Welsh Type of Old Red Sandstone.—Along the south-eastern and southern border of the older Palæozoic district of Wales, from Coalbrook Dale through Herefordshire, Monmouthshire, Glamorganshire, and Pembrokeshire, the Old Red Sandstone is of vast thickness, fully developed, extensively spread, composed of definite parts, and regularly traceable through the country. Its boundary on the west is by Haverfordwest, Caermarthen, Llandovery, Knighton, and Ludlow. On the east it ranges from near Cardiff, by the high district of Wentwood, Trelech, and Craig-y-Dorth, and by the Forest of Dean, which it encircles with a high ridge, and west of Mayhill, the Malvern and Abberley hills, to the Severn near Bewdley. Its thickness in Monmouthshire and Breconshire can hardly be estimated at less than from 6000 to 8000 feet, but its lower portion is not always clearly distinguishable from the Silurian strata beneath. In fact, near Langaddoc, the marly beds of the Lower Old Red Sandstone alternate with true Silurian strata, containing characteristic fossils. From the Carboniferous limestone series above it is in general sharply defined. In the district of Tortworth and the Forest of Dean, a yellowish sandstone appears along the junction line.

Monmouthshire, &c.—One of the best sections of the Old Red Sandstone is afforded in the neighbourhood of Monmouth, beginning with the Kymin Hill, which is part of the lofty boundary of Dean Forest. Here the thick conglomerate is full of quartz pebbles, remarkably analogous to some varieties of millstone grit, and forms the very cap of the whole system, crowning the hills with magnificent precipices and solitary crags. Below is a series of red sandstones, productive of excellent flagstone, with one or two beds of a singular limestone, mottled with red, blue, green, and yellow, sometimes much mixed with clays, and always irregular. Though of argillaceous aspect, it is so nearly pure as to be burned for lime. No organic remains occur in this vicinity, but elsewhere fragments of Cephalaspis, Holoptychius, and other fishes occur in it. The lowest part of the section exhibits an extreme abundance of red marls with white and green bands, hardly distinguishable from those of the New Red marl. The upper conglomerates are worked and converted into cider millstones, and the limestone (called cornstone) is often employed as road metal. This limestone, indeed, notwithstanding its apparently irregular and fragmentary character, is one of the most persistent layers; it characterises the Old Red Sandstone along nearly its whole course. In Caermarthenshire it is remarkable in the cliffs near Laugharne and Ferryside, from which place have been obtained many specimens of *Cephalaspis Lyellii*.

Comparing these enormous masses of conglomerate, arenaceous, and argillaceous rocks, and this included limestone, with the older Silurian series, we find the chief mineral distinction to be in the state of the iron which colours the rocks. Protoxide is common in the older series, peroxide is prevalent in the newer group. As in many other cases, the grey oxide series contain many, the red oxide rocks yield few remains of life. If life had been more abundant, the now