

Holocene eolian flux changes estimated from detrital components in peat bed of the Ozegahara, central Japan.

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Eolian dusts falling over the Japanese Island have transported from the Chinese loess plateau and its surrounding area by the Westerlies. The amounts of eolian inputs reflected the dry-wet climate in the inland area of East Asia, because eolian dusts were produced larger under dry climate such as desert environment by dust storm than under wet climate caused to appear forest and grassy plain. By using deep-sea and lacustrine clastic sediments, it is difficult to distinguish eolian dust materials from fluvial detrital materials. However, it is possible that inorganic materials in peat have been almost originated from eolian dust and volcanic ash, if we have been not able to recognize fluvial layers. We estimated eolian flux of Holocene peat sequences in the Ozegahara, central Japan, after chronological studies by tephra identification and radiocarbon measurements, determination of carbon by LECO analyzer and physical properties such as bulk and grain densities by pycnometer. And then, we investigated to compare eolian dust concentration with Holocene climatic change in Japan detected by pollen analysis in the same peat sequence (Sakaguchi, 1982).

As results, we could get many information on eolian input as follows; 1) Onset of peat formation started since 8,200 cal. years BP. 2) Rate of peat production increased since 5,000 cal. years BP. 3) High concentrations of eolian dust showed in 4,500-3,000, 2,000-1,900 and 1,300-1,000 cal. years BP, but pollen analysis by Sakaguchi (1982) suggested to compare these ages with cooling period. 4) It is possible that peat production during Holocene warm periods might be low, because of the foresaid evidences