share in the discovery of several of these ancient animals. The coal formation of Nova Scotia, so full in its development, so rich in fossil remains, and so well exposed in coast cliffs, has afforded admirable opportunities for such discoveries, which have been so far improved that at least eight out of the not very large number of known Carboniferous land animals, have been obtained from it.* The descriptions of these creatures, found at various times and at various places, are scattered through papers ranging in date from 1844 to 1862,† and are too fragmentary to give complete information respecting the structures of the animals, and their conditions of existence. I have, for some time, designed to prepare a resumé of the published facts, with the addition of such new points as may arise from the further study of the specimens, but have been deterred by the incomplete state of my knowledge, and the prospect of further discoveries. So much has, however, now been done, and so many difficulties have been removed by the labours of several eminent naturalists who have examined the specimens, that I think the time has arrived when such a work may be undertaken with advantage to science.

In now endeavouring more fully to introduce the tenants of the coal forests of Nova Scotia to the notice of geologists and of the general reader, I shall take them nearly in the order in which they have become known to me, and shall not scruple to indulge in some gossip as to the circumstances of their discovery, and in some speculations as to their modes of life. I shall however endeavor carefully to sum up the facts ascertained as to their structure, and their relation to other creatures, whether their contemporaries or successors.

II. Footprints.

Plate I.‡

It has often happened to geologists, as to other explorers of new regions, that footprints on the sand have guided them to the inhabitants of unknown lands. The first trace ever observed of reptiles in the carboniferous system, consisted of a series of small

* It appears that five species of Carboniferous reptiles have been recognised on the continent of Europe, three in Great Britain, and four in the United States. More full references will be made to these in the sequel.

† Papers by Lyell, Owen, and the author, in the Journal of the Geological Society of London, vols. i, ii, ix, x, xi, xvi, xvii, xviii.

‡ This plate will be given in the next number.