A new scyphozoan species in the Sea of Marmara: *Chrysaora hysoscella* (Linné, 1766)

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Abstract- The first appearance of the jellyfish, *Chrysaora hysoscella* (Cnidaria: Scyphozoa) in the Marmara Sea, during August-September of 2000, is reported. Three specimens have been collected. Two of them were collected in August and the other in September. The umbrella diameter of these jellyfish individuals ranged from 12 to 18 cm.

Keywords- *Chrysaora hysoscella,* Marmara sea, Scyphozoa, Jellyfish

Introduction

Chrysaora hysoscella (Linné, 1766) is distributed from the British Isles (Russell, 1970) to Benguela (Buecher, 2001; Sparks et al., 2001) and it extends along the Bay of Biscay into the Mediterranean and Adriatic. It is also recorded from Monrovia, Liberia, on the West African coast; and Puerto Melchior, Argentina, and Ushuaia , Tierra del Fuego (Russell, 1970). It is once recorded for Turkey from Izmir Bay (Aegean Sea) (Balik, 1973). The present paper deals with the first occurrence of *C. hysoscella* from Erdek Bay, southern Marmara Sea. In the species that can be discriminated easily, exumbrella typically with sixteen brown v-shaped radial markings with varying degrees of pigmentation between, with dark apical circle or spot, with brown marginal lappets; twenty-four marginal tentacles in groups of three alternating with eight marginal sense organs. Size up to 20-30 cm in diameter (Russell, 1970). *C. hysoscella* is carnivorous, and can have negative impacts on zooplankton populations and fish eggs and larvae (Sparks et al,. 2001) and its cutaneous toxicity in man is known (Del Negro et al., 1992). The species can live at 6-32 °C (Russell, 1970), and mostly occur in the top 20-25 m (Fearon et al., 1992; Sparks et al., 2001)

Materials and Methods

Samples of *C. hysoscella* (Fig. 1) were obtained from the inshore of the Erdek Bay (sampling stations: 40°19'54" N; 27°48'00" E and 40°22'02" N; 27°52'00" E) (Fig. 2) on August 26 and September 18 of 2000. The distance to the shore was around 10 to 20 m for both samplings. In the sampling stations, the maximum depth of the area investigated was around 15 m. Three specimens were collected using a hand-net. Umbrella diameter (between the opposite vellar lappets) of each specimen was measured (12; 13; 18 cm). Sea surface temperature was measured. Temperature was around 23 °C in August and 21 °C in September.

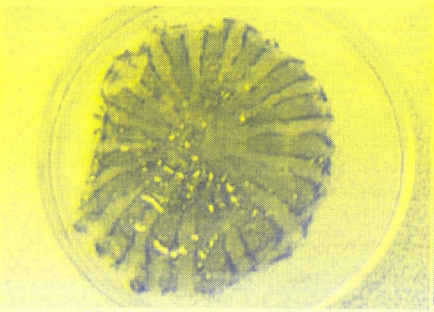

Fig. 1. *Chrysaora hysoscella*

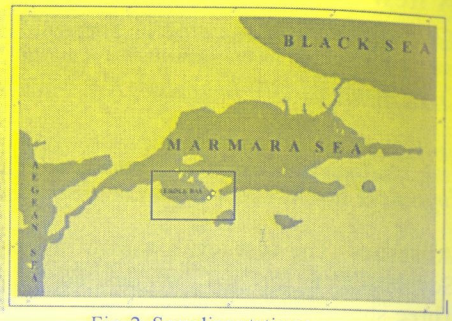

Fig. 2. Sampling stations

Discussion

All three specimens were observed in the inshore of the Erdek Bay during June-September of 2000. These specimens were examined for species identification and was found to be identical with Russell's (1970) description of *Chrysaora hysoscella*. Although this species is well known in the Mediterranean, North Atlantic (Mills et al., 1996) and South Africa coasts (Fearon et al., 1992; Sparks et al., 2001), the available information on the distribution and abundance of the species in the Turkish seas is limited. Present paper is the first recording of *Chrysaora hysoscella* from the Sea of Marmara. The present recording extends the distribution range of *Chrysaora hysoscella* to the Marmara Sea, which plays an important role as an acclimatization zone, a biological corridor or a biological barrier on the spreading of marine fauna and flora between the Mediterranean and Black Seas. Regarding the coastal artisanal fishery, Erdek Bay has a significant importance in the Marmara Sea. According to Inanmaz (2001) and Keskin (2002) coastal areas of this bay are suitable breeding and nursery grounds for the larvae and juvenile fish. *Chrysaora hysoscella* is a predatory scyphozoan which feeds on the species of coelenterates, ctenophores, zooplankton, as well as the eggs and larvae of fish and invertebrates (Russell, 1970; Fearon, et al., 1992; Sparks et al., 2001). Regarding the predation on abovementioned organisms by this scyphozoan, it is obvious that *Chrysaora hysoscella* may have a potential to alter their population densities. As it has been observed in the case of comb jelly, *Mnemiopsis leidyi*, in the Black Sea (Kideys, 1994 and Shiganova, 2001), such an alteration in the population densities of zooplankton, as well as the eggs and larvae of fish, would have negative impacts, particularly on the adult populations of the commercially important marine organisms. Further researches focusing on the population dynamics of *Chrysaora hysoscella*, as well as other medusae, will provide a better insight for our understanding how this predation by those species could affect the juvenile and adult populations of commercially important marine species in the Erdek Bay.

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