be observed that generally limnic parts are dominant in chrome spinel which corroborates the hypothesis of a Tethys ophiolitic suture to the south of the Northern Calcareous Alps as a significant source within non-marine successions.

## Preliminary results from the Palaeocene/Eocene boundary sedimentary rocks of Austria: Microflora and palaeoclimate interpretation

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This paper reports on the first microflora including coccoliths, dinoflagellates, pollen and spores from P/E-boundary strata (ca. 55 ma) in Austria. The original accumulation place was situated along the north western margin of the Tethys on a shallow southern shelf of the European Plate. This newly discovered outcrop (25 km to the north of Salzburg) today is part of the South-Helvetic thrust unit. Using the palaeogeographic reconstruction of SCOTESE & GOLONKA (1992), the palaeolatitude can be estimated as approximately 40° northern latitude. The dinoflagellate assemblages are dominated by an acme of the Upper Palaeocene taxon *Apectodinium*, which makes up 62 % of the total marine palynoflora, particularely *A. augustum*, which is thought to be typical for the P/E boundary strata. The thermal maximum at the Palaeocene/Eocene-boundary lasted ca. 170000 years (RÖHL et al. 2007), but previously investigated terrestrial plant communities (North America: HARRINGTON 2003, WING et al. 2003; Australasia: CROUCH & VISSCHER 2003; north western Europe: COLLINSON et al. 2003, 2009) did not display high quantities of typical megathermal elements as known from the Eocene megathermal event. Our new findings confirm these results: The pollen and spore assemblages are dominated by various *Normapolles* taxa, gymnosperms are extremely rare. Climate-indicating palynomorph taxa occur in small numbers only (counts from one to seven), generally below 1 %. They mostly represent warmth-loving taxa from more mesothermal conditions („subtropical"), such as, *Ilex*, *Lithocarpus*, *Trigonobalanopsis*, Hamamelidaceae, Rutaceae, Juglandaceae, Rhoipteleaceae, *Parthenocissus*, Restoniaceae and Schizaeales, whereas true megathermal („tropical") taxa are represented by few families, only, such as Arecaceae (2), Anacardiaceae (1) Sapotaceae (2), Icacinaceae (1), Bombacaceae (1), Myristiceae (1) and Sterculiaceae (1). In future, further localities will be explored and might shed more light on the question why the P/E atmospheric warming, had not caused a severe turnover in land vegetation.

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## Human occupation of the High Himalaya range: archaeo-botanical evidence from a high alpine meadow in NW-Bhutan

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High alpine environments place severe constraints on a full-scale human occupation due to a series of geomorphologic, ecologic and physiological parameters. As a consequence high altitude landscapes like the Tibetan Plateau (e.g., BRANTINGHAM et al. 2007), the High Himalaya (e.g., MEYER et al. 2009) or the central European Alps (e.g., TINNER et al. 2007) were only permanently colonized in the course of the Holocene i.e. by Neolithic tribes with special economic and social as well as physiologic adaptations which allowed them to survive under these rather harsh climatic conditions. Nevertheless, the available archaeological and palaeoenvironmental evidence for prehistoric human activity in high altitude environments is extremely sparse partly due to the number and intensity of erosional processes, which are capable of destroying traces of former human occupancy within a short time. Here we present archaeo-botanical and paleoenvironmental data from the high alpine valleys in NW Bhutan (4000 - 4500 m asl.) which provide one of the earliest proofs of human activity yet known for the High Himalaya range.

The archaeo-botanical data were retrieved from a high al-