

Everglades Project - Macroinvertebrate Response to Nutrient Enrichment

Management Issue:

As required by the EFA, monitoring and assessment is needed to ensure that naturally occurring flora and fauna communities remain viable. Continued monitoring is necessary to assess further damages and community alterations in response to current and future environmental conditions.

Project Overview:

Natural populations of invertebrates respond to nutrient related changes in the northern Everglades. Macroinvertebrate community data has shown that the invertebrate taxonomic and functional compositions found in nutrient-poor reference condition dramatically changes in enriched conditions. This alteration can be interpreted as a direct violation of the EFA.

Project Objective:

The objective of this project is to characterize the invertebrate community and to identify taxonomic and functional responses to nutrient-related changes in the northern Everglades.

Application of Results:

1. Invertebrate communities were dominated by dipterans, coleopterans and oligochaetes
2. Percentage of insect declined significantly with increasing enrichment
3. Percentage of oligochaetes increased significantly with increasing enrichment
4. Clear taxonomic and functional distinction were shown between invertebrate communities at reference sites and those at enriched sites using principal component analysis