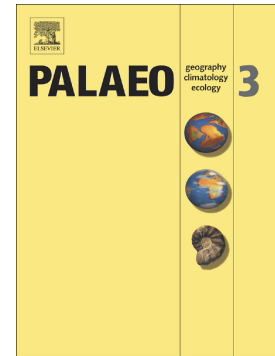


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Middle Permian (Capitanian) seawater $^{87}\text{Sr}/^{86}\text{Sr}$ minimum coincided with disappearance of tropical biota and reef collapse in NE Japan and Primorye (Far East Russia)

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Abstract

To investigate the secular changes in Permian seawater chemistry and to constrain the global environmental changes during the end-Guadalupian (Middle Permian) extinction, we analyzed $^{87}\text{Sr}/^{86}\text{Sr}$ ratios in Capitanian (Upper Guadalupian) shallow-marine limestones in NE Japan and in southern Primorye, Far East Russia. These limestones were deposited on the continental shelf/platform of the northern part of Greater South China, which faced the northern connecting seaway between the Tethys and Panthalassa. The measured limestone samples were collected from the Capitanian fusuline (*Lepidolina*)-bearing intervals and overlying beds at Iwaizaki in the South Kitakami belt, NE Japan, and at Senkina Shapka in the Sergeevka belt, southern Primorye. The present analysis of bulk $^{87}\text{Sr}/^{86}\text{Sr}$ ratios clarified extremely low $^{87}\text{Sr}/^{86}\text{Sr}$ ratios of 0.7068-0.7070 from all measured samples. These Sr isotopic values support a Capitanian age for these strata. The topmost 30 m-thick interval of the Iwaizaki

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