

The botanical evidence, while yet imperfect, is therefore by no means in contradiction to that afforded by the animals and the stratigraphy.

A number of fossils from the Queen Charlotte Islands have also been described and figured from Mr. Richardson's collections made during a visit to the islands in 1872. Additional collections made by the writer in 1878 have since considerably increased the fauna.* There are few cases of specific identity between the forms in the Vancouver Cretaceous, previously described, and those of the Queen Charlotte Islands, the latter representing a lower stage in the Cretaceous formation. The plants found in these rocks, embracing numerous coniferous trees and a species of Cycad, also indicate a greater age than those of Vancouver.

The coal-bearing beds at Quatsino Sound, on the west coast of Vancouver Island, have also yielded a few fossils. These consist chiefly of well-characterized specimens of *Aucella Piochii*, which occurs but sparingly in the Queen Charlotte Islands, and brings the rocks into close relations with the *Aucella* beds of the mainland of British Columbia, and in Mr. Whiteaves' opinion probably indicate an "Upper Neocomian" age. The rocks of the Queen Charlotte Islands and Quatsino may therefore be taken together as representing the upper and lower portions of the so-called Shasta group of California, which in British Columbia can now be readily distinguished by their fossils.

On the mainland, developed most characteristically along the north-eastern border of the coast range, is a massive series of rocks first referred to by Dr. Selwyn, in the provisional classification adopted by him in 1871, as the Jackass Mountain group, from the name of the locality in which they are best displayed on the main waggon-road. The age of these rocks was not known at this time, but fossils have since been discovered in the locality above mentioned, and in several others, the most characteristic forms being *Aucella Piochii* and *Belemnites impressus*.† The rocks are generally hard sandstones or quartzites, with occasional argillites, and very thick beds of coarse conglomerate. A measured section on the Skagit River includes over 4,400 feet, without comprising the entire thickness of the formation. Behind Boston Bar, on the Fraser River, the formation is represented by nearly 5,000 feet of rocks, while on Tatlayoko Lake it probably does not fall short of 7,000 feet. At the last-named place these beds are found to rest on a series of felspathic rocks, evidently volcanic in origin, and often more or less distinctly porphyritic. On the Ilas-youce River, near the 51st parallel, and in similar relation to the

* Mesozoic Fossils. Vol. i, parts i and ii.

† See on this and other older Cretaceous rocks. J. F. Whiteaves, Trans. Roy. Soc. Canada, 1882, section iv, p. 81.