

CHAPTER V.

The Classifying Principle, and its Uses. — Three groups of Ichthyolites among the Organisms of the Lower Old Red Sandstone. — Peculiarities of the Third Group. — Its Varieties. — Description of the *Cheiracanthus*. — Of two unnamed Fossils of the same Order. — Microscopic Beauty of these Ancient Fish. — Various Styles of Ornament which obtain among them. — The Molluscs of the Formation. — Remarkable chiefly for the Union of Modern with Ancient Forms which they exhibit. — Its Vegetables. — Importance and Interest of the Record which it furnishes.

THERE rests in the neighborhood of Cromarty, on the upper stratum of one of the richest ichthyolite beds I have yet seen, a huge water-rolled boulder of granitic gneiss, which must have been a traveller, in some of the later periods of geological change, from a mountain range in the interior highlands of Ross-shire, more than sixty miles away. It is an uncouth looking mass, several tons in weight, with a flat upper surface, like that of a table; and as a table, when engaged in collecting my specimens, I have often found occasion to employ it. I have covered it over, times without number, with fragments of fossil fish — with plates, and scales, and jaws, and fins, and, when the search proved successful, with entire ichthyolites. Why did I always arrange them, almost without thinking of the matter, into three groups? Why, even when the mind was otherwise employed, did the fragments of the *Coccosteus* and *Pterichthys* come to occupy one corner of the stone, and those of the various fish just described another corner, and the equally well-marked remains of a yet different division a third corner? The