

have verified these for the Devonian and Carboniferous of the United States, and to some extent also for those of Europe. To the same effect is the recognition of the Kootanie or Lower Cretaceous, the Middle Cretaceous, Upper Cretaceous, Laramie and Miocene in Western Canada. These have in all cases corresponded with the indications of animal fossils<sup>1</sup> and of stratigraphy. Fossil plants have been less studied in this connection than fossil animals, but I have no hesitation in affirming that, with reference to the broader changes of the earth's surface, any competent palæobotanist is perfectly safe in trusting to the evidence of vegetable fossils.

It may be objected that such evidence will be affected by the migrations of plants, so that we cannot be certain that identical species flourished in Greenland and in temperate America at the same time. If such species originated in Greenland and migrated southward, the specimens found at the south may be much newer than those in the north. This, no doubt, is locally true, but the migrations of plants, though slow, occupy less time than that of a great geological period. It may also be objected that the flora of swamps, plains, and mountain tops would differ at any one period. This also is true, but the same difficulty applies to animals of the deep sea, the shore, and the land; and these diversities of station have always to be taken into account by the palæontologist.

REFERENCES:—Report on the Erian or Devonian Plants of Canada, Montreal, 1871. Article in *Princeton Review* on Genesis and Migrations of Plants. "The Geological History of Plants," London and New York, 1888 and 1892. Papers on Fossil Plants of Western Canada, 1883, and following volumes of Transactions of Royal Society of Canada.

NOTE.—Since writing the above, I have obtained access to Dall and Harris' "Neocene Correlation Papers," which throw some additional

<sup>1</sup> Reports on Fossil Plants of the Devonian and Lower Carboniferous.