

measures, yet the rare discovery of their remains clearly prove that they could have borne no comparison to the vegetable life of the age. This cannot be said in reference to the ichthyolites or fishes of the period, for Agassiz in his noble work on fossil fishes, describes upwards of one hundred and fifty different kinds in the carboniferous rocks, all belonging to the two great families of placoids and ganoids. The placoids were so called from their being covered with bony plates. In the shark, one of the few representatives of this family now existing, these plates are reduced to small points, and it is this which causes its skin to be so rough, and this makes it useful as a polisher. The ganoids are so called from the brilliancy of their angular scales, which were formed of bone covered with enamel, the enamel being outside. The bony pike of the Canadian lakes and rivers is the living representative of this family. Of the ganoids the remains of one curious family are found in the coal measures, they are called sauroid fishes, or in other words lizard like fishes, from their likeness to lizards. And it was at one time supposed, that they in consequence evidenced a more highly developed organization than other ichthyolites, or in fact a step towards land animals, but late discoveries have proved the fallacy of the idea. In the shale in the County of Albert are found some very fine ganoids. We had one in our possession in which every part of the fish was perfect even to the most minute portion of the membrane of the fins. We saw a few months ago a very fine large specimen found this spring imbedded in shale, which was covered with the scales of both ganoid and placoid fishes. The presence of these fossils near the Albertite* is one of the strongest proofs that it is true coal, and that the strata which overlie and underlie it form a true carboniferous rock.

Having given a short description of the flora fauna and ichthyolites of the coal measures, we now purpose to conclude with an imaginative picture of the appearance of the earth at the time coal was being formed.

The whole surface of the world was then covered with great flat continents and islands, which were crossed by ranges of mountains of not very great height, from which ran streams, which widening into rivers went sluggishly in winding courses through the great marshes, carrying with them the soft slimy mud from their banks, and forming great deltas at their mouths. Where the Atlantic now tosses its dark waters—the deepest and most stormy of oceans, then stretched a vast continent, containing hill, and valley, and every variety of scenery. In the far east from a mountain range ran a little brook, and as it poured westward, it received the waters of a hundred tributaries, and increased in size until it became the mightiest river of the earth. Onward it rolled its great volume of waters, emptying itself where now exist the great Appalachian coal fields of Ohio. At its mouth stretched an

* The name given to the Albert Coal.