SPATIAL DRIFT DISTRIBUTIONS AND THEIR ECOLOGICAL IMPORTANCE

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ABSTRACT

In the Oberer Seebach, a 2nd order mountain stream (Lunz, Austria), drift samples of particulate organic matter, Baetidae and Chironomidae were taken in two cross sections during the midnight drift peak. The horizontal drift pattern changed with discharge. Active swimming of the larvae had an effect at low discharge only, therefore spatial drift patterns were formed mainly by the distribution of the starting points and the hydraulic influence during drifting. The effect of these spatial drift patterns on the benthic distributions is discussed.

THE LOTIC FAUNA IN WATER LOGGED SEDIMENTS BEYOND THE WATERLINE IN THE CANALIZED DANUBE

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ABSTRACT

The ecosystem 'stream' is confined traditionally within the bankfull lines: Inside is the so called active channel, outside the flood plains. Only during periods of high discharge the entire active channel is covered by water, most of the time elevated sediment structures are dry on the surface. These only periodically flooded channels areas are large and frequent in braided river sections and smaller, less frequent and mainly near the banks in confined gorge sections. The ecological implications for the entire ecosystem are manifold and important. Described are the reactions of the lotic fauna in and on the remaining bank near gravel bars and elevated gravel areas. Water flow through the sediments is in the canalized Danube reduced to an extend impeding the survival of the lotic fauna below dry sediment surfaces. Exceptional are very special topographic situations.

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