

## SHORT COMMUNICATION

### First record of the blenny *Parablennius thysanius* (Jordan & Seale, 1907) in the Mediterranean

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#### Abstract

The blenny *Parablennius thysanius* is recorded for the first time in the Mediterranean Sea. The specimen was collected by scraping the mooring bouys at the Great Harbour of Antalya, Turkey. The source of the Mediterranean specimen could be fouling or ballast water or even from the Red Sea via the Suez Canal (Lessepsian migrant).

**Keywords:** *Parablennius thysanius*, Blennidae, Turkey, Mediterranean, alien species

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#### Introduction

The Mediterranean Sea is experiencing an enormous rate of invasion of marine species from various taxonomic groups, most of which have originated from the Red Sea while others from the Atlantic via the straits of Gibraltar. Other invasive marine species enter the Mediterranean through aquaculture, ballast water, ships' fouling and aquarium escapees.

This phenomenon of massive invasion has changed the Mediterranean Sea into the world's most invaded marine ecosystem (Edelist *et al.* 2013). Among fish over 145 species are known as alien species (CIESM 2014).

On 4 November 2013 a single specimen, 60.7 mm TL (50.1 mm SL), weighing 4.02 g of previously unknown blenny was collected in the Great Harbor of

Antalya, Turkey(36°48'53"N – 30°36'05"E), in the Levantine Sea (Figure 1). The specimen was collected by scraping the mooring buoys of 3.7 m in diameter and 3.1 m in height. The buoys were covered mainly by calcified red algae, *Cystoseira* meadows, cirripeds and molluscs, namely, *Brachidontes pharaonis* (P. Fischer, 1870), *Septifer cumingii* Récluz, 1849, *Pinctada imbricata radiata* (Leach, 1814), *Spondylus spinosus* Schreibers, 1793, *Chama pacifica* Broderip, 1835, and *Ostrea stentina* Payraudeau, 1826. The previously unknown blenny was identified as *Parablennius thysanius* (Jordan & Seale, 1907) (Figures 2, 3) as a first record from the Mediterranean. The specimen was deposited in the Antalya Metropolitan Municipal Marine Biology Museum and received the catalogue number AMM-PB373. Other fish species that were sampled in the same collection were *Blennius ocellaris* Linnaeus, 1758, *Coryphoblennius galerita* (Linnaeus, 1758), *Lipophrys canevae* (Vinciguerra, 1880), *Lipophrys pholis* (Linnaeus, 1758), *Omobranchus punctatus* (Valenciennes, 1836), *Parablennius incognitus* (Bath, 1968), *Parablennius zvonimiri* (Kolombatovic, 1892), *Scartella cristata* (Linnaeus, 1758) and the Scorpaenid species, *Scorpaena maderensis* Valenciennes, 1833. All the specimens were preserved in 4% formalin and reserved in the Antalya Metropolitan Municipal Marine Biology Museum. The specimen was X-rayed and photographed (Figures 2, 3) after fixation.

## Description

Body deep and compressed, its depth 3.5 times in SL at origin of dorsal fin, tapering posteriorly to narrow caudal peduncle, 7.8 times in SL. Large, blunt and wide head, its length 2.6 times in SL. Gill membrane united forming a membrane across the isthmus. Wide and pronounced lips. Jaws reaching back to level of vertical of anterior of eye. Eye large, 4.5 times in head length, located at dorso-lateral position of the head. Narrow interorbital, 9.4 times in head length. A single row of close-set teeth in both jaws, 32 in upper jaw and 26 in lower jaw. In the upper jaw, the longest teeth are in the middle, gradually becoming shorter at the back. There is a gap between the last tooth and a strong backward and slightly outward recurved canine at the corner. On the lower jaw, most teeth of similar length; the gap between last tooth and canine teeth at the corner is smaller than that of the upper jaw. No teeth on vomer. Supraorbital tentacle, wide-based flap with 3-4 short cirri, resembling those in Bath, 1989 (Fig. 45, j-l). No nuchal cirri. Nostril located at level of eye center with short tube and narrow elongated thread in its posterior edge.

Single dorsal fin with 12 flexible spines and 14 rays. Spines shorter than rays. Dorsal fin originates above pectoral fin base. Anal fin with one visible spine; second spine imbedded and 15 rays. Posterior rays of both dorsal and anal fins connected by a small membrane to the caudal peduncle. Caudal fin round with 15 rays. Pectoral fin round with wide base with 14 rays on both sides. Pelvic fin located slightly in front of pectoral fin base and has 3 rays, only two of

which are clearly visible. Ten precauda vertebrae and 23 caudal vertebrae (total 33 vertebrae). No scales on the body.

Color (after fixation): Body olive grey. Four black to dark grey blotches on flank. The blotches formed by dense spots, the first below 7th dorsal spine and the last under the 12th dorsal ray. Dark black membrane between 1-3 dorsal fins. Tip of dorsal fin rays light grey to white.

## **Discussion**

The characteristics of the Mediterranean *Parablennius thysanius* agree with the descriptions of Bath (1977; 1989) and Randall (1995; 2007). The number of teeth are within the upper range given by Bath (1989). Although Bath (1989) mentioned the existence of a single tooth on the vomer, we could not see any teeth on the vomer. This discrepancy could be due to natural variations, especially the significant differences between the morphology of females versus that of males in this species.

The family of Blenniidae consists of over 360 species. This family was subdivided into five "tribes" (Nelson 2006). The genus *Parablennius* is part of the formerly-recognized Parablenniini that in recent publications has been combined with Salariinae (Nelson 2006).

The genus *Parablennius* is distinguished from its confamilials in the Red Sea by the combination of wide gill openings, dorsal rays less than 25 and almost no notches between spinous and soft rays of the dorsal fins. It can be distinguished from its only cogenetic in the Red Sea *Parablennius cyclops* (Rüppell, 1830) by having 13-15 dorsal fin spines and 14-17 anal rays (versus 17-18 and 18-20 in *P. cyclops*, respectively).

*Parablennius thysanius* can be distinguished from its Mediterranean confamilial species by having 12 dorsal spines. The spines on the dorsal fin are slightly shorter than the soft rays portion, with little or no notch between them, flap-like supraorbital tentacles without any nuchal tentacles or cirri, canine teeth at the corner of both jaws and the absence of a black longitudinal stripe.

The original distribution of *Parablennius thysanius* included Oman, India, Thailand and the Phillipines (Bath 1989; Randall 2007). However, no record is known from the Red Sea (Golani and Bogorodsky 2010). Springer (1991) reported it from Hawaii and assumed that it was introduced by fouling or ballast water.

The source of the Mediterranean specimen could be fouling or ballast water or even from the Red Sea via the Suez Canal (Lessepsian migrant). There are several cases of Lessepsian migrants that were found in the Mediterranean,

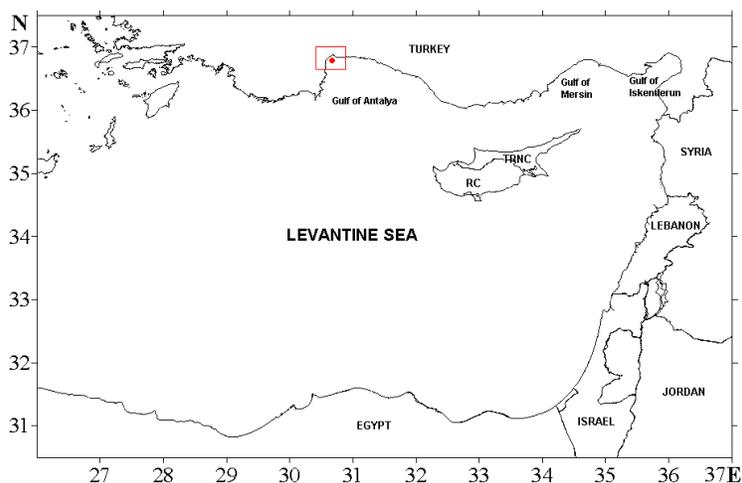
without any known record in the Red Sea (e.g., *Trypauchen vagina* (Bloch & Schneider, 1801) by Salameh *et al.* (2010) and *Stolephorus insularis* Hardenberg, 1933 by Fricke *et al.* (2012). These species were apparently overlooked in the Red Sea.

It was suggested by Golani (2010) that schooling, fast swimming species will have an advantage in reaching the Mediterranean from the Red Sea. However, this is not the case regarding *P. thysanius*. There are several examples of Red Sea benthic territorial and slow moving species, such as *Hippocampus fuscus* Rüppell, 1838, *Synanceia verrucosa* (Bloch and Schneider, 1801) *Trypauchen vagina* (Bloch and Schneider, 1801) and *Vanderhorstia mertensi* Klausewitz, 1074 that have been found in the Mediterranean.

It is interesting to note that among the fishes collected along with the specimen of *P. thysanius* was also *Omobranchus punctatus* that was first recorded in Israel in a very similar habitat (Golani 2004); the present collection constitutes the second record of *O. punctatus* in the Mediterranean.

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**Figure 1.** Map of the Levantine Sea showing the sampling site.



**Figure 2.** *Parablennius thysanius*, 60.7 mm TL, AMM-PB373, collected in the Great Harbor of Antalya, Turkey. (Photo by E. Özgür Özbek)



**Figure 3.** Close up on the head of *Parablennius thysanius* collected in the Great Harbor of Antalya, Turkey. (Photo by E. Özgür Özbek)

## Akdeniz’de horozbina, *Parablennius thysanius* (Jordan & Seale, 1907)’nin ilk kaydı

### Özet

Bu çalışmada, horozbina *Parablennius thysanius* (Jordan & Seale, 1907), (Pisces: Blenniidae)’nin Akdeniz’de ilk kaydı verilmektedir. Türe ait tek birey, Antalya Körfezi, Büyük Liman’da demirleme şamandıralarının değişimi sırasında yapılan örnekleme sırasında elde edilmiştir. Türün Akdeniz’e girişi fouling organizma olarak ya da gemilerin balast sularıyla veya Kızıldeniz’den Süveyş Kanalı yoluyla (Leseptiyen göç) gerçekleşmiş olabilir.

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