

Only two of the above seams, namely, the main and new mine, are considered workable at the Joggins. We therefore have this vast thickness of strata, comprising 4757 feet, yielding in its upper half no seams worth mentioning, and in its lower part only four beds meriting the miner's attention.

In considering this great mass of sediments, with its alternating layers of coal, clay, sandstones and limestones, it must be borne in mind that the various changes chronicled at the Joggins did not necessarily extend over the whole of the Cumberland coal field. But, as Dr. Dawson remarks, had we visited the district during the coal period, we might, by changing our position a few miles, have passed from a sandy shore to a peaty swamp or the margin of a lagoon. The evidence of similar districts at the present day, and the sections of their coal fields, show that, although these changes would be visible in passing over the ground, still the horizons of deposition, whether of vegetable matter or of sandstone, etc., vary very little, and that the persistence and regularity of the coal beds is greater than that of the associated measures. We thus find in Cape Breton coal seams preserving over considerable areas a uniform size and relative position while marked variations are observed in the thickness of the containing beds. Had we visited the district we are considering at a period coinciding with the formation of one of the coal beds, we would have seen on all sides vast swampy plains covered with dense forests of strange shapes and unknown hues; calamite brakes and peaty bogs, traversed by sluggish streams and shallow lagoons, impeded and changed in their course by the luxuriant and encroaching vegetation. Again, a visit at the time of deposition of some of the great beds of barren sandstones would have shown us a wide and shallow sea filled with sandbars and low islands, on which grew straggling calamites, fighting for an existence amid the shifting sands.

We may now briefly pass in review the sections of the seams presented at the various mines which have been opened on the eastern extension of these strata.

Near the shore the Joggins main seam presents the following section recently measured by myself:—