

A valuable overview of the lithostratigraphical variation of the Purbeck Limestone Group across its Dorset type-area (within the Wessex sub-basin of northern Europe) is gained from new logging of coastal sections in west and central parts of south Dorset, and re-evaluation of previous detailed work further east. An adapted lithostratigraphical classification is presented, which divides the group into the two existing formations (Lulworth and Durlston), five new members, and fifteen or so traditional beds. The members were set up in the more representative west and central parts of the basin; they have been designed to reflect broad sedimentary variations in the group, and thus are useful for inland mapping and will be helpful for palaeogeographical analysis. The beds are the traditional minor divisions of the group conceived in the last century, which have been promoted recently by some authors to member status. The problematic historic 'Lower', 'Middle' and 'Upper' divisions are not used, in agreement with many recent researchers. The type-section of the group, at Durlston Bay in the east is placed in a regional context. It is revealed that the lower part of the sequence, the Lulworth Formation, is at its most lithologically variable in the west, whilst its upper part, the Durlston Formation, is more variable in the east. The work may help in discussions on the position of the base of the Cretaceous in relation to the Purbeck Limestone Group.