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Category:Sequence Stratigraphy of the Chalk Group

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STAGE	STANDARD ZONE	LITHOSTRATIGRAPHY	SEQUENCE
			Coniacian 8
	M. coranguinum	SEAFORD CHALK FORMATION	Coniacian 7
			Coniacian 6
CONIACIAN			Coniacian 5
			Coniacian 4
			Coniacian 3
	M. cortestudinarium	WHITE CHALK SUBGROUP	Coniacian 2
			Coniacian 1
	S. plana		Turonian 4
TURONIAN	T. lata	NEW PIT CHALK FORMATION	Turonian 3
			Turonian 2
	Mytiloides spp.	HOLYWELL NODULAR CHALK FORMATION	Cenomanian 6/Turonian 1
	N. juddii		
	M. geslinianum		
	C. guerangeri	ZIG ZAG CHALK FORMATION	Cenomanian 5
	A. jukesbrownei		
CENOMANIAN	A. rhotomagense		Cenomanian 4
	C. inerme	GREY CHALK SUBGROUP	
	M. dixoni	WEST MELBURY MARLY CHALK FORMATION	Cenomanian 3
			Cenomanian 2
	M. mantelli		Cenomanian 1

Sequence stratigraphy seeks to subdivide rock successions into genetically related packages of sediment based on major changes in relative sea-level (Van Wagoner et al., 1988). The fundamental building block of sequence stratigraphy is the 'sequence', which when preserved intact, records a complete cycle of marine deposition, from an initial fall in relative sea level, through transgression and maximum flooding of the basin, culminating in a sea level highstand. The different stages in this cycle are called 'systems tracts', of which lowstand, transgressive and highstand are recognised (Van Wagoner et al., 1988). The Exxon Model emphasises the importance of the sequence boundary, generated during a relative sea level fall, whereas the Galloway model (Genetic Sequence Stratigraphy) places the emphasis on the maximum flooding surface (Galloway, 1989). In basin marginal areas, or where tectonic influences are pronounced, not all the elements in this cycle of relative sea level change are necessarily preserved in the rock record.

Sequence stratigraphy provides another useful means of correlating rock successions, and is a useful framework for understanding how and why different facies types or sedimentary packages occur in different basin settings, and to this end, it has the potential to be a powerful predictive tool in stratigraphical analysis. Although initially applied to siliciclastic successions, there is increasing

realisation that it can also be applied to carbonate facies. Recently, several papers have attempted to identify sequences in the Cenomanian, Turonian and Coniacian of the Chalk Group of the UK (Gale, 1996; Robaszynski et al., 1998; Grant et al., 1999).

A detailed explanation of sequence stratigraphy is beyond the scope of this work, but Van Wagoner et al. (1988) provided a useful overview of key terms and concepts.

References

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