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Ciliates and testate aboebae in acidified mountain streams.

The ciliates (qualitative) and testate amoebae (qualitative and quantitative) in the sediment (0-3 cm) of three small streams with different pH (Eger, pH 6; Röslau, pH 5; Zinnbach, pH 4) were investigated in spring and autumn 1992.
The species number of ciliates decreased with decreasing pH (Eger 53, Röslau 41, Zinnbach 38) and acidophilic taxa were most numerous in the Zinnbach. The species number of the testaceans was similar in all streams (42 - 45 taxa). However, acidophilic species, mainly of the family Nebelidae, increased from the Eger to the Zinnbach. The individual number and the biomass of the testate amoebae distinctly with decreasing pH: Eger 8125 x 10^3 ind./m^2 (311 mg), Röslau 11250 x 10^3 ind./m^2 (606 mg), Zinnbach 14375 x 10^3 ind./m^2 (1323 mg).
These data indicate pH-dependent protozoan communities. The high number of testate amoebae in the sediment suggest that they play an essential part in the energy transfer, especially in acidified streams where the macrozoobenthos is often depleted.