Distribution of archaeological material scatters and soils at the site of Abila of the Decapolis, northern Jordan

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Patterns and intensities of past land use are mostly unknown. However, soils in the vicinity of archaeological sites usually carry significant amounts of material culture (mostly pottery sherds) which testify to past human activity. We surveyed surface transects of material culture and soil distribution, radiating from the city center of ancient Abila of the Decapolis. The city had been abandoned during the Medieval and was never resettled, which minimizes the presence of material culture from younger periods. In addition, earlier studies suggested that soil erosion of the rather level limestone plateau surrounding the site was rather limited, indicating that actual land surfaces largely represent those of antiquity. Our survey encountered strongly varying quantities of material culture, which correspond to some soil properties such as concentrations of faeces biomarkers of pork excrements. As the material culture mainly dates to Late Antiquity, and as pork consumption during the Islamic periods is rather unlikely, this indicates that the distribution of the archaeological material was to some degree connected with pig breeding during Antiquity. A possible practice leading to sherd deposition on fields could be manuring, such as from applying dung including pork excrements, but ratios of N-isotopes do not suggest that fields surrounding Abila were subject to application of larger amounts of manure. Therefore, it seems very likely that material culture deposition on the land surrounding Abila was partly connected with the herding of pigs, a land use practice that is attested in Biblical sources on the region.