

Relationship between accretion of limestone blocks and subduction tectonics in Japan

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Detailed mechanism for accretion of limestone and basalt is not elucidated yet. Seamount collapse occurs in the tectonic erosion convergent margin such as the Japan trench, but the seamount accretion does not happen in accretionary convergent margin such as the Nankai trough. How are the limestone and basalt blocks preserved in accretionary complexes? The key to understand the reason of accretion of limestone and basalt is the tectono-stratigraphic position of limestone and basalt blocks. In the most of the Japanese accretionary complexes, limestone and basalt blocks occur in the youngest unit of each complex. The cessation of the development of the accretionary complex must be associated with the special tectonic setting, which caused less supply of detrital materials from the provenance area. Flat slab subduction is one of the candidates to cause the less igneous activities in the provenance area. The flat subduction may be caused by the subduction and accretion of buoyant body such as ocean plateau. This subduction and accretion of oceanic plateau caused the cessation of accretionary process, and may have allowed to preserve limestone and basalt block in the accretionary complexes in Japan.

Keywords: limestone, accretionary complex, oceanic plateau