

Finding the context of culture geology by utilizing local stone: A case study of the "Shindosaki stone" of Oiso town, Kanagawa prefecture

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The local stones were once used as stone materials in people's lives and were familiar to them. Stones in such areas are likely to be an element of useful local resources in the context of culture geology, because local stone materials are closely related to the geographical and geological environment, regional history and people's lives in a given area. In addition to regional geology, regional resources related to a wide range of natural environments, living environments, regional culture, history and landscapes are factors for understanding area's contexts.

In this presentation, I introduce the "Sindosaki stone" in Oiso town, Kanagawa prefecture, as an example of interpretation of the cultural and geological context of local stone.

On the old stone walls in Oiso town, you can find two types of local stone called "Koma-ishi" and "Sindosaki stone". Judging from the state of their use, it is considered that the stones were used from the Meiji to Showa periods. Although there are many historical records on the quarrying and the use of Koma-ishi, there are few historical records on the quarrying and use of the Sindosaki stone. To determine the origin of the Sindosaki stone, observation of the stone itself and comparison of the stratum from which it originated are effective measures. Considering that the lithofacies of the Oiso Formation of the Miura Group on the Oiso coast correspond to the Sindosaki stone, the utilization of the Sindosaki stone in the area has been seen frequently.

On the other hand, it is also useful to check the quarries in the survey of regional stone. On the Oiso coast, rocks of the Oiso Formation are now widely exposed due to the erosion of gravels on the coast caused by the Typhoon 19 in 2019, and quarry traces that were previously difficult to see have been confirmed there. As a result, it became clear that various lithologies of the Oiso Formation had been cut out as stone materials.

Assuming that this quarrying is in the Meiji era, the altitude of the quarry needs to be subtracted from the uplift of the Kanto Earthquake. If we subtract a 1.8 m height from the present altitude, the quarry will be underwater at the intertidal level. It can be assumed that cut stones could be transported with the buoyancy in seawater.

When I take these issues into account in the regional context of culture geology, several keywords can be seen. One of them is "uplift" which is the geologic key factor of the Oiso region. The topography of Oiso Hills is related to the development of villas in the Meiji period and the establishment of swimming beaches on rocky shores. The location of the stone quarry on the Oiso coast, where terraces and shore platform are developed, can be related to the uplift.

Thus, geological materials can be made more attractive by finding area's contexts related to cultural matters such as local history and people's lives in accordance with local geologic/geographic phenomena. It is a interdisciplinary perspective of culture geology.

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