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Precipitation of freshwater carbonates - in-situ accumulation experiments in the creekbed of the stream Friede (NW-Thuringia)

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Abstract

Thuringia is one of the freshwater carbonate riches areas in Germany. They are still in the process of sedimentation until now. By in-situ accumulation experiments in the creekbed of stream Friede, recent sedimentation rate, structural buildup and chemical composition could be analysed.

Three annual layers of pure calcite were deposited in flowing and in lentic water. Biogen induced deposits dominate the whole year in the flowing water. Spring-summer sedimentation is characterised by fluffily associated calcified Cyanophycees. Autumn-winter sedimentation is characterised by compact stromatolitic calcified Cyanophycees. Abiotic accumulated sparite begins the Spring-summer sedimentation in lentic water. Fluffily, biogen induced layers of calcified Cyanophycees represent the autumn-winter sedimentation. A micritic interlayer demonstrates a waterless period in the second year.