

It is also closely allied by its fauna to the Bear River formation of Wyoming, lately described by White and Stanton.<sup>1</sup> Two of the most characteristic species of the Bear River beds, *Corbula pyriformis* and *Corbicula Durkeii*, occur in the Dunvegan formation and most of the genera are alike. The position of the two formations in the Cretaceous is, however, different, as the Bear River beds are placed by the above writers below the Colorado, while the Dunvegan series overlies that formation."

#### LOWER CRETACEOUS.

The early Cretaceous deposits in the Rocky mountains were laid down upon Jurassic sediments of considerable thickness but generally fine grained. In the southern part of the Skeena basin they were preceded by a period of great volcanic activity and coal seams are now found in the sediments filling basins in an uneven floor of volcanics. In following these northward it is found that the floor of volcanic rocks gradually gives place to sedimentaries made up largely of tuffs and tufaceous sandstones interbedded with black shales.

#### *Kootenay Formation.*

The following general description of the Kootenay, the coal-bearing formation in the Rockies, is taken from G. S. Malloch's report on the Bighorn coal field.<sup>2</sup> The description of the Skeena series is by W. W. Leach.

"The name Kootenay was used by Dr. Dawson in 1885 to designate the coal-bearing series in the Cascade basin. From the palæontological evidence there is some doubt whether the formation should be assigned to the bottom of the Cretaceous or to the top of the Jurassic.

"At all points where it and the underlying formations have been studied in parallel basins in the eastern Rockies, or in the foothills, the Kootenay and these older strata thin out rapidly east-

<sup>1</sup>American Journal of Science, Vol. XLIII, p. 91.

<sup>2</sup>Malloch, G. S., Bighorn coal basin, Alberta; Memoir 9, Geol. Surv. Can.