Işık University

Ardahan University

Turkish Academy of Sciences



# INTERNATIONAL WORKSHOP

in the framework of Turkish-German Science Year 2013-2014
31 August-6 September 2014
Işık University
Şile, Istanbul-Turkey

## Implications of Late Quaternary Sea Level Changes on the Mediterranean and Black Sea Coasts

*abstract book*



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## Keynote Speakers

Keynote speakers for International workshop in the framework of Turkish-German Science Year 2013-2014 - MEDBLACKS2014:

Helmut Brückner (Germany), İlhan Kayan (Turkey), Giuseppe Mastronuzzi (Italy) and Mariana Filipova-Marinova (Bulgaria)

# Holocene sea level change indicators of northeast Aegean: Gökçeada and Bozcaada beachrocks

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**Abstract**

Age and cement fabric analyses of beachrocks on south coasts of Gökçeada and Bozcaada islands were attempted on the basis of radiocarbon dating, calcimetric measurement of total CaCO3 amounts, thin sections, scanning electron microscopy (SEM) and X-ray diffraction (XRD) analyses. Beachrocks were sampled at five different cemented beaches and total of 15 samples were collected for the above-mentioned measurements.

Petrographically, beachrocks are lithic sandstone and contain clastics derived from metamorphics and limestones as well as some fossil shell fragments. Finer grains are angular or poorly rounded amalgamated with a weak carbonate cement conisting solely of micritic envelopes typical of early cementation on the grain surfaces. Radiocarbon data obtained from 15 samples collected from exposed (+0,45m) and submerged (-0,10 m) parts of beds yielded ages ranging between 5830 – 5580 yrs BP and 760-620 yrs BP. We suggest based on radiocarbon ages and petrographic chatacteristics that beachrock formation took place at two different periods, namely 5830-3390 years BP and 2390-620 years BP, when sea-level was at similar position in proportion that of the present and sea-level was likely lower during the interragnum period.

**Key words:** Beachrock, Cementation, Paleocoastal environment, Holocene, Gökçeada, Bozcaada

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