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**Summary of Japan-Russia Cooperative Salmon Research
aboard the Research Vessel *Wakashio maru* in 1993**

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Abstract

To investigate the distribution of juvenile salmonids, ten drift-net operations were carried out at 10 locations in the central part of the Sea of Okhotsk and the Okhotsk coastal waters off the northern Kuril Islands. A hundred and fifty six juvenile salmonids were caught in the central part of the Sea of Okhotsk. Eighty six juveniles were chum salmon (*Oncorhynchus keta*; mean FL 220 mm) and 68 were pink salmon (*O. gorbuscha*; mean FL 165 mm). The juvenile salmonids were not distributed off the Okhotsk coastal waters off the northern Kuril Islands. The stock identification of the juvenile chum is under way.

Introduction

In accordance with 1993 Japan-Russia Science and Technology Cooperative plan for Fisheries, the present research was conducted in the Sea of Okhotsk. The purpose of the survey was to describe the distribution and migration of the juvenile salmonids in this area, especially juvenile chum salmon (*Oncorhynchus keta*) originating from Japan. Assuming that juvenile chum migrate from coastal waters off Hokkaido to the central part of the Okhotsk Sea, we surveyed the Okhotsk Sea south of 50° N.

Materials and Methods

The survey was conducted in the central part of the Okhotsk Sea and the Okhotsk coastal waters off the Kuril Islands by the research vessel *Wakashio maru* (199.51 gross tons). Ten operations by drift nets were made to sample juveniles (Fig.1). Twelve tans of the drift nets with 6 mesh sizes (30, 35, 42, 48, 55, and 60 mm) were used for collecting juvenile salmonids. Oceanographic observations (900-1250 m deep) were carried out at 11 locations.

Results and comments

Main fishes which were collected during the survey are listed in Tables 1 and 2. In total, a hundred and fifty six juvenile salmonids were caught with 6,666 greenlings (*Preurogrammus azonus*). One of them was sockeye salmon, 86 chum salmon, 68 pink salmon, 1 coho salmon. The distribution of numbers of juvenile chum salmon caught is shown in Fig.1 and the juvenile pink salmon in Fig. 2. The juvenile chum and pink salmon were mainly occurred in the central part of the Okhotsk and not found in the Okhotsk coastal waters off the Kuril Islands. The fork length (FL) of juvenile chum salmon

ranged from 159 mm to 265 mm with a mean of 220 mm. The FL of pink salmon ranged from 143 mm to 183 mm with a mean of 165 mm. The stock identification of the juvenile chum salmon is now being undertaken.

Two hundreds and ninety five maturing and immature salmonids and 6,666 greenling were caught during the survey.

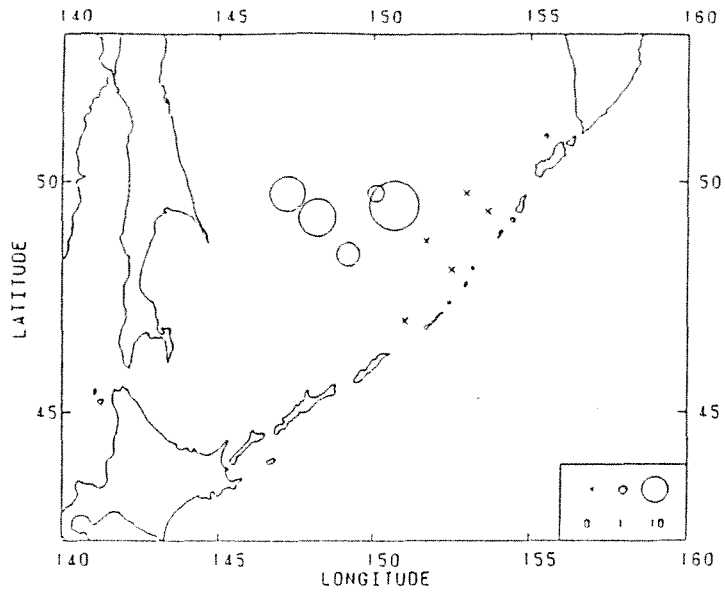


Fig.1 Map showing the distribution of juvenile chum salmon.

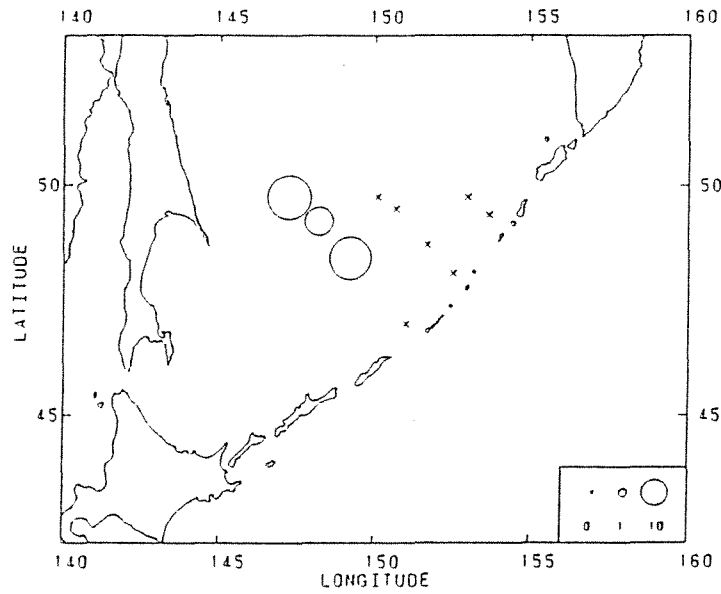


Fig.2 Map showing the distribution of juvenile pink salmon.

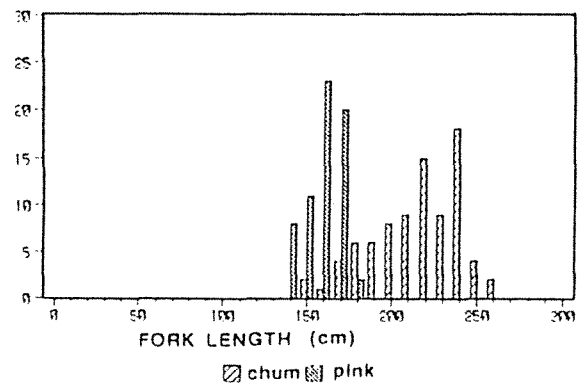


Fig.3 Fork length frequencies of juvenile chum and pink salmon.

Table 1. Numbers of main juvenile fishes caught by drift net operations during the 1993 *Wakashio maru* survey

St.	Date	Location		SST (°C)	Catch					
		Lat.	Long.		Sock-eye	Chum	Pink	Coho	Sub-total	Greenling
1-1	93.08.22	49-23N	153-41E	7.9						
1-2	93.08.23	49-45N	153-00E	9.4	1				1	9
2-4	93.08.24	49-45N	150-07E	8.6		4			4	431
2-3	93.08.25	49-30N	150-42E	11.1		35			35	1668
3-1	93.08.31	47-03N	151-02E	7.5					0	10
2-1	93.09.01	48-08N	152-32E	7.0					0	80
2-2	93.09.02	48-45N	151-43E	10.5					0	506
3-5	93.09.07	49-45N	147-15E	12.9		18	29		47	1039
3-4	93.09.08	49-15N	148-13E	13.0		21	12		33	1978
3-3	93.09.09	48-28N	149-13E	12.7		8	27	1	36	945
Total	-	-	-	-	1	86	68	1	156	6666

Table 2. Numbers of mature and immature salmonids caught by drift net operations during the 1993 *Wakashio maru* survey

St.	DATE	location		SST (°C)	Catch					
		Lat.	Long.		Sock	Chum	Pink	Coho	Chinook	Total
1-1	93.08.22	49-23N	153-41E	7.9	3	12	9	2	2	28
1-2	93.08.23	49-45N	153-00E	9.4	2	18	1	3	1	25
2-4	93.08.24	49-45N	150-07E	8.6	1	9	34			44
2-3	93.08.25	49-30N	150-42E	11.1		37	24			61
3-1	93.08.31	47-03N	151-02E	7.5		30	2			32
2-1	93.09.01	48-08N	152-32E	7.0	1	5	3		1	10
2-2	93.09.02	48-45N	151-43E	10.5		4	4			8
3-5	93.09.07	49-45N	147-15E	12.9		14	7	1		22
3-4	93.09.08	49-15N	148-13E	13.0		10	4			14
3-3	93.09.09	48-28N	149-13E	12.7		50	1			51
Total	-	-	-	-	7	189	89	6	4	295