

among the nearly vertical strata that lean against the Northern Sutor. The section there presented is washed by the tide for nearly three hundred yards from where it rests on the granitic gneiss; and each succeeding stratum in the ascending order may be as clearly traced as the alternate white and black squares in a marble pavement. First there is a bed of conglomerate two hundred and fifteen feet in thickness, "identical in structure," say Professor Sedgwick and Mr. Murchison, "with the older red conglomerates of Cumberland and the Island of Arran,* and which cannot be distinguished from those conglomerates which lean against the southern flank of the Grampians, and on which Dunnotar Castle is built. Immediately above the conglomerate there is a hundred and fourteen feet more of coarse sandstone strata, of a reddish yellow hue, with occasionally a few pebbles enclosed, and then twenty-seven feet additional of limestone and stratified clay. There are no breaks, no faults, no thinning out of strata — all the beds lie parallel, showing regular deposition. I had passed over the section twenty times before, and had carefully examined the limestone and the clay, but in vain. On this occasion, however, I was more fortunate. I struck off a fragment. It contained a vegetable impression of the same character with those of the ichthyolite beds; and after an hour's diligent search, I had turned out from the heart of the stratum plates and scales enough to fill a shelf in a museum — the helmet-like snout

* Different in one respect from the conglomerates of Arran. It abounds in rolled fragments of granite, whereas in those of Arran there occur no pebbles of this rock. Arran has now its granite in abundance; the northern locality has none; though, when the conglomerates of the Lower Old Red Sandstone were in the course of forming the case was exactly the reverse.