

also thrown into a series of undulating anticlinal and synclinal curves, great denudations occurred, and the result was that the individual coal-fields now lie in basins often separated from each other by intervening tracts of Millstone Grit and Carboniferous Limestone. Sometimes portions of these basins are concealed by unconformable overlying Permian and New Red strata. Thus, the Northumberland and Durham coal-field is probably a basin, partly out at sea, and the southern edge of which is overlaid by Magnesian Limestone. The Yorkshire and Derbyshire coal-field is in my belief another basin, the eastern half of which must crop up against the Magnesian Limestone, deep under ground, and miles to the east of where it first dips beneath that limestone. The Lancashire and North Wales coal-fields also form parts of another great basin, in places probably 6,000 feet or more beneath the New Red Marl of Cheshire. These statements will be more easily understood by referring to figs. 63, p. 325, and 115, p. 601.

In the purely marine strata of the Carboniferous series, of which the Carboniferous Limestone forms the most important part, we find that more than 30 genera and about 100 species of Corals have been named. Among the most common are species of the genera *Cyathophyllum*, *Clisiophyllum*, *Syringopora*, *Lithostrotion*, and *Zaphrentis*. Crinoidea are numerous, the most common of which belong to the genera *Actinocrinus*, *Cyathocrinus*, *Platycrinus*, *Woodocrinus*, and *Poteriocrinus*; 3 species of Echinidæ also occur. Trilobites are scarce in the Carboniferous rocks, the most characteristic genera being *Griffithides* and *Phillipsia*. Among other Crustacea there are *Estheria*, *Eurypterus*, *Prestwichia*, *Belinurus*, and *Limulus*. Polyzoa are common. Brachiopoda are also exceedingly