



HOKKAIDO UNIVERSITY

Title	PART I -9. THE " OSHORO MARU " CRUISE 048 to SANRIKU OFF IN NOVEMBER 2017
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**THE "OSHORO MARU" CRUISE 048
TO SANRIKU OFF
IN NOVEMBER 2017**

1. Cruise Itinerary

Cruise 048

Departure from Kushiro and start survey	Nov.	14, 2017
Finish survey after arrival at Miyako		15
Departure from Miyako		17
Start hydrographic research		18
Finish hydrographic research and Arrival at Kamaishi		19
Departure from Kamaishi		20
Return to Hakodate		21

Total coverage 547 miles

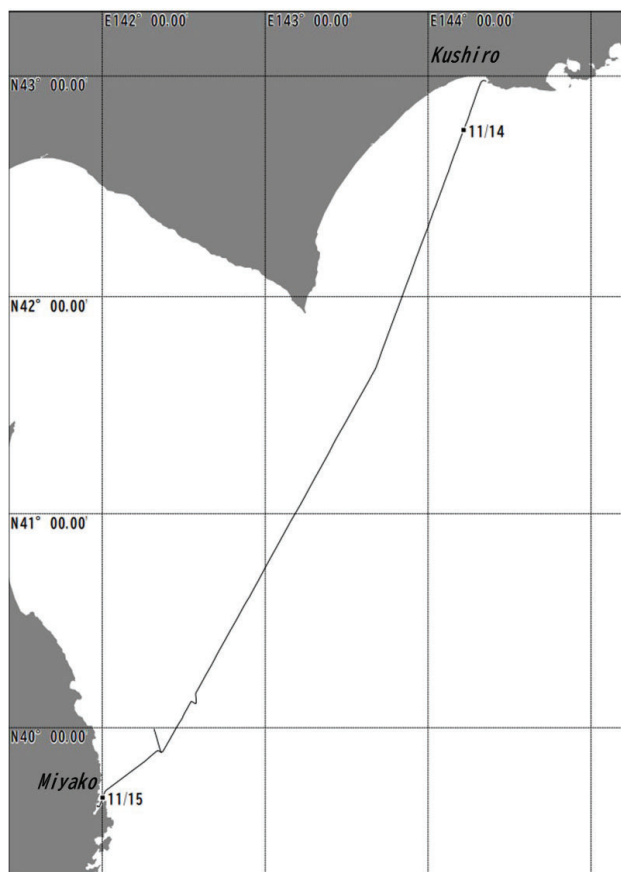


Fig. 1-1: Noon Position

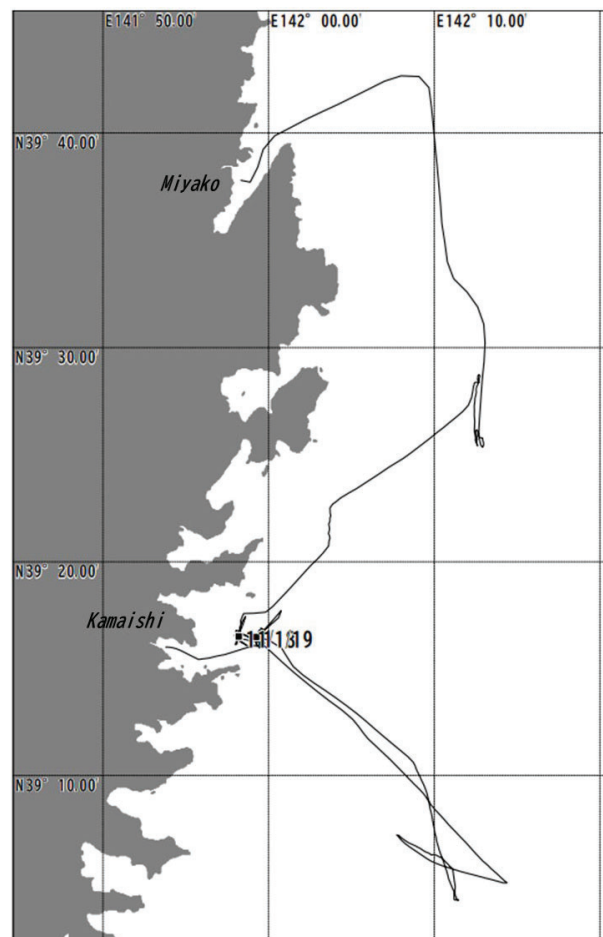


Fig. 1-2: Noon Position

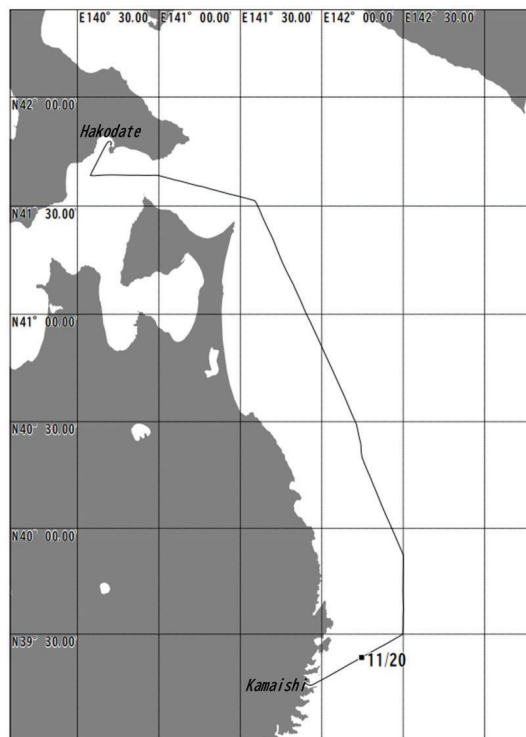


Fig. 1-3: Noon Position

2. Vessel Personnel

Crew: Captain: Associate Professor Shogo Takagi
And 31 persons

Research staff:

Technical Assistant (Tokyo University of Marine Science and Technology)

Kushiro-Miyako Chika Namaizawa

Undergraduate instructor:

Professor (Sanriku Fisheries Research Center, Iwate University)

Miyako-Kamaishi Niri-yuki Tanaka

Assistant Professor (Sanriku Fisheries Research Center, Iwate University)

Miyako-Kamaishi Tomoaki Goto

Associate Professor (Sanriku Fisheries Research center, Iwate University)

Miyako-Kamaishi Hideharu Tukagoshi

Specially Appointed Assistant Professor (School of Fisheries Sciences, Hokkaido University)

Miyako-Hakodate Mitsuhiro Nakaya

Teaching Assistant: 2 persons

Undergraduate Student: 22 persons