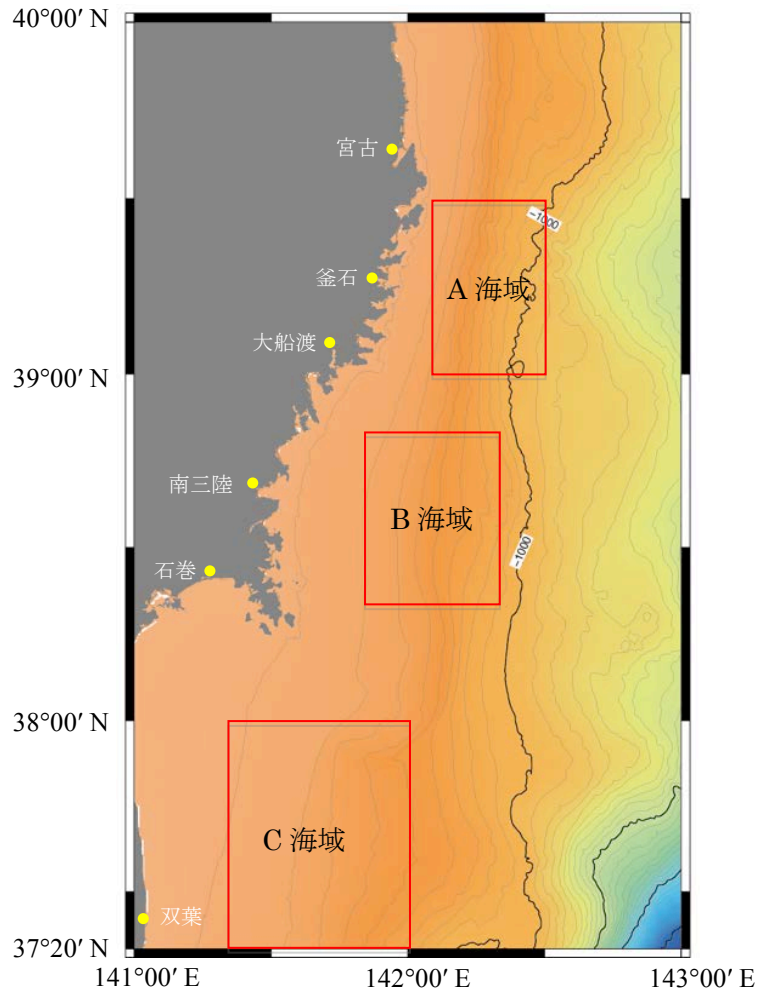


## Cruise Summary

### 1. Cruise Information

- Cruise ID : KY15-08
- Name of vessel : RV Kaiyo & Hyper-Dolphin
- Title of the cruise : Researches on marine ecosystem dynamics off Sanriku
- Chief scientist : Shinji Tsuchida [JAMSTEC]
- Representative of the Science Party : Shinji Tsuchida [JAMSTEC]
- Title of proposal: Researches on marine ecosystem dynamics off Sanriku
- Cruise period : May 2<sup>nd</sup> – 20, 2015
- Ports of departure / call / arrival : JAMSTEC / off Kamaishi Bay/ JAMSTEC
- Research area : off Sanriku
- Research map



## **2. Overview of the Observation**

- Topographic survey

During the cruise, two lines off Iwate, three lines off Miyagi and a line off Fukushima were topographically surveyed by SEABEAM 2112.

- Quantitative observation of benthic animals using by the stereo camera system

The quantitative biomass of benthic animals on the sea floor was observed by the stereo camera system loaded on the Hyper-Dolphin. Bumper debris, snow crabs with pinger for size calibration, the bacterial mat site, liponematid anemone, ophiuroids, etc, were intensively observed.

- Behavior and distribution patterns of commercial species recorded by the bio-tracking system

Eight bio-tracking base station were deployed off Otsuchi, 700m depth along with the deep-sea canyon. We attached the pingers to seventeen snow crabs and four Kichiji fish, and released inside the station area. In this area, we also shoot pingers with hook to Kichiji fish and succeeded to attach pingers to nine fish at the deep-sea bottom. The base stations will be recovered in March 2016 by Hyper-Dolphin.

- Off shore environmental dynamics measured by the long term monitoring system

Long term monitoring system deployed off Otsuchi in June 2014 was recovered and obtained data sets. After the maintenance, it was deployed again to the same site.

- Quantitative analysis of ophiuroids distribution on the deep-sea bottom

Quantitative amount of ophiuroids was recorded by the stereo camera system. Also, ophiuroids samples were quantitatively collected by the Ekman-birge grabber for comparing the amounts data by the still images.

- Diversity of meio-fauna

Total number of sixty-one sediment samples were collected by the MBARI corers for understanding the diversity of meio-fauna.

- Succession of the bacterial mat on the deep-sea valley off Kamaishi

Huge range of bacterial mat found at the Kamaishi Canyon in July 2014 was surveyed by observing its range and measuring by Redox and DO sensors for clarifying the process of succession.

- Title of project

Project Team for Analyses of Changes in East Japan Marine Ecosystems  
(Tohoku Ecosystem-Associated Marine Sciences)