

A CONTRIBUTION ON THE DISTRIBUTION OF THE GIANT RED SHRIMP *ARISTAEOMORPHA FOLIACEA* (RISSO, 1827) ALONG THE AEGEAN SEA AND MEDITERRANEAN PART OF TURKEY

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Abstract

The aim of this study is to provide information on the distribution of *Aristeomorpha foliacea* in the Aegean Sea and Mediterranean coast of Turkey. Samples were collected during surveys at various stations in South Aegean and North-East Mediterranean Sea from 2005 - 2008.

Keywords: *Decapoda, Deep Waters, Aegean Sea, Eastern Mediterranean*

The giant red shrimp is a commercially important, valuable species for deep water fisheries in Turkish coasts. It is heavily exploited in Western Mediterranean, and is currently fished in the Central Mediterranean; its stocks are pristine in the Eastern Mediterranean [1]. *A. foliacea* is more common than *A. antennatus* in the Eastern Mediterranean [2]. The species was rarely recorded in the Eastern Mediterranean while in The Aegean Sea, it appears in a few reports. Biological surveys were carried out in Marmaris 650 m (one male; 2005), Mersin Bay (20 male; 15 female; 2008) and Iskenderun Bay (103 male; 125 female; 2005); the species was also collected from the north of Ikaria Island (29 male, 43 female, 480 m, 2007), (Fig. 1).

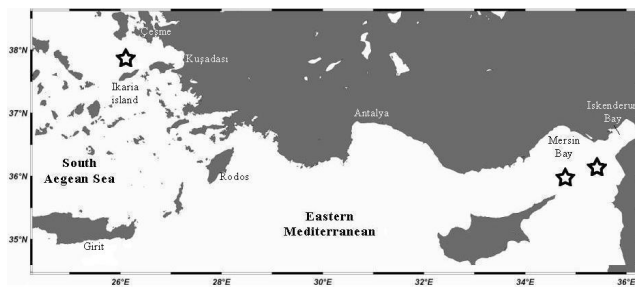


Fig. 1. Sampling areas along the Turkish coast

In some areas of the Aegean Sea their exploitation has recently started. The mean biomass indices recorded at the Mediterranean basin showed that *A. foliacea* was least abundant in the Aegean Sea [3]. A total of 336 specimens of *A. foliacea* were measured and sexed throughout the sampling area (Table 1). A prevalence of females can be generally observed, representing 55% of the sampled total, except for the Mersin Bay, where only 42% out of all individuals were females.

Tab. 1. Minimum, maximum and mean Carapace length (mm) and weight (g) for male and female in The sampling areas

Geographic Area	Significant (p<0.05)	Carapace Length (mm)				Weight (g)			
		Sex	Min	Max	Mean	Sex	Min	Max	Mean
Mersin Bay	North of Icaria island (0.001)	♂	27,7	53	41,7	♂	9	16,9	13
	Iskenderun Bay (0.760)	♀	38,8	48,1	44,2	♀	11	17	13,9
Iskenderun Bay	Mersin Bay (0.760)	♂	24	49	35,7	♂	6,6	29,7	19
	North of Icaria island (0.000)	♀	33	67	54	♀	13,9	71,2	41,1
North of Icaria island	Mersin Bay (0.001)	♂	24,3	49,6	32,3	♂	8,1	27,2	15,3
	Iskenderun Bay (0.000)	♀	32,4	48,5	41,1	♀	11,2	38,8	22,5

Anova tests and Tukey test were used to compare the differences in the average carapace length for each geographic area; the median value of carapace length for *A. foliacea* differs significantly between North of Icaria island (Aegean Sea) and Iskenderun Bay (Eastern Mediterranean) (Table 1). The differences in size may be attributed to one or more factors: the effects of different areas such as abiotic factors, fishing depth and fishing pressure. Sizes of giant red shrimp in deeper areas was relatively larger compared to the shallow depth zone [4]. For its

population at commercial fishing depths (usually from 400 to 600 m) in Iskenderun Bay (Eastern Mediterranean), the total CPUE ranged from 0.94 kg/hr to 8 kg/hr, and the mean CPUE (\pm SD) and its variation coefficient were calculated as 4.76 ± 2.41 and 50.73% respectively; the ratios of giant red shrimp in the total catch and in the total shrimp catch were calculated as 22.45% and 64.61% respectively [5]. According to these data, it can actually be concluded that variability, both in the yields and in the sizes, appears particularly high for the species. These facts need to be more studied in order to clarify the causes that induce these differences.

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