

I thankfully avail myself of the authority (—can there be a higher?—) and testimony of Mr. Murchison. “—The fossils of the Silurian System here represented, and amounting in all to about 350 species, are, with the exception of a very few (chiefly doubtful casts,) essentially distinct from any of the numerous and well-defined fossils of the Carboniferous System; and further, that the Old Red Sandstone which separates these two systems is also characterized by fossils peculiar to it.—Having for a series of years collected fossils from every stratum of the Silurian rocks, throughout a large region, in which the stratigraphical order is clear, I now present the results. Professor Phillips had previously completed a valuable monograph of the organic remains of the Carboniferous System; [in his *Illustrations of the Geology of Yorkshire*; vol. II. 1836.] If the naturalist will compare the figures in these, the only two works yet published upon the older fossiliferous rocks, which combine geological description with zoological proofs, he will at once see the truth of my position.

“Beginning with the *vertebrata*; Are not the fishes of the Old Red Sandstone as distinct from the Carboniferous System on the one hand, as from those of the Silurian on the other? M. Agassiz has pronounced that they are so.

“Are any of the *crustaceans*, so numerous and well-defined throughout the Silurian rocks, found also in the Carboniferous strata? I venture to reply, not one.

“Are not the remarkable *cephalopodous mollusca*, the *Phragmoceræ*, and certain forms of *Lituites*, peculiar to the older system?

“Is there one species of the *Crinoidea* figured in this work, known in the Carboniferous strata?

“Has the *Serpuloides longissimum*, or have those singular bodies the *Graptolites*, or in short any zoophytes of the Silurian System, been detected in the well-examined Carboniferous rocks?

“And, in regard to the *corals*, which are so abundant that they absolutely form large reefs, is not Mr. Lonsdale, who has assiduously compared multitudes of specimens from both systems, of opinion that there is not more than one species common to the two epochs?—

“Such evidences are—additional supports of the important truth which Geology has already established; that *each great period of change, during which the surface of the planet was essentially modified, was also marked by the successive production and obliteration of certain races.*” *Silur. Syst.* pp. 581, 582.

With astonishment I read in Dr. Y., “The general conformity of the strata and their undisturbed succession, indicate that they must have been deposited about the same era.” P. 23. He admits indeed