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Long-distance migration of an Atlantic mackerel, *Scomber scombrus*,
tagged in Newfoundland waters

by

L. S. Parsons and J. A. Moores
Fisheries Research Board of Canada
Biological Station, St. John's, Nfld.

Mackerel are seasonal migrants to Newfoundland waters appearing in abundance in July and disappearing again in late autumn; catch records indicate that they are most plentiful in Newfoundland waters from August to October. It has long been assumed that they undergo regular southward migrations in the fall to overwintering areas at the edge of the continental shelf south of Sable Island. During the spring and early summer mackerel move northward into the coastal waters of Nova Scotia, the Gulf of St. Lawrence and Newfoundland, migrating as far north as southern Labrador (Parsons, 1970).

On August 30, 1972, the Fisheries Research Board of Canada tagged 1450 mackerel near Cape St. John in northeast Newfoundland (Fig. 1) in an attempt to elucidate the seasonal migrations of mackerel in Newfoundland waters. Two types of external tags were used to mark the mackerel - the FD-68 Anchor tag and the FT-2 Dart tag, made of #20 vinyl tubing approximately 2½ inches long, manufactured by Floy Tag and Manufacturing Inc., of Seattle. The FD-68 Anchor tag was applied with a tagging gun described previously by Dell (1968). The FT-2 Dart tag was applied with a sharp-pointed hollow stainless steel applicator. Both types of tags were inserted in the dorsal region of the fish approximately midway between the dorsal fin and the vertebral column; 750 mackerel were tagged with Anchor tags and 700 with Dart tags.

During September 1-29, 1972, five tagged mackerel were recaptured in Notre Dame Bay, Nfld. (Fig. 1), all south of the tagging locality, indicating a general southward migration during the autumn. On December 28, 1972, the Polish trawler *Aries* caught a tagged mackerel at 40°05'N, 72°27'W, south of Cape Cod in ICNAF Statistical Area 6A. The mackerel (Canadian dart tag No. A32209) proved to have been marked on August 30, 1972, off northeast Newfoundland (49°58'15"N, 55°39'10"W). This mackerel had migrated at least 1400 miles during four months over the greater part of the range of Atlantic mackerel in the Northwest Atlantic.

Sette (1950), from analyses of length measurements of commercial catches and the results of tagging experiments, postulated the existence of 'northern' and 'southern' populations or contingents of mackerel with spawning areas in the Gulf of St. Lawrence and from Cape Hatteras to Long Island. The present recapture suggests that mixing occurs between the two populations. This was previously indicated by the recapture in the area from New Jersey to Cape Cod during the summer of 1928 of five mackerel tagged in St. Margaret's Bay, Nova Scotia in June 1927 (Mackay, MS 1967), but these were discounted as probable stragglers by Sette (1950).

The recapture south of Cape Cod of an Atlantic mackerel tagged in northeast Newfoundland waters might well have resulted from a stray movement but at any rate represents the farthest documented migration of mackerel ever reported from the Northwest Atlantic.

References

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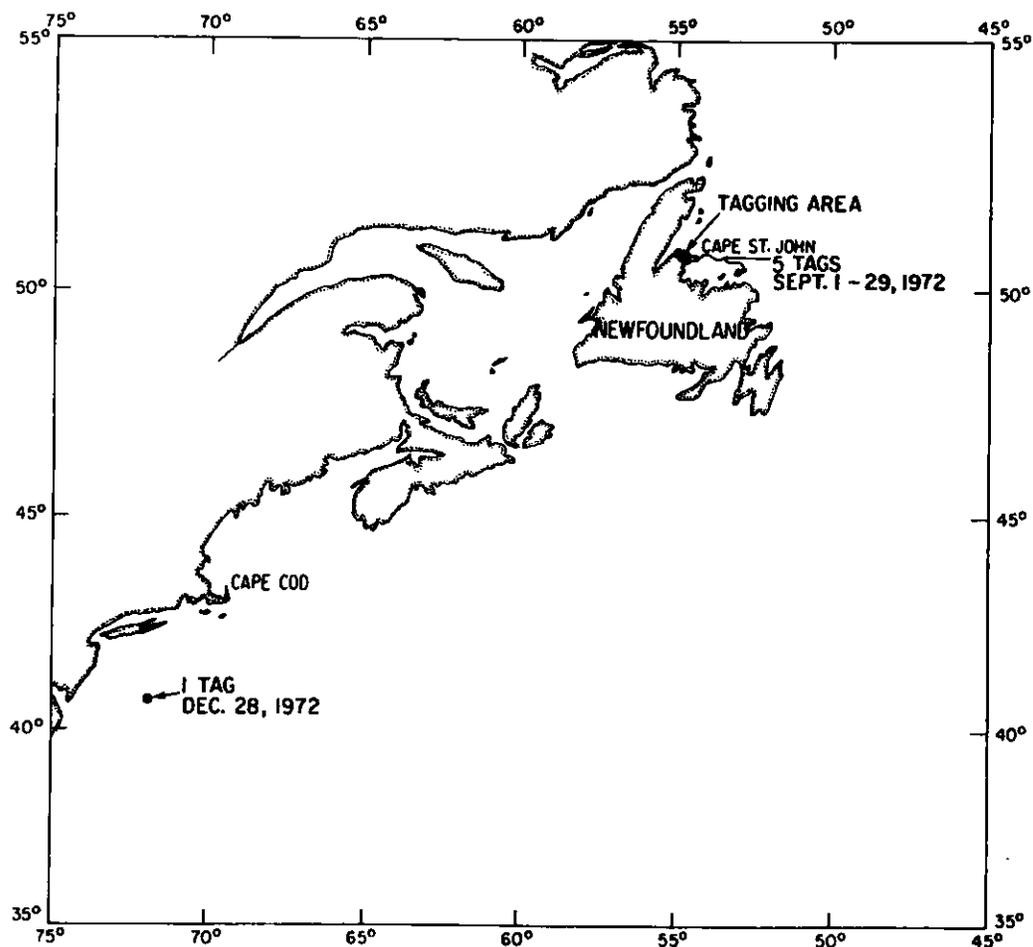


Fig. 1. Map of Northwest Atlantic depicting mackerel tagging area and location of recaptures.