

structure, in the upper part of the marine Upper Silurian limestones,\* proves the flora of the Devonian rocks to have had its beginning at least in the previous geological period, and to characterise the lower as well as the upper beds of the Devonian series. In this connection I may state that, from their marine fossils, as well as their stratigraphical arrangement, Sir W. E. Logan and Mr. Billings regard the lower portions of the Gaspé sandstones as the equivalents of the Oriskany sandstone of New York. On the other hand, the great thickness of this formation, the absence of Lower Devonian fossils from its upper part, and the resemblance of the upper beds to those of the newer members of the Devonian elsewhere, render it probable that the Gaspé sandstones, though deficient in the calcareous members of the system, seen farther to the westward, represent the whole of the Devonian period.

The Gaspé sandstones, as their name imports, are predominantly arenaceous, and often coarsely so, the sandstones being frequently composed of large grains and studded with quartz-pebbles. Grey and buff are prevalent colours, but red beds also occur, more especially in the upper portion. There are also interstratified shaly beds, sometimes occurring in groups of considerable thickness, and associated with fine-grained and laminated argillaceous sandstone, the whole having in many places the lithological aspect of the coal-measures. At one place, near the middle of the series, there is a bed of coal from one inch to three inches in thickness, associated with highly bituminous shales abounding in remains of plants, and also containing fragments of crustaceans and fishes (*Pterygotus*, *Ctenacanthus* ? &c.). The beds connected with this coal are grey sandstones and grey and dark shales, much resembling those of the ordinary coal formation. The coal is shining and laminated, and both its roof and floor consist of laminated bituminous shale with fragments of *Psilophyton*. It has no true under-clay, and has been, I believe, a peaty mass of rhizomes of *Psilophyton*. It occurs near Tar Point, on the south side of Gaspé Bay, a place so named from the occurrence of a thick dyke of trap holding petroleum in its cavities. The coal is of considerable horizontal extent, as in its line of strike a similar bed has been discovered on the Douglas River, about four miles distant. It has not been recognised on the north

---

\* The marine fossils of these beds have been determined by Mr. Billings. They are Upper Silurian, with an intermixture of Lower Devonian in the upper part. Fragments of *Nematophyton* occur in beds of the same age in the Bay des Chaleurs, at Cape Bon Ami.