst, has been engaged in an Ethnological and Archeological Survey of the State. A large amount of material, illustrative of Indian life and culture in past and present times, has been obtained and will form an important part of the anthropological collections which will in the future be exhibited in a museum of the university at Berkeley. At the present time this collection, with others of the department, is temporarily placed in one of the buildings of the affiliated colleges belonging to the University in San Francisco. Here the large and valuable collections are safely cared for until the permanent museum building is secured.

Systematic explorations are being made of the later gravel deposits, of several caves, and of the ancient shellheaps, in order to ascertain when man first occupied this region. The languages of the existing Indians are being studied by experts of the department; the customs and mythology of the different tribes are being carefully recorded; and collections illustrating their arts are being formed for the museum. A study of the physical characters of the various groups of Indians, combined