

ABUNDANCE OF SCOMBRID LARVAE IN MERSIN BAY (NE MEDITERRANEAN)

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Abstract

Distribution and abundance of Scombrid larvae were determined for the period January 1998-2001, at three stations in Mersin Bay (NE Mediterranean). Scombrid larvae were composed of a total of 10 taxa (6 species, 2 genera and 2 families). Among the most abundant scombrid species were the bluefin tuna *Thunnus thynnus*, observed during June-August at offshore station, the albacore *Thunnus alalunga*, found during June-September at the second station, and Atlantic mackerel *Scomber scombrus*, observed at the offshore station during January-April. These species together contributed 48% of the total scombrid larvae catch.

Keywords: *Ichthyoplankton, Larvae, Eastern Mediterranean.*

Introduction

Scombrid species are of high commercial value to fisheries, world-wide [1]. This family contains 15 genera and 51 species all around the world [1] of which only 10 genera, including 12 species, live in the Mediterranean [2]. The already published data on the ichthyoplankton of the northeastern Mediterranean Turkish waters is limited [3]. The distribution and abundance of *Thunnus thynnus*, *Auxis rochei* and *Euthynnus alleteratus* larvae have been reported only for a short period (in June) for this region [4]. This work aims to study the abundance, distribution and spawning period of all species present over a period of three years.

Material and methods

Sampling was performed in Mersin Bay (NE Mediterranean) at three stations (34° 16' E, 36° 33' 50 N; 34° 18' E, 36° 32' N; 34° 22' E, 36° 30' N) which are located within about 10 km from the coast. Samplings were made from January 1998 to June 1999 weekly all stations (20, 80, 100 m depth) and from July 1999 to January 2001 biweekly at two stations (20, 100 m depth). Vertical net tows were carried out from bottom to surface with Nansen net (112 µm mesh size). The collected ichthyoplankton material was then preserved in 5% neutralized formalin. Scombrid larvae were separated from zooplankton under a stereoscopic microscope in the laboratory.

Results and discussion

10 different scombrid larvae were identified from the region throughout the study period. A total of 68 scombrid larvae were collected at three stations (Table 1).

Tab. 1. Abundance of Scombrid larvae during 1998-2000 in Mersin Bay (NE Mediterranean).

Species	Stations									Total
	1			2			3			
	100 m	80 m	20 m	100 m	80 m	20 m	100 m	80 m	20 m	
	1998									
<i>Euthynnus alleteratus</i> (Raf., 1810)	-	2	-	-	-	-	-	-	-	2
<i>Katsuwonus pelamis</i> (L., 1758)	2	-	-	-	-	-	-	-	-	2
<i>Scomber japonicus</i> (Hout., 1752)	-	6	-	-	1	1	-	-	-	8
<i>Scomber scombrus</i> (L., 1758)	6	1	-	-	-	2	-	-	-	9
<i>Scomber</i> sp.	-	6	-	-	-	-	-	-	-	6
<i>Thunnus alalunga</i> (Bon., 1788)	-	7	1	-	-	1	1	1	-	10
<i>Thunnus thynnus</i> (L., 1758)	4	4	-	-	2	1	3	-	-	14
<i>Thunnus</i> sp.	-	4	-	-	-	-	-	-	-	4
Scombridae sp.1	-	5	-	-	-	-	1	-	-	6
Scombridae sp.2	1	2	-	-	1	-	2	1	-	7
Total	13	37	1	-	4	5	7	1	68	
	1999									
	2000									

Scombrid larvae were more abundant at the second station during sampling except from July 1999 to January 2001 (Fig. 1). Since the larvae were found at low number at the coastal station, it is concluded that they prefer offshore waters. Contribution of the bluefin tuna *T. thynnus* larvae to the total was 21% of all scombrid larvae collected, followed by albacore *Thunnus alalunga* (14.5%) and Atlantic mackerel *Scomber scombrus* (12.7%). Larvae of bluefin tuna were abundant during June-August with peaks during June at the first station (offshore). Albacore larvae were abundant from June to September at the second station in 1998. Previous works have also reported similar high values for this species during this period for different areas of the Mediterranean [5]. During 1998-1999, larvae of Atlantic mackerel were only found between January-April, being most abundant at the offshore station. Larval abundance of chub mackerel *Scomber japonicus* peaked during March at the second station in 1998. Little tunny *E. alleteratus* at the second station in July and skipjack tuna *Katsuwonus pelamis* at the offshore station in June were found in relatively low numbers only during 1998. In general, Scombrid larvae were more abundant at the second station in 1998. Tuna larval survey con-

ducted earlier in the Levantine basin has revealed three species (bluefin tuna, bullet tuna and little tunny) of scombrid larvae for June 2004.

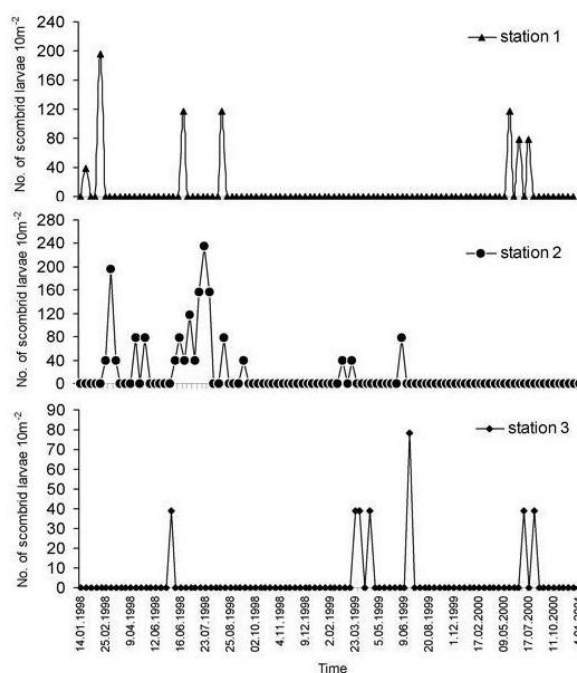


Fig. 1. Weekly changes in abundance of Scombrid larvae at stations 1, 2 and 3 during 1998-2001.

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