Franklin Island has been designated as a conservation reserve with the option, during the planning process, to make it into a park. Because of these two potential designations and the quantity and diversity of use, Franklin Island presents a good case study for recreation impacts and potential management options for the greater Georgian Bay coast. Planning issues include type of protection, type of management (direct vs. indirect), and challenges such as diversity of uses and stakeholders. Finally, planners and managers are challenged by little understood ecosystem dynamics. This range of challenges for research, planning and management invites opportunities for learning, and for creating new partnerships for protection on Georgian Bay.

Assessment of Pre-Industrial Conditions and Long-Term Environmental Trends in Park Lakes

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Paleoecological techniques offer a unique opportunity to obtain long-term environmental data for park lakes. These approaches are based on the interpretation of biological remains (e.g. diatom valves, chrysophyte scales) and geochemical indicators preserved in the different layers of sediment cores collected from the lakes. Our studies of algal microfossils in sediment cores from Killarney and Algonquin Provincial Parks were very effective in environmental monitoring and assessment because, in addition to characterizing the background or reference conditions, it was possible to assess deterioration and/or recovery in aquatic ecosystems, even when direct historical data were not available. These data answered questions related to lake acidification, metal contamination, climate change, and loss of fish. For example, in Killarney Park, acid sensitive lakes started to acidify in the 1930s and rapid acidification only occurred in the 1960s and 1970s. As the pH declined, lakewater aluminum concentrations greatly increased and some sport fisheries were extirpated. Although the lakes have acidified during this century, recent sediments of some lakes have shown signs of biological and chemical recovery as a result of recent reductions in SO2 emissions. We are presently conducting a more comprehensive project on three lakes in Killarney Park to develop 12,000- year record of ecosystem responses to environmental changes. These data will be communicated to the general public through interpretive media at the park.