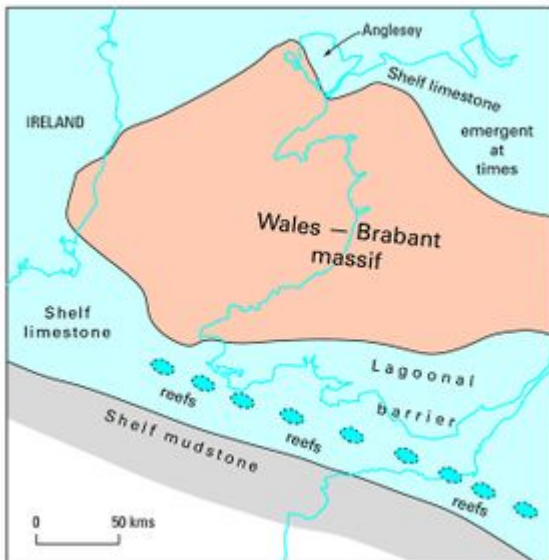


Carboniferous, introduction, Wales

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Dinantian palaeogeography (adapted from Freshney and Taylor 1980). P916180.

Recent palaeomagnetic and structural studies in the Upper Palaeozoic rocks across Europe have indicated that the Carboniferous sequences in the British Isles accumulated to the north, on current coordinates, of a micro-plate collision zone that lay across central Europe, between Armorica, the Massif Central and the Vosges. On the north side of this zone, the Rheno-Hercynian Basin, floored by ocean crust, was systematically closed by northward-directed thrusting that persisted into late Carboniferous times. Farther to the 'north', the British Isles lay on a foreland where, in response to tectonism, a series of faulted basins developed on either side of a landmass, which has been referred to as St George's Land but is now included in the Wales-Brabant massif ([P916180](#)). The basins and adjacent platforms became the controlling influence in Carboniferous sedimentation.

The Carboniferous sequence includes a range of shallow marine carbonates, fluviodeltaic and shallow marine siliclastic deposits, lacustrine sediments and coal. The distribution of facies indicates a continuous interaction between terrestrial and marine influences, and the temporal variations reflect both climatic and sea level changes. One of the most discussed features of the sequence is the cyclical patterns that have been variously ascribed to eustatic, tectonic and autocyclic sedimentary mechanisms; all these mechanisms were probably operative.

Biostratigraphical schemes based on microfloras, conodonts and foraminifera complement the long established stratigraphy based on the macrofaunas. The three main lithostratigraphical divisions of Carboniferous Limestone, Millstone Grit and Coal Measures have been recognised since the early 19th century, and have been related to the chronostratigraphical divisions, Dinantian (Tournaisian and Viséan), Namurian and Westphalian. The sequence includes the coal, ironstone, clay and limestone, which have been so intensively exploited, making this the most economically important part of the stratigraphical sequence in Wales.

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