

SHORT COMMUNICATION

**First record of *Physophora hydrostatica* Forskål, 1775
(Cnidaria, Hydrozoa) for the Turkish seas**

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Abstract

A siphonophore species *Physophora hydrostatica* Forskål, 1775 was observed in July 2006 in Saros Bay, the North-eastern Aegean Sea coast of Turkey. Although this species is found in the Mediterranean, it is the first record from the Turkish coastal areas.

Keywords: *Physophora hydrostatica*, Siphonophora, jellyfish, Aegean Sea

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The siphonophore is a group of pelagic colonial hydrozoans (Cnidaria) that contains one of the longest animals in the world such as *Praya dubia*, whose chain of zoids can reach up to 50 meters long (Robison 1995; Clark *et al.* 2018). Even so, they have largely escaped the public eye and many biologists are not aware of their existence (Dunn and Wagner 2006).

The jellyfish fauna, which includes medusozoan cnidarians (Hydrozoa, Cubozoa and Scyphozoa) and ctenophores, are represented by 45 species along the Turkish coast (İsinibilir and Yılmaz 2017; Yılmaz *et al.* 2017; Topçu *et al.* 2017); this number is increasing gradually due both to global warming and to international maritime transport. However, siphonophores are not usually included in this species list in Turkey because the taxonomic identification is difficult. Despite the fact that these organisms are overlooked or undervalued in plankton samplings, siphonophores are one of the most abundant and important voracious carnivorous animals in the oceans (Pugh 1984; Haddock and Dunn 2005). They feed on all zooplankton and fish eggs and larvae (Purcell 1981; Purcell and Arai 2001) and they may affect the stocks of economically

important fish species (Pagès *et al.* 2001). We report here the first record of the siphonophore *Physophora hydrostatica* Forskål, 1775, a cosmopolitan species and widely distributed in tropical and subtropical regions in the Pacific, Atlantic and Indian Oceans (Bouillon *et al.* 2004). It is generally reported from the western part of the Mediterranean Sea, however it has also been observed along the shores of Malta (Deidun and Sciberras 2017) and Karpathos Island, Greece (iNaturalist 2013). These species could have been introduced into the Aegean Sea through the surface currents.

The siphonophore colony can reach a total length of 8-12 cm (The Marine Flora & Fauna of Norway 2019). The swimming bells of this species are translucent, with a slight blue tinge (Jeal and West 1970). The float, shaped like a series of bells on top of each other, constitutes a significant fraction of the total colony length. In the bottom of the float there is a gas-emitting pore used to control the buoyancy of the colony. The banana-shaped, orange or violet coloured tentacles may cause painful stings. At the base of the float there are long threads packed with small animals with specialized tasks in the colony (Bouillon *et al.* 2004).

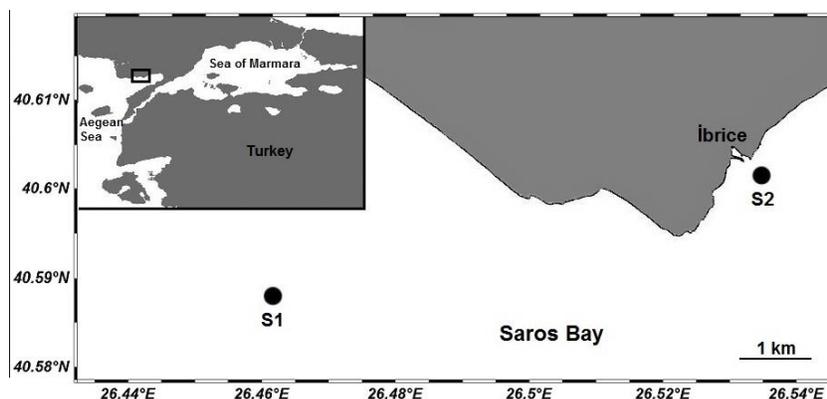


Figure 1. Sampling stations of *Physophora hydrostatica* in Saros Bay, the northeast Aegean Sea (S1: July 2006, S2: October 2014)

The first specimen of *P. hydrostatica* was sampled in July 2006 by using a modified WP2 net with 200 µm mesh size during the seasonal samplings for zooplankton abundance in Saros Bay, northwestern coast of Turkey (40° 35' N, 26° 28' E; Figure 1). Water temperature was 18.6°C and salinity was 37.6 ppt.

Only morphological features were recorded because the specimen was deformed during sampling. Total length of this specimen was measured to be 12 cm. This specimen had a pneumatophore (gas-filled float) with a deep red-pigmented up 5mm high and nectophores (swimming bells) up 20 mm in height (Figure 2).

During the subsequent sampling seasons, this species was not found in the same sampling area. However, in October 2014, one individual of *P. hydrostatica* was observed and photographed at about 2-3 m depth in the vicinity of the İbrice Port, in Saros Bay during SCUBA diving (Figure 1). This specimen was approximately 15 cm high and the sea temperature during the observation was 21°C.

Saros Bay, which is a Special Environmental Protection Area (Güçlüsoy 2015), is an inlet in the northeastern part of the Aegean, north of the Gallipoli Peninsula in northwestern Turkey. The Meriç River in the northwest and Kavak Creek in the east are the main sources of fresh water and sediments for Saros Bay (Sari and Çagatay 2001). Because of the high oxygen content of the waters and the abundant nutrients brought by the streams pouring into the bay, it is an important fishing area rich in species. Due to the under threat of big scale fishing 40 % of the bay has been declared Special Environmental Protection (SEPA) by the Council of Ministers (Çoker and Akyol 2018).

According to Bouillon *et al.* (2004), 61 siphonophoran species have been recorded in the Mediterranean Sea and six of them (*Abylopsis tetragona*, *Lensia conoidea*, *Lensia subtiloides*, *Eudoxoides spiralis*, *Hippopodius hippopus* and *Nanomia bijuga*) are recorded in the Aegean Sea (Çınar *et al.* 2014; Topçu *et al.* 2017). *P. hydrostatica* is a new species for the Turkish coastal areas. This species has an important ecological role due to its general ability to feed upon fish eggs and larvae and to feed on the plankton that fish larvae consume.

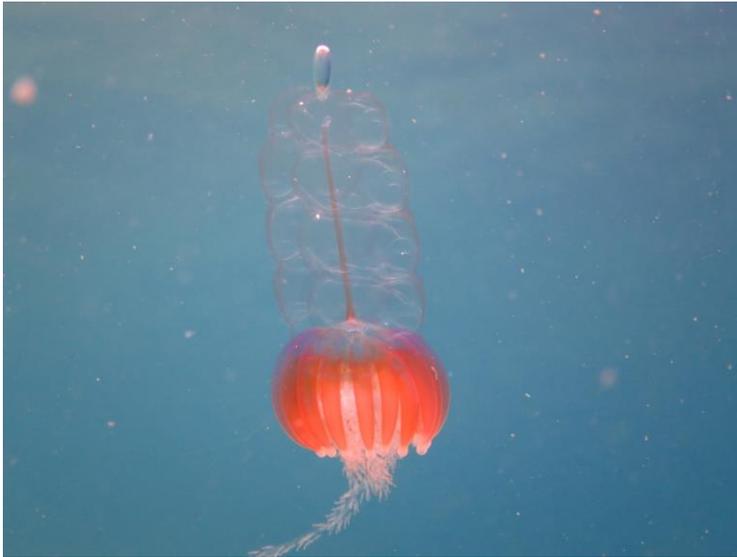


Figure 2. *Physophora hydrostatica* in İbrice, Saros Bay (photograph: Kamuran Ulucam).

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***Physophora hydrostatica* Forskål, 1775 (Cnidaria, Hydrozoa)'nın Türkiye denizleri için ilk kaydı**

Öz

Sifonofor *Physophora hydrostatica* Forskål, 1775, Temmuz 2006'da Türkiye'nin Kuzeydoğu Ege kıyılarında, Saros Körfezi'nde gözlenmiştir. Bu tür Akdeniz'de bulunsa da, Türkiye'nin kıyı bölgelerinden ilk kayıttır.

Anahtar kelimeler: *Physophora hydrostatica*, Siphonophora, denizanası, Ege Denizi

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