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Diatoms as indicators of the past ocean environment

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Abstract

Studies on diatoms as indicators of the past ocean environment are reviewed from two points of view. One is from diatom temperature indices derived from the dependence of diatom production on SSTs (sea surface temperatures), and the other is from the latitudinal shift of surface-water fronts inferred from changes in the biogeography of diatom species. By taking mainly two indices Td' and Twt ratios as examples, their usefulness for paleo-SSTs reconstructions from Pliocene-Holocene cores is discussed, and by taking Oligocene-Holocene biogeography of a cosmopolitan diatom species *Thalassionema nitzschioides* sensu lato as an example, its usefulness as a proxy for delineating oceanic fronts is suggested.

Key index words: diatoms, indicators, ocean environment