

# Relationship between the cyclic eolian dust contribution on the Japanese Island and pollen products, based on borehole cores

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The fluctuation during the last 100yr of the eolian dust(Kosa aerosol) originating from arid and semi-arid areas of China has been reconstructed by using the sediments from Lake Kawaguchi, central Japan with high temporal resolution. The quantification of Kosa contribution to the sediments was carried out by a new method using scanning electron microscopy-energy dispersive X-ray microanalysis (SEM-EDX) proposed by us. Therefore, we can first show a short-term(approximately 10-20 yr scale) cycle in Kosa aerosol fluctuation. Higher

sedimentation rates of the Lake Kawaguchi sediments and the new analytical method using SEM-EDX revealed a remarkable fluctuation pattern of Kosa aerosol, suggesting climate cycles much shorter than glacial-interglacial. Such short-term cycles may be related to sun-spots. The number of days of Kosa events during the last 30 yr, obtained by visual observation by Meteorological Agency of Japan, also supports the presence of such a short-term cycle. Further, since the annual pollen products both of Japanese cedar and Japanese cypress were also well observed during the last 30 yr in Japan, we investigated on the relationship between the cyclic eolian dust(Kosa) contribution on the Japanese Island and annual pollen products both of them found in Kofu basin during the 30 yr.