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Archaeological evidences of a Neolithic to Recent karstic landscapes in Marketbergel, Germany: first insights to the paleoenvironmental reconstruction and land use

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We have conducted a geoarchaeological study in Marktbergel, where important findings have been recovered from the Neolithic to recent times. The site is developed on a karstic landscape from the dissolution of limestone and gypsum. The karstification processes have formed different geoforms which contain paleosols and pedosediments of different age. We have recognized at least five paleosol levels. The basal paleosol has developed from a geological layer strongly affected by periglacial processes. Over it, there is another paleosol showing gleyic features. From this level a set of stony artefacts was recovered, which belong to the Neolithic period. The next, younger paleosol is the best developed soil. It is very clayey and shows thick and continuous clay cutans. These properties evidence a long period (probably 3000 years) of landscape stability, when karstification and colluviation processes were not active. The upper paleosols are the less developed and have been affected by colluvial processes, thus they constitute pedosediments. These paleosols contain abundant artefacts (charcoal, ceramic) from the Bronze Age. We analyze both, analytical soil properties and archaeological evidences to reconstruct paleoenvironments and possible land use of the site.