

Elemental Composition in Siebold's Beech Seedling Roots at Shirakami-Sanchi World Heritage Area

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ABSTRACT

Siebold's Beech (*Fagus crenata* Blume) seedlings were collected at three sites in and near the Shirakami-Sanchi World Heritage Area, a mountainous region, in October 2002, and their elemental compositions were determined by PIXE. 24 elements were determined in total. The elements Na, Mg, Al, Si, P, S, Cl, K, Ca, Ti, Mn and Fe were found to be the major elemental components. The concentrations of major elements, Zn and Pb in root sample at the monitoring site (Mt. Kushiishiyama) were different from those in root sample at other sites (Futatsumori and Tsugaru pass). To compare the elements data for the tip, midpoint and root of the beech seedling root in three sites, Al, Si, Ti, Fe and Pb were prominent in the tip, and Zn was prominent in the tip and midpoint. The purpose of this study is to obtain basic data for monitoring and investigating the influence of acidic deposition on the forest ecosystem of Shirakami-sanchi.