

Granite of 18th to 19th century stone works in Itoigawa Geopark

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Determination of production area of stones using as historic stone works is useful for the studies on transportation condition and culture on those days. There are many stone works of 18th to 19th century in some shrines of Itoigawa Geopark. It is considered that they were made by stonemasons of Onomichi facing Seto Inland Sea, because of engraving of their name on the stone. They were brought by cargo vessel named Kitamaebune which is sailed the Japan Sea during the Edo period. These stone works are made of following two type granites.

Rock facies A: Medium grained biotite granites. They are characterized by white-colored K-feldspar and very low magnetic susceptibility showing 3×10^{-5} - 1×10^{-3} SI.

Rock facies B: Medium-grained porphyritic hornblende biotite granites. They are characterized by k-feldspar phenocrysts and euhedral hornblende of about 1 cm in long axis. They contain mafic enclaves. Magnetic susceptibilities of this type of granites are 1×10^{-3} SI to 5×10^{-3} SI.

On the other hand, many evidences of quarrying work are remained in Onomichi City. Granites of such quarrying sites have similar rock facies and magnetic susceptibility to stones of Rock Facies B forming stone works in Itoigawa Geopark. Furthermore, stone works in some old temples of Onomichi City are composed of same rocks to Rock Facies B of Itoigawa area. These facts indicate that the granites of this rock facies in Itoigawa Geopark originated from Onomichi area.

However, granites corresponding to Rock Facies A in Itoigawa Geopark are not found in Onomichi area. This suggests a possibility that Onomichi flourished not only as producing center but as agglomeration area of stones.

The 18th to 19th century stone works produced by stonemasons of Onomichi in Itoigawa Geopark are composed of granites from Onomichi area and them from other area.

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