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An interactive survey panel regarding the effects of mice (Microtus spec.) on a young ecosystem

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Apparent disturbance caused by soil megafauna took place for the very first time in 2014, after nine years of spontaneous vegetative succession of the constructed watershed Chicken Creek catchment (6 ha). This watershed was designed to investigate the initial phase of soil and ecosystem development under natural conditions including the detailed study of hydrologic processes and water-substrate-plant-atmosphere interactions. In autumn 2014, we recorded the primarily common vole (Microtus arvalis Pallas) activities (calamity), which altered the microtopography of the substrate surface: We counted mouse holes and diggings (for storage organs) at the same spatial units (permanent plots, >100 # of 5 m $\times$ 5 m) where we monitor the vegetation since the onset of the catchment. We are hence capable of analysing the effect of abundant vegetarian mice and biogenic macropores, e.g. on the occurrence and performance of the more than 150 vascular plant species present by comparing the respective coverage in 2013 (the pre-mice year) versus 2014, with or without accounting for the confounding effect of succession. Additionally elaborated insight on the 3-D architecture of the mice underground corridors and the nesting places (in situ) enables to extrapolate mass and volume of the moved substrate and the number of the nests of mice for the whole catchment. We report these results, anticipating a return service: Here, we ask for your expectation regarding the significance of the mice-made disturbance on the vegetation of the young ecosystem.