

The purpose of the present note is to call attention to certain facts recently developed respecting the equivalency of the Queen Charlotte Islands and Kootanie formations and to the importance of the earlier Cretaceous rocks of which they are representatives, over great areas of the western and extreme northwestern portion of the continent. These facts possess particular interest at the present time from their analogy to those lately developed by Mr. R. T. Hill respecting a similar earlier Cretaceous formation in the southwestern region of the United States.*

The region in which the Kootanie was first recognized as a distinct lower portion of the Cretaceous, embracing that portion of the Rocky Mountains above defined, with the adjacent foot-hills, has a length of about 140 miles with a width of forty miles or more. The Kootanie formation here constitutes a great part of the area of the several Cretaceous troughs or infolds and comes to the surface as well in several or many places in the foot-hills to the east. The Cretaceous rocks of this part of the mountains are known to extend upward from the Kootanie so far as to include the base of the Laramie. The thickness of the upper members of the series has not been ascertained, but that of the Benton (possibly including part of the Niobrara) is about 1400 feet, while the maximum known thickness of the lower part of the series, referable to the Dakota and Kootanie, is about 11,950 feet. Of this thickness, over 7000 feet is shown by its fossils to belong to the Kootanie, while the line between this formation and the Dakota remains to be drawn in a series of beds above, from which no fully distinctive fossils have been collected.†

In the report for 1885, above cited, it is stated that one of the characteristic fossil plants of the Kootanie had previously been found in northern British Columbia, at a distance of 580 miles to the northwestward of the part of the Rocky Mountains there under description. The flora of the Kootanie was characterized as Lowest Cretaceous and placed on approximately the same horizon with that of the Queen Charlotte Islands formation (more particularly of subdivision C., of that section) by Sir J. Wm. Dawson.‡

Up to this time no recognizable fossils other than plants had been obtained from the Kootanie, but marine mollusks have since been discovered by Mr. R. G. McConnell in beds which are (at least locally) at the very base of the formation and which underlie the principal plant-bearing beds by at least several hundred feet. These are referred to in Mr. McCon-

* See this Journal, vol. xxxiii, p. 291; vol. xxxiv, p. 287; vol. xxxvii, p. 282.

† Though fossil plants apparently referable to the Dakota have been found in the higher beds, in two places.

‡ Trans. Royal Soc. Can., vol. iii, sec. 4, p. 20.