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ART. I.—*The Air-Breathers of the Coal Period in Nova Scotia*
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I. INTRODUCTORY.

The animal population of the earth during the older or palæozoic period of its geological history, is known to us chiefly through the medium of remains preserved in rocks deposited in the bed of the ocean. In such rocks we have little reason to expect an abundant representation of the animals of the land, even if these existed at the time plentifully on the neighbouring shores. Perhaps for this reason,—perhaps because there were then no land animals, the organic remains of the Cambrian, Silurian, and Lower Devonian rocks consist, in so far as animal life is concerned, solely of marine species. In the Upper Silurian and Lower Devonian, however, land plants begin to appear; and in the Upper Devonian these are so numerous and varied as to afford a probability that animals also tenanted the land. Indeed, Mr. Hartt, of St. John, has just announced the discovery of remains, which he believes to be attributable to insects, in the rich plant-bearing Upper Devonian beds of that locality.* It is true also that reptiles of high organization have been found in beds referred to the Upper Devonian, at Elgin, in Scotland; but so much doubt rests on the age of these beds, that it is unsafe at present to regard them as affording evidence of reptilian life at so early a period.

* In a letter to the author. It is to be hoped that descriptions of these interesting remains may soon be published.