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# TAG RETURNS IN 1997 - INTERNATIONAL HIGH-SEAS SALMON TAGGING

by

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## ABSTRACT

Preliminary information is reported on all high-seas salmonid disk tags recovered from 1 September 1996 through 31 August 1997. Eighteen Japan-U.S. tags were returned (1 sockeye, 13 chum, and 4 pink salmon). These tagged salmon were released from 1995 to 1997 during international cooperative tagging operations aboard Japanese research vessels in the central Aleutian Islands, Bering Sea, and Gulf of Alaska in June and July. The only North American recovery was a sockeye salmon released in the central Gulf of Alaska in early July 1997 and recovered approximately one month later in the San Juan Islands, Washington. Two immature chum salmon released in the central Bering Sea in mid-July 1995 were recovered as adults in September and October 1996 in Hokkaido, Japan. Eleven maturing chum salmon released in July 1996 in the central Aleutian Islands and Bering Sea were recovered in Hokkaido (10 fish) and southeastern Kamchatka (1 fish) from August to November 1996. All four tagged pink salmon were recaptured during high-seas research gillnet operations on the day following their release.


## 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 1996 to 31 August 1997. 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 salmon tags reported to FRI from 1 September 1996 through 31 August 1997 were from fish 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 from 1995 to 1997 (Ito and Ishida 1995, 1996; Myers et al. 1995, 1997; Davis et al. 1996). Eighteen Japan-U.S. tags were returned (1 sockeye, 13 chum, and 4 pink salmon; Table 1). The only North American recovery was a sockeye salmon released in the central Gulf of Alaska in early July 1997 and recovered approximately one month later in the San Juan Islands, Washington. Two immature chum salmon released in the central Bering Sea in mid-July 1995 were recovered as adults in September and October 1996 in Hokkaido, Japan. Eleven maturing chum salmon released in July 1996 in the central Aleutian Islands and Bering Sea were recovered in Hokkaido (10 fish) and southeastern Kamchatka (1 fish) from August to November 1996. All four tagged pink salmon were recaptured during high-seas research gillnet operations on the day following their release.

## ACKNOWLEDGMENTS

Thanks are given to Japanese and U.S. fishermen, processors, biologists, and fisheries agencies who participated in the 1996-97 high-seas tagging program. Special acknowledgments are given to Captain Y. Hayasaka and the officers, crew, and students aboard the *Wakatake maru*, and Captain G. Anma and the officers, crew, cadets, and graduate students aboard the *Oshoro maru*, Hokkaido University, who cooperated in high-seas salmon tagging experiments in 1996-1997. Funding was provided by the Auke Bay Laboratory of the Alaska Fisheries Science Center, U.S. National Marine Fisheries Service (NOAA contract No. 50ABNF700003).

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Table 1. Preliminary release and recovery information for cooperative Japan-U.S. tags returned from 1 September 1996 to 31 August 1997.
A blank indicates the information is not available. LL = research longline, GN = research gillnet, PS = purse seine.
Age designation is European method, first number is number of freshwater annuli, second number is number of ocean annuli, R = regenerated.

| FRI Tag. No. | FAJ Tag No. | Release | | | | | | | Recovery | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Date | Lat (°N) | Long | 2° X 5° Area | Gear | FL (mm) | Age | Date | Lat (°N) | Long | Area Code | Gear | Sex | FL (mm) | BW (g) | Gonad (g) | Age | Location |
| **A. Sockeye salmon** | | | | | | | | | | | | | | | | | | | |
| LL1021 | CC6521 | 10-Jul-97 | 54°01 | 144°59W | W4554 | LL | 522 | R.R | 12-Aug-97 | 48°31 | 123°09 | 81 | PS | M | | 2364 | | 1.2 | San Juan Is., Washington, USA; catch area 7 |
| **B. Chum salmon** | | | | | | | | | | | | | | | | | | | |
| KK141 | JJ6176 | 11-Jul-95 | 56°30 | 177°30W | W8056 | LL | 582 | 0.4 | 6-Sep-96 | 43°55 | 144°40E | 02-2 | | | | | | | Shiretoko P., Shari C., Hokkaido, Japan |
| KK162 | JJ6197 | 11-Jul-95 | 56°30 | 177°30W | W8056 | LL | 484 | 0.2 | 13-Oct-96 | 43°02 | 145°52E | 02-1 | | | | | | | Off Ochiishi, Hokkaido, Japan |
| KK295 | KK2103 | 30-Jun-96 | 51°30 | 179°30W | W8050 | LL | 600 | R.3 | 25-Aug-96 | 51°25 | 157°30 | 10-0 | | | | | | | Vestnik & Zholtaya R., southeastern Kamchatka, Russia |
| KK290 | KK2098 | 30-Jun-96 | 51°30 | 179°30W | W8050 | LL | 490 | 0.2 | 1-Oct-96 | 44°29 | 143°08E | 02-2 | | M | | | | | Okhotsk C., Okoppe C., Hokkaido, Japan |
| KK309 | KK2117 | 2-Jul-96 | 53°30 | 179°30W | W8052 | LL | 590 | 0.4 | 16-Oct-96 | 43°40 | 145°08E | 02-0 | | M | 628 | 2444 | 89 | 0.4 | Nemuro S., Shibetsu R., Hokkaido, Japan |
| KK373 | KK2181 | 3-Jul-96 | 54°30 | 179°30W | W8054 | LL | 532 | 0.3 | 14-Sep-96 | 43°55 | 144°40E | 02-2 | | M | 572 | 2039 | 125 | 0.3 | Shiretoko P., Shari C., Hokkaido, Japan |
| KK441 | KK2249 | 5-Jul-96 | 56°30 | 179°30W | W8056 | LL | 538 | 0.3 | 13-Oct-96 | 43°23 | 144°17E | 02-0 | | F | | | | | Nemuro S., Bekkai C., Hokkaido, Japan |

Table 1. Cont'd.

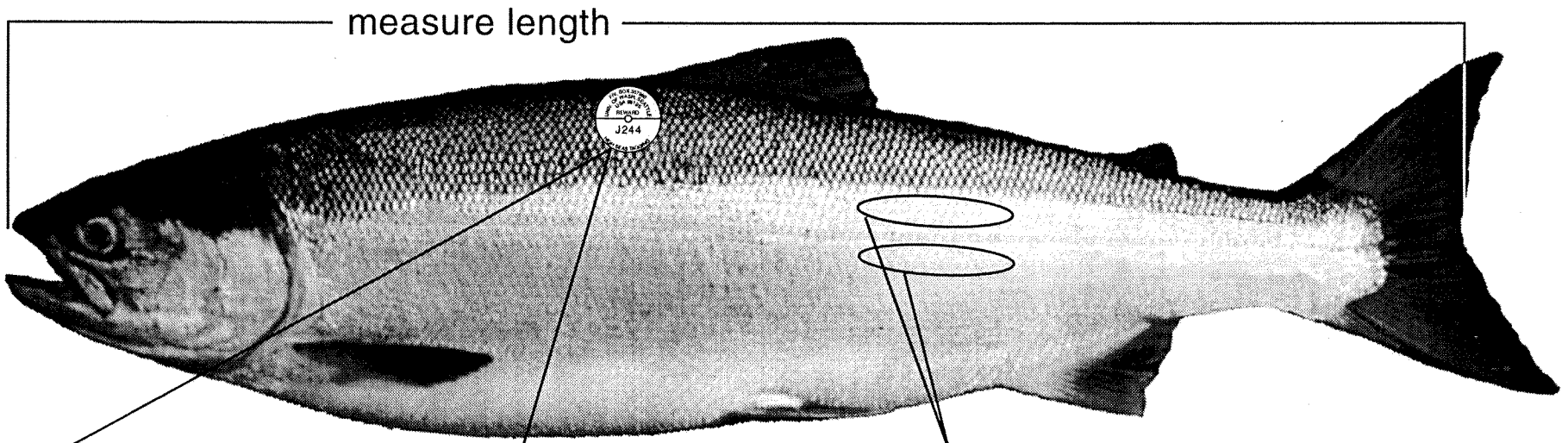
| FRI Tag. No. | FAJ Tag No. | Release | | | | | | | Recovery | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Date | Lat (°N) | Long | 2° X 5° Area | Gear | FL (mm) | Age | Date | Lat (°N) | Long | Area Code | Gear | Sex | FL (mm) | BW (g) | Gonad (g) | Age | Location |
| **B. Chum salmon (cont'd)** | | | | | | | | | | | | | | | | | | | |
| KK493 | KK2301 | 5-Jul-96 | 56°30 | 179°30W | W8056 | LL | 532 | 0.4 | 23-Oct-96 | 44°01 | 145°12E | 02-0 | | M | | 2000 | | | Shiretoko P., Rausu C., Hokkaido, Japan |
| EE698 | KK2506 | 10-Jul-96 | 57°30 | 178°30W | W8056 | LL | 509 | 0.3 | 14-Oct-96 | 43°40 | 145°08E | 02-0 | | F | 540 | 1820 | | 0.3 | Nemuro S., Shibetsu C., Hokkaido, Japan |
| EE749 | KK2557 | 11-Jul-96 | 57°30 | 177°30W | W8056 | LL | 574 | 0.3 | 26-Sep-96 | 43°55 | 144°40E | 02-2 | | M | 597 | 2347 | 146 | 0.3 | Shiretoko P., Shari C., Hokkaido, Japan |
| EE816 | KK2624 | 12-Jul-96 | 56°30 | 177°30W | W8056 | LL | 460 | 0.2 | 1-Nov-96 | 43°23 | 144°17E | 02-0 | | | | | | | Nemuro S., Bekkai C., Hokkaido, Japan |
| EE918 | KK2726 | 14-Jul-96 | 56°30 | 179°30E | E7556 | LL | 604 | 0.3 | 24-Sep-96 | 43°35 | 145°25E | 02-0 | | | | | | | Nemuro S., Notsuke C., Hokkaido, Japan |
| EE922 | KK2730 | 14-Jul-96 | 56°30 | 179°30E | E7556 | LL | 562 | 0.3 | 7-Oct-96 | 44°00 | 145°30E | 02-0 | | F | 582 | 2150 | 280 | 0.3 | Nemuro S., Hokkaido, Japan |
| **C. Pink salmon** | | | | | | | | | | | | | | | | | | | |
| LL4378 | LL0378 | 9-Jul-97 | 58°30 | 179°30W | W8058 | LL | 427 | 0.1 | 10-Jul-97 | 58°30 | 179°30W | 25 | GN | | | | | | High-seas recovery, *Wakatake maru* , tags found in net |
| LL4415 | LL0415 | 9-Jul-97 | 58°30 | 179°30W | W8058 | LL | 442 | 0.1 | 10-Jul-97 | 58°30 | 179°30W | 25 | GN | F | 450 | 1120 | 100 | 0.1 | High-seas recovery, *Wakatake maru* |

Table 1. Cont'd.

| FRI Tag. No. | FAJ Tag No. | Release | | | | | | | Recovery | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Date | Lat (°N) | Long | 2° X 5° Area | Gear | FL (mm) | Age | Date | Lat (°N) | Long | Area Code | Gear | Sex | FL (mm) | BW (g) | Gonad (g) | Age | Location |
| **C. Pink salmon (cont'd)** | | | | | | | | | | | | | | | | | | | |
| LL4416 | LL0416 | 9-Jul-97 | 58°30 | 179°30W | W8058 | LL | 504 | 0.1 | 10-Jul-97 | 58°30 | 179°30W | 25 | GN | | 516 | | | 0.1 | High-seas recovery, *Wakatake maru* |
| LL4623 | LL0623 | 14-Jul-97 | 56°30 | 178°30W | W8056 | LL | 444 | R.1 | 15-Jul-97 | 56°30 | 178°30W | 25 | GN | M | 434 | 1100 | 7 | 0.1 | High-seas recovery, *Wakatake maru* |

1997 1998

# RETURN HIGH SEAS SALMON AND STEELHEAD TAGS




Examples of high seas disk tags


Tag color is red/white or solid red

- Collect tag, if tag cannot be collected then get tag number and description
- Collect scales and carefully measure fish length as shown
- Record location, date, species, gear, sex, and weight

**RETURN** a high seas salmon tag (or tag number and description)

**GET** a custom embroidered cap as a reward

Send to: **High Seas Project**
**University of Washington**
**Fisheries Research Institute**
**Box 357980**
**Seattle, WA 98195-7980**

For details call: (206) 543-1101

INTERNATIONAL HIGH SEAS SALMON TAGGING