



Study on the sediment compaction in relation to the nematode vertical distribution by means of high-resolution X-ray CT

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In benthic ecology, there is a long history relating the distribution and abundance of organisms to sediment characteristics. A strong feedback between sediment grain size and the structure and functioning of the benthic food web has been observed. Broad-scale distribution patterns of nematode communities, the predominant meiofaunal-sized metazoans in marine soft sediments, have often been related to variations in sediment properties. However, far less is known about the structuring force of sediment properties on smaller scales, in particular the vertical distribution of nematodes in the sediment. By means of high-resolution X-ray CT in combination with 3D-analysis, the internal structure of the sediments in relation to different structuring forces was examined. The present study addresses the question whether sediment compaction has a differential structuring impact on the nematode vertical distribution.