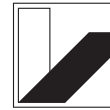


BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

Summer 2019



UNIVERSITÄT
BAYREUTH

Monday

22.07.2019

18:00 in H6, GEO

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Reconstructing the Late Bronze Age island of Santorini, Greece

The volcanic island of Santorini (Thera), Greece, has been the focus of international research efforts for centuries. The island is famous not only for its unique volcanic landscapes but also for remnants of the Minoan civilization well preserved below volcanic deposits.

In the Late Bronze Age, the internal part of the island was already occupied by a caldera bay formed during the Cape Riva eruption 22 ka ago. Within the caldera bay there was a central island to be called 'Pre-Kameni' after the current Kameni Islands. 3600 years ago Pre-Kameni – along with other parts of Santorini – was destroyed during the VEI=7 explosive 'Minoan' eruption. The fragments of Pre-Kameni can be recovered from the Minoan tuffs.

In this talk I will focus on the reconstruction of the island prior to the 'Minoan' eruption. Applying a photo-statistical, granulometrical and geochemical analysis and high-precision radiometric dating, it was found that Pre-Kameni had a 2.2-2.5 km³ volume, and its characteristic, black glassy andesite, using Cassinot-Gillot K-Ar dating, yielded an age of ca. 20 ka. Such an age implies that the island had started to grow subsequent to the Cape Riva eruption, which makes it possible to calculate a long-term eruptive rate of 0.13-0.14 km³/kiloyears for Pre-Kameni. However, the island probably was already dormant when the Minoan civilisation spread over Santorini in the Late Bronze Age.