

obtains. The fin of the *Osteolepis*, with its surface of enamelled and minutely jointed bones, I have already described as a sort of bird-wing fin. The naked rays, with their flattened surfaces, lay thick together as feathers in the wing of a bird — so thick as to conceal the connecting membrane; and fins of similar construction characterized the families of the *Dipterus*, *Diplopterus*, *Glyptolepis*, *Cheirolepis*, *Holoptychius*, and, I doubt not, many other families of the same period, which await the researches of future discoverers. But the fins of another set of ichthyolites, their contemporaries, may be described as bat-wing fins: they presented to the water a broad expanse of membrane; and the solitary ray which survives in each was not a jointed, but a continuous spear-like ray. The fins of this set, or order, are thorny-fins, like those of the *Acanthopterygii*; the anterior edge of each, with the exception of, perhaps, the caudal fin, which differs in construction from the others, is composed of a strong, bony spike. Such, with some tacit reference, perhaps, to the similar Cuvierian principle of classification, were the distinctive differences, on the strength of which I used to arrange two of my groups of fossils on the granitic boulder; and the influence of the same principle, almost instinctively exerted, — for, in writing the previous pages, I scarce thought of its existence, — has, I find, given to each group its own chapter.

Of the membranous-finned and thorny-rayed order of ichthyolites, the *Cheiracanthus*, or thorny-hand, (*i. e.* pectoral,) may be regarded as an adequate representative. (See Plate VII., fig. 1.) The *Cheiracanthus* must have been an eminently handsome little fish — slim, tapering, and described in all its outlines, whether of the body or the fins, by gracefully waved lines. It is, however, a rare matter to find it presenting its original profile in the stone — none of the other ichthyolites