



Late Pliocene climate change in the Northeast Asia region inferred from palynofloral assemblages of the ODP Site 798B, East Sea

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The palynological study from the selected intervals (Section 798B-31X, 286.4-296.73 mbsf) of core drilled in ODP Leg 128, Site 798B on Oki Ridge in the Yamato Basin, East Sea, provide a consistent pollen stratigraphy and a solid basis for Asian monsoon climate history during the Late Pliocene. The palynological assemblages are composed of terrestrial-derived pollen and marine dinoflagellates. Six local pollen assemblage zones (LPAZ) and seven LPA subzones are suggested. Each LPAZ reflects its paleoenvironmental history such as paleoclimate changes, but paleoceanographical setting is not reconstructed yet here. The palynological assemblages are characterized by the predominance of arboreal pollen throughout the interval. Of the palynomorphs, the conifers including *Pinus* and *Taxaceae-Cephalotaxaceae-Cupressaceae*, together with the cool-temperate representatives of *Fagus* and *Quercus* (*Lepidobalanus*) are dominant. Pollen analyses allow recognition of well-known episodes of climate evolution (development of major Northern Hemisphere glaciation and of mixed conifer-deciduous forest at 2.5-2.3 Ma), as well as new insights into climate dynamics such as occurrences of short, warm excursions and of unstable periods.