## 11) THE "RIPRAP": A SPECIFIC ARTIFICIAL BIOTOPE (RIVER DANUBE, ALTENWÖRTH, AUSTRIA)

## Tockner, K.

Besides locally restricted macrophyte zones (mainly Pot. pectinatus), the riprap is the only structure of the river bank with a high degree of heterogenity. It is characterized by the stability of the substratum (large boulders), a complex hollow space system, and by modest water level fluctuations, because of its location in an impounded part of the river. Further, wave action prevents sedimentation of suspended matter in the upper area. There, on the front side of the boulders, algae develop. In the lower area sedimentation is permanent.

For an understanding of the structure and functioning of the epilithic community, granite stones with a defined surface area are exposed for colonisation, both in the upper and lower area. Colonisation patterns are investigated up to an exposure time of six months. Abundances reach a maximum after two months, chironomids dominate in the upper, Corophium curvispinum Sars, a filter feeder, in the lower area of the riprap. Colonization rate of chironomids is strongly correlated with algae development. Additional, gastropods and caddisflies colonize the back side of the boulders.

Generally, the epilithic community is characterized by high abundances, extensive biomasses and low diversities, mainly in the lower part of the riprap.

## 12) BEDSEDIMENTS, GROUNDWATER AND STREAM LIMNOLOGY

Bretschko, G.

The depth distribution of the river fauna in the sediments is shortly described and a definition is given for "bedsediments" as part of the hyporheic zone. The lower boundary of bedsediments is surprisingly stable in its position, regardless of varying situations in the topmost layers of sediments. In "Oberer Seebach" this boundary is in about 50 cm of sediment depth. The depth limitation of the epigeic fauna is not to explain with the distribution of sedimentcomposition, neither with temperature, nor chemistry nor throughflow nor organic matter. A very tentative explanation is given: assimilating plants are restricted to the sediment surface because of their dependence upon sun radiation. Assuming, that the epigeic fauna needs at least once in its life living plant tissue in difference to the hyporheic fauna, the described depth limitation is to explain with the fact, that living plant tissue gets scarcer as deeper one penetrates the sediments.

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

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