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# **TAG RETURNS IN 1998 - INTERNATIONAL HIGH-SEAS SALMON TAGGING**

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## ABSTRACT

Information is reported on all high-seas salmon disk tags recovered from 1 September 1997 through 15 September 1998. Seventeen Japan-U.S. tags were returned (14 chum, 1 pink, and 1 coho salmon, and 1 steelhead). All recoveries were from salmonids released during international cooperative tagging operations aboard Japanese research vessels. The chum salmon were released in the central Aleutian Islands and Bering Sea in July 1997 (12 fish) and 1998 (2 fish) and recovered in Hokkaido (13 fish) and Honshu (1 fish), Japan. Three tagged fish from releases in the central Gulf of Alaska in early July 1998 were recovered in fisheries off western (1 coho salmon) and central Alaska (1 pink salmon and 1 steelhead). The release location of the coho salmon (56°N, 145°W) is a significant northeastward extension of the known ocean range of western Alaskan coho salmon in the Gulf of Alaska. The steelhead is the first reported recovery in Alaska of a steelhead tagged with a high-seas disk tag. All five recoveries in 1998 were salmonids that had also been tagged with thermal or archival tags.

## INTRODUCTION

This is a report of all high-seas salmon tags returned to the Fisheries Research Institute (FRI), School of Fisheries, University of Washington from 1 September 1997 to 15 September 1998. FRI serves as a processing center for all North American recoveries of Canadian, Japanese, Russian, and U.S. high-seas salmon (*Oncorhynchus* spp.) tags and recoveries of U.S. high-seas salmon tags by all nations. By agreement with the Fisheries Agency of Japan (FAJ), FRI also reports recoveries of tagged salmon released during cooperative Japan-U.S. high-seas salmon tagging.

## METHODS

FRI's high-seas tag processing center activities include: (1) advertising for tag recoveries, (2) returning tags and original recovery information to the appropriate release agencies, (3) mailing information on tag recoveries and a tag reward to fishermen and processors, (4) maintaining a file of original correspondence, data, and tags of all recoveries of U.S., U.S.-Russia, and Japan-U.S. tags (1956-present), (5) maintaining and updating an all-agency tag release and recovery computer database, and (6) reporting all recoveries of U.S., U.S.-Russia, and Japan-U.S. high-seas tags to the North Pacific Anadromous Fish Commission (NPAFC). In addition, FRI scientists periodically prepare reports and maps based on historical recoveries of high-seas tags that describe the known ocean ranges of major regional stocks of Asian and North American salmonids (for example, Myers et al. 1996). The complete all-agency (Canada, Japan, Russia, and United States) high-seas tag release and recovery computer database (1954-present) is available from FRI upon request from the parties of NPAFC so that all member nations can have access to a common database.

## RESULTS AND DISCUSSION

All recoveries of high-seas tags reported to FRI from 1 September 1997 through 15 September 1998 were from salmonids released during cooperative Japan-U.S. high-seas salmon tagging experiments aboard the *Wakatake maru* and *Oshoro maru* in the central Aleutian Islands, Bering Sea, and Gulf of Alaska in 1997 and 1998 (Nagasawa et al. 1997, Ueno et al. 1998, Walker et al. 1998a). Seventeen Japan-U.S. tags were returned (14 chum, 1 pink, and 1 coho salmon, and 1 steelhead; Table 1). The chum salmon were released in the central Aleutian Islands and Bering Sea in July 1997 (12 fish) and 1998 (2 fish) and recovered in Hokkaido (13 fish) and Honshu (1 fish), Japan. Three tagged fish (1 coho salmon, 1 pink salmon, and 1 steelhead) from releases in the central Gulf of Alaska in early July 1998 were recovered in fisheries in western and central Alaska. The release location of the coho salmon (56°N, 145°W) is a significant northeastward extension (555 km, great circle distance) of the known ocean range of western Alaskan coho salmon in the Gulf of Alaska; the previous range limit of 54°N, 153°W was established by a coho salmon recovered in the Ugashik District of Bristol Bay in September 1962 (Myers et al. 1996). The steelhead is the first reported recovery in Alaska of a steelhead tagged with a high-seas disk tag. All five recoveries in 1998 were salmonids that had also been tagged with thermal or archival tags (Ueno and Ishida 1998; Ueno et al. 1998; Walker et al. 1998a, 1998b).

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Table 1. Preliminary release and recovery information for cooperative Japan-U.S. tags returned from 1 September 1997 to 15 September 1998. A blank indicates the information is not available. LL = longline, GN = gillnet, PS = purse seine. Age designation is European method, first number is number of freshwater annuli, second number is number of ocean annuli, S = spawning check. FL = fork length. TL = total length. BW = body weight.

U.S. Tag No.	Release						Recovery											
	Japan Tag No.	Date	Lat (°N)	Long	2° X 5° Area	FL (mm)	Date	Lat (°N)	Long	Area Code	Sex	Gear	FL (mm)	BW (g)	Gonad (g)	Age	Location	
<b>A. Chum salmon</b>																		
LL0102	LL4102	04-Jul-97	53°30	179°30W	W8052	LL 584	0.4	29-Sep-97	42°20	140°40E	02-1	Setnet	M	615	2300	119	0.4	Otoebe Coast, Funka Bay, Pacific Ocean, Hokkaido, Japan
LL0103	LL4103	04-Jul-97	53°30	179°30W	W8052	LL 552	0.3	18-Oct-97	44°00	145°00E	02-2	Setnet	M	-	3300	-	-	Shiretoko Coast, Okhotsk Sea, Hokkaido, Japan
LL0115	LL4115	04-Jul-97	53°30	179°30W	W8052	LL 519	0.3	21-Oct-97	43°13	145°33E	02-1	Setnet	M	-	-	-	-	Konbumori Coast, Pacific Ocean, Hokkaido, Japan
LL0178	LL4178	05-Jul-97	54°30	179°30W	W8054	LL 618	0.3	22-Sep-97	45°16	142°14E	02-2	Setnet	M	640	2500	-	-	Sarufutsu Coast, Okhotsk Sea, Hokkaido, Japan
LL0278	LL4278	07-Jul-97	56°30	179°30W	W8056	LL 561	0.3	10-Sep-97	43°40	145°08E	02-0	Setnet	M	600	2480	158.6	0.3	Shibetsu Coast, Nemuro Strait, Hokkaido, Japan
LL0279	LL4279	07-Jul-97	56°30	179°30W	W8056	LL 679	0.4	05-Sep-97	45°16	142°14E	02-2	Setnet	M	650	3640	-	-	Sarufutsu Coast, Okhotsk Sea, Hokkaido, Japan

Table 1. continued

U.S.		Release					Recovery												
Tag No.	Japan Tag No.	Date	Lat (°N)	Long	Area	2° X 5°	FL (mm)	Age	Date	Lat (°N)	Long	Area Code	Gear	Sex	FL (mm)	BW (g)	Gonad (g)	Age	Location
<b>A. Chum salmon, continued.</b>																			
LL0340	LL4340	08-Jul-97	57°30	179°30W	W8056	LL	560	0.3	11-Oct-97	40°36	141°30E	01-0	Trap	-	TL = 2100 640	-	-	-	Oirase River, Aomori Prefecture, Pacific Coast, Honshu, Japan
LL0343	LL4343	08-Jul-97	57°30	179°30W	W8056	LL	571	0.3	26-Sep-97	42°57	144°04E	02-1	Setnet	F	560	2100	301.8	0.3	Shiranuka Coast, Pacific Ocean, Hokkaido, Japan
LL0346	LL4346	08-Jul-97	57°30	179°30W	W8056	LL	595	0.3	09-Oct-97	43°23	144°17E	02-0	Setnet	M	600	2350	90.8	0.3	Bekikai Coast, Nemuro Strait, Hokkaido, Japan
LL0441	LL4441	10-Jul-97	57°30	178°30W	W8056	LL	549	0.3	20-Sep-97	43°40	145°08E	02-0	Setnet	M	590	2350	131.7	0.3	Shibetsu Coast, Nemuro Strait, Hokkaido, Japan
LL0581	LL4581	14-Jul-97	56°30	178°30W	W8056	LL	483	0.2	03-Nov-97	43°40	145°08E	02-0	Setnet	M	540	1400	-	0.2	Shibetsu Coast, Nemuro Strait, Hokkaido, Japan
LL0704	LL4704	16-Jul-97	56°30	178°30E	E7556	LL	484	0.2	14-Oct-97	43°23	144°17E	02-0	Setnet	M	525	1450	76.7	0.2	Bekikai Coast, Nemuro Strait, Hokkaido, Japan
LL2170, thermal tag (Kiwi) no. 259	MM1222	03-Jul-98	52°30	179°30W	W8052	LL	622	0.3	04-Sep-98	42°39	143°31E	02-1	Setnet	M	650	3000	-	0.3	Near mouth of Tokachi River, Pacific Coast, Hokkaido, Japan

Table 1. Continued.

U.S. Tag No.	Japan Tag No.		Release				Recovery												
	Date	Lat (°N)	Long	2° X 5° Area	FL (mm)	Age	Date	Lat (°N)	Long	Area Code	Sex	Gear	FL (mm)	BW (g)	Gonad (g)	Age	Location		
<b>A. Chum salmon, continued.</b>																			
LL2281, archival tag (NWMT) no. 256	MM1333	05-Jul-98	54°30'	179°30'W	W8054	LL	670	0.4	10-Sep-98	43°23'	145°48'E	02-0	Setnet	F	690	3700	600	0.4	Shibetsu Coast, Nemuro Strait, Hokkaido, Japan
<b>B. Pink salmon</b>																			
LL1165, thermal tag (Kiwi) no. 189	DD6565	03-Jul-98	55°59'	145°00'W	W4554	LL	495	0.1	24-Jul-98	58°06'	152°20'W	56-3	PS			1400			Cape Izhut, Afognak Island, central Alaska, USA
<b>C. Coho salmon</b>																			
LL1156, thermal tag (Kiwi) no. 52	DD6556	03-Jul-98	55°59'	145°00'W	W4554	LL	592	1.1	24-Aug-98	59°02'	160°20'W	45-0	GN	M	~610	~3200			Togiak Bay, western Alaska, USA
<b>D. Steelhead</b>																			
LL1179, thermal tag (Kiwi) no. 198	DD6579	09-Jul-98	49°58'	144°58'W	W4548	LL	690	2.1S1	14-Aug-98	60°13'	144°40'W	60-0	GN	M	~3360				2.1S1 Sofuk Bar, southeast tip of Copper R. Delta, central Alaska, USA