

Occurrence of the Blue Button *Porpita porpita* (Linnaeus, 1758) in the Iskenderun Bay, Northeastern Mediterranean Coast of Turkey

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*The blue button *Porpita porpita* (Linnaeus, 1758) was observed for the first time in July 2018 in the Iskenderun Bay, Northeastern Mediterranean coast of Turkey. This is the third record of this species for Turkish marine waters, while it is the first record for Iskenderun bay. The presence of *P. porpita* in the northeastern Mediterranean coast of Turkey shows its extension from northwestern Mediterranean coast (Antalya Bay) of Turkey.*

Key words: *Porpita porpita*, Hydrozoan, Iskenderun Bay, Turkish Marine Waters

INTRODUCTION

During the last two decades in the eastern Mediterranean coasts of Turkey, a large number of hydrozoan species as non-indigenous have been reported (TURAN *et al.*, 2011; GÜRLEK *et al.*, 2013; ERGÜDEN *et al.*, 2014; GÜLŞAHİN *et al.*, 2016).

Porpitiidae family (chondrophores) is represented by two genera *Porpita* and *Velella*, both of which are found in the Mediterranean Sea (GUERRERO *et al.*, 2016; FURFARO *et al.*, 2017; SAYGIN, 2017; WORMS, 2018). The genus *Porpita* has only one species *Porpita porpita* (WORMS, 2018).

The blue button *Porpita porpita* (LINNAEUS, 1758) is a colonial Hydrozoa belonging to the Porpitiidae family. The species was defined by LINNAEUS (1758) as *Medusa porpita*. Although numerous nominal species under the *Porpita* genus have been proposed, the overall have been now gathered under one roof now as synonyms of *Porpita porpita* (CALDER, 1988; SCHUCHERT, 2013).

Blue button is a marine organism consisting of a colony of hydroids. These hydroids live on the ocean surface, are sometimes blown into shore and thousands of them can be seen. Blue button feeds on plankton and other small

organisms, whereas they are typically eaten by sea slugs and violet sea snails. Blue buttons are hermaphrodites and have reproductive polyps that release eggs and sperms into the water. The eggs are fertilized and turn into larvae, which develop into individual polyps step by step. Blue button is actually colonies of different types of polyps; these colonies form when a polyp divides to form new types of polyps. The polyps are specialized for different functions, such as reproduction, feeding, and defense (PANDYA *et al.*, 2013).

P. porpita has an unnoticeable sting that do not pose health risks for humans (GERSHWIN *et al.*, 2010), therefore, the blue button is almost harmless since its tentacles might only give rise to some irritation for human skin. Recently, it has been found to contain bioactive compounds having antimicrobial effect (FREDRICK & RAVICHANDRAN, 2010).

P. porpita is found in the Atlantic and Indo-Pacific Oceans (MEINKOTH, 1981; GUL & GRAVILI, 2014; CHOWDHURY *et al.*, 2016). In the Mediterranean, *P. porpita* was reported from the eastern to the western coasts, including the Syrian coasts (MAMISH *et al.*, 2019), the Ionian and Adriatic Sea (LILLO *et al.*, 2019), the Maltese coasts (DEIDUN, 2010), the Tyrrhenian Sea (FURFARO *et al.*, 2017), the Corsican Sea (KOUSTENI *et al.*, 2019) and the Balearic Sea (GUERRERO *et al.*, 2016). In Turkish marine waters, *P. porpita* was recorded for the first time from Lycia (today's Teke Peninsula) in February 1842 (FORBES, 1844) in the western Mediterranean coast of Turkey. Subsequently,



Fig. 2. *Porpita porpita* from Iskenderun Bay, Northeastern Mediterranean

this species was reported as second time from the Antalya Bay (Gazipaşa coast) on 14 July 2016 by SAYGIN (2017).

The present study reports the occurrence of *P. porpita* in the Iskenderun Bay, from the northeastern Mediterranean coast of Turkey.

MATERIAL AND METHODS

A single specimen of *P. porpita* was observed which came ashore, it was put in a bucket and photographed in 19 July 2018 from the Iskenderun Bay, northeastern Mediterranean coast of Turkey (36° 49' 754" N, 35° 96' 953" E), (Fig. 1). The disc length of single specimen was 8 mm and the length with tentacles was 25 mm (Fig.



Fig. 1. Sampling location (★) of *Porpita porpita* from the Iskenderun Bay in the present study (3). ●; previous records 1 (Forbes, 1844); 2 (Saygin, 2017)

2). The presence of a disc in the middle of *P. porpita* helps to float in the water. The blue button ingests prey and its ingredients along with sea water by mouth. The other part is known as hydroid colony which has bright color tentacles. The tentacles and float help to move along and through the water body (RAMANIBAI *et al.*, 2014).

RESULT AND DISCUSSION

In recent years, new arrivals and establishment of non-indigenous jellyfish species in the Turkish Mediterranean waters are increasing (ÇEVİK *et al.*, 2006; ÖZGÜR & ÖZTÜRK, 2008; TURAN *et al.*, 2010; ÇEVİK *et al.*, 2011; TURAN *et al.*, 2011; BROTZ & PAULY, 2012; GÜRLEK *et al.*, 2013; ERGÜDEN *et al.*, 2014; GÜLŞAHİN *et al.*, 2016), this may be attributed to the increasing global warming trend of Mediterranean waters (BIANCHI, 2007).

The way of entrance of this species in the Mediterranean coast of Turkey has not been elucidate until this time. There is no doubt that the occurrence of this species in the Iskenderun Bay can be related to the temperature increases that characterizes the Mediterranean surface waters and that is probably due to a tendency towards global warming (TURAN *et al.*, 2016). *P. porpita* may also have entered the Mediterranean coasts of Turkey by water currents.

In conclusion, the present paper reports the first occurrence of the new hydrozoan species from the Iskenderun Bay in the northeastern Mediterranean coast of Turkey. It's possible blooms in the area may adversely affect the fish populations and fisheries. Therefore, surveys in this region or in the Mediterranean Sea must be carried out.

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Pojava plavog dugmeta *Porpita porpita* (Linnaeus, 1758) zaljev Iskenderun, sjeveroistočna mediteranska obala Tunisa

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SAŽETAK

Plavo dugme *Porpita porpita* (Linnaeus, 1758.) prvi je put primijećen u srpnju 2018. u zaljevu Iskenderun, sjeveroistočna obala Mediterana u Turskoj. Ovo je treći zapis ove vrste za tursko more, a prvi je zabilježeni nalaz za zaljev Iskenderun. Prisutnost *P. porpita* na sjeveroistočnoj mediteranskoj obali Turske pokazuje njezino proširenje od sjeverozapadne mediteranske obale (zaljev Antalya) u Turskoj.

Ključne riječi: *Porpita porpita*, hidrozoa, zaljev Iskenderun, turske morske vode

