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**Monitoring bioremediation after oil spills, old and new, using  
marsh foraminiferans as indicators**

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Salt marshes of Nova Scotia are highly susceptible to marine oil spills. Removal of oil by natural processes is slow in low-energy environments, allowing oil to remain unaltered for many years. Marsh foraminiferans, microfossils sensitive to various environmental stresses, can indicate oil pollution and are useful to monitor bioremediation. Petpeswick Inlet, Nova Scotia, a two year-old experimental spill site, and Black Duck Cove, Chedabucto Bay, Nova Scotia, a 32 year-old spill site, have similar foraminiferal assemblages. At Petpeswick Inlet are 18 plots treated with one of the following: a controlled plot with nutrients (not oiled), a controlled plot without nutrients (not oiled), a plot with natural attenuation (oiled), a plot with nutrient enrichment (oiled), a plot with nutrient enrichment and cut plants (oiled), and a plot with nutrient enrichment and agricultural disking (oiled). Results continue to show deformation in the species *Miliammina fusca* in oil plots with no change in the control plot. Cores examined from Black Duck Cove indicate that *Miliammina fusca* is the dominant species with deformation present. The two areas provide present-day and post-spill scenarios that show how foraminiferans may be used to detect the duration needed for bioremediation within a marsh environment.

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