

**A PRELIMINARY REPORT ON THE INVESTIGATION OF SWORDFISH (*XIPHIAS GLADIUS*,
L. 1758) CAUGHT IN THE TURKISH WATERS**

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SUMMARY

The length/weight relationship and the age of swordfish caught off the northeastern coast of Turkey were investigated.

From May, 1993, fork length measurements and weights of 404 swordfish specimens were taken. The smallest fish in the sample was 58 cm whereas the largest fish measured 201 cm. Weights ranged from a minimum of 1 kg to a maximum of 108 kg.

From May, 1993 onwards, the collection of anal spines and otoliths for age determination was carried out. The reading of the sections has not yet been completed.

RESUME

L'étude porte sur le rapport longueur-poids et l'âge d'espadons capturés sur les côtes turques du nord-est de la Méditerranée.

Des espadons ont été prélevés et mesurés à partir du mois de mai 1993.

Le plus petit poisson de l'échantillon mesurait 58 cm, et le plus grand 201 cm. Le poids minimum était de 1 kg, et le maximum de 108 kg.

A partir de mai 1993, des épines de la nageoire anale et des otolithes ont été prélevés pour la détermination de l'âge. Les coupes transversales n'ont pas encore été déchiffrées.

RESUMEN

Se debe investigar la relación talla-peso y la edad de pez espada capturado en la costa nordeste mediterránea de Turquía.

A partir de mayo de 1993, se capturaron y midieron ejemplares de pez espada.

En 1993 se midió la longitud a la horquilla y el peso de 404 especímenes.

El pez más pequeño de la muestra medía 58 cm, y el de mayor tamaño, 201 cm. El peso mínimo fue de 1 kg, y el máximo de 108 kg.

A partir de mayo de 1993 se recolectan radios de aletas anales y otolitos para determinación de la edad. Aún no se ha procedido a hacer una lectura de las secciones.

INTRODUCTION

Swordfish is a species with worldwide distribution .

Swordfish is widely distributed in the Mediterranean (including the Aegean and Ionean Seas) and are fished many nations by using longlines, gillnet and harpoons. The largest producer is Italy (53 percent) followed by Greece (15 percent) and Spain (9 percent) ICCAT , 1993 .

Swordfish is one of the important species in the Turkish waters such as the Blue fin tuna.

In the last four years, the total amount of the swordfish landed at the İstanbul Fish Market varied between 8369 kg - 20425 kg . The total catch of this species between 1988 - 1992 is shown in the table 1. Several studies has been previously made on Swordfish in the Turkish waters. Devedjian (1926) studied the systematics of Swordfish. Slastenenko (1955-1956), studied the systematic of the Swordfish in the Black Sea.

Demir, Acara, Arım (1956), studied the biology and fishery of the Swordfish. Artüz (1964), studied the biology and fishery of the Swordfish in the Marmara Sea. Akşıray (1987), has studied the systematic of the Swordfish in the Turkish waters. Gökoğlu and Oray (1992), studied the longline fishery of the Swordfish in the Mediterranean Sea.

MATERIAL AND METHODS

This report covers the last six months of 1993. The lower jaw fork lengths in centimetres and whole weights in kilogrammes of 404 specimens were recorded.

A aliminum caliper was used for the Swordfish.

Size (LJFL) was classified in 5 centimetres size catagories and weight frequency was classified in 5 Kg intervals (fig. 1-2).

The length- weight relationship in shown in figure 3.

SWORDFISH FISHERY

The Swordfish are caught by longlines, dalian, nets and harpoons in the Turkish waters. The harpoon fishery in the Marmara Sea is between May and June. From September to November fish were caught by Swordfish nets in the Marmara Sea (Demir, Acara, Arım., 1956).

In the last years, the longlines are the most important gear in the Turkish waters. However from May to June Swordfish are caught by harpoons around the Gökçeada Island in the Aegean Sea.

According to Demir, Acara, Arım (1956), Sworfish are found in the Mediterranean Sea, Aegean Sea and in the Marmara Sea while in the Black Sea, they were seen only in the summer.

Swordfish aren't caught in the Black Sea and Marmara Sea in the last years. They are caught more numerously in the Mediterranean Sea.

Total landings of Swordfish in the Turkish waters from 1988 to 1992 are shown table 1.(Anon. 1991- 1994).

LENGTH DISTRIBUTION

The Swordfish sampling was done between May to December in 1993.

The samples were measured at the İstanbul Fish Market. The smallest sample was 58 cm, the biggest 201 cm.

Length frequency distribution is shown in figure 1. The peak is seen 100 cm.

The avarage length (aritmatical) was calculated to be 108,27 cm.

WEIGHT DISTRIBUTION

The 404 specimens with a minimum (whole) weight of 1 kg and a maximum weight of 108 kg were measured.

The weight frequency distribution is shown in figure 2. The peak is seen 10 kg.

The avarage weight (aritmatical) was calculated to be 16 kg.

LENGTH - WEIGHT RELATIONSHIP

The size-weight relationships are very important biological parameters.

A total of 404 Swordfish were measured and the relationship between the fork length and the whole weight is shown in figure 3.

Table 1. Total Landings of Swordfish in the Turkish Waters (1988-1992)

YEARS	TOTAL CATCH (tons)
1988	589
1989	209
1990	243
1991	100
1992	136

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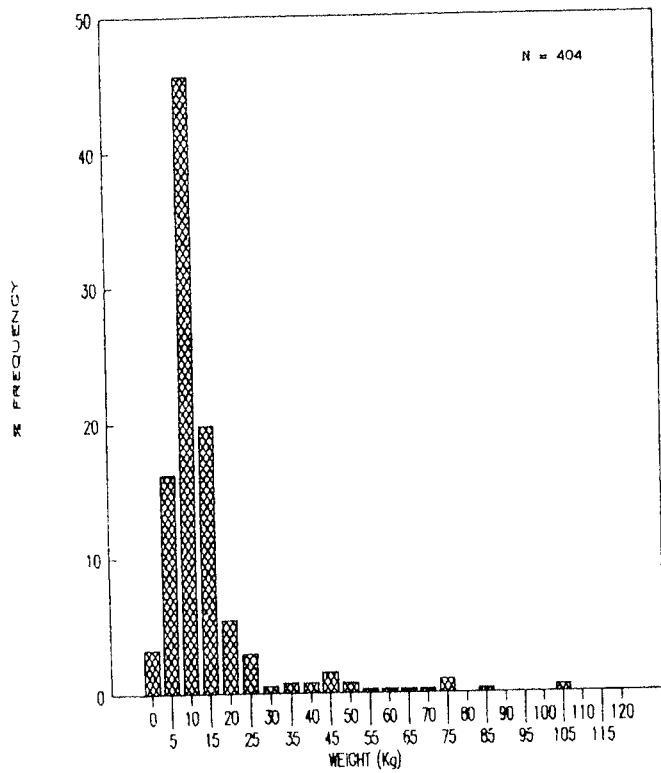


FIGURE 2. Swordfish weight frequency of six months.

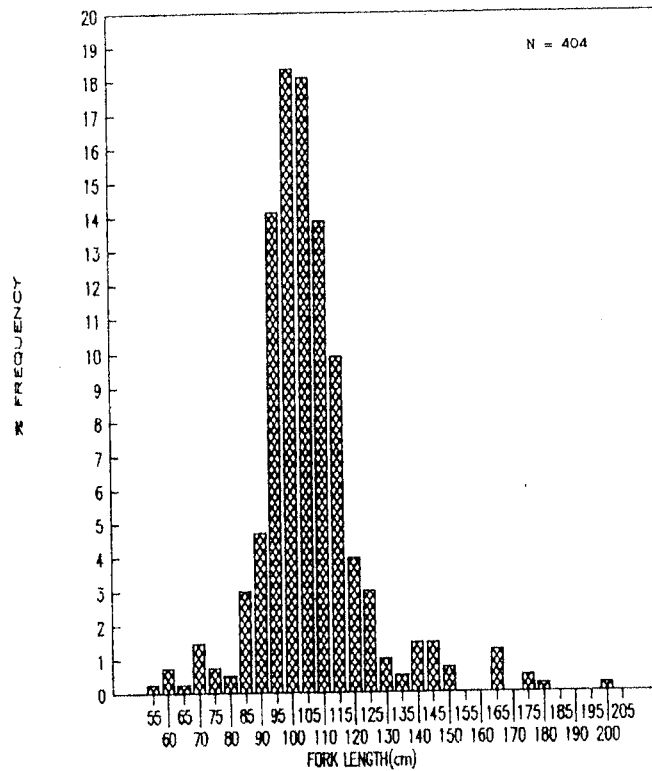


FIGURE 1. Swordfish length frequency of six months.

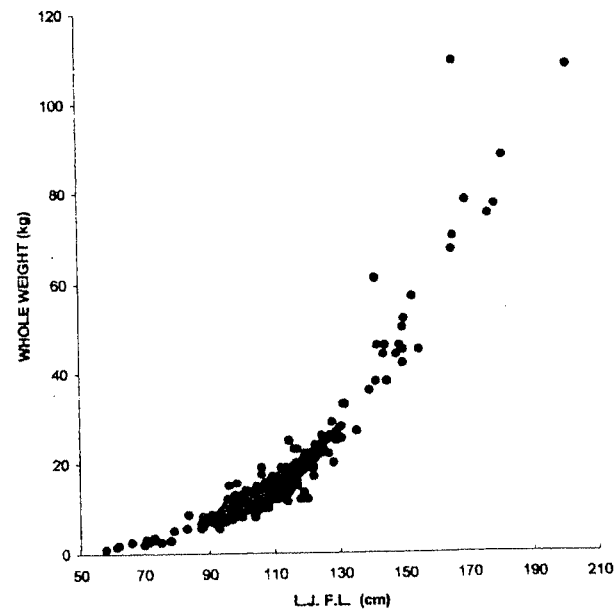


FIGURE 3. Length - weight relationship for the sexes combined.