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Pollen distribution in surface sediments on the Okhotsk Sea

Manami Sugaya[1*], Masaaki Okuda[2], Makoto Okada[3], Tatsuhiko Sakamoto[4]

[1]Science and Engineering, Ibaraki Univ., [2]Nat. His. & Inst., Chiba, [3]Dept. Env. Sci., Ibaraki Univ., [4]JAMSTEC

The objective of this study is to reveal distributions of fossil pollen assemblages in surface sediments on the Okhotsk Sea basin floor as an example of pollen distribution on deep-sea basins. We used top 5 cm sediments of 16 core top samples, belonging to JAMSTEC, taken from the Okhotsk Sea basin. Fossil pollen analyses were done using pollen grains extracted from 1.5 gram in dry weight sediments at each core sample.

As the results, we divided distribution of the fossil pollen assemblages on the Okhotsk Sea basin floor into two zones that are 1) coastal zone (mainly within 100 km from the coast) and 2) pelagic zone. 1) Assemblages of the costal zone mainly consist of *Betula* and and other deciduous pollens which are the main elements of taiga forest, corresponding to vegetations on the neighboring land. Concentration of pollen grains is often over 1000 grains/gram indicating relatively high value as deep-sea sediments. 2); Assemblages of the pelagic zone mainly consist of conifer pollens such as *Pinus* and *Picea*, which are wind-transport type pollens. Concentration of pollen grains is around or less than 500 grains/gram. These observations indicate that pollen assemblages in surface sediments on the Okhotsk Sea basin floor reflect vegetations on the neighboring lands precisely more when the distance from the coast is closer, and relative abundant of wind-transport type pollens such as *Pinus* become larger when the distance is far. Therefore we might say that the distribution of pollen grains has not been affected by ocean current after the pollen grains, transported by wind, fall on the sea surface.

Keywords: fossil pollen, Okhotsk Sea, paleoclimately