

RESULTS OF UNITED STATES TAGGING OF ATLANTIC BILLFISHES, OCTOBER 1975-OCTOBER 1976

by

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SUMMARY

The releases and recoveries of white marlin, blue marlin, and Atlantic sailfish are discussed. These data are a result of the cooperative game fish tagging program being conducted by the Woods Hole Oceanographic Institution and the National Marine Fisheries Service of the United States.

In the time period from October, 1975 to October, 1976, 326 white marlin, 143 blue marlin and 1,406 sailfish were tagged and released in the Atlantic.

Returns reported during these same 12 months continue to expand our information on migrations and behavior of these species. Five white marlin, one blue marlin and 30 sailfish were recaptured in the Atlantic with tags.

RESUME

Le présent document traite du relâchage et de la recapture de makaires blancs, makaires bleus et voiliers marqués. Ces données proviennent du programme de marquage d'espèces visées par la pêche sportive, mené en collaboration par la "Woods Hole Oceanographic Institution" et le "National Marine Fisheries Service" des Etats-Unis.

Entre octobre 1975 et octobre 1976, 326 makaires blancs, 143 makaires bleus et 1.406 voiliers ont été marqués et relâchés dans l'Atlantique.

Les retours de marques signalés au cours des mêmes douze mois sont venus accroître nos connaissances de la migration et du comportement de ces espèces. Les poissons marqués repris dans l'Atlantique comprenaient 5 makaires blancs, 1 makaire bleu et 30 voiliers.

RESUMEN

Trata de marcados y recapturas de aguja blanca, aguja azul y pez vela. Los datos proceden del programa de marcado de especies explotadas por la pesca deportiva, realizado en colaboración por el "Woods Hole Oceanographic Institution" y el "National Marine Fisheries Service" de Estados Unidos.

De octubre 1975 a octubre 1976 se marcaron y soltaron en el Atlántico 326 ejemplares de aguja blanca, 143 de aguja azul y 1.406 de pez vela.

Las recuperaciones obtenidas durante esos doce meses, aportaron nuevos datos sobre migraciones y hábitos de estas especies. En el Atlántico se capturaron varios ejemplares marcados: 5 agujas azules, 1 aguja blanca y 30 peces vela.

This document updates the last report (SCRS/75/99) presented on taggings of Atlantic billfishes with United States tags. The data presented are for results obtained by the Woods Hole Oceanographic Institution (WHOI) - National Marine Fisheries Service (NMFS) Cooperative Game Fish Tagging Program during the period October, 1975 to October, 1976. Included in this paper are results for white marlin, *Tetrapturus albidus*, blue marlin, *Makaira nigricans*, and sailfish, *Istiophorus platypterus*, in the Atlantic.

Nearly all of the taggings and returns must be credited to sport fishermen cooperating with our program. These individuals tagged some of their catches on a volunteer basis with equipment distributed by WHOI and NMFS. The tags and tagging techniques used are described in Mather (1963), FAO (1972), and Mather, Tabb, Mason and Clark (1974).

During the twelve month period, October, 1975 to October, 1976, there were 326 white marlin, 143 blue marlin and 1,406 sailfish tagged and released in the Atlantic. In this same period five returns were reported for white marlin, one for blue marlin and 30 for sailfish. These figures include returns obtained in this period from taggings and recaptures in previous years. The cumulative totals for releases and returns by species as of September 30, 1976, were as follows (releases after slash, returns before slash): white marlin 177/10,343; blue marlin 10/1,211; and sailfish 174/18,594. These results are discussed by species.

#### *White marlin*

The five new white marlin returns continue to expand our information on the migratory pattern of this species. All were released in the summer fishery in coastal waters between Cape Hatteras, North Carolina and Long Island, New York. Four of the five fit very well with the cyclical migratory pattern proposed for the group which summers in these waters (Mather, Jones and Beardsley, 1972; FAO, 1972; Mather, Mason and Clark, 1974). Three were recaptured after one year and one after four years in this same fishery. Two of these new recaptures were recovered in July and August of 1974 but only recently returned to us.

The one recovery which does not fit with the pattern was from a fish recaptured, after almost one year at liberty, in the Gulf of Mexico in July, 1976. Such a return shows a definite change in summer habitat as this is the prime time for the northern coastal fishery. This is the third occurrence of this nature (Mather, Mason and Buchanan, 1976) and may indicate an ability of this group to change their migratory pattern perhaps in response to adverse environmental conditions. Many fishermen reported better white marlin fishing in the Gulf and poorer fishing off the eastern U.S. this past summer.

Three of these new recoveries were made by United States sport fishermen, one by a U.S. commercial fishermen using a harpoon and the last by a Japanese longliner.

#### *Blue marlin*

The single blue marlin recovery does not indicate a great deal about the movements of this species. The fish was released near St. Thomas, Virgin Islands in July, 1974, and recaptured off Bimini, Bahamas in September, 1975.

With only 1,211 releases it is little wonder that recaptures have not provided us with more significant data. A much more intensive effort is needed on this species in order to adequately assess fishery damage to the stock.

### *Sailfish*

All 30 of the sailfish recoveries were from fish released in the area of intensive sport fishing off southeastern Florida and the Florida Keys. This same area is where the great majority of the 1,406 new releases occurred.

All of these new recoveries but one were from fish recaptured in the same general release area off Florida. None of the local recaptures showed any extensive migrations even though some were at liberty for about three years. Time at large ranged from one day to 36 months, but only four fish were at liberty two years or more. All of these fish were recaptured by sport fishermen.

The one exception came from a fish released in December, 1975, off Hobe Sound, Florida, and reported to have been recaptured about 120 miles northeast of the Bahamas (28°N 76°W) in June, 1976. The report was by a Korean longliner but is a little unclear so is being rechecked since this is an interesting area for such a catch.

A pattern for sailfish movement remains unclear with these new results. Movements along the Florida coast still appear rather random and the one movement offshore, across the Gulf Stream, has no relation to previous migrations.

Overall, the results of billfish tagging are not as definitive as is possible to obtain with a little more emphasis. This tagging must be stressed at the multi-national level. The limitation of large numbers of releases being obtained only in areas of intensive fishing where the fish have little market value still exists. Results from our past work with white marlin have shown that meaningful data can be gathered. If we are to gain the necessary understanding of these species before it is too late tagging must be more widely encouraged.

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### ICCAT WORKING DOCUMENT

- SCRS/75/99 Mather, F. J., III, J. M. Mason, Jr. and C. C. Buchanan
1975. Results of United States tagging of Atlantic billfishes. January 1, 1972 - September 30, 1975.