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## Environmental evaluation using the attached and drifting diatom assemblage :A case study in the Ai River, Osaka

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Diatom assemblage is an excellent bioindicator for river environment. Many water quality indices have been established based on the attached diatom assemblages. Meantime, drifting diatom assemblage as an environmental indicator has not been verified enough. We compared epilithic and drifting diatom assemblages in term of their nature of environmental indices in the Ai River flowing through Osaka prefecture in Japan. The species compositions of epilithic diatom assemblages varied between sites and they well represent the water environment in situ. In contrast, a saprophilous diatom *Nitzschia palea* was usually dominant in the drifting diatom assemblage despite the oligo- to beta-mesosaprobic water. Its dominance can be explained by the inflow from the paddy fields in the watershed. Therefore, we conclude that the drifting diatom assemblage is less effective as a water quality indicator, but it may be good indicator for geographical configuration and the land use of the watershed.

Keywords: river environment, diatom assemblage, bioindicator, environmental parameters