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Summary of Recaptures of Salmon Tags from USA Stocks in ICNAF Waters

by

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Atlantic salmon tagging experiments were started in the USA in 1962 when ascending adults were tagged at fishway traps in the Narraguagus River. This program was expanded in 1966 to include a portion of the salmon run in the Machias River, and the Penobscot River was added to the list in 1969.

Characteristics of the ascending runs were presented by Meister and Cutting (1967), and migration data from tagged adults presented by Cutting and Meister (1967). Annual summaries updating tag recaptures have been submitted to the ICES/ICNAF Joint Working Party on North Atlantic Salmon.

Recent tag recaptures and revised figures for tagged kelt recoveries for the period 1962-1970 are presented in Table 1. The apparent decrease in total returns for the 1968-69 winter of tagging cannot be explained at this time. However, this decrease was further documented by a near complete absence of repeat spawners in the ascending runs in Maine rivers during 1970.

The first liberation of tagged smolts was made in 1966. Annual releases of tagged hatchery-reared one- and two-year-old smolts have been made in the period 1966-70. To date no tagged wild smolts have been liberated in the USA.

The number of hatchery smolts tagged and released and recapture data for the period 1966 through 1970 is presented in Table II. The returns for the 1966-68 releases are essentially complete. The very low returns for the 1967 and 1968 releases cannot be explained fully.

The increased returns from the West Greenland area in 1970 as noted in Table II is interpreted as increased cooperation and improved tag collection systems. The staff of the Greenland Fisheries Laboratories at Godthaab and Charlottenlund have been most cooperative and for the first time tags were received from Faroese vessels upon return to home port. Return of these tags provides a most valuable tool in assessing hatchery techniques and stocks.

Additional releases of hatchery-reared salmon were made in 1969 and 1970 in the Connecticut River Drainage by the various state and federal organizations. In 1969 approximately 7,000 smolts were released below Holyoke Dam. In 1970 approximately 60,000 were released. It is estimated that 75,000 hatchery-reared smolts will be released in this drainage in the spring of 1971. Approximately 10 percent of these fish were tagged prior to release. The tag employed was supplied by Domtar Industries, Canada, and tag and release information has been supplied to the clearing house operated by the Fisheries Research Board of Canada. No USA tags have been applied to the above releases in the Connecticut River.

References

- CUTTING, R.E. and A.L. MEISTER. 1967. Marine migrations of Atlantic salmon kelts tagged in Maine, USA. Intl. Comm. Northw. Atl. Fish., Res.Doc. 67/57.
- MEISTER, A.L. and R.E. CUTTING. 1967. A preliminary report of the composition of the spawning runs of Atlantic salmon (*Salmo salar*) in Maine rivers for the period 1962-1966. Intl. Comm. Northw. Atl. Fish., Res.Doc. 67/42.

TABLE I. Number of kelts tagged in the winters 1962/63 - 1970/71 and recaptured in Greenland and other areas, including home waters, up to the end of 1970.

Country	Winter of Tagging	Number Tagged	Recaptures		
			Greenland	Other Areas	Total
USA	1962-63	151	1	13	14
	1963-64	123	1	10	11
	1964-65	160	0	23	23
	1965-66	146	2	16	18
	1966-67	578	5	75	80
	* 1967-68	340	5	56	61
	1968-69	218	1	16	17
	1969-70	315	0	8+	8+
	1970-71	400	-	-	-

* Updated figures for period from 1967-68. Figures for 1969-70 are provisional.

TABLE II. Number of hatchery smolts tagged in the years 1966-1970 and recaptured in Greenland and other areas, including home waters, up to the end of 1970. Figures in brackets are returns per thousand tagged.

Country	Year of Tagging	Number Tagged	Recaptures				Grand Total
			West Greenland	Grilse	Salmon	Total	
USA	1966	82,250	39(0.4)	69	168(2.0)	237	276
	1967	80,717	0	12	10(0.1)	22	22
	1968	73,730	7(0.1)	9	12(0.1)	21	28
	1969	73,418	51(0.7)	30	-	30	81*
	1970	48,217	-	-	-	-	-

* Provisional