

contact with a dike of granite or trap, though altogether wanting in every other part of the rock; a proof that they have been produced by the effects of heat on those parts of the sedimentary deposits which were most exposed to the influence of the erupted mass.*

37. REVIEW OF THE SILURIAN AND CAMBRIAN SYSTEMS.—Let us now review the leading phenomena which have been brought under our notice in this discourse. The Silurian system presented all the usual characters of sedimentary deposits, with which our previous investigations have rendered us familiar. Its marine origin is evinced by the organic remains; and the strata have evidently been formed and consolidated by mechanical and chemical agency, acting through a long period of time, in like manner as in the production of the newer secondary formations. The fossils consist of a few algæ, equiseta, lycopodiaceæ, and ferns; about ninety species of polyparia, of which the lamellar and cellular corals form by far the largest proportions; thirty-five species of crinoidea; about two hundred and sixty species of bivalve shells, and eighty of cephalopoda; sixty-five species of trilobites, or other crustacea; and the remains of a few species of fishes. Mr. Murchison, from his extensive collection of fossils, has selected several which he considers characteristic of the four groups into which he has subdivided the system; and these

* Mr. Lyell.