

THE OCCURRENCE OF THE JINGA SHRIMP, *METAPENAEUS AFFINIS* (H. MILNE EDWARDS, 1837) (DECAPODA, PENAEIDAE) – A COMMERCIALY VALUABLE ALIEN

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Abstract

In 2000 the use of beach seining and trawling was prohibited in the Bay of Izmir, on the Aegean coast of Turkey. Ever since artisanal fishermen have been using stationary gear such as gillnets and longlines. Trammel nets have been used between May and October to fish the native Mediterranean prawn *Melicertus kerathurus*. In 2008 large numbers of an alien prawn, *Metapenaeus affinis*, were collected for the first time in the inner part of the bay. Because of their higher value and longer fishing season than the native prawn, fishermen began to exploit them.

Keywords: Alien species, Aegean Sea, Crustacea, Fisheries

Introduction

Metapenaeus affinis (H. Milne-Edwards) is an Indo-West Pacific species which ranges from the Arabian Gulf to the Malay Archipelago [1]. It is commercially valuable in some Asian countries and in the Persian Gulf. Trawlers, trammel nets, beach and boat seines are used to catch this species. Soon after the population of the jinga shrimp was discovered in Izmir bay, local fishermen began catching them using shrimp trammel nets.

Extensive studies conducted in 2003-2005 of the commercial prawn trammel net fishery targeting the native Mediterranean prawn *Melicertus kerathurus* (Forskål, 1775) in Izmir Bay have revealed no alien prawn either in the landed catch or in the discard [2,3]. The aim of this study was to determine the fishing method and technical details of the trammel net which used to capture Jinga shrimp.

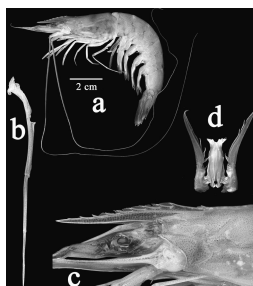


Fig. 1. *Metapenaeus affinis* a) Lateral view of male, b) 5th Pereiopod of male, c) Rostrum of male d) petasma and 1st pereopods (Photo: LAYDIN)

Material and Methods

This study was realized in Izmir Bay with a commercial F/V *EFSANE 6* between April 2008-October 2009. Depth of the fishery areas varied 8-12 meter. The shrimp trammel nets which are popular for the bay were used to collect specimens [4].

Results and Discussion

Jinga shrimp specimens were occurred in April 2008 in Izmir Bay where is the eastern shore of the Aegean Sea [5]. Trammel nets for jinga shrimp set in the inner part of the bay catch other species as well: Whiting (*Merlangius merlangus*), meagre (*Argyrosomus regius*), red mullet (*Mullus barbatus*), chub mackerel (*Scomber japonicus*), squid (*Loligo vulgaris*), sole (*Solea solea*) are the most commercially valuable abundant species in all seasons. Twaite shad (*Alosa fallax*) and annular sea bream (*Diplodus annularis*) are commercial between May – September during the closure of trawling and purse seining. 72 species were identified from prawn trammel nets in the bay of Izmir, and 46 of them are considered discards [2]. We identified 8 species collected in the jinga shrimp fishery in the bay and only two of them are discards during the trawl fishing season. The difference in number of species may be due to the location of the fishery, which is in the innermost part of the bay, closer to the harbour of izmir, whereas *M. kerathurus* is fished in the middle and outer part of the bay.

The fishermen use 8-9 pieces of netting per fishing operation. The average catch was 18, 26, 12 kg respectively in spring, summer and autumn of 2008, and 10, 15, 3 kg respectively in 2009. In winter the prawn fishery does

not operate, however other types of nets are set for sparid fish and occasionally few individuals are caught as well. The jinga shrimp fishery lasts from April to October.

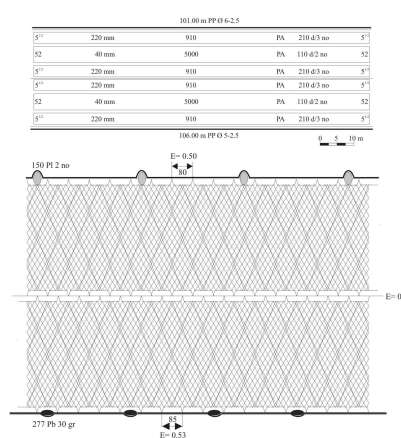


Fig. 2. Technical detail of trammel net, used for jinga shrimp in Izmir Bay

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