

B517 Heavy Metal Contents of *Gypsophila oldhamiana* growing on soil derived from serpentine

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To investigate the degrees of toxification in the serpentine areas, serpentinites and adjacent metamorphic rocks, soils derived from serpentine and metamorphic rocks and a plant, *Gypsophila oldhamiana*, dominantly surviving at the serpentine soil are collected from the Hongseong-Gun, Chungnam. Geochemically, the serpentinites are high in the nickel, chrome and cobalt contents whereas the metamorphic rocks show high zinc, scandium, molybden and iron contents. The serpentine soils are high in the nickel, chrome and cobalt contents whereas the non-serpentine soils show high zinc and iron contents. Heavy metal contents in the *Gypsophila oldhamiana* are high in the serpentine soil relative to the mixed soil. Comparing with rocks, the *Gypsophila oldhamiana* is low in the most of heavy metal contents(except zinc) relative to the serpentinite whereas the plant is low in the nickel, chrome and cobalt contents, and high in the zinc, scandium, iron and molybden contents relative to the metamorphic rock.

B518 Heavy Metal Levels in Fish of Youngsan River System

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Heavy metal concentrations were determined in a total of 192 samples of 27 species of freshwater fish. The samples were collected at 11 main and branch streams of Youngsan river system, 1995 ~ 1996. The essential metals, such as, Fe, Mn, Zn, Cu were detected in all samples, but the toxic metals, Pb and Cd, were showed 86.4% and 57.1% in detection rate, respectively. In general, the order of heavy metal levels showed as follows : Fe > Mn > Zn > Cu > Pb > Cd. Among the fish species, the significant inter-specific differences of the mean levels existed in all of the metal species tested(p<0.01). However, between the food habits of fish, the mean Cd level of carnivore only was significantly two times higher than that of omnivore and herbivore(p<0.01). Of the 27 fish species, 9 species in Zn, 13 species in Pb, and 5 species in Cd exceeded the maximum permissible limits set by foreign countries for fish, 40ppm for Zn in Newzealand, 0.5ppm for Pb and 0.05ppm for Cd in Netherland.