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# Possibilities for the domestication of bluefin tunas in the Eastern Mediterranean Sea

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**SUMMARY** – Turkey borders the Black Sea, the Sea of Marmara, the Aegean and the Mediterranean Seas with a total coast line of 8333 km. The Mediterranean coast is 1839 km long. The water temperatures on the Mediterranean coasts of Turkey are good to grow out the bluefin tunas. The monthly minimum mean surface water temperatures in the Western Turkish Mediterranean Coast in Antalya in the coldest month in February was 16.6°C. In the hottest month in August the maximum mean surface water temperature was 27.6°C.

**Key words:** Eastern Mediterranean Sea, grow-out, bluefin tuna, fishery.

**RESUME** – "Possibilités de domestication du thon rouge en Méditerranée orientale". La Turquie est baignée par la mer Noire, la mer de Marmara, la mer Egée et la mer Méditerranée avec une ligne de côte qui totalise 8333 km. La côte méditerranéenne a une longueur de 1839 km. La température de l'eau sur les côtes méditerranéennes de la Turquie est appropriée pour l'élevage du thon rouge. Les températures moyennes minimales mensuelles de l'eau en surface dans la côte occidentale méditerranéenne de la Turquie à Antalya en février, le mois le plus froid, étaient de 16,6°C. Pendant le mois d'août, le plus chaud, la température moyenne maximale de l'eau en surface était de 27,6°C.

**Mots-clés :** Mer Méditerranée orientale, engraissement, thon rouge, halieutique.

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In the eastern part of the Turkish Mediterranean Coast in Iskenderun, in the coldest month in February, the monthly minimum mean surface water temperature was 15.6°C. In the hottest month in August, the monthly maximum mean surface water temperature was recorded as 29.1°C (Fig. 1).

Up to 1957 bluefin tunas in Turkey were caught in dalians (traps) and by hooks and lines. The most important bluefin tuna dalians were set in the Bosphorus and in the Sea of Marmara. After 1957 (Iyigüngör, 1957) bluefin tuna catch was carried out mostly by purse seiners.

Up to 1987 bluefin tunas were caught in the Black Sea and in the Sea of Marmara. Till 1988 bluefin tunas were rarely observed by the fishermen at the entrance of Marmara Sea and the Dardanelles. 1998 and 1999 very small quantities bluefin tunas were caught by purse seiners in the Marmara Sea. From 2000 on more quantities of bluefin tunas are being caught by purse seiners in the Sea of Marmara.

The catch of bluefin tunas in 1998 of 5889 tonnes by 62 purse seiners were reduced drastically to about 2000 tonnes in 2001 by means of 25 purse seiners.

Bluefin tunas are mainly caught in the Northern and in the Southern Aegean Sea and in the Mediterranean Sea in the coastal areas and in the open waters during the winter and in the spring.

For the first time in 2001, the catch period was extended till mid July, in which good catches were made. The weights of the bluefin tunas caught by purse seiners in May to mid July were between 40-350 kg. Good catches were also made in March and April. Few days before mid July all the bluefin tunas disappeared from the fishing grounds in the Eastern Mediterranean Sea (between Antalya and North Cyprus).

Bluefin tunas in Turkish waters become sexually fully mature at 3-4 years of age by 94.75-113.51 cm (Karakulak, 1999). Turkey has a fish production of about 650,000 tonnes/year. About half of the total catch is comprised by anchovies.

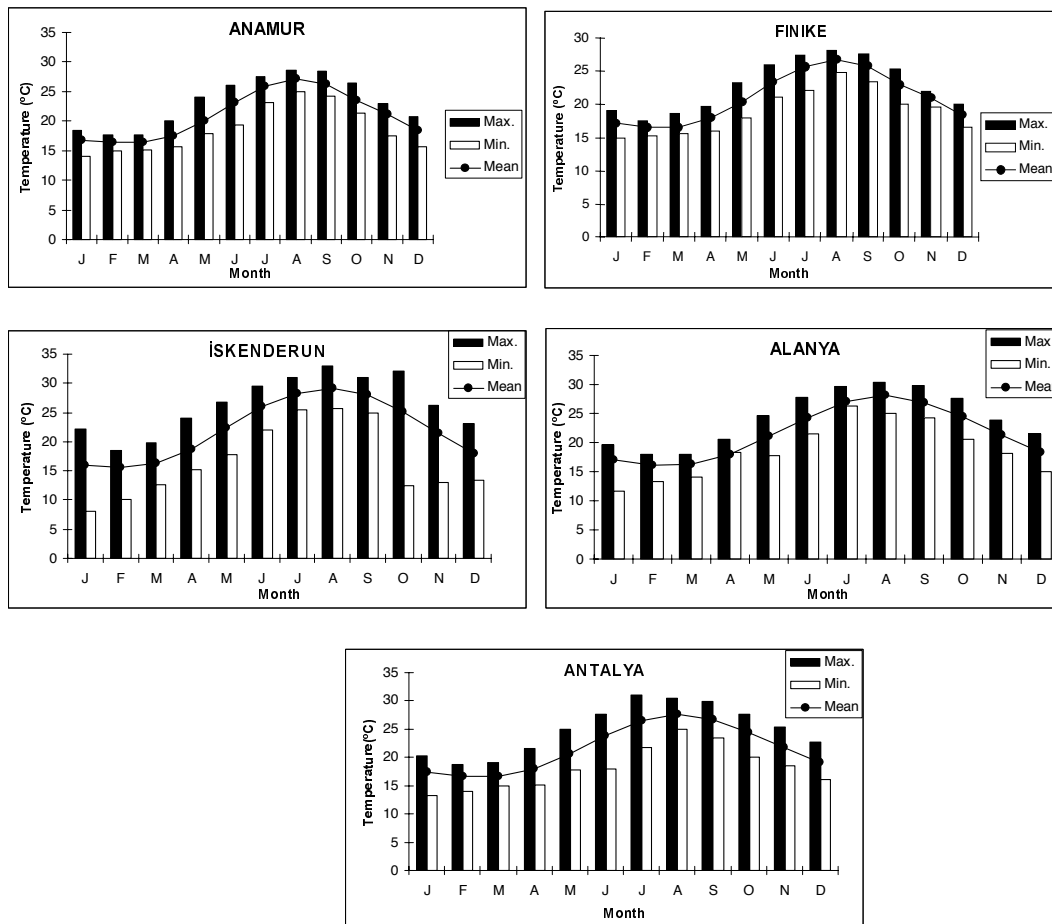


Fig. 1. Minimum, maximum and mean sea water temperatures in the Eastern Mediterranean.

40 miles away from Turkey, on the coasts of North Cyprus exist during the whole year ideal water temperatures for growing out of bluefin tunas. The bluefin tunas in North Cyprus are caught as by catch in the swordfish longlines fishery in small numbers by the artisanal fishery. The weights of these fish are between 10-100 kg. In North Cyprus, a purse seine fishery does not exist. Small and big pelagic fisheries are not developed. There are good chances for developing these fisheries. The monthly minimum mean temperature on the North Cypriot coasts in the coldest month in February was 15.4°C. The maximum monthly mean water temperature of the hottest month in August was recorded as 27.9°C.

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