

The Upper Triassic Burgsandstein (Löwenstein Formation) in Franconia presents a fossil desertlike playa landscape with episodic supply of clastic material. It occurs as sheet wash and river deposits. A tight interplay of deposition and soil formation evidences longer periods of standstill with soil formation and shorter periods of fine to coarse clastic alluvial and fluvial deposition. While in shales tight bedding with unconformities veil the frequent and real change of sheet wash and soil formation, e.g., paleo-Vertisols, in clastic river deposits this deposition-soil interplay is much better detectable in form of quartz sandstone with Leptosols and Gleysols. Strong weathering close by in the dolomitic facies with deep solution cavities (Chromic Luvisols) could find an equivalent in the siliceous facies as silicate weathering. Diagenetic garnishing are bleaching nodules, and Dia-Gley as reduction hems below the edge of water-saturated sandstone.

River deposits (fluments) show among themselves relationships of vertically alternating texture, in which a deposition uses the interflument depressions of the preceding flument deposits. As consequence, the lithological boundaries between subdivision units in the Burgsandstein are wavy.

Pleistocene sediment deformations act in both the mantle rock and the pre-Pleistocene deposits thus challenging considerations whether some of the deformations are of synsedimentary Triassic or of postsedimentary Pleistocene age.