

stone of Scotland, and their careful and elaborate description by Mr. Whiteaves, in the Transactions of our Society, constitute other and most important steps of progress in the development of our knowledge of this system, as they supply another link between the geology of eastern America and that of Europe.

A still more recent discovery in connection with our Devonian system is that of new types of insects and crustaceans, found only last summer by Mr. W. J. Wilson in the same plant-beds at Carleton, near St. John, as those in which Devonian insects were first found by Hartt. The latter, and which were for a long time the earliest insect-remains known from any part of the world, were synthetic forms, combining features of the neuropterous and orthopterous orders. They have since been placed by Scudder in a new Palæozoic order, on the ground that they antedate both those modern orders and that they represent the source from which these latter have sprung.

The fact that considerable tracts in northern Maine, described in the Reports of the Survey of that State, have been found to contain a well-marked Silurian fauna, has already been referred to. On the other hand, small areas, carrying characteristic fossils of Oriskany age, have been observed by Mr. W. McInnes about the head-waters of the Tobique, in New Brunswick, in a region previously supposed to be wholly Silurian.¹

In the case of the Carboniferous system, the facts ascertained during the period now under review have had to do rather with its economic aspects than with questions of general scientific interest. In the year 1876-77 the distribution and succession of the Lower Carboniferous formation, as represented in King's, Albert and Westmorland Counties, was worked out in considerable detail, with special reference to the so-called Albert shales and the unique and valuable mineral, albertite, associated with the latter.² These investigations amply confirmed the idea of albertite being an altered mineral oil, and distributed much after the manner of ordinary mineral veins, with few, if any, of the characteristics of a true coal, and also indicated the wide extent of the area, fully fifty miles, over which the conditions resulting in these products had operated. In the very same year, however, the original deposit of the Albert mines, which had been so long and so profitably worked, was found to have so greatly decreased in amount as to render its further prosecution useless, and thus what had been for many years the seat of a most active industry as well as a source of considerable revenue to the Province, had to be abandoned. This was not done without long and expensive search for further extensions of the deposit, but though these, and explorations since made, resulted in the discovery of the mineral at quite a number of points, at none of these have the veins proved sufficiently large to warrant their further prosecution.

The existence of true coal in the Grand Lake district in Queen's County was discovered soon after the first settlement of the Province, and the subsequent explorations of Dr. Gesner and others sufficed to show the enormous area over which the rocks of the coal formation are spread within its limits. Prior, however, to the year 1872, but little was definitely known either as to the true thickness of the formation or its probable productive capacity. The idea having been generally entertained by those resident in the Grand Lake region that other and much thicker beds really existed there than the small twenty-two-inch seam which had been so long known and worked near the surface, the members

¹ Geological Survey, Report 1886.

² Report of Progress, Geological Survey, 1876-77.