



## **Ancient terraces as environmental archives in the southern Levant**

Bernhard Lucke (1) and Paula Kouki (2)

(1) FAU Erlangen-Nürnberg, Institute of Geography, Erlangen, Germany (bernhard.lucke@gmail.com), (2) University of Helsinki

Remains of ancient terraces collecting runoff water are widespread in the southern Levant, and played a pivotal role for agriculture since rainfall was often not sufficient for growing crops. In this context, it has been debated how large cities of antiquity such as Petra were supplied, since they are situated in an environment apparently hostile to food production. However, a survey of the hinterland of Petra showed that it represents in fact an agricultural landscape full of terrace remains, although these are largely eroded today. But excavations of profiles found surprisingly deep sediment bodies, showing only a limited connection with the respective bedrocks, and indicating that part of the sediments consist of windblown dust. As well, there are carbonate crusts and archaeological materials associated with the terraces, suggesting that they represent so far unexplored environmental archives. Although probably discontinuous and thus rather challenging records are present, the terraces and their sediments could be a key for a better understanding of past landscape changes in the region.