

A Survey of Potential Hyperaccumulators Near Sudbury, Ontario, Canada.

Hickey, Karen T. Mirarco, Centre for Environmental Monitoring, Laurentian University, Sudbury, ON.
P3E 2C6, khickey@mirarco.org

Recent studies into phytoremediation revealed that certain species of ferns (*Pteris vittata*) can hyperaccumulate soil and groundwater contaminants. This survey was undertaken to determine if any sporophyte (fern and clubmoss) species native to the Sudbury region, are potential heavy metal accumulators.

Between two and eight species of sporophytes were sampled from 14 sites, including a control site in Killarney, Ontario. Sites were within 70 km on a NE transect from the regional smelters. In the lab, fronds and stem were separated from the roots and milled using a Wiley mill. Using X-ray Fluorescence Spectrometry, ground samples were analyzed to determine $\mu\text{g/g}$ of K, Ca, Ti, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Br, Rb, Sr, Pb. The figures below provide a summary of results obtained to date. Early trends suggest spinulose species are accumulating higher concentrations of Mn and Zn than those found in the soil.

