

Evolution of the Kuroshio Current and its impact on East Asian marginal seas

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Quaternary is characterized by the onset of the Quaternary ice ages as well as the progressive cooling of the high latitude. Many proxy records from high latitude evidence this. On the other hand, records from low latitudes indicate that the sea surface temperature of the tropical warm pool regions remained relatively stable during the last 4 Ma. Hence these suggest a dramatic increase in the zonal (west?east) and meridional (north?south) gradients in sea surface temperature, which was accompanied by a progressive cooling of the water upwelled along the eastern margins of the Pacific. It is most likely believed that the evolution of the west-east and north-south temperature gradients in the North Pacific is closely related to the evolution of the western boundary current and North Pacific subtropical gyre during the Plio-Pleistocene. It, in turn, caused changes in weather and climate patterns of East Asian margins. In this presentation, previously published data and hypothesis will be reviewed to clarify future researches related to these.

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