durable forms like those which abound in the natural herbaria of the carboniferous strata.

43. CORALS AND CRINOIDEA OF THE CARBONIFEROUS SYSTEM.—But I must pass to the consideration of the animal remains entombed in the strata, which have afforded so rich and varied a field of botanical research. From the examination of the fossil corals and crinoidea in the previous lecture, a few remarks on this subject will suffice. About thirty species of polyparia occur in the limestones, but no traces have been observed in the coal measures. They consist principally of various species of tubiporæ and cateniporæ, cyathophylla, astreæ, turbinoliæ, and fungiæ (see Lecture VI. p. 570 to p. 575). Of the crinoidea, more than thirty species have been found. The mountain-limestone is the grand depository of the encrinites, and entire beds of marble are formed of their fossilized skeletons, as I explained in the former discourse (page 588). One singular genus of the crinoidea, *pentremites*, occurs in the carboniferous limestone of Derbyshire (Tab. 91, fig. 8): and I have also a species of the same genus from the United States, by Professor Silliman. One kind of cidaris (*C. Phillipsii*), with large mammillated tubercles, and muricated spines, has been found, and is the earliest known geological appearance of the family of echinodermata.

44. SHELLS OF THE CARBONIFEROUS SYSTEM.—The testaceous remains of above two hundred