

COCARDE – an international network of carbonate mound research

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Carbonate mounds are important contributors of life in different settings, from warm-water to cold-water environments, and throughout geological history. Research on modern cold-water coral carbonate mounds over the last decades made a major contribution to our overall understanding of these particular sedimentary systems. By looking to the modern carbonate mound community with cold-water corals as main framework builders, some fundamental questions could be addressed, until now not yet explored in fossil mound settings.

“New views on old mounds” is the principle scientific objective of the International Research Network COCARDE (<http://www.cocarde.eu>). The aim of the network is to bring together scientific communities, studying Recent carbonate mounds in mid-slope environments in the present ocean and investigating fossil mounds spanning the whole Phanerozoic time, respectively. The integration of Recent and fossil mound research allows identifying the full spectrum of biosphere and geosphere actors, their processes and products in carbonate mound formation and its transformation to a geological body.

Scientific challenges got well defined in past COCARDE meetings. The Special Volume *Cold-water Carbonate Reservoir systems in Deep Environments – COCARDE* (Marine Geology, Vol. 282) was one major outcome of these meetings and highlights the diversity of Recent carbonate mound studies. By comparing ancient, mixed carbonate-siliciclastic mound systems of Cantabria or the carbonate mounds in Morocco with the Recent ones in the Porcupine Seabight, striking similarities in their genesis and processes in mound development can be observed. This asks for integrated drilling campaigns to better understand the 3D internal mound build-up.

An important next step was the start of the five-year running ESF European Research Network Programme *Cold-Water Carbonate Mounds in Shallow and Deep Time – The European Research Network (COCARDE-ERN)*, (<http://www.esf.org/cocarde>) in June 2011 with yearly open calls for short visit and exchange grants, as well as calls for scientific meetings (integrated workshops and field seminars, conferences and schools).

The upcoming COCARDE Workshop *Fluid flow-related carbonate build-ups: from lacustrine to (early) marine environments – The Ries Impact Crater as a Natural Laboratory* – will be held on 15-19 October 2012 at Nördlingen (Germany). During this workshop well-preserved spring and seepage associated mounds in the Ries impact crater will be evaluated. Results from the 2011 Erbisberg Mound drilling will

be compared and contrasted with other research efforts on fluid flow-related carbonate build-ups in preparation of drilling seepage associated mounds in Morocco. The field seminar to the Miocene carbonates and Franconian Jurassic reef systems outstandingly serves capacity building in academia and industry.