

ing a gap in the record. Three distinct formations the group undoubtedly contains — perhaps more; nor will the fact appear strange to the reader who remembers how numerous the formations are that lie over and under it, and that its vast depth of ten thousand feet equals that of the whole secondary system from top to bottom. Eight such formations as the Oolite, or ten such formations as the Chalk, could rest, the one over the other, in the space occupied by a group so enormous. To the evidence of its three distant formations, which is of a very simple character, I shall advert as I go along.

The central or Cornstone division of the system in England is characterized throughout its vast depth by a peculiar family of ichthyolites, which occur in none of the other divisions. I have already had occasion to refer to the *Cephalaspis*. Four species of this fish have been discovered in the Cornstones of Hereford, Salop, Worcester, Monmouth, and Brecon; * “and as they are always found,” says Mr. Murchison, “in the same division of the Old Red System, they have become valuable auxiliaries in enabling the geologist to identify its subdivisions through England and Wales, and also to institute direct comparisons between the different strata of the Old Red Sandstone of England and Scotland.”† The *Cephalaspis* is one of the most curious ichthyolites of the system. (See Plate XIII., fig. 1.) Has the reader ever seen a saddler’s cutting knife? — a tool with a crescent-shaped blade, and the handle fixed transversely in the centre of its concave side. In general outline the *Cephalaspis* resembled this tool — the crescent-shaped blade representing the head and the transverse handle the body. We have but to give the

* *Cephalaspis Lewisii*, *C. Lloydii*, *C. Lyellii*, and *C. rostratus*

† See Note E 2.