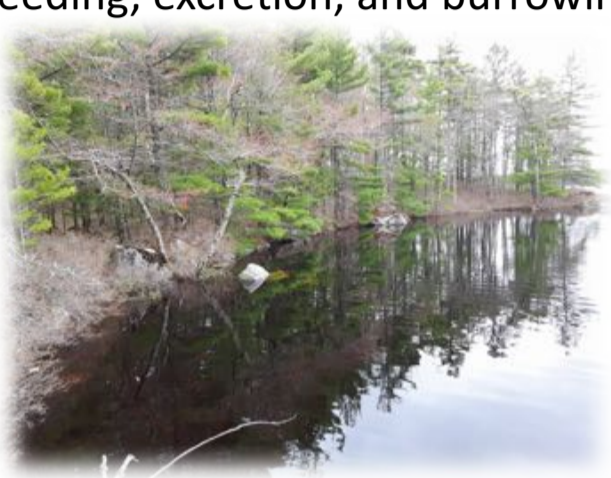


# Influences of Water and Sediment Chemistry on Mercury Bioaccumulation in Freshwater Invertebrates from Two Lakes in Kejimikujik National Park, Nova Scotia

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Mercury is a contaminant of global concern capable of bioaccumulating and biomagnifying in freshwater aquatic organisms. Freshwater insects accumulate methylmercury (MeHg) through their diet (consisting largely of detritus and sediments) and are important vectors for MeHg transfer to both freshwater and terrestrial food webs. These insects are important for the function of aquatic and terrestrial ecosystems by decomposing detritus and releasing nutrients through feeding, excretion, and burrowing.



The objective of this research is to quantify the distribution of MeHg in sediments and near-sediment aquatic insects, with emphasis on caddisflies and mayflies (Order Trichoptera and Ephemeroptera, respectively), as well as quantify any possible relationships between mercury in sediments and freshwater insects from two lakes (Big Dam East Lake, Big Dam West Lake) and their major tributary (Thomas Meadow Brook) in Kejimikujik National Park, Nova Scotia.



Sediments and freshwater insects collected from Kejimikujik National Park will be freeze-dried and mercury concentrations will be analyzed. Quantifying the relationship between sediment mercury speciation and freshwater insects could provide a better model for predicting food web bioaccumulation in the Kejimikujik National Park.

