

# ALBACORE ( *THUNNUS ALALUNGA* BONNATERRE, 1788 ) FISHERY IN ANTALYA BAY (LEVANTINE BASIN)

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## Abstract

This study presents data on the albacore drift-net fishery which was carried out for the first time in 2006 in the Turkish waters. Fishing was carried out with 18 vessels in Antalya Bay between May and July. The length frequency distribution and length-weight relationship for 171 captured albacore were calculated.

**Keywords :** *Migrant Species, Pelagic, Fisheries, Levantine Basin.*

## Introduction

Albacore (*Thunnus alalunga*) is a temperate tuna widely distributed throughout the Atlantic Ocean and the Mediterranean Sea. In the Atlantic, three stocks are commonly recognized by ICCAT (The International Commission for the Conservation of Atlantic Tunas): the northern and southern stocks separated by latitude 5°N, and the Mediterranean stock [1]. Albacore is not a target species in the Turkish waters. It is caught as by-catch in the bluefin tuna purse seine fishery. The catches of albacore had not been recorded for a long time until 2004. The total catch in 2004 was 27 t [2]. In this study, the data of the albacore drift-net fishery, which was carried out firstly in 2006 in the Turkish waters, are presented.

## Materials and methods

Data on the number of fishing vessels, the properties of the nets, fishing areas and non-target species of this fishery which was carried out in 2006 in Antalya Bay (Levantine Basin) were collected on board. Fork length (FL) and weight (TW) of 171 albacore were recorded. The length-weight relationship was calculated by equation  $W=aL^b$ . The obtained coefficients were analysed with ANOVA.

## Results and Discussion

The albacore drift-net fishery was carried out for the first time between May and July 2006 in the national and international waters in Antalya Bay (Fig. 1). The depth at the fishing grounds ranged from 150 to 2300 m. Albacore fishery was carried out by 18 vessels. These vessels had 14-25 m length and 200-500 engine HP. The drift-nets were approximately 2 km in length and 150 meshes in depth with a 150-170 mm mesh. Illuminated buoys were attached to each side of the net. Nets were set at sunset (20:00 h) and retrieved at sunrise (05:00 h). The fishing period lasted 30-40 days due to the migration of fish, meteorological conditions and the phase of the moon.

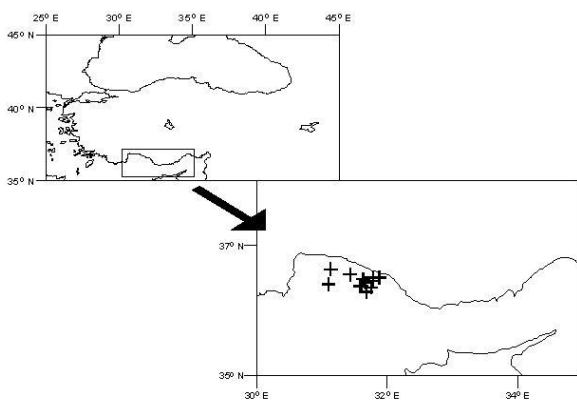


Fig. 1. The fishing grounds of albacore in the Levantine Sea

The total catch of the fishing boat, with which this study was realized, was 32 tones. Albacore constituted 94%, swordfish 4% and the remaining fishes 2%.

The total length of albacore ranged from 64.0 to 94.0 cm (mean length  $75.7 \pm 0.4$  cm (Fig. 2) and the weight from 4.5 to 12.3 kg (mean weight  $7.0 \pm 0.1$ ). The length-weight relationship was  $W=0.132 \times L^{2.52}$  (standard

error of  $b=0.095$ ,  $r=0.927$ ). The slope of the length-weight relationship indicated negative allometry ( $b < 3$ ), and the value of  $b$  is similar to that ( $b=2.88$ ) reported for the Aegean Sea [3].

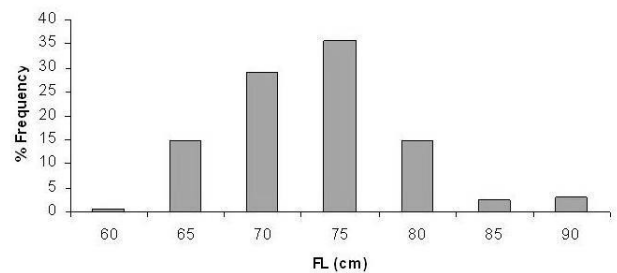


Fig. 2. Length frequency distribution of albacore caught by driftnets in the Levantine Sea.

Driftnet fishing is a simple method of fishing with a long history of use all around the world. There is, however, a concern that these nets also capture non-target species (e.g. fish near the surface, marine mammals, birds and reptiles) in relatively larger numbers when compared with the non-target catches in demersal trawls [4].

Bluefin tuna (*Thunnus thynnus*), swordfish (*Xiphias gladius*), Atlantic black skipjack (*Euthynnus alletteratus*), bullet tuna (*Auxis rochei*) and dolphinfish (*Coryphaena hippurus*) are non-target species. In this study, no common dolphin, sperm whales and birds were caught, although turtles were trapped in the nets (which, however, were released back into the sea by fishers).

In 2003, ICCAT enforced a recommendation prohibiting the use of drift-nets for fishing large pelagic species in the Mediterranean [1]. The driftnet fishery was prohibited in Turkish waters (by the Ministry of Agriculture and Rural Affairs) in September 2006 [5].

## References

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