THE POPULATION DYNAMICS AND FISHING STATUS OF *NEPHROPS NORVEGICUS* (L.) IN THE NORTHERN AEGEAN SEA

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Abstract
This research was conducted in Northern Aegean Sea at especially around Gökçeada island between 2010-2014. Norway lobster samples were collected by various commercial bottom trawler. A total of 232 Norway lobster were sampled. The mean carapace length 16,2 mm in females, 19,2 mm in males were determined. The CPUE was calculated 2,3 (kg/h).

Keywords: Crustacea, Aegean Sea, Fisheries, Saros Bay

INTRODUCTION

Nephrops norvegicus is a widespread species that is found in commercial quantities throughout its range ranging from Iceland, the Faroes and Norway in the north of its range, to the Atlantic coast of Morocco in the south including the west and central region of the Mediterranean, but is absent from the eastern Mediterranean, the Baltic Sea, the Bosphorus and the Black Sea [1]. *Nephrops norvegicus* has been assessed as Least Concern [2]. It is commercially harvested as a food source. The greatest threat to this species is the commercial scale harvest for human food across. It is a sedentary lobster which inhabits burrows constructed in muddy subtrates throughout the continental shelf of the north-eastern Atlantic and Mediterranean

MATERIAL AND METHODS

This research was conducted in Northern Aegean Sea at especially around Gökçeada island between 2010-2014 (Fig 1). Norway lobster samples were collected by various commercial bottom trawler. A total of 78 hauls were carried out between 130 and 480 m depth. Carapace lengths were measured to the nearest 0.01 mm with a caliper. Total weight was measured to the nearest 0.01 g. The biomass values and frequency of Nephrophs individuals were calculated and compared to others studies from Northern Aegean Sea.

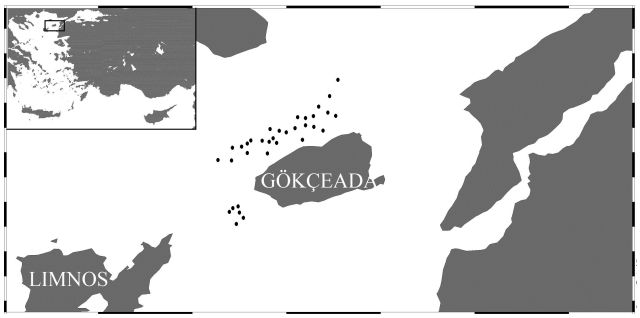

Fig. 1. Sampling stations of Norway lobster in the Northern Aegean Sea.

RESULT AND DISCUSSION

Due to its ecological demands for particular sediments, it has a very patchy distribution and is divided into over 30 populations [3]. *N. norvegicus* is considered commercial important species for Turkey. Rose shrimp (*Parapenaeus longirostris*)and Norway lobster (*Nephrops norvegicus*) are the two main target crustaceans for the demersal trawl fleet in the international waters of the Aegean Sea [4]. Highest biomass of *N. norvegicus* in Saros Bay (the northeastern Aegean Sea) was recorded as 433.22 (kg/m^2) for Spring time [5]. Table 1 shows that the biomass of *N. norvegicus* in this study between 2010-2014 years and other two studies. Add to that it gives carapace length. In this study, a total of 232 Norway lobster were sampled. The mean carapace length 16,2 mm in females, 19,2 mm in males were determined. The CPUE was calculated 2,3 (kg/h) (Table 1) It clear that biomass and mean carapace length decreased year by year. The reason for this might be overfished and commercial trawl codends size (44 mm diamond) in Northern Aegean sea. Compilation of field data usually by scientists from fishermen can offer valuable insight into the bias resulting from data collection procedures. Fishermen's associations is uncertain. So fisheries studies must based on data supplied directly the field.

Tab. 1. The CPUE (kg/h) and female-male carapace length of Nephrops norvegicus.

	Northern Aegean Sea (1996) (Oray et al 2000)	Saros Bay (2005-2008) (İşmen et al 2013)	Gökçeada Island Present Study (2010 - 2014)
CPUE (kg/h)	No data	10,58	2,3
Mean carapace length	30,2 - 30,7	38 - 42	16,2 - 19,2
Maximum carapace length m (F -M)	54,3-58,9	59 - 72	22,1 - 23,1
Minumum carapace length mm (F -M)	12,1 - 12,8	21 - 23	10,4 - 11,2

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