

## OLD RED SANDSTONE AND DEVONIAN PERIOD.

ANOTHER great period in the Earth's history opens on us—the Devonian or "Old Red Sandstone," so called, because the formation is very clearly displayed over a great extent of country in the county of Devon. The name was first proposed by Murchison and Sedgwick, in 1837, for these strata, which had previously been referred to the "transition" or Silurian series.

The circumstances which marked the passage of the uppermost Silurian rocks into Old Red Sandstone seem to have been:—First, a shallowing of the sea, followed by a gradual alteration in the physical geography of the district, so that the area became changed into a series of mingled fresh and brackish lagoons, which, finally, by continued terrestrial changes, were converted into a great fresh-water lake; or, if we take the whole of Britain and lands beyond, into a series of lakes.\*

Mr. Godwin Austen has, also, stated his opinion that the Old Red Sandstone, as distinct from the Devonian rocks, was of lacustrine origin.

The absence of marine shells helps to this conclusion, and the nearest living analogues of some of the fishes are found in the fresh water of Africa and North America. Even the occurrence in the Devonian rocks of Devonshire and Russia of some Old Red Sandstone fishes along with marine shells, merely proves that some of them were fitted to live in either fresh or salt water, like various existing fishes. At the present day animals that are commonly supposed to be essentially marine, are occasionally found inhabiting fresh water, as is the case in some of the lakes of Sweden, where it is said marine crustacea are found. Mr. Alexander Murray also states that in the inland fresh-water lakes of Newfoundland seals are common, living

\* "On the Red Rocks of England," by A. C. Ramsay. *Quart. Jour. Geol. Soc.*, vol. xxvii p. 243.