

## THE FIRST RECORD OF PINK GLASS SHRIMP (*Pasiphaea multidentata*) FROM IN THE GULF OF ANTALYA/TURKEY

Mehmet Gökoğlu\*, Yasemin Kaya

Akdeniz Üniversitesi, Su Ürünleri Fakültesi Kampüsü Antalya, Turkey

Received: 17.02.2013 / Accepted: 17.06.2013 / Published online: 28.12.2013

**Abstract:** A different kind of shrimp species having 10.430 g weight, 45 mm carapace width and 130 mm total length was recognized during shrimp catching with deep sea trawl net. It was identified that this species was Pink Glass Shrimp (*Pasiphaea multidentata*) and there is no record of this specimen in the Gulf of Antalya/ Turkey.

**Keywords:** First Records, Gulf of Antalya, *Pasiphaea multidentata*

**Öz:** **Antalya Körfezi'nden Derinsu Pembe Cam Karidesi'nin (*Pasiphaea multidentata*) İlk Kaydı**

Antalya Körfezi'nin derin sularında trolle yapılan karides avcılığı sırasında 10.430 g, karapaks boyu 45 mm ve total boyu 130 mm olan farklı bir karides türü tespit edilmiştir. Bu karidesin yapılan tür tayininde *Derin Su Pembe Cam Karidesi (Pasiphaea multidentata)* olduğu ve daha önce bu türün Antalya Körfezi'nden bildirilmediği tespit edilmiştir.

**Anahtar Kelimeler:** İlk kayıt, Antalya körfezi, *Pasiphaea multidentata*

---

\* Correspondence to: Mehmet GÖKOĞLU, Akdeniz Üniversitesi, Su Ürünleri Fakültesi Kampüsü Antalya-TURKEY

Tel: +90 242 2262013, Fax: +90 242 3101566

E-mail: [gokoglu@akdeniz.edu.tr](mailto:gokoglu@akdeniz.edu.tr)

## Introduction

Trammel and trawl net are used for shrimp catching in the Gulf of Antalya. Deep sea and shallow water trawls are applied in this region, where many kinds of economically important shrimp species are caught. Generally species of Penaeidae family are caught from shallow water between the depths of 0-90 m. These species are *Penaeus semisulcatus*, *P. kerathurus*, *P. japonicus*, *Metapenaeus monoceros* (Gokoglu & Ozden, 1991, Gokoglu & Kaya 2005). Red Sea immigrant *Melicertus hathor* has been harvested from shallow waters (0-40 m) of this region since 2005 (Kaya & Gokoglu, 2005). The first record of this species in Mediterranean Sea was reported by Galil (1998) from the coast of Israel. The habitat of *Melicertus hathor* has expanded and the presence in Aegean Sea was declared (Yokes *et al.* 2007). The other migrant prawn is *Farfantepenaeus aztecus* the depth of 10-90 m in the Gulf of Antalya (Deval *et al.* 2010). Uneconomical *Metapenaeopsis aegyptia* is also caught from the Gulf of Antalya with small net size trammel nets and trawl nets. In addition to this species, Yokes and Galil (2006) reported the presence of *Metapenaeopsis moigensis consobrina* and *Trachysa lambria palaestinensis* in the Gulf of Antalya.

*Parapenaeus longirostris*, *Aristomorpha foliacea*, *Aristeus antennatus*, *Plesionika edwardsii*, *Plesionika martia*, *Parapandalus narval* are caught from deeper waters of the Gulf of Antalya (Kaya & Gökoğlu 2005). *Parapenaeus longirostris* is mostly caught from the depths between 60 m and 200 m.

Many researchers such as Polunin *et al.* (2001), Politou *et al.* (2005), Ungaro *et al.* (2005), Fanelli *et al.* (2007) reported the presence of these shrimp species in deep waters of Mediterranean Sea.

A different kind of shrimp species was caught by deep trawl net between the depths of 400-700 m from the Gulf of Antalya. It was identified that this species was Pink Glass Shrimp (*Pasiphaea multidentata*) and there is no record of this specimen in the Gulf of Antalya/Turkey.

This species is a deep-water caridean shrimp living between 200 and 2000 m deep in Mediterranean and Atlantic waters (Gonzalez-Gurriaran and Olaso, 1987). *P. multidentata* undergoes diel vertical migration and predate on gammarids, amphipods and isopods on the benthic boundary

layer and is the prey of a variety of decapod crustaceans and fishes (Cartes 1993).

## Materials and Methods

The shrimp was collected off Serik depths of 400-700 m within the framework of a monthly sampling program of the trawling grounds of Antalya Bay. Trawling was carried out in stable weather and sea conditions, by the R/V "Akdeniz Su" at an average speed of 2.6 nautical miles/h [approx. 4.7 Km/h] with a conventional bottom trawl (1100 meshes at mouth opening; cod end in polyethylene, mesh opening 44 mm, equipped with a polyamide cover, mesh opening 22 mm).

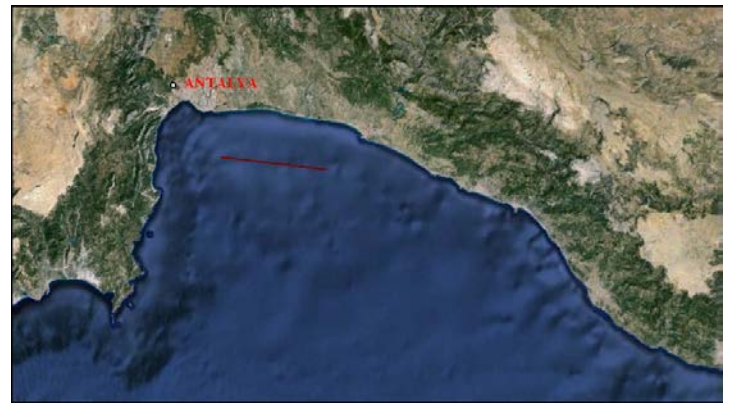


Figure 1. Study area in the Gulf of Antalya

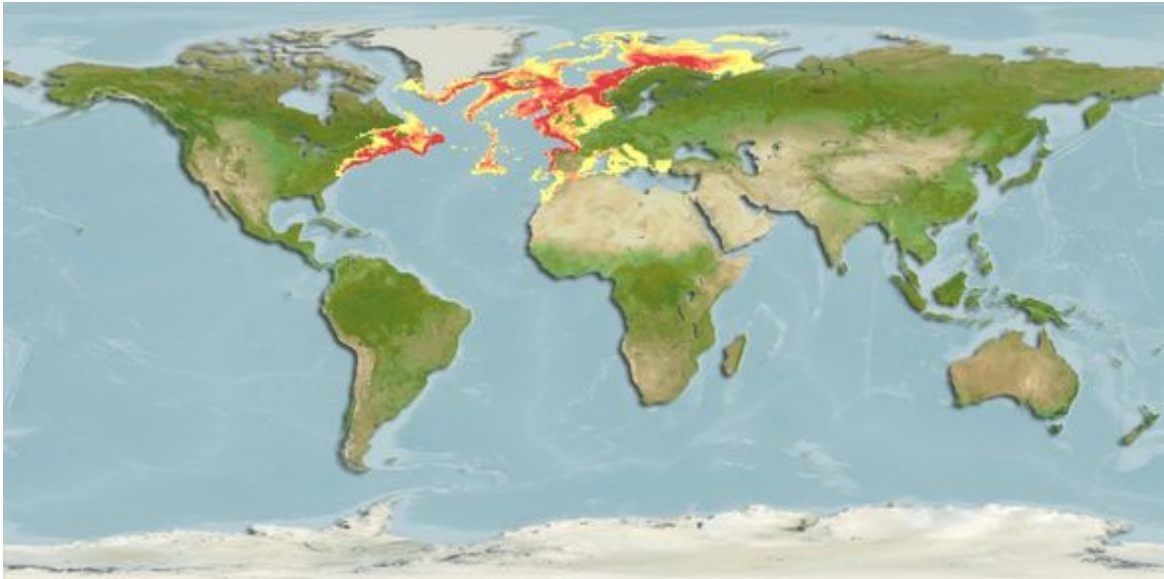
## Results and Discussion

### *Pasiphaea multidentata*

#### Description

A different kind of shrimp species was caught on 10.01.2012 in the Gulf of Antalya. Its weight: 10.430 g, carapace length: 45 mm. total length: 130 mm. Rostrum is short, slender, and spinous with wide base and inferior margin concave, rising from dorsal carina of the carapace. Pleura of the second abdominal segment are overlapping those of the first and third segment. There are no chelae on the third legs. Basis of leg 2 has 12 spines and immovable finger. Color of the shrimp is pink and semi-transparent. Telson is narrow and has deeply cleft at apex. There are two carinas (spine) on each side of the cephalothorax. The body is laterally compressed (Figure 3 and Figure 4).

The coordinates of the first record in the Levantine was made 35°59'N 28°14'E by Stephensen in 1923 (Galil and Goren 1994). The second record was reported by Galil and Goren (1994).



**Figure 2.** Geographical distribution of *Pasiphaea multidentata* (<http://eol.org/pages/311383/overview>)



**Figure 3.** *Pasiphaea multidentata* (from the Gulf of Antalya)



**Figure 4.** Carapax of *Pasiphaea multidentata* (from the Gulf of Antalya)

The sample is deposited in Akdeniz University, Fisheries faculty museum collection (Crustacean ID: 020).

### Conclusion

Atlanto-Mediterranean species has been spatially bio-diversified increasingly with the reoccurrence of the shrimp, *Pasiphaea multidentata* in the deep sea zone of in the Gulf of Antalya.

### References

- Cartes J., (1993). Feeding habits of pasipheid shrimps close to the bottom on western Mediterranean slopes, *Marine Biology*, **117**: 459-468.
- Deval, M.C., Kaya, Y., Guven, O., Gokoglu, M., Frogli, C., (2010). An unexpected find of the western Atlantic shrimp, *Farfantepenaeus aztecus* (Ives, 1891) (Decapoda, Penaeidae) in Antalya Bay, eastern Mediterranean Sea, *Crustaceana*, **83**(12): 1531-1537.
- doi: [10.1163/001121610x538859](https://doi.org/10.1163/001121610x538859)
- Fanelli, E., Collaca, F., Ardizzone, G.,(2007). Decapod crustacean assemblages off the West coast of central Italy (western Mediterranean), *Scientia Marina*, **71**(1): 19-28. doi:10.3989/scimar.2007.71n119
- Galil, B.S., Goren, M.,(1994). The deep sea Levantine fauna. New records and rare occurrences, *Senckenbergiana Maritima*, **25**(1/3): 41-52
- Galil, B.S., (1998). *Melicertus hathor* (Burkenroad, 1959): A red sea penaeid prawn new to the mediterranean, *Crustaceana*, **72**(9): 1126-1128.
- Gökoğlu, M., Özden, O., (1991). Antalya Körfezinde Damızlık Karides Avcılığı Üzerine Araştırmalar. Su Ürünleri Avlama ve İşleme Teknolojisi Seminer Tebliğleri. 119-122. İstanbul Beyoğlu Rotary Kulübü, İstanbul.
- Gokoglu, M., Kaya, Y., (2005). First record of *Melicertus hathor* (Penaeidae) from the Gulf of Antalya (Mediterranean Sea), *JMBA2 - Biodiversity Records*.
- Gonzalez-Gurriaran, E., Olaso, I., (1987). Spatial and temporal changes of decapod crustaceans from the continental shelf of Galicia (NW Spain), *Investigaciones Pesqueras*, **51**: 323-341.
- Kaya, Y., Gökoğlu, M., (2005). Antalya Körfezi'nde Yaşayan Ekonomik Karides Türleri ve Yetiştiriciliğine Uygun Türlerinin Belirlenmesi, *Su Ürünleri Mühendisleri Derneği Dergisi*, **4**(24): 35-38.

- Politou, C.Y., Maiorano, P., D'onghia, G., Mytilineou, C., (2005). Deep-water decapod crustacean fauna of the Eastern Ionian Sea, *Belgian Journal of Zoology*, **135**(2): 235-241.
- Polunin, N.V.C., Morales-Nin, B., Pawseyi, W.E., Cartes, J.E., Pinnegar, J.K., Moranta, J., (2001). Feeding relationships in Mediterranean bathyal assemblages elucidated by stable nitrogen and carbon isotope data, *Marine Ecology Progress Series*, **220**: 13-23.
- doi:** [10.3354/meps220013](https://doi.org/10.3354/meps220013)
- Ungaro, N., Marano, C.A., Ceriola, L., Martino, M., (2005). Distribution of demersal crustaceans in the southern Adriatic Sea, *Acta Adriatica*, **46**(1): 27-40.
- Yokes B., Galil, B.S., (2006). New records of alien decapods (Crustacea) from the Mediterranean coast of Turkey, with a description of a new palaemonid species, *Zoosystema*, **28**(3): 747-755.
- Yokes, M.B., Karhan, S.U., Okus, E., Yuksek, A., Aslan-Yılmaz, A., Yılmaz, I. N., Demirel, N., Demir, V., Galil, B. S., (2007). Alien Crustacean Decapods from the Aegean Coast of Turkey, *Aquatic Invasions*, **2**(3): 162-168.
- doi:** [10.3391/ai.2007.2.3.2](https://doi.org/10.3391/ai.2007.2.3.2)