BUCHEM VAN, F.S.P., GERDES, K.D. & ESTEBAN, M. [Eds.] (2010): **Mesozoic and Cenozoic Carbonate Systems of the Mediterranean and the Middle East: Stratigraphic and diagenetic reference models.** – Geological Society, Spec. Publ., **329**, 422 pgs., ill., London.

ISBN: 978-1-86239-292-2.

£ 110.00.

This volume contains 14 scientific papers focusing on various aspects of Mesozoic and Cenozoic carbonate sequences from the Tethyan realm concentrating on southern and Mediterranean regions.

The themes range from some principal considerations like *"The influence of basin architecture and eustacy on the evolution of Tethyan Mesozoic and Cenozoic carbonate sequences"* to a wide range on special topics such as *"Depositional sequences and palynology of Triassic carbonate-evaporite platform deposits in the Palmyrides, Syria"*. Shallow water features like ooids *("Spatial and temporal distribution of ooids along a Jurassic carbonate ramp: Amellago outcrop transect, High-Atlas, Morocco")* or tidal channels within carbonate platforms *("Channelized systems in an inner carbonate platform setting: differentiation between incisions and tidal channels, Natih Formation, Late Cretaceous, Oman")* are treated as well as carbonate ramps *("Sedimentary evolution of an Upper Jurassic epeiric carbonate ramp, Iberian Basin, NE Spain")*.

A major part of contributions deals with stratigraphic questions from some different points of view such as: *"Sequence stratigraphy and carbon isotope stratigraphy of an Aptian mixed carbonate-siliciclastic platform to basin transition (Galve sub-basin, NE Spain)"* or *"High-resolution seismic stratigraphy of the Shu'aiba and Natih formations in the Sultanate of Oman: implications for Cretaceous epeiric carbonate platform systems"*. Rather regional aspects with an impact on petroleum geology are described by examples from Iran *("Regional stratigraphic architecture and reservoir types of the Oligo-Miocene deposits in the Dezful Embayment, Asmari and Pabdeh Formations, SW Iran")* and Spain *("Porosity development, diagenesis and basin modelling of a Lower Cretaceous (Albian) carbonate platform from northern Spain")*.

The second part of this book concentrates on diagenetic aspects and dolomitization showing examples from the Zagros Mountains in Iran *("Stratigraphic architecture and fracture-controlled dolomitization of the Cretaceous Khami and Bangestan groups: an outcrop case study, Zagros Mountains, Iran")* and the Southern Alps *("Contrasting fluid events giving rise to apparently similar diagenetic products; late-stage dolomite cements from the Southern Alps and central Apennines, Italy")*. Oliver Weidlich from Germany contributes *"Meteoric diagenesis in carbonates below karst unconformities: heterogeneity and control factors"*.

To conclude: This mixture of articles gives a modern overview of various aspects of carbonates, especially their diagenetic history thus underlining the importance for petroleum geology. Some well studied areas from the Middle East may serve as references to find answers for similar questions in other regions of the world.

Thomas Hofmann