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RELEASES OF HIGH-SEAS SALMON TAGS BY U.S. VESSELS IN 2006

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ABSTRACT

This document reports information on all high-seas salmon tags released aboard United States (U.S.) research vessels in 2006. Petersen disk tags and data storage tags were released as part of salmon tagging research aboard the NOAA Ship *Miller Freeman* in the eastern Bering Sea during August 29-30, 2006. Data storage tags were placed on 2 chum salmon (*Oncorhynchus keta*), and Petersen disk tags (n = 44) were placed on 31 chum, 7 sockeye (*O. nerka*), 5 pink (*O. gorbuscha*), and 1 coho (*O. kisutch*) salmon.

INTRODUCTION

This document reports information on all high-seas salmon tags released aboard United States (U.S.) research vessels in 2006. Petersen disk tags and data storage tags were released as part of salmon tagging research aboard the NOAA Ship *Miller Freeman* in the eastern Bering Sea during August 29-30, 2006. In 2006 and 2007 U.S. tags were also released aboard Japanese research vessels; these releases are reported in Fukuwaka et al. (2006, 2007). Additional release information and all recovery information from high-seas salmon tagging activity are reported in Fukuwaka et al. (2006, 2007). The last previous report of U.S. tag releases and North American recoveries of high-seas tags was in Walker et al. (2005).

MATERIALS AND METHODS

Tagging activity during 2006 aboard U.S. research vessels was limited to the experimental trials of a live-box (Figure 1) in the eastern Bering Sea aboard the NOAA Ship *Miller Freeman* during 29-30 August, 2006. The live-box was designed for live capture of salmon with trawl gear for tagging and physiological research. Disk tags were 20 mm diameter plastic red-and-white Petersen disk tags provided by the School of Aquatic and Fishery Sciences, at the University of Washington in Seattle, WA. Disk tags were secured to salmon with cinch straps posterior of the dorsal fin. Data storage tags were model LTD_1100 data tags manufactured by Lotek[1] Marine Technologies, which record temperature and depth and consist of a small battery powered circuit board potted in a clear urethane with dimensions of 27 x 16 x 8 mm and weight of 5 g. Data tags were secured to salmon with two 76 mm nickel pins with a blank oval disk as a backing plate. Petersen disk tags were not used with the data storage tags.

RESULTS AND DISCUSSION

The live-box trials were successful and enabled U.S. scientists to tag and release forty-six salmon with high-seas salmon tags (Petersen disk and data storage tags). Data storage tags were placed on 2 chum salmon (*Oncorhynchus keta*), and Petersen disk tags (n = 44) were placed on 31 chum, 7 sockeye (*O. nerka*), 5 pink (*O. gorbuscha*), and 1 coho (*O. kisutch*) salmon (Table 1). Salmon captured with the live box were in excellent condition with minimal (<5%) to no scale loss on all immature and maturing salmon. The construction of the live box and the purchase of data storage tags were part of the North Pacific Anadromous Fish Commission salmon tagging project summarized in Walker et al. (2006).

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[1] Reference to trade names does not imply endorsement by NOAA Fisheries.

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Table 1. Highseas tags released aboard U.S. vessels between October 1, 2005 and August 21, 2007. Tags were released during live-box trials aboard the NOAA Ship *Miller Freeman* during July 29 and 30, 2006 and include Petersen disk tags (disk) and data storage tags (DST). Data storage tags record temperature, and depth data (Lotek LTD1100).

Tag Type	Species	Release Date	Release Location Latitude	Release Location Longitude	Fork Length	Tag Number
DST	chum	7/29/2006	57°08´N	166°53´ W	580	LTD10650
DST	chum	7/29/2006	57°08´N	166°53´ W	520	LTD10648
disk	chum	7/29/2006	54°03´N	166°37´ W	--	LL4940
disk	chum	7/29/2006	54°03´N	166°37´ W	--	LL4941
disk	chum	7/29/2006	54°04´N	166°47´ W	375	LL4945
disk	chum	7/29/2006	54°04´N	166°47´ W	450	LL4946
disk	chum	7/29/2006	57°08´N	166°53´ W	530	LL4947
disk	chum	7/29/2006	57°08´N	166°53´ W	550	LL4949
disk	chum	7/29/2006	57°08´N	166°53´ W	520	LL4952
disk	chum	7/30/2006	57°09´N	166°56´ W	520	LL4953
disk	chum	7/30/2006	57°09´N	166°56´ W	460	LL4954
disk	chum	7/30/2006	57°09´N	166°56´ W	510	LL4957
disk	chum	7/30/2006	57°09´N	166°56´ W	530	LL4956
disk	chum	7/30/2006	57°09´N	166°56´ W	500	LL4922
disk	chum	7/30/2006	57°09´N	166°56´ W	490	LL4959
disk	chum	7/30/2006	57°09´N	166°56´ W	410	LL4924
disk	chum	7/30/2006	57°09´N	166°56´ W	595	LL4921
disk	chum	7/30/2006	57°09´N	166°56´ W	465	LL4923
disk	chum	7/30/2006	57°08´N	167°04´ W	570	LL4927
disk	chum	7/30/2006	57°08´N	167°04´ W	520	LL4933
disk	chum	7/30/2006	57°08´N	167°04´ W	600	LL4929
disk	chum	7/30/2006	57°08´N	167°04´ W	540	LL4932
disk	chum	7/30/2006	57°08´N	167°04´ W	510	LL4925
disk	chum	7/30/2006	57°08´N	167°04´ W	540	LL4920
disk	chum	7/30/2006	57°08´N	167°04´ W	580	LL4903
disk	chum	7/30/2006	57°08´N	167°04´ W	540	LL4902
disk	chum	7/30/2006	57°08´N	167°04´ W	540	LL4901
disk	chum	7/30/2006	57°08´N	167°04´ W	520	LL4926
disk	chum	7/30/2006	57°08´N	167°04´ W	430	LL4938
disk	chum	7/30/2006	57°08´N	167°04´ W	500	LL4939
disk	chum	7/30/2006	57°08´N	167°04´ W	460	LL4900
disk	chum	7/30/2006	57°08´N	167°04´ W	510	LL4935
disk	chum	7/30/2006	57°08´N	167°04´ W	525	LL4905
disk	pink	7/29/2006	57°08´N	166°53´ W	--	LL4948
disk	pink	7/29/2006	57°08´N	166°53´ W	--	LL4950
disk	pink	7/29/2006	57°08´N	166°53´ W	540	LL4951
disk	pink	7/30/2006	57°09´N	166°56´ W	560	LL4955
disk	pink	7/30/2006	57°09´N	166°56´ W	470	LL4930

Continued.

Table 1. continued

Tag Type	Species	Release Date	Release Location Latitude	Release Location Longitude	Fork Length	Tag Number
disk	sockeye	7/29/2006	54°04´N	166°47´ W	--	LL4942
disk	sockeye	7/29/2006	54°04´N	166°47´ W	560	LL4943
disk	sockeye	7/29/2006	54°04´N	166°47´ W	390	LL4944
disk	sockeye	7/30/2006	57°08´N	167°04´ W	490	LL4958
disk	sockeye	7/30/2006	57°08´N	167°04´ W	565	LL4931
disk	sockeye	7/30/2006	57°08´N	167°04´ W	480	LL4936
disk	sockeye	7/30/2006	57°08´N	167°04´ W	520	LL4937
disk	coho	7/30/2006	57°08´N	167°04´ W	570	LL4934

Figure 1. Photographs of live-box operations aboard the NOAA Ship Miller Freeman during August 29-30, 2006.