Cruise Summary

1. Cruise Information

- (1) Cruise ID: KS-20-18
- (2) Vessel: R/V SHINSEI MARU
- (3) Cruise Title

Study of larval dispersion and evolution of deep-sea benthic organisms in the southernmost part of the Kuril Trench

(4) Chief Scientist

Shigeaki Kojima (The University of Tokyo)

(5) Representative of the Science Party

S20-14 Shigeaki Kojima (The University of Tokyo)

(6) Research Titles

S20-14 Study of larval dispersion and evolution of deep-sea benthic organisms in the southernmost part of the Kuril Trench; toward the hakuho cruise in 2021

(7) Cruise Period

2020/08/16 - 2020/08/20

(8) **Ports of departure/call/arrival** Kushiro - Hakodate

(9) Research Area

The Pacific Ocean off Hokkaido, Erimo Seamount

(10) Cruise Track



2. Overview of the Observation

1. Deployment of mooring systems

Mooring systems with supersonic current meters (RCM11 and Aquadopp) and MicroCAT (CTD) were deployed on deep-sea bottom at following four sites around Erimo Seamount, which are planned to be recovered during Hakuho-maru cruise in 2022.

St. EM1 41° 07.06'N, 144°38.64'E 5382 m depth 18 Aug 2020 St. EM2 40° 59.80'N, 144°50.79'E 5636 m depth 18 Aug 2020 St. EM3 40° 52.45'N, 145°02.60'E 5551 m depth 18 Aug 2020 St. EM4 40° 35.97'N, 145°30.15'E 5431 m depth 18 Aug 2020

2. CTD

St. EM3 40° 53.31'N, 145°01.53'E 5168 m depth 19 Aug 2020 Data will be not be opened due to malfunction of CTD 3. Sampling of deep-sea benthic organisms by using a 3m bean trawl
St. T7 42°19.30′-20.47′N, 144°22.96′-23.58′E 1,402-1,412 m depth 16 Aug
2020

St. T6 42°21.57′–22.43′N, 144°14.73′–15.48′E 1,115–1,161 m depth 17 Aug 2020

St. T3N 42°23.58′–24.38′N, 144°05.71′–06.25′E 827–847 m depth 17 Aug 2020 St. T2 42°26.07′–26.83′N, 143°58.32′–58.68′E 490–504 m depth 17 Aug 2020 St. T1 42°27.97′–28.40′N, 143°53.96′–54.26′E 298–303 m depth 17 Aug 2020 St. EC4 41°17.69′–15.66′N, 144°08.01′–07.92′E 3,143–3,176 m depth 19 Aug 2020

Samples will be analyzed at the Atmosphere and Ocean Research Institute, the University of Tokyo and the National Museum of Nature and Science, Tokyo.

4. Sampling of deep-sea benthoplagic organisms by using an epibenthic sled
St. T3N 42°24.05′-24.91′N, 144°05.92′-06.46′E 822-826 m depth 17 Aug 2020
Samples will be analyzed at the Atmosphere and Ocean Research Institute, the
University of Tokyo.

5. Sampling of deep-sea meio- and macrobenthos and environmental DNA by using multiple corer

St. T7 42º19.49'N, 144º23.02'E 1407 m depth 16 Aug 2020

St. T5 42º23.00'N, 144º12.00'E 1012 m depth 16 Aug 2020

St. T9 42º16.00'N, 144º34.97'E 1713 m depth 17 Aug 2020

Samples will be analyzed at the Atmosphere and Ocean Research Institute, the University of Tokyo, School of Science, the University of Tokyo, and Center for Water Cycle, Marine Environment and Disaster Management, Kumamoto University.