

**THE OCEAN QUAHOG *ARCTICA ISLANDICA* (*CYPRINA ISLANDICA*)  
– A BIOINDICATOR FOR CONTAMINATED SEDIMENTS?**

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In the 1960ies, industrial waste products (dusts and muds) containing relatively high concentrations of heavy metals and organic pollutants (PAHs) were deposited in the Lübeck Bight, 54°05 N; 11°00 E. Currents along the see-floor, turbulences in the water column and bioturbation caused mixing, resuspension and a lateral transport of these deposits.

This contamination of noxious substance in sediments were analysed in a on-going project, “Dangerous wastes in the Lübeck Bight”. In this connection the spatial distribution and population dynamics of *Arctica islandica* and other benthic organisms were analysed. Furthermore, in the soft body and the shell trace metal concentrations were analysed by AAS (Atomic Absorption Spectrometry) and LA-ICP-MS (Laser Ablation Inductively Coupled Plasma Mass Spectrometry). The effects of the sediment pollution could be correlated with the contamination of *Arctica islandica*.

The growth of *Arctica islandica* was quantified by determination of age rings. With help of LA-ICP-MS it was attempted to analyze the heavy metal concentration per age ring in order to estimate the possibly deposition of heavy metals in the respective years.