

LATE PALEOZOIC GLACIOGENIC DIAMICTITE OF THE OGCHEON GROUP IN KOREA, AND ITS CONNECTION WITH THE GONDWANA GLACIAL DEPOSITS

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Late Paleozoic glaciogenic diamictite was first described in detail from the Ogcheon Belt, which is the most conspicuous tectonic belt (70 km wide and 200 km long) in Korean Peninsula. The belt is occupied by the Cambro-Ordovician Joseon Supergroup (quartzite and limestone) and the Late Paleozoic Ogcheon Group intruded by Jurassic-Cretaceous granitoids. The Ogcheon Group consists of five formations; Seochangri, Puknori, Myeongori, Hwanggangri, and Munjuri in ascending order. Each formation represents sedimentary facies of preglacial, glacial, interglacial, glacial, and postglacial stages respectively. The glaciogenic Puknori and Hwanggangri Formations consist mainly of marine diamictite, have thickness of 150 m and 450 m respectively, and occupy about 60 percent distributional area of the Ogcheon Group. The age is estimated to be Late Paleozoic from ages of the clasts. The other formations consist of marine clastic sediments including calcareous turbidites and laminites. Matrices of the diamictite consist of calcareous mudstone and fine sandstone with cleavage, and clasts consist of quartzite and limestone with subsidiary granitoids, gneisses, shales, and mafic rocks. Most of the clasts are 1-50 cm in diameter, poorly sorted, matrix-supported, and polygonal. Many clasts have glacially shaped characteristics; faceted and striated surfaces, and prolonged pentagonal shapes in plan view with stoss and lee ends. Very finely laminated mudstone beds intercalated in the diamictite contain sporadic dropstones. The Sino-Korea massif, together with adjacent massifs, is paleomagnetically supposed to have been located near the equator in Permian time. It is probable that the massif was a part of Gondwana where Permo-Carboniferous glacial deposits are widely distributed.