

**ABSTRACT**  
**UPTAKE OF MERCURY BY PLANTS PRESENT IN THE VICINITY OF**  
**BALATOC TAILINGS POND OF BENGUET CORPORATION**

Elsie P. Cezar  
University of the Philippines, 2005

Adviser: Dr. Florida Carino  
Co-Adviser: Dr. Josefina de Jesus  
Reader: Dr. Daniel Lagunzad

To identify plants useful as bioindicators of, and bioextraction agents for mercury pollution, soil and plant samples were collected from the mine tailings pond of Balatoc mines located in Brgy. Birac, Itogon Benguet. Plants growing in the sampling plots were identified, and the mercury content of plants and soil samples were determined. The pH of the soil was likewise measured. Seven species of plants were found in the sampling site: *Chromolaena odorata* L. (R.M. King and Robinson), *Crassocephalum crepidioides* (Benth.) S. Moore, and *Ageratum conyzoides* L. (all Compositae/Asteraceae); *Saccharum spontaneum* (Gramineae/Poaceae); *Crotalaria incana* and *Mimosa pudica* L. (both Leguminosae); and *Lantana camara* L. (Verbenaceae). These plants were also found in the presumably clean area about 7 km away. Among the species found in the area, *C. odorata* and *S. spontaneum* were most tolerant of the toxic effects of mercury, being found in plots with relatively high mercury loads in the soil. At medium levels of mercury contamination of the soil, these plants showed the ability to concentrate mercury in their above ground parts. *A. conyzoides*, *L. camara* and *M. pudica* were found only in plots with low mercury content. Mercury concentration in the aboveground tissues does not significantly correlate with the mercury content in soil.