

4. LARAMIE BEDS at Judith River (*Rep. Hayden Survey*, vol. ix., 4to), according to Meek, in the lower part: *Unio Dana* and *U. Deweyi*, *Viviparus*, *Goniobasis*, *Sphaerium*, *Planorbis*, *Ostrea subtrigonalis*; in the upper part: *Ostrea subtrigonalis* (?), *Corbicula occidentalis*, *C. cytheriformis*, *Goniobasis convexa*, etc.

Among Vertebrates of the Laramie beds are the following: At Moreau River, South Dakota (west of the Missouri), the Plesiosaurids, *Plesiosaurus occiduus* and *Ischyrosaurus antiquus*, both described by Leidy. At the Judith River Basin, remains of species related to the Iguanodon of the genera *Palaeoscincus*, *Troödon* and *Aublysodon* of Leidy; according to Marsh, of *Claosaurus*, of *Ceratopsids* and *Ornithomimus*; of *Plesiosaurus* and *Ischyrosaurus*; also of the Rhynchoceph, *Champsosaurus profundus* Cope; and Turtles of the genus *Compsemys*. At Black Butte, the Ceratopsid, *Agathaumas sylvestris* Cope. At Castle Gate in southwestern Utah, an important coal-mining village, a species of *Claosaurus*; in the Denver group, or Upper Laramie, near Denver, species of *Ceratops* and *Ornithomimus*. Some of the Mammals of the Laramie are mentioned on pages 852, 853.

Aublysodon mirandus of Leidy (1859, 1868), referred by him to the tribe of Dinosaurs, was based on a number of teeth. Marsh has suggested (1892) that some of the incisors figured may be Mammalian, stating that only the discovery of a tooth of the kind in a jaw will remove doubt.

Fossils from the Cretaceous formation of New Jersey were first described by the excellent naturalist of Philadelphia, Thomas Say, in 1820 (*Am. Jour. Sc.*, ii., 34), who then named species of *Baculites*, *Exogyra* (instituting this genus), and *Terebratula*. The beds were called by him "the New Jersey Alluvium." The first reference of the beds to the Cretaceous formation, and first account of their geographical distribution along the Atlantic and Gulf borders, was made by Lardner Vanuxem in January, 1828 (*Acad. N. S. Philad.*, vi.); and the first systematic description of the fossils, with figures, by S. G. Morton, in a paper of the same date, which follows Vanuxem's. Vanuxem, in a note to his paper (page 63), alludes to Morton's extensive collections of fossils of New Jersey and Delaware, which he had examined in addition to his own. Morton's paper was soon followed by others in continuation.

The Radiolarians found by Tyrrell in the Montana group, Manitoba, have been described and figured by D. Rüst (*Canada Survey*, 1892).

On the Invertebrate paleontology of the Continental Interior, see especially the publications of Meek in connection with the Hayden Survey and also elsewhere; also papers by C. A. White, and his *Correlation of the Cretaceous*; also T. W. Stanton's *Colorado Formation* (1893).

FOREIGN.

ROCKS — GENERAL DISTRIBUTION.

The Cretaceous formation covers a large part of southeastern England, east of the Jurassic boundary, from Dorset on the British Channel to Norfolk on the German Ocean; and also a narrow coast region, about and south of Flamborough Head, as shown on the map, page 694, and small areas in northern Ireland and on the islands of Mull and Morven, off Scotland, where it is covered by Tertiary basaltic lavas.

Like the Jurassic, it reappears across the British Channel in France and Denmark, and to the east and south over much of Europe. It usually outcrops along the borders of the great Tertiary areas or within them, indicating that the seas of the early Tertiary, which cover so large a part of the conti-