

carbonaceous beds of the Trias, the fossil soils of the Portland series, the estuarine Wealden beds would seem to be as favourably situated as those of the coal formation for preserving land shells, though possibly the flora of the Mesozoic was less suitable for feeding such creatures than that of the Coal period, and they may consequently have become few and local. After all, perhaps more diligent collecting and more numerous collectors might succeed, and may succeed in the future, in filling this and similar gaps.

It is a great mistake to suppose that discoveries of this kind are made by chance. It is only by the careful and painstaking examination of much material that the gaps in the geological record can be filled up, and I propose in the sequel of this article to note a few instances, in a country where the range of territory is altogether out of proportion to the number of observers, and which have come within my own knowledge.

It was not altogether by accident that Sir C. Lyell and the writer discovered a few reptilian bones and a land snail in breaking up portions of the material filling an erect *Sigillaria* in the South Joggins coal measures. We were engaged in a deliberate survey of the section, to ascertain as far as might be the conditions of accumulation of coal, and one point which occurred to us was to inquire as to the circumstances of preservation of stumps of forest trees in an erect position, to trace their roots into the soils on which they stood, and to ascertain the circumstances in which they had been buried, had decayed, and had been filled with mineral matter. It was in questioning these erect trees on such subjects—and this not without some digging and hammering—that we made the discovery referred to.

But we found such remains only in one tree, and they were very imperfect, and indicated only two species of batrachians and one land snail. There the discovery might have rested. But I undertook to follow it up. In successive visits to the