

Geowissenschaftliches Kolloquium

Montag, 27.1. 2020, 17:15 Uhr, Geologie Hörsaal (LMS12-R7)

The end of the Tethyan Seaway - oceanographic rearrangement and biogenic response

Or M. Bialik^{1,2}

1. Institute of Geology, CEN, University of Hamburg, Bundesstrasse 55, Hamburg 20146, Germany.

2. Dr. Moses Strauss Department of Marine Geosciences, The Leon H. Charney School of Marine Sciences, University of Haifa, Carmel 31905, Israel.

The Tethys Ocean was compartmentalized into the Mediterranean Sea and Indian Oceans during the early Miocene, yet the exact nature of this disconnection and the sequence of oceanographic events are not well understood. It has been speculated that the termination of meridional water mass exchange across the Tethyan seaway led to a major reorganization of northern Indian Ocean and North Atlantic currents and associated climate belts. Similarly, the effect of the closure changed the behavior of the Mediterranean and effected the communities living in it in fundamental ways.

To deconvolve the timing and complex effects of this tectonic forcing on the worlds ocean, a combination of geochemistry, sedimentology and geophysics across multiple basins is required. In this talk I will present the results of an extensive study utilizing a large swath of Earth science tools to pin the age of the decoupling of the Indian Ocean and Mediterranean and understand the effect this separation had on both oceans.