

Cenozoic methane-seep communities in southwestern Japan

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Japanese Islands yield many (more than 80) Cretaceous to Holocene cold-seep communities. Most of them are distributed in central Japan and Hokkaido island, and rare in southwestern Japan although there are relatively many Recent cold-seeps in Nankai Trough region. Recently, several Cenozoic cold-seeps in accretionary complex distributed in Wakayama and Kochi prefectures were investigated. This presentation mainly introduces two cold-seeps; late Eocene to early Oligocene Tanami seep in Kushimoto, Wakayama Prefecture (Amano et al., 2013; PPP) and late Oligocene to early Miocene Mitsu seep in Muroto, Kochi (unpublished data). The Tanami seep was formed during subduction of the Pacific and the Kula plates beneath the Eurasian Plate during the Paleogene (late Eocene to early Oligocene). The Mitsu seep would be formed during subduction of Shikoku Basin ridge. Both seeps are seep-related carbonate blocks with abundant molluscan assemblages including chemosynthetic bivalves, such as vesicomysids, lucinids, thyasirids and solemyids. Those ancient seeps would be important to understand evolution of cold-seep systems in southwestern Japan, including Nankai Trough region.

Keywords: methane seep, cold seep, chemosynthetic community