

Wintersemester 2010/2011

Gebäude GEO I
Hörsaal H6

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung

Donnerstag 04.11.2010, 16:15 Uhr, H6

Anschließend Postkolloquium mit Bier und Brezeln im Foyer H6

Prof. Dr. Pavel Tarasov

Institute for Geological Sciences, Palaeontology, Freie Universität Berlin

Pollen-based reconstructions of the late Quaternary vegetation and climate: Numerical approaches and case studies from northern Asia

Prof Tarasov will present the results of the reconstruction of the late Quaternary vegetation and climate, using the quantitative biomization, and the pollen records from Mongolia, Russia, China and Kazakhstan. Quantitative reconstruction of the Holocene vegetation and climate dynamics in the semiarid Mongolian Altai suggests that boreal woodland has replaced the primarily open landscape of northwestern Mongolia at about 10 kyr BP in response to a noticeable increase in precipitation from 200 to 250 mm/yr to 450 to 550 mm/yr. A decline of the forest vegetation and a return to a predominance of open vegetation types occurred after 5 kyr BP when precipitation sums decreased to 250 to 300 mm/yr. The reconstruction is in agreement with the paleomonsoon records from China, demonstrating an abrupt strengthening of the summer monsoon at 12 kyr BP and an associated increase in precipitation and in lake levels between 11 and 8 kyr BP, followed by the stepwise attenuation of the monsoon circulation and climate aridization towards the modern level. The records from the neighboring areas of Kazakhstan and Russia, situated west and north, demonstrate spatially and temporally different Holocene vegetation and climate histories, indicating that the Altai Mountains as a climate boundary are of pivotal importance for the Holocene environmental and, possibly, habitation history of Central Asia.

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