

Cruise Summary

1. Overview of the cruise

(1) Cruise Number, Research Vessel and Submersible:

NT08-12, R/V Natsushima and ROV "Hyperdolphin"

(2) Title of the cruise:

FY2008 Deep-sea research using with ROV "Hyperdolphin"

(3) Proposer and research title:

Satoshi Kimura, The University of Tokyo, Biogenesis and structure of cellulose in the deep sea Appendicularians

Yoshihiro Fujiwara, JAMSTEC, Experimental biogeography of Osedax polychaetes –dispersal & depth adaptation

(4) Chief scientist:

Satoshi Kimura, The University of Tokyo

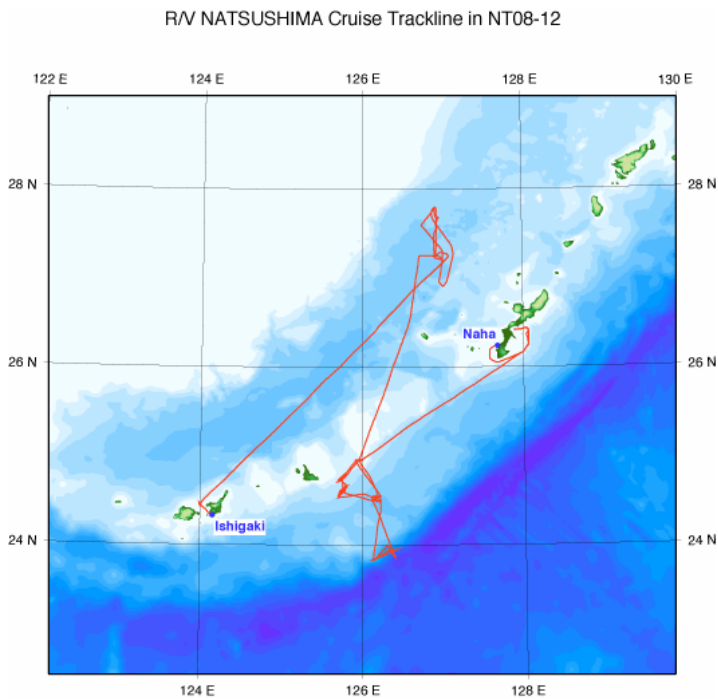
(5) Cruise period and port call:

2008/6/23 - 2008/7/4 (Naha - Ishigaki)

(6) Track map:

(7) Research site:

Izeya knoll, Izena hall and Nansei islands trench



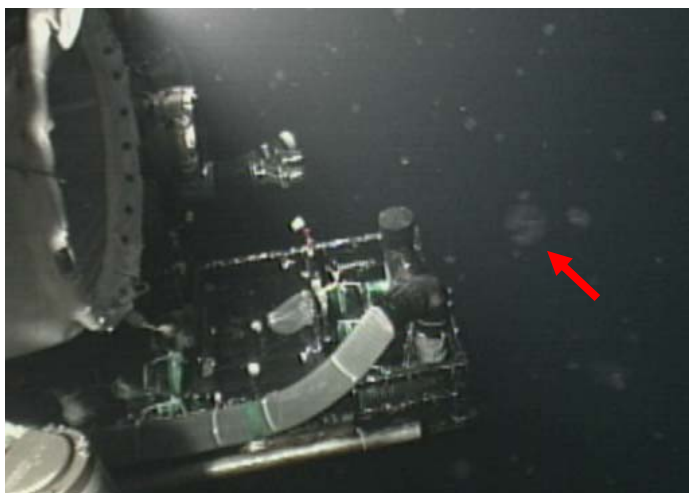
2. Overview of Observation:

Occurrence of deep sea appendicularians at Izena holl of Okinawa trough, was described by previous JAMSTEC reports. Generally, appendicularians make balloon like cellulosic structure, called house, which act as a feeding apparatus. We carried out collection of the deep sea appendicularians which are large species, in order to understand biogenesis of house and description of new appendicularian species.

Whale-fall ecosystems are known as a unique chemosynthetic ecosystem. To understand how build up the unique ecosystem, we placed fresh whale bones on seabed selected several depth, at 250, 500, 1000, 2000, 4000 and 7000m depth (Dive#856 - #862). The placed materials will be scheduled to be investigated with time-dependent change.



Placement of whale bones (Dive#856)



Deep sea appendicularians with houses were observed at hydrothermal plume on Dive #865 (arrow in the figure).