



## 1. Introducció als carbonats

### Introducció

Classificació de carbonats

Components no esquelètics

Components esquelètics

Màtriu

Fàcies i seqüències carbonàtiques

Plataformes carbonàtiques

Controls de la sedimentació carbonàtica

## 2. Exposició subaèria

### Introducció

Fàcies de Karst

Fàcies de Caliche

## 3. Lacustre

Ambients deposicionals

Diposició del carbonat en els llacs

Models de fàcies

## 4. Planes Mareals

Plana supramareal

Plana intermareal

## 5. Platges

Backshore

Foreshore

Shoreface

## 6. Plataformes restringides, Badies i Lagoons

Badies i Lagoons

Plataformes restringides

## 7. Plataforma

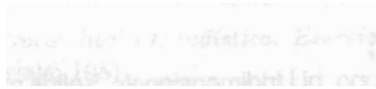
Introducció

Situació

Rampes

Plataformes

Fàcies



## 8. Esculls

### Classificació calcàries esculloses

#### Esculls moderns:

Patch reefs

Esculls de marge de plataforma

Esculls en copa

Bancs d'inshore

Bancs de fang

Monticles escullosos de profunditat

#### Esculls fòssils:

Nomenclatura

Estadis de creixement

## 9. Bancs de plataforma i marges

### Generalitats

## 10. Talús de Fore-reef

### Generalitats

Marges tipus by-pass

Marges deposicionals

Processos de transport

## 11. Marge de conca (Talús)

### Inestabilitats sedimentàries

Dipòsits gravitatius

Fangs planctònics

## 12. Pelàgic

### Organismes pelàgics

Dipòsits pelàgics

Hard grounds

## **Bibliografia:**

### **Sedimentologia general**

- Reading, H.G., 1996. *Sedimentary environments: Processes, facies and stratigraphy*. Blackwell Science, Oxford, 688 pages.
- Walker, R.G. and James, N.P., 1992. *Facies models: Response to sea-level change*. Geological Association of Canada, Ontario, 409 pages.
- Nichols, G., 1999. *Sedimentology and Stratigraphy*. Blackwell Science, Oxford, 355 pages.

### **Referències additionals**

- Allen, P.A., 1997. *Earth surface processes*. Blackwell Science, Oxford. 404 pages.
- Collinson, J.D. and Thompson, D.B., 1989. *Sedimentary structures*. Chapman and Hall, London, 207 pages.
- Einsele, G., 1992. *Sedimentary basins - Evolution, facies and sediment budget*. Springer-Verlag, London. 628 pages. ISBN 3-540-54449-6. 0-387-54449-6.
- Emery, D., and Myers, K. J., eds., 1996, *Sequence stratigraphy*: London, Blackwell Science, p. 297.
- Leeder, M.R., 1981. *Sedimentology: Process and product*. George, Allen and Unwin, London, 344 pages.
- Leeder, M., 1999. *Sedimentology and sedimentary basins - From turbulence to tectonics*. Blackwell Science, Oxford, 592 pages.
- Tucker, M.E., 1991. (second edition) *Sedimentary Petrology*, Blackwells.

### **Carbonats i diagènesi**

- Dunham, R. J., 1962, *Classification of carbonate rocks according to depositional texture, Classification of carbonate rocks—A symposium, American Association of Petroleum Geologists Memoir 1*, p. 108-121.
- Goldhammer, R. K., Dunn, P. A., and Hardie, L. A., 1990, *Depositional cycles, composite sea-level changes, cycle stacking patterns, and the hierarchy of stratigraphic forcing; examples from Alpine Triassic platform carbonates: Geological Society of America Bulletin*, v. 102, no. 5, p. 535-562.
- Handford, C. R., and Loucks, R. G., 1993, *Carbonate depositional sequences and systems tracts; responses of carbonate platforms to relative sea-level changes, in Handford, C. R., and Loucks, R. G., eds., Carbonate sequence stratigraphy; recent developments and applications: American Association of Petroleum Geologists Memoir 57*, p. 3-41.
- Harris, P. M., 1979, *Facies anatomy and diagenesis of a Bahamian ooid shoal: Sedimenta 7, Comparative Sedimentology Laboratory, University of Miami, Florida*, 163 p.
- Harwood, G.M. *Principles of Sedimentary Petrography*. Chapter 5 In *Techniques in Sedimentology* edited by M.E. Tucker, Blackwells, p 105-173.
- James, N.P and Walker, R.G. 1992 *Facies Models. Response to Sea Level Change*. Geological Association of Canada
- Kerans and Tinker, 1997, *Sequence Stratigraphy and Characterization of Carbonate Rocks, SEPM Short Course Notes No. 40. Chapter 1*

- Schlager, W., 1992, Sedimentology and Sequence Stratigraphy of reefs and carbonate platforms, AAPG Continuing Education Course Note Series #34
- Read, J. F., Kerans, C., and Weber, L. J., 1995, Milankovitch sea level changes, cycles and reservoirs on carbonate platforms in greenhouse and ice-house worlds: Society of Economic Paleontologists and Mineralogists Short Course Notes 35, p. 102.
- Richter, D. K., 1983, Calcareous ooids, in Peryt, T. M., ed., Coated grains: New York, Springer- Verlag, p. 71-99.
- Scoffin, T.P. 1987 An introduction to Carbonate Sediments and Rocks
- Tucker, M.E. 1991 (second edition) Sedimentary Petrology, Blackwell Science.
- Tucker, M. E., Wright, V. P., and Dickson, J. A. D., 1990, Carbonate sedimentology: London, Blackwell Science, p. 482.
- Wilson, J. L., 1975, Carbonate facies in geologic history: New York, Springer- Verlag, p. 471.

### Atles i Guies

- Adams, A.E., MacKenzie, W.S. and Guilford, C. 1984 Atlas of Sedimentary Rocks under the Microscope. Longman.
- Scholle, P. 1978 A color illustrated guide to Carbonate Rock Constituents, Textures, Cements and Porosities AAPG (American Association of Petroleum Geologists) Memoir 27.
- Scholle, P. 1979 A color illustrated guide to Constituents, Textures, Cements and Porosities of Sandstones and Associated Rocks. AAPG Memoir 28.
- Scholle, P.A. 1983 –Carbonate Depositional Environments. AAPG Memoir 33.
- Welton, J. 1984 SEM Petrology Atlas. AAPG Methods in Exploration Series, 4

### Links

Oxford Brookes University:

Carbonate Models

Permian Reef Complex

Union College

Carbonate Rock Directory

Monticles de Fang

Algues coral.lines

UBC Carbonats

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