

so the restorations which I completed in 1840, and published in 1841, were found, by our highest authorities in 1848, after they had been set aside for nearly six years, to be essentially the true ones after all. I see, however, that one of the most fanciful and monstrous of all the interim restorations of *Pterichthys* given to the world,—that made by Mr. Joseph Dinkel in 1844 for the late Dr. Mantell, and published in the “Medals of Creation,” has been reproduced in the recent illustrated edition of the “Vestiges of Creation.” But the ingenious author of that work would scarce act prudently were he to stake the soundness of his hypothesis on the integrity of the restoration. For my own part, I consent, if it can be shown that the *Pterichthys* which once lived and moved on this ancient globe of ours ever either rose or sank into the *Pterichthys* of Mr. Dinkel, freely and fully to confess, not only the possibility, but also the *actuality* of the transmutation of both species and genera. I am first, however, prepared to demonstrate, before any competent jury of Palæontologists in the world, that not a single plate or scale of Mr. Dinkel’s restoration represents those of the fish which he professed to restore; that the same judgment applies equally to his restoration of *Cocosteus*; and that, instead of reproducing in his figures the true forms of ancient Cephalaspeans, he has merely given, instead, the likeness of things that never were “in the heaven above, or in the earth beneath, or in the waters under the earth.”

The place in the geologic scale, as certainly as the forms and characters, of these ancient fishes had to be determined. Mr. George Anderson had informed me, as early as 1834, that some of them were identical with the ichthyolites of the Gamrie deposit; but then the place of the Gamrie deposit was still to fix. It had been recently referred to the same geological horizon as the Carboniferous Limestone, and was regarded as lying unconformable to the Old Red Sandstone of the district in which it occurs; but, wholly dissatisfied with the evidence adduced; I continued my search, and, though the process was a slow one, saw the position of the Cromarty beds gradually