

South Wales, the Carboniferous system passes down conformably into the Old Red Sandstone. The passage beds consist of yellow, green, and reddish sandstones, green, gray, red, blue, and variegated marls and shales, sometimes full of terrestrial plants. They are well exposed on the Pembrokeshire coasts, marine fossils being there found even among the argillaceous beds at the top of the Red Sandstone series. They occur with a thickness of about 500 feet in the gorge of the Avon near Bristol, but show less than half that depth about the Forest of Dean. At their base there lies a bone-bed containing abundant palatal teeth. Not far above this horizon, plant-bearing strata are found. Hence these rocks bring before us a mingling of terrestrial and marine conditions. In Yorkshire, near Lowther Castle, Brough, and in Ravenstonedale, alternations of red sandstones, shales, and clays, containing *Stigmaria* and other plants, occur in the lower part of the Carboniferous Limestone. Along the eastern edge of the Silurian hills of the Lake district, at the base of the Pennine escarpment and round the Cheviot Hills, a succession of red and gray sandstones, and green and red shales and marls with plants, underlies the base of the Carboniferous Limestone. It is highly probable, however, that these red strata form merely a local base, and occur on many successive horizons; so that they should be regarded not as marking any particular period, but rather as indicating the recurrence or persistence of certain peculiar littoral conditions of deposit during the subsidence of the land (p. 862). Further north, in the southern counties of Scotland, the Upper Old Red Sandstone, with its characteristic fishes, graduates upward into reddish and gray sandstones with Carboniferous plants.

In Devon and Cornwall a type of the Carboniferous system is found, which, though it does not occur elsewhere in Britain, has been ascertained to reappear and to have a wide extension in central Europe. It presents a thick series of well-bedded grits, sandstones, shales, often dark gray, and occasional thin limestones, and passes down conformably into upper Devonian strata. Though much contorted and faulted, like the Devonian formations of the same region, this arenaceous and shaly series has yielded a sufficiently large number of recognizable fossils to show its geological position. The plants resemble generally those found in the Calciferous Sandstone series of Scotland. The animal remains include species of *Orthoceras*, *Goniatites*, *Posidonomya* (*P. Becheri*) *Chonetes*, *Spirifer* (*S. Urei*), *Phillipsia*,