

Stratigraphy and lithofacies of the Middle-Upper Permian in Far East: correlation between the South Kitakami belt and the Sergeevka belt in Primorye

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Before the Miocene opening of the back-arc basin named Japan Sea, the pre-Cenozoic geotectonic units in Japan and Primorye were connected to each other. The Jurassic and Cretaceous accretionary complexes have good mutual correlation; nonetheless, good information is still lacking for correlating Paleozoic units. Our preliminary U-Pb dating of detrital zircon from the Paleozoic sandstones documented that a similar depositional setting with common provenance has existed in Japan and Primorye. As to the Permian, overall lithostratigraphy is common between the South Kitakami belt in NE Japan and the Sergeevka belt in Primorye; the Capitanian (Middle Permian) shallow marine limestone covered by the Wuchiapingian/Changhsingian black shale. Judging from the detrital zircon spectra, these Middle-Upper Permian sequences were deposited on a shallow-marine shelf of the continental margin of South China. This stratigraphic interval is noteworthy because it records extinction-related paleo-environmental changes across the Guadalupian-Lopingian boundary in relatively higher latitude.

Keywords: Permian, Far East Asia, South China, extinction, Primorye, South Kitakami belt