

CHAPTER XXVI.

OLD RED SANDSTONE, OR DEVONIAN GROUP.

Old Red Sandstone of the Borders of Wales—Of Scotland and the South of Ireland—Fossil reptile and foot-tracks at Elgin—Fossil Devonian plants at Kilkenny—Ichthyolites of Clashbinnie—Fossil fish, crustaceans, &c., of Caithness and Forfarshire—Distinct lithological type of Old Red in Devon and Cornwall—Term Devonian—Organic remains of intermediate character between those of the Carboniferous and Silurian systems—Devonian series of England and the Continent—Upper Devonian rocks and fossils—Middle—Lower—Old Red Sandstone of Russia—Devonian strata of the United States—Coral-reefs at the Falls of the Ohio.

It has been already shown in the section (p. 332), that the carboniferous strata are surmounted by a system called "The New Red," and underlaid by another termed the "Old Red Sandstone." The last-mentioned group acquired this name because in Herefordshire and Scotland, where it was originally studied, it consisted chiefly of red sandstone, shale, and conglomerate. It was afterwards termed "Devonian," for reasons which will be explained in the sequel. For many years it was regarded as very barren of organic remains; and such is undoubtedly its character over very wide areas where calcareous matter is wanting, and where its color is determined by the red oxide of iron.

"*Old Red*" in *Herefordshire*, &c.—In Herefordshire, Worcestershire, Shropshire, and South Wales, this formation attains a great thickness, sometimes between 8,000 and 10,000 feet. In these regions, it has been subdivided into

1st. Conglomerate, passing downwards into chocolate-red and green sandstone and marl.

2d. Marl and cornstone,—red and green argillaceous spotted marls, with irregular courses of impure concretionary limestone, provincially called Cornstone, and some beds of white sandstone. In the cornstones, and in those flagstones and marls through which calcareous matter is most diffused, some remains of fishes of the genera *Onchus* and *Cephalaspis* occur. Several specimens of the latter have been traced to the lowest beds of the "Old Red," in May Hill, in Gloucestershire, by Sir R. Murchison and Mr. Strickland.*

Old Red Sandstone of Scotland and Ireland.—South of the Grampians, in Forfarshire, Kincardineshire, and Fife, the Old Red Sandstone may be divided into three groups.

* Murchison's *Siluria*, p. 245.