

## Gold Anomalies in Plants from the La Ronge Belt - Red Herrings or Real Prospects?

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### **ABSTRACT**

*About 15 years ago, biogeochemical exploration for gold became a viable alternative to the more conventional geochemical methods because of the development of neutron activation analysis to determine accurately sub-ppb levels of gold in dry tissues of trees and shrubs. At the time there were few published results by which to compare newly acquired data, and practically none from surveys in Canada.*

*Subsequently, several surveys conducted in the La Ronge Belt yielded high concentrations of gold in plant tissues. Some were near zones of proven mineralization, whereas others were from undisturbed forest with little or no outcrop and remote from known mineralization. In subsequent years, extensive field and laboratory investigations across Canada have provided clearer understanding of the processes that contribute to gold uptake by plants. Consequently, the methodology has been refined and precautions that need to be taken when conducting biogeochemical surveys have been identified.*

*Data from samples collected from the La Ronge Belt during the 1980s are reviewed in the light of this new knowledge, and in relation to the development of known and newly discovered deposits. There remain a number of zones of biogeochemical enrichment of gold (and pathfinder elements for gold) for which the sources have not been determined. This talk will focus upon these biogeochemical anomalies.*