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Aquatic insects as bioindicators

Scope on freshwater insects



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ABSTRACT

There is a growing change in the natural environment around the world as a result of the growth of human populations in the recent decades, so that insects are now widely used as bioindicators for environmental changes.

The communities of aquatic insects are affected by several factors related to water quality, stream morphology, food availability and quality and many other factors.

Among aquatic insects, there are some orders that are very important as bioindicators for environmental changes, in assessing water quality and also as indication for many other environmental parameters such as bacteriological pollution of water, sedimentation of streams and effects of heavy metal.

This paper discusses the aquatic insects as bioindicators for different environmental changes by providing introductory text, identification keys, checklists and literature references to the most important points in aquatic life and most important orders of aquatic insects in general, with scoping on fresh water insects; discussing adaptation to fresh water habitat, Threats to global freshwater biodiversity, and the usage of fresh water insects for determination of bacteria pollution.

Moreover, this paper provides the most effective used sampling protocols for identifying fresh water habitat in case of preparation of field study.