

coal beds of the south of England do not contain marine remains, whereas in the north, certain beds abound in ammonites, and other inhabitants of the sea. At Burdie House, near Edinburgh, beds of limestone, with fresh-water shells, crustacea, sauroid fishes, and terrestrial plants, have been discovered in the carboniferous series by Dr. Hibbert; they appear to be an intercalation between the marine deposits of the same group,* like those of Coalbrook dale, and were probably formed in an estuary communicating with a river of considerable extent.

In the immense accumulations of the early vegetation, of which the coal-measures are composed, we have presented to us, in the most legible and striking characters, the peculiar flora of the remote epoch in which those deposits were produced. But to obtain any satisfactory results from an examination of these remains, some knowledge of the internal structure of vegetables is requisite; for in a fossil state the mere external characters are, for the most part, either so imperfect or obliterated, as to afford but obscure indications of the nature of the original. As in our investigations of the fossil remains of animals, we availed ourselves of the principles of comparative anatomy (page 127) to reconstruct those extinct forms of being; in like manner we must now call to our aid that branch of

* On the fresh-water limestone of Burdie House, near Edinburgh, by Samuel Hibbert, M.D. F.R.S. Edinburgh. Philosophical Transactions, vol. xiii.