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ZOOGEOMORPHOLOGY:
ANIMALS AS LANDSCAPE ENGINEERS

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For millions of years, animals have had a dramatic impact on landforms and ecosystems, from classic examples of soil bioturbation by earthworms to evidence of dinosaurs changing ancient river courses. However, identifying and quantifying the impact of large animals (other than humans) on landforms has been a challenging and under-appreciated branch of interdisciplinary natural sciences. This talk explores the impact of animals, from deep-sea whale feeding marks to burrowing on mountain slopes, with an emphasis on coastal environments (with volumes of reworked sediment >1000 m^3/km^2 annually!) and new research into impact of beaver as a keystone landscape engineer, which has been resurgent from North America to Baltic States and beyond. In addition to satellite image analysis, high-resolution geophysical techniques are used to non-invasively image biogenic structures and examine their impact at different spatial scales: from slope stability to regional climatic balance and even their role as groundwater-table and sea-level indicators. This is an exciting research field with tremendous potential and the need for field observations and studies of billions of preserved relict zoogenic features worldwide.