

The majority of 'Marine Devonian' GCR sites are located on the Early to Latest Devonian rocks of central and north Cornwall and south Devon, within the successions of the east–west Looe, South Devon and Tavy basins, their sub-basins and associated highs. This half-graben and full graben complex developed sequentially northwards during the Devonian period by rifting of the Rheuohercynian passive margin. Basin formation and development was initiated in a terrestrial setting, but from the late Early Devonian marine environments prevailed. Each basin and high had its own stratigraphical succession, and there is variation between those of composite sub-basins. From Mid-Devonian times basins were characterised by hemipelagic deposits with turbid flow incursions of predominantly fine-grained northerly derived terrigenous clastics, and the highs developed carbonate platforms with reefs that persisted into the Late Devonian. Associated alkaline basaltic rocks are typical of the continental rifting regime with high extension. The complex basin and high architecture directly determined major structures, folds and thrusts, developed during regional contraction, and review of those structures permits placement of the sites in that structural context.

Thirty eight GCR site reports in this chapter are grouped to describe the stratigraphical successions of named basins and highs from south to north through the sub-province. The oldest deposits are in the south, with basins developing later to the north, but there are differing coeval basin and high successions that extend up to the Latest Devonian through the belt. Amongst the sites there are those that provided definitive descriptions of limestone reefs and their changes in time and space through their acme in the Mid-Devonian, and others that are significant for their fossils, such as the ammonoids, corals or conodonts, which fostered classic studies internationally important in Devonian stratigraphy. Together they describe the variety of stratigraphical sequences and their evolution, environmental, sedimentological and palaeontological, in this major setting of the marine Devonian of Britain.