Bioturbation in the Pacific abyssal plain: its paleontological and sedimentological implications

*Koji Seike[1], Hidetaka Nomaki[2]

1. Atmosphere and Ocean Research Institute, University of Tokyo, 2. JAMSTEC

Abyssal plain is the largest single marine ecosystem on Earth and contains abundant benthic fauna living on and in the seafloor sediment such as gastropods, bivalves, polychaetes, echinoderms, and crustaceans. The benthic fauna are important in the seafloor environments, because they mix sediments, disrupt microstratigraphy, and influence the biogeochemistry of seafloor sediment. The process of biomixing of sediment is known as bioturbation. The abyssal plain is characterized by low-sedimentation rate thereby being heavily disturbed by bioturbation. Hence, investigating nature of bioturbation is essential for further understanding on organism–sediment interactions, and is also important for sedimentology and paleontology. In this presentation, we review previous biological and ichnological studies on the abyssal plain settings, and show preliminary result of our ongoing research project on bioturbation and biogeochemical cycles under different settings on organic carbon input to the seafloor in the Pacific abyssal plain.

Keywords: Burrow, Trace fossil, Ichnology, Sedimentary structures

