

## The COCARDE Carbonate Mound Database – example for time-slice 33 (Pleistocene–Holocene)

A. RÜGGERBERG<sup>1,2,3</sup>, A. FOUBERT<sup>3</sup>, A. VERTINO<sup>4</sup>, D. JARAMILLO-VOGEL<sup>3</sup>, and the participants of the COCARDE Research Network<sup>5</sup>

<sup>1</sup>Renard Centre of Marine Geology, Ghent University, Ghent, B-9000, Belgium

<sup>2</sup>GEOMAR Helmholtz Centre for Ocean Research Kiel, Kiel, D-24148, Germany

<sup>3</sup>Dept. of Earth Sciences, University of Fribourg, Fribourg, CH-1700, Switzerland

<sup>4</sup>Dept. of Earth and Environmental Sciences

University of Milano-Bicocca, Milan, 20126, Italy

<sup>5</sup><http://www.cocarde.eu/participants>

e-mail: andres.rueggerberg@unifr.ch

In the milestone publication of Kiessling and Flügel (2002) an extensive database is presented on pre-Quaternary Phanerozoic reefs including standardized information on (paleo)position, age, reef type, dimensions, environmental setting, paleontological and petrographical features, as well as reservoir quality. This database differentiates between 32 time slices (Golonka and Kiessling, 2002) comprising the occurrence of different carbonate build-ups (shallow and deep marine) during the earliest Cambrian to the late Miocene-Pliocene. The focus is on reefs, defined as laterally confined carbonate bodies built by sessile benthic aquatic organisms differing between 1) true reefs, 2) reef mounds, 3) mud mounds, and 4) biostromes (Kiessling et al., 2003).

Within the COCARDE network the setup of a carbonate mound related database has been initiated and will be further developed and discussed during and after the COCARDE workshop and field seminar in Sicily, Italy (23-27.09.2013). The aim is to focus on carbonate mounds and/or build-ups in general, not limited to the marine realm but including lacustrine, fluvial, spring- or seep-related carbonate precipitates that create a 3D structure – the whole variety of carbonate mounds.

“*New views on old mounds*” is the principal scientific objective of the European Research Network COCARDE. Throughout Phanerozoic times, mounds have represented recurrent strategies of Life, and an exemplary mode of Geosphere-Biosphere coupling. Partly, these mounds are considered within the Paleoreef Database of Kiessling et al. (2003). However, with the *new view* we would like to focus on carbonate mounds through time starting from the Recent Ocean. We present an example of the Pleistocene-Holocene time slice 33 summarizing the known occurrences of cold-water coral mounds but also integrating other carbonate mound systems differing between mounds in the marine vs. continental realm, pure biogenic deposits vs. spring and seep-related authigenic carbonates, and microbial build-ups vs. bioclastic mounds. Comparable to the Paleoreef Database, we aim to link equivalent metadata of each identified occurrence to existing publications and other information of the mound and/or province.

This presentation is meant to be a basis for discussions and improvement of the envisaged database with the input of all workshop and field seminar participants.

### References

- Golonka, J. and Kiessling, W. (2002) Phanerozoic Time Scale and Definition of Time Slices. In: Kiessling, W., Flügel, E., Golonka, J. (eds.) *Phanerozoic Reef Patterns*, SEPM Special Publication No. 72:11-20.
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- Kiessling, W., Flügel, E., Golonka, J., König, D., Röper, W., Steuding, R., Haas, A. and Däßler, R. (2003) The Paleoreefs Project. [<http://www.paleo-reefs.pal.uni-erlangen.de>].