



HOKKAIDO UNIVERSITY

Title	8. The "Oshoro maru" Cruise 247 East of Tsugaru Strait in September 2012
Citation	海洋調査漁業試験要報, 56, 79-85
Issue Date	2015-03-31
Doc URL	https://hdl.handle.net/2115/77472
Type	dataset
File Information	Data.Rec.Oceanogr.Obs.Expl.Fish.56.79.pdf



8.

THE "OSHO RO MARU" CRUISE 247 EAST OF TSUGARU STRAIT

IN SEPTEMBER 2012

1. Cruise Itinerary

Cruise 247

Departure from Hakodate	Sep. 18, 2012
Bottom trawl (OST1203-OST1205), and start hydrographic research (OS12132)	19
Finish hydrographic research (OS12134)	20
Gill-net research (OSSG1201-1-OSSG1201-5)	21
Return to Hakodate and Departure from Hakodate	23
Bottom trawl (OST1206-OST1207), and start hydrographic research (OS12135)	24
Finish hydrographic research (OS12137)	25
Gill-net research (OSSG1202-1-OSSG1202-6)	26
Return to Hakodate	28
Total coverage 608.8 miles	

2. Vessel Personnel

Crew:	Captain:	Associate Professor	Shogo Takagi
			And 30 persons
Research Staff:	Professor	(Laboratory of Marine Environmental Science)	Shigeru Montani
	Associate Professor	(Laboratory of Marine Environmental Science)	Isao Kudo
	Professor	(Laboratory of Marine Bio-resources Science)	Tetsuya Takatsu
	Associate Professor	(Laboratory of Marine Ecology)	Yutaka Watanuki
	Associate Professor	(Laboratory of Marine Bio-resources Ecology)	Takashi Matsuishi
	Associate Professor	(Laboratory of Marine Biology and Biodiversity)	Hisashi Imamura
	Associate Professor	(Laboratory of Marine Biodiversity)	Atsushi Yamaguchi
	Instructor	(Museum, Hokkaido university)	Toshio Kawai
Teaching Assistant:			9 persons
Under Graduate Students:			60 persons
			Total 108 persons

3. Items of Training and Research

A short cruise to conduct shipboard training in hydrographic observations, plankton samplings, sighting survey of marine mammals, and biological processing of trawl catch for undergraduate students in the Department of Marine Biological Science.

Hydrographic observations: (Observation of Temperature, Salinity, and Computed Dynamic Depth Anomaly)

Hydrographic work on deck and the data processing were made by the deck officers, Science officer, crews, research staff and cadets of the “Oshoro maru”. Temperature and salinity were measured by CTD (Seabird SBE-9Plus and

SBE-19Plus). Water and Plankton sampling were also carried out at almost hydrographic stations.

Fig. 1, Table 1, 2

Bottom trawl observations:

Five operations of the stern otter bottom trawl were carried out. These operations were supervised by the captain, Deck officers, Science officer, crews, research staffs, and cadets were engaged in the work.

Table 3, 4

Saury gillnets research:

Eleven operations of gillnet Researches were carried out. These operations were supervised by the captain, Deck officers, Science officer, crews, research staffs, and cadets were engaged in the work.

Table 5

Fig 1. Oceanographic Stations

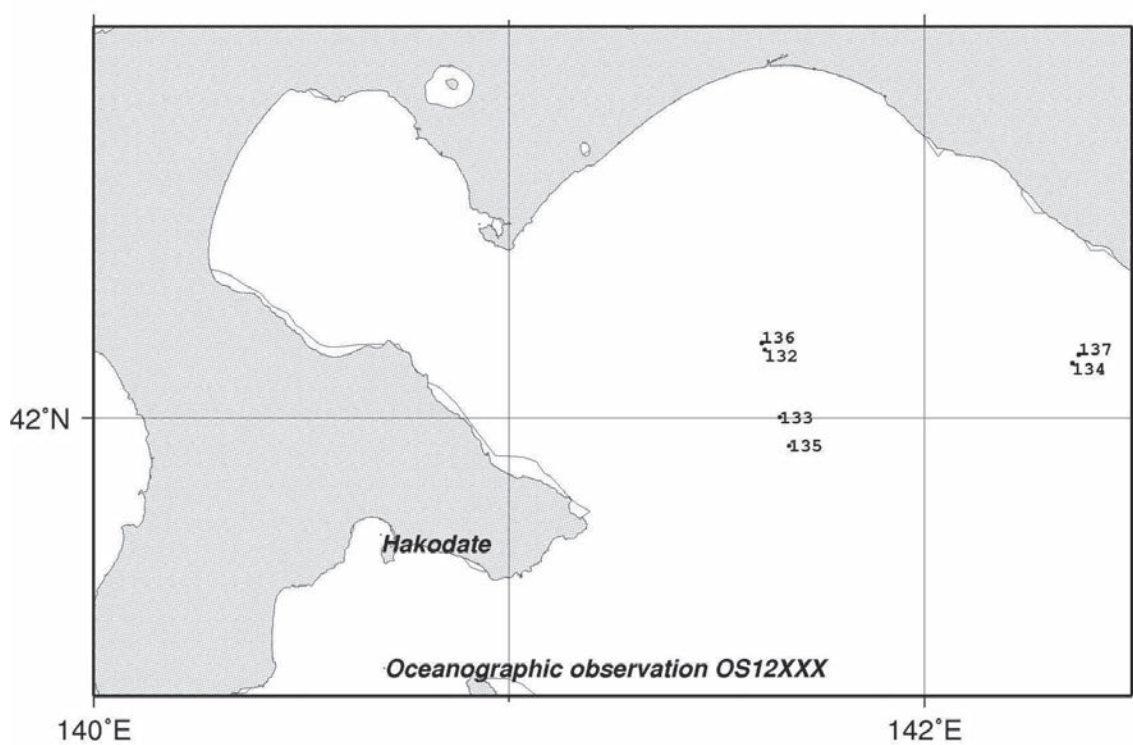


Table 1. List of Oceanographic station

Station	Lat.	Long.	Date (GMT)	Hour (GMT)	T.Z.	Depth	Col.	Tr.	SST	Wr.	Gear
OS12132	42-07.36N	141-36.98E	9/19	7:37	9	701	-	-	-	b	9Plus-0769
OS12133	42-00.12N	141-39.12E	9/19	11:49	9	801	-	-	-	-	9Plus-0769
OS12134	42-05.96N	142-21.41E	9/20	7:34	9	734	-	-	-	-	9Plus-0769
OS12135	41-57.06N	141-40.47E	9/24	7:40	9	827	-	-	21.5	c	9Plus-0769
OS12136	42-08.10N	141-36.55E	9/24	11:26	9	688	-	-	23.6	c	19Plus-4636
OS12137	42-06.86N	142-22.34E	9/24	7:35	9	645	-	-	22.7	r	19Plus-4636

Table 2. Oceanographic data

Station OS12132 Latitude 42-07.37N Longitude 141-36.98E Depth(m) 701m				Station OS12133 Latitude 42-00.11N Longitude 141-39.15E Depth(m) 801m				Station OS12134 Latitude 42-05.97N Longitude 142-21.43E Depth(m) 734m			
Press.	Temp.	Sal.	SIG-T	Press.	Temp.	Sal.	SIG-T	Press.	Temp.	Sal.	SIG-T
5	23.828	33.470	22.534	5	22.772	33.621	22.953	5	24.809	33.531	22.289
10	19.707	33.785	23.912	10	23.224	33.576	22.790	10	22.283	33.558	23.044
20	15.339	34.110	25.211	20	17.660	34.136	24.693	20	18.002	33.775	24.334
30	12.697	33.776	25.504	30	15.083	34.200	25.337	30	15.198	34.072	25.213
40	12.292	34.132	25.859	40	12.727	34.151	25.789	40	13.605	34.148	25.610
50	11.929	34.248	26.018	50	11.286	34.158	26.068	50	12.970	34.185	25.767
75	11.390	34.221	26.098	75	10.409	34.184	26.244	75	11.233	34.187	26.100
100	10.262	34.130	26.228	100	8.973	33.989	26.331	100	9.303	33.983	26.273
125	8.827	33.981	26.348	125	6.837	33.791	26.488	125	8.323	33.924	26.380
150	6.730	33.737	26.460	150	4.348	33.463	26.528	150	5.570	33.597	26.497
175	6.816	33.813	26.508	175	3.774	33.448	26.574	175	5.014	33.582	26.550
200	5.343	33.650	26.565	200	3.384	33.426	26.594	200	3.951	33.485	26.586
250	4.043	33.568	26.642	250	2.424	33.415	26.669	250	2.362	33.456	26.706
300	3.611	33.625	26.731	300	2.972	33.563	26.741	300	3.147	33.634	26.781
400	3.298	33.770	26.876	400	3.168	33.772	26.890	400	3.054	33.793	26.917
500	3.472	33.949	27.003	500	3.562	34.006	27.039	500	3.556	34.003	27.037
600	3.515	34.088	27.109	600	3.536	34.110	27.125	600	3.488	34.122	27.138
				700	3.378	34.211	27.220	700	3.322	34.221	27.234

Station OS12135				Station OS12136				Station OS12137			
Latitude 41-57.07N				Latitude 42-08.10N				Latitude 42-06.86N			
Longitude 141-40.48E				Longitude 141-36.55E				Longitude 142-22.34E			
Depth(m) 827m				Depth(m) 688m				Depth(m) 645m			
Press.	Temp.	Sal.	SIG-T	Press.	Temp.	Sal.	SIG-T	Press.	Temp.	Sal.	SIG-T
5	21.838	33.699	23.275	20	19.438	33.870	24.046	20	23.282	33.528	22.737
10	21.597	33.724	23.360	30	16.301	34.067	24.961	30	21.47	33.694	23.372
20	18.466	33.998	24.390	50	11.794	33.849	25.733	50	16.765	34.006	24.807
30	15.399	34.119	25.205	75	11.189	34.164	26.090	75	12.564	34.034	25.731
40	13.924	34.153	25.548	100	9.947	34.106	26.263	100	11.497	34.121	26.001
50	12.765	34.177	25.802	150	8.670	34.037	26.416	150	9.967	34.107	26.26
75	11.010	34.156	26.117	200	6.894	33.834	26.515	200	7.841	33.933	26.459
100	10.907	34.155	26.134	300	3.657	33.598	26.705	300	2.746	33.52	26.726
125	9.369	34.066	26.327	400	3.269	33.736	26.852	400	3.24	33.766	26.878
150	8.344	34.002	26.439	500	3.392	33.909	26.978	500	3.486	33.953	27.004
175	7.133	33.836	26.483	600	3.541	34.062	27.086	600	3.521	34.069	27.093
200	4.969	33.599	26.568								
250	4.665	33.676	26.663								
300	3.075	33.566	26.733								
400	3.154	33.759	26.881								
500	3.473	33.951	27.004								
600	3.522	34.071	27.094								
700	3.417	34.165	27.180								
800	3.214	34.247	27.264								

Table 3: Data on Bottom trawl research during the Oshoromaru Cruise#247

No. of research	Date and time of net tow (S.M.T.*1)		Position		T.D.*2	D.S.*3	Speed of tow (K't)	Bottom depth (m)	Wr.*4	Wind	S.T.*5 (°C)
			Lat. (N)	Long. (E)							
OST1203	Sep. 19	0625-1005	41-53.8	141-41.6	+9h	320	4.5	865	c	SSE-5	24.7
OST1204	Sep. 19	1030-1325	42-03.8	141-38.2	+9h	335-000	4.5	780-670	c	SW-4	23.1
OST1205	Sep. 19	1335-1615	42-11.8	141-36.9	+9h	185	3.5	680-717	c	SW-4	23.8
OST1206	Sep. 24	1005-1255	42-12.0	141-35.8	+9h	170	3.5	620	bc	NE-5	22.4
OST1207	Sep. 24	1308-1610	42-02.5	141-36.5	+9h	160	3.2	734	bc	calm	21.9

*1 S.M.T. : Ship's Mean Time.

*2 T.D. : Time Difference between Greenwich Mean Time (G.M.T.) and Ship's Mean Time (S.M.T.).

*3 D.S. : Direction of tow.

*4 Wr. : Weather (bc: 25-75% clouded, c: over 75-99% clouded).

*5 S.T. : Surface temperature

Table 4. Data on catches by bottom trawl research

Japanese name	Scientific Name	OST1203		OST1204		OST1205		OST1206		OST1207	
		Number	Weight (kg)	Number	Weight (kg)	Number	Weight (kg)	Number	Weight (kg)	Number	Weight (kg)
Gangiei-ru	<i>Bathyrāja sp.</i>	3	6.50	9	1.99	-	-	2	0.12	2	1.22
Sokoganngiei	<i>Bathyrāja bergi</i>	-	-	-	-	3	0.16	-	-	-	-
Shigiunagi	<i>Nemichthys scolopaceus</i>	1	0.10	-	-	-	-	-	-	-	-
Irakoaago	<i>Synaphobranchus kaupii</i>	16	11.30	17	10.57	-	6.50	19	7.64	18	7.50
Kurosokoiwashi	<i>Diaphus watasei</i>	-	-	-	-	1	0.30	-	-	-	-
Yokoeso-ru	Gonostomatidae sp.	-	-	-	-	2	0.03	-	-	-	-
Hoteieso	<i>Photonectes albipennis</i>	-	-	-	-	-	-	1	0.17	-	-
Hadakahoteieso	<i>Tactostoma macropis</i>	1	0.06	-	-	-	-	-	-	-	-
Mamehadaka	<i>Laempanyctus jordani</i>	-	-	-	-	8	0.20	29	0.50	13	0.30
Mikadodadaka	<i>Nannobranchium regale</i>	6	0.45	-	-	3	0.20	1	0.07	2	0.17
Hadakaiwashi-ryu	<i>Diaphus watasei</i>	-	-	5	0.10	-	-	-	-	-	-
Karasudara	<i>Halargyreus johnsonii</i>	2	0.40	-	-	-	-	-	-	1	0.16
Kanadadara	<i>Antimora microlepis</i>	369	157.00	28	7.77	-	6.70	15	4.00	46	15.00
Itohikidara	<i>Laemonema longipes</i>	134	76.66	142	96.50	174	110.00	175	105.00	162	92.00
Munedara	<i>Coryphaenoides pectoralis</i>	17	13.50	1	1.09	1	3.90	-	-	5	7.70
Ibarahige	<i>Coryphaenoides acrolepis</i>	-	-	1	0.17	-	-	-	-	2	0.24
Karafutosokodara	<i>Coryphaenoides cinereus</i>	50	16.00	56	13.00	48	11.00	30	8.50	523	105.50
Onikinme	<i>Anoplogaster cornuta</i>	1	0.30	-	-	-	-	-	-	-	-
Ibodai-ru	Centrolophidae sp.	-	-	1	0.40	-	-	-	-	-	-
Nezumiginpo	<i>Lumpenella longirostris</i>	3	0.16	1	0.10	3	0.28	11	0.45	8	0.41
Genge-ru	Zoaridae sp.	-	-	-	-	-	-	280	75.50	561	240.50
Shirogenge	<i>Bothrocara molle</i>	141	143.00	143	41.50	160	58.80	-	-	-	-
Kantenngenge	<i>Bothrocara tanakae</i>	-	-	14	4.67	8	4.00	-	-	-	-
Nyuudoukajika	<i>Psychrolutes phricus</i>	1	0.70	-	-	-	-	-	-	-	-
Kobushikazika	<i>Malacocottus zonurus</i>	-	-	2	0.13	-	-	-	-	-	-
Kichiji	<i>Sebastolobus macrochir</i>	189	31.50	146	29.50	104	22.50	103	22.50	88	14.70
Ganko	<i>Dasycottus setiger</i>	3	0.46	8	0.47	2	0.07	3	0.37	3	0.28
Hoteiuo	<i>Aptocyclus ventricosus</i>	-	-	-	-	-	-	1	0.05	-	-
Hirainkiuo	<i>Paraliparis grandis</i>	-	-	-	-	1	0.17	2	0.96	-	-
Aburagarei	<i>Atheresthes evermanni</i>	-	-	1	6.60	-	-	-	-	-	-
Samegarei	<i>Clidoderma asperrimum</i>	-	-	3	4.70	-	-	-	-	-	-
Tako-ru	<i>Octopuses</i>	29	10.81	22	5.12	25	5.00	31	5.40	13	6.50
Mendako spp.	<i>Opisthoteuthis spp.</i>	-	-	4	1.21	-	-	-	-	-	-
Ika-ru	<i>Squids</i>	32	10.36	7	1.77	6	2.16	14	5.40	22	9.00
Ezobai spp.	<i>Buccinidae spp.</i>	-	-	-	12.07	16	1.80	27	1.30	-	-
Benizuwaigani	<i>Chionoecetes japonicus</i>	21	10.10	26	12.50	16	7.00	26	14.40	13	6.30

Table 5. Data on floating gill net research during the "Oshoro Maru" Cruise #247

No. of research		OSSG 1201-01	OSSG 1201-02	OSSG 1201-03	OSSG 1201-04	OSSG 1201-05
Date		21-Sep	21-Sep	21-Sep	21-Sep	21-Sep
position of	Lat. (N)	42-29.7	42-29.7	42-29.7	42-29.7	42-29.7
net set	Long. (E)	144-07.0	144-07.0	144-07.0	144-07.0	144-07.0
Time(S.M.T.*1)	net set	2030	2135	2207	2240	2335
	net houl	2040	2142	2216	2250	2345
Mesh size(mm)		42	42	42	42	42
Wr.*2		o	o	o	c	c
S.T.*3 (°C)		17.8	17.8	17.8	17.8	17.8
Wind (force)		calm	NW-2	NW-2	NNW-2	NNW-2
Pacific saury		-	-	-	-	-
Japanese sardine		420	33	69	100	181
Mackerels		18	83	8	10	4

No. of research		OSSG 1202-01	OSSG 1202-02	OSSG 1202-03	OSSG 1202-04	OSSG 1202-05	OSSG 1202-06
Date		26-Sep	26-Sep	26-Sep	26-Sep	26-Sep	26-Sep
position of	Lat. (N)	41-42.4	41-42.4	41-42.4	41-42.4	41-42.4	41-42.4
net set	Long. (E)	143-35.6	143-35.6	143-35.6	143-35.6	143-35.6	143-35.6
Time(S.M.T.*1)	net set	2030	2118	2151	2235	2258	2338
	net houl	2039	2126	2203	2240	2328	2350
Mesh size(mm)		42	42	42	42	42	42
Wr.*2		c	c	c	c	c	o
S.T.*3 (°C)		18.0	17.9	17.9	17.9	17.9	18.0
Wind (force)		ENE-3	East-3	East-3	East-3	East-2	East-2
Pacific saury		4	-	-	2	64	19
Japanese sardine		427	238	17	2	73	26
Mackerels		9	9	21	6	8	41

*1 S.M.T. : Ship's Mean Time.

*2 Wr. : Weather (bc: 25-75% clouded, c: over 75-99% clouded, o: 100% clouded, r: rain, d: drizzling rain, f: fog).

*3 S.T. : Surface temperature

