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Comparison of deposition fluxes on the open area and in mountain spruce stands of different density

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[fulltext]

To better understand the chemical transformation of rainfall after the passage through the canopies it is necessary to study throughfall deposition fluxes within forest stands. The comparison of bulk deposition fluxes of Ca, Mg, K, S-SO_4, N-NO_3 and N-NH_4 in mountain spruce stands of different stand density and bulk deposition fluxes on the open area was made at the study site Bílý Kříž (Moravian-Silesian Beskids Mts., Czech Republic) during the period of 1999–2006. A linear relationship between the amount of rainfall on the open area and the amount of throughfall in the spruce stand was found. Throughfall deposition fluxes of selected elements in the dense as well as in the sparse spruce stands were higher when compared with bulk deposition fluxes on the open area. There were mostly statistical significant differences between the bulk deposition fluxes on the open area and those in the studied spruce stands. The throughfall deposition fluxes of Ca, Mg, K and S-SO

were influenced by the spruce stand density.

Keywords:
throughfall; Norway spruce; Moravian-Silesian Beskids Mts.; Czech Republic

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