

Evolution of chemosynthesis-based animals from the point of view of whale-bone animal community

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'Whale-bone animal community' had been proposed to play a role of 'stepping stone' for spreading of chemosynthesis-based animals, which endemic to the hot-vent and cold-seep systems distributed sparsely in the deep ocean. However, further studies of the community were shown that there were appeared few species common to the hot-vent and cold-seep communities, therefore, the original 'stepping stone' hypothesis was not commonly accepted today. On the other hand, the species appeared present chemosynthesis-based community have been considered to adapt to the deep-sea hot-vent and cold-seep systems according to getting chemoautotrophic symbionts since the Cenozoic. During the evolutionary process of adaptation to the deep-sea environments and acquisition of the symbionts, the whale-bone animal community is considered a relay point from the shallow coastal zone to deep-sea, i.e., a role of 'evolutional stepping stone'.

We have studied the artificially deposited whale-corporse at off Nomamisaki since 2003. We will introduce the preliminary result of the study and discuss from the point of view of evolutionary stepping stone hypothesis.