

and McConnell, southward from Alberta to the U. S. boundary line; eastward to Turtle mountain, in Manitoba; and northward to the Arctic circle in the MacKenzie river valley. The *Fort Union* beds or formation have also been recognized in the Souris River district.

It is believed that about the beginning of the Tertiary or the close of the Cretaceous, the Rocky Mts. began to be uplifted, whilst the plains sank beneath the surface of the sea. Then were deposited on the gradually sinking floor, the sandstones and shales of this series, in which occur the remains of dinosaurs, fresh-water shells, land plants, with occasional beds of coal.

*Miocene*.—In the Hand hills of the Prairie region, Mr. Tyrrell finds light-gray argillaceous marls interbedded with fine-grained sands, which pass upward into a bed of quartzite pebbles more or less held together in some places by a hard calcareous cement, forming a compact conglomerate. These strata resemble the argillites of the Cypress hills, first examined by Dr. Hector, in 1859, and are, no doubt, equivalent to the Miocene of the Cypress hills in the Assiniboia region, described by Mr. McConnell, known as Miocene conglomerates, etc. It was from the Cypress hills region that Mr. McConnell and Mr. Weston obtained the interesting series of fossil mammalian remains, described by the late Prof. E. D. Cope and referred to the *White River* division of the Tertiary, according to United States geologists or Lower Miocene. The *Saskatchewan* gravels are doubtfully referred to the Pliocene by some geologists.

It was possibly during this or a somewhat later period that many of the *Æolian* deposits of the west were laid down.

*The Cordilleran Region*.—In the Kamloops district of British Columbia, Dr. Dawson refers certain conglomerates and sandstones to the *Oligocene*, under the terms "*Coldwater Group*" and "*Similkameen*" beds. In the "*Tranquille Beds*" he describes and includes volcanic basalts and bedded tuffs ascribed to the *Earlier* and *Later* Miocene respectively. In the same region, unconformably over the *Tranquille* beds or formation, conglomerates of Early Pliocene age are also recorded. In the vicinity of the city of Vancouver, Mr. James Richardson, Dr. Dawson, and Mr. Amos Bowman, have examined the plant-bearing beds of this district, which form part of the "*Puget group*." The strata in question form part of the lowland about the mouth of the Fraser river, extending northward to Burrard inlet. These strata are at least 3000 feet in thickness, holding carbonaceous matter, and more or less lignite coal at different horizons. Dr. Dawson further notes the possible