

## **Zooplankton in Canadian Coastal Marshes of Lake Erie: Association with Water Quality and Aquatic Vegetation.**

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There are over 100 wetland complexes within the 2-km shoreline of Lake Erie, covering close to 27,000 ha. Forty of the Canadian complexes have been mapped and identified to specific site type; the majority of these are located in drowned river-mouths, barred estuaries, and barrier-beach lagoons. From 1995 to 1998, we visited 7 of these coastal marshes, along with one in the Detroit River, to investigate the type of zooplankton communities and their association with water quality and aquatic vegetation. Water quality in these wetlands can be ordinated along a nutrient-turbidity gradient. Marshes that are highly turbid and eutrophic, have only a few submersed aquatic plant taxa and are dominated by a fringe community of emergent and floating taxa. On the other hand, marshes that are clear and oligotrophic are associated with a higher diversity of aquatic plants that include submergent, emergent and floating taxa. According to literature on other Great Lakes coastal marshes, zooplankton communities that are associated with macrophytes differ from those associated with shallow, turbid open water that have no macrophytes. In this paper, we investigate the appropriateness of using zooplankton as bioindicator of water-quality-plant conditions in lake-wide and long-term monitoring programs of Lake Erie marshes.