

opposite ; and thus, when the animal closed its formidable mouth, the jaws would have been locked together by their long teeth and deep recipient hollows, as the crenellated jaws of a fox-trap lock into each other when we release the spring. The other ichthyolite of the Old Red Sandstone to which I shall refer is the *Coccosteus*,—a ganoid that, so far as we yet know, was restricted to this formation. Like the *Pterichthys*, with which it has been classed, it was provided with a helmet and cuirass of bony plate ; but its caudal portion seems to have been naked,—a peculiarity of which we find no other example among the ganoids of this early time. The *Coccosteus* was, however, chiefly remarkable for the form of its jaws.¹ More than ten years ago I ventured to state, in the first edition of a little work on the Old Red Sandstone, that the jaws of this ancient fish seemed, like those of some of the crustaceans, and of some of the insects, to have possessed a horizontal action. Aware, however, that I was on dangerous ground, I exercised, in making the statement, some little share of Scotch caution : the thing was, I stated, too anomalous to be regarded as proven by the evidence of the specimens yet found ; and I mentioned it, I said, only with the view of directing attention to it. It was a question, I thought, worthy of being entertained, and so I craved that it *should* be entertained, and specimens carefully examined. But specimens were *not* examined, at least no specimens that threw any light on the subject ; and my very modified statement respecting it was written down a blunder on the very highest authority. I kept, however, a steady eye on the rocks, as the real authorities in the case ; and, deeming myself bound as a geologist to observe carefully and record truthfully whatever they revealed, but as not in the least responsible for the anomalies of the revelation, I persisted in quietly collecting their evidence in a

¹ The *Coccosteus* possessed also true bony vertebræ. See *Siluria*, p. 504, new edition.—W. S. S.