



Palynological implications for paleoceanography of South Sea, offshore Korea over the past 30,000 years: a preliminary result

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Age-controlled palynological profile of piston core H-C27 obtained from a shelf of the South Sea, offshore Korea, reflects the paleoenvironmental changes over the past ca. 30,000 years. The palynofloral assemblage consists of marine dinocysts and terrestrial pollen grains. The occurrence of dinocysts shows a high variation throughout the whole section studied. The mesohaline and coastal habitats, such as *Filishphera filifera* and *Lingulodinium machaeorophorum*, were intensively produced at the lower interval (ca. 28,000 yr BP, a last glacial), and replaced by hyaline species including *Spiniferites elongates*, *S. mirabilis* and *Operculodinium longispinigerum*, toward the upper Holocene interval. During the last glacial to post glacial, the change in marine dinocyst assemblages may indicate that the oceanographic environments of the H-C27 site changed from the coasts to the shelf caused by sea level rise. During the last glacial maximum, the sea level around the Korean Peninsula (East China Sea, Yellow Sea and East Sea) was 130-140 m below than present sea level. The present water depth of core H-C27 site is about -125 m. Therefore, the site of H-C27 core during the ca. 28,000 yr BP was still under the sea, although the sea level was dropped to the -80 m. It is assumed that Tsushima Warm Current (TWC) during the last glacial period has inflow into the Yellow Sea and East Sea indicated by TWC indicator, *Tuberculodinium vancampoe*. In addition, cold tolerant conifers of fir and spruce, together with a xerophytic of Mugwort are predominated at about 28,000 yr BP assuming cold and dry conditions over the southern part of the Korean Peninsula. At the same time, the pollen grains of *Chenopodiaceae*, *Cyperaceae* and *Poaceae* are dominated reflecting that salt marshes flourished along the coastal environment.