

## KY11-01 Leg2 Cruise Summary

### 1. Cruise Information

**Cruise ID:** KY11-01 Leg2

**Name of vessel:** R/V *Kaiyo* and the ROV *Hyper-Dolphin* 3000

**Title of the cruise:** Studies on succession of two sperm whale-fall communities in Sagami Bay and characteristics of larval development in mussels inhabiting whale bones

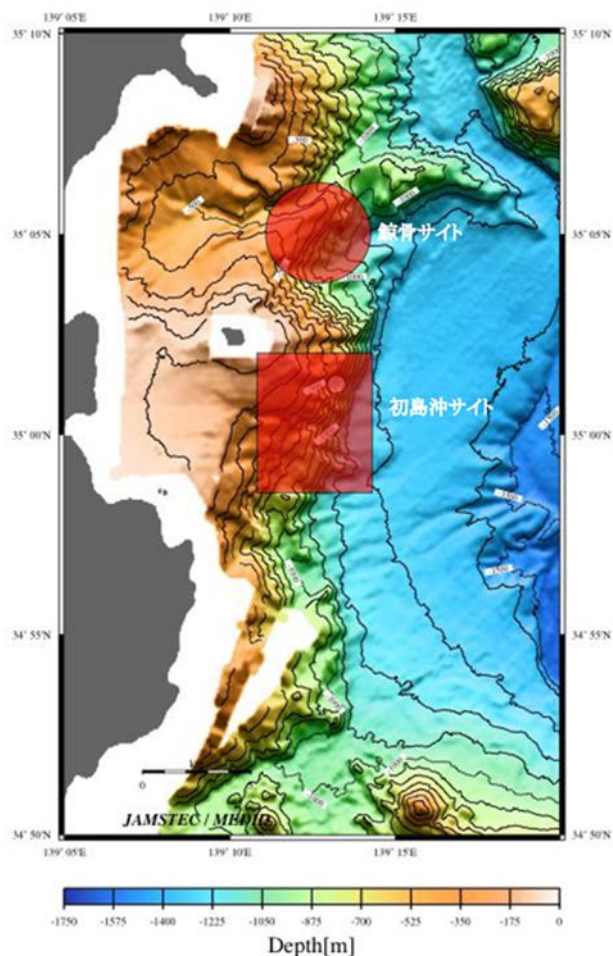
**Chief scientist:** Kenji Okoshi [Toho University]

**Representative of the Science Party:** Kenji Okoshi [Toho University]

**Cruise period and Ports of call:** From 22<sup>nd</sup> (JAMSTEC) to 25<sup>th</sup> (JAMSTEC), January 2011

**Research area:** Sagami Bay, Japan

**Water depths:** 800-1000m



## 2 . Overview of the Observation

The cruise KY11-01Leg2 took place from January 22nd to 25th, 2011, in Sagami Bay, onboard the R/V Kaiyo and with the ROV Hyper-Dolphin. A total of 4 dives were conducted at different study sites including a whale fall site, cold seeps, and a deep-sea observatory near Hatsushima Island. Different projects were carried out. Biodiversity, dispersal and colonization mechanisms at whale falls were studied at an experimental site where 2 sperm whale carcasses were implanted since 2005 and 2008, respectively. Almost yearly surveys were performed at this site to observe carcass decay, the establishment of chemosynthesis-dependent animal communities and species succession.

During this cruise, we continued to document these processes and compared the two carcasses. Whale bones were collected as well as surrounding sediments, plankton, benthos and water. Preserved samples and live specimens were brought back to some laboratories including JAMSTEC where species diversity, nutrition and symbiosis will be investigated.

Studies at cold seeps sites were focused on *Calyptogena* clams and *Bathymodiolus* mussels. Distribution patterns of these species, shell size and life-history traits were investigated through sampling.