

Influence of invasive



Riparian forests are known as important source of allochthonous organic matter entering to water ecosystems via fallen leaves. However, leaf litter, depending on their quality, may create different conditions for benthic microorganisms functioning in littoral zone of water bodies. In order to evaluate the impact of riparian invasive *Acer negundo* on littoral water zone of the River Neris (Lithuania), we performed physicochemical and microbiological investigations in bottom sediments of three different sites of the river. One sampling site was close by riparian *A. negundo*, another close by native *Alnus glutinosa* location and a third zone was near the shore without riparian vegetation. Content of nutrients in the littoral sediments differed between invasive and native trees leaf litter accumulation sites, while not always significantly. The highest microbial densities as well as benthic community respiratory activity (expressed as the rate of organic carbon mineralization) occurred in *A. negundo* leaves accumulation site. In sediments of this site, the most intensive anaerobic terminal organic carbon mineralization process – sulfate reduction and the highest concentration of hydrogen sulfide were also observed. Differences in the intensity of mineralization processes between sites suggest that the replacement of the riparian native species such as dominant *A. glutinosa* by invasive *A. negundo* with higher biodegradability leaves may induce local changes in organic matter processing in the littoral zone of the river. The increase of littoral bioproductivity in the accumulation zone of *A. negundo* leaf litter can occur due to the inflow of available organic matter and its intensive mineralization.

Auteurs du document : Alina Krevš, Alė Kučinskiene

Obtenir le document : EDP Sciences

Mots clés : leaf litter, benthic microorganisms, river, litière, microorganismes benthiques, rivière

Thème (issu du Text Mining) : MILIEU NATUREL

Date : 2017-06-02

Format : text/xml

Source : <https://doi.org/10.1051/kmae/2017015>

Langue : Anglais

Télécharger les documents : <https://www.kmae-journal.org/10.1051/kmae/2017015/pdf>

Permalien : <https://www.documentation.eauetbiodiversite.fr/notice/influence-of-invasive0>

Evaluer cette notice: