



## On Occurrence of Flying Gurnard (*Dactylopterus volitans* Linnaeus, 1758) in the Gallipoli Peninsula (Northern Aegean Sea, Turkey)

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### Abstract

A single specimen of Flying Gurnard (*Dactylopterus volitans* Linnaeus, 1758) was caught on 18 September 2013 in the Gallipoli Peninsula (Northern Aegean Sea, Turkey). This study is a first record of *D. volitans* in the Gallipoli Peninsula.

**Keywords:** Record, Flying gurnard, *Dactylopterus volitans*, Northern Aegean Sea

### Gelibolu Yarımadası'nda (Kuzey Ege Denizi, Türkiye) Uçan Kırlangıç Balığının (*Dactylopterus volitans* Linnaeus, 1758) Kaydı Üzerine

### Özet

Bir adet Uçan kırlangıç balığı (*Dactylopterus volitans* Linnaeus, 1758) 18 Eylül 2013 tarihinde Gelibolu Yarımadası'nda (Kuzey Ege Denizi, Türkiye) yakalanmıştır. Bu çalışma, Gelibolu Yarımadası için türün ilk kayıdır.

**Anahtar Kelimeler:** Kayıt, Uçan kırlangıç, *Dactylopterus volitans*, Kuzey Ege Denizi

### Introduction

The flying gurnard *Dactylopterus volitans* (Linnaeus, 1758) is present in the Eastern Atlantic, apparently from the North Sea to Angola, including the entire Mediterranean Sea and the Azores, and in the Western Atlantic, from Canada to Argentina (Froese and Pauly, 2013). It was found at depths of 1- 100 m over sand, mud or rocky bottoms and feeds on crustaceans, especially crabs, clams and small fishes. The flying gurnard has minor commercial (Van Guelpen et al., 2005). This paper represents the first record of *Dactylopterus volitans* (Linnaeus, 1758) for the Gallipoli Peninsula.

### Materials and Methods

A single specimen of *Dactylopterus volitans* was caught using the trammel nets by fishermen on 18 September 2013 in the Ece Bight (lat 40°22'11"N, long 26°19'16"E), Gallipoli Peninsula (Northern Aegean Sea, Turkey) at a depth of about 15 m at night (Figure 1).

Once in the laboratory of Faculty of Marine Science and Technology, Çanakkale Onsekiz Mart University, the specimen was identified based on Mater et al. (2009), photographed, the some measurement and meristic characters were measured. And then, the specimen was fixed and preserved in 6% formalin solution. Sample was deposited at Çanakkale Onsekiz Mart University, Piri Reis Marine Museum, Çanakkale (PRM-PIS 2013-0071) (Figure 2).

### Result and Discussion

Some morphometric and meristic characters were given in Table 1. The pectoral fin was large and fan-like, with a brilliant, iridescent blue line and dot markings.

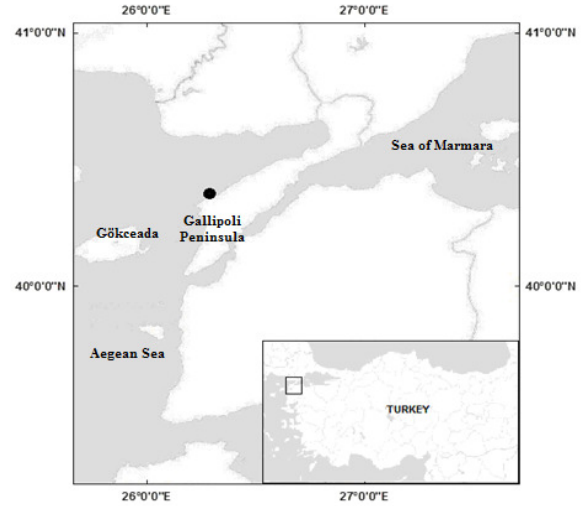
The body was in shades of grey to yellow brown with white spots and the snout was blunted (Figure 2). All these characters closely correspond to those listed by Quéro et al. (2003) and Mahé et al. (2013).

**Table 1.** Some morphometric and meristic characters for *Dactylopterus volitans* captured in the Ece Bight, Gallipoli Peninsula (Northern Aegean Sea, Turkey)

Morphometric characters	Values
Total length (mm)	340.0
Fork length (mm)	311.0
Standard length (mm)	288.0
Weight (g)	200.0
Anal length (mm)	160.0
Eye diameter (mm)	18.32
Body depth (mm)	54.88
Head length (mm)	60.79
Dorsal fin length - 1 (mm)	30.97
Dorsal fin length - 2 (mm)	57.09
Pectoral fin length (mm)	195.0
Meristic characters	
Dorsal fin rays - 1	V
Dorsal fin rays - 2	8
Pectoral fin rays	32
Pelvic fin rays	I - 4
Anal fin rays	6

The occurrence of *Dactylopterus volitans* was observed by Quérou and Guéguen (1981) in the Western English Channel, by Quérou et al. (2004) in the Bay of Biscay, by Quigley et al. (2004) in the Irish waters, by Saad (2005) in the coast of Syria, by Maiorano et al. (2010) in the North-western Ionian Sea, by Mahé et al. (2013) in the Eastern English Channel. Labropoulou and Papaconstantinou (2000) noted the its presence in the Northern Aegean Sea (Greece), but gave no precise locality information.

As to Turkish waters, the flying gurnard has been reported by Başusta and Erdem (2000) in the Iskenderun Bay, by Öğretmen et al. (2005) in the Gökova Bay, by Keskin et al. (2011) in the North-eastern Levantine Sea. Mater et al. (2009) also reported its distribution in the Aegean and Mediterranean Seas for Turkish waters, but provided no precise locality information. In addition, Cengiz et al. (2012) gave a list of 152 species belonging to 51 families from the Gallipoli Peninsula and Dardanelles (North-eastern Mediterranean, Turkey), but reported no information concerning its occurrence. In the northern Aegean coasts, only a single specimen was recorded by Karakulak et al. (2006) in the Gökceada Island. This species was included in the checklists of Turkish fishes (Bilecenoğlu et al., 2002; Fricke et al., 2007).



**Figure 1.** Ece Bight where *Dactylopterus volitans* captured (indicated by a full dot).



**Figure 2.** *Dactylopterus volitans* captured in Ece Bight, Gallipoli Peninsula (Northern Aegean Sea, Turkey).

Climate change controls the rate of change in the geographical distribution of marine species or populations in the sea. Climate variability also directly affects fish recruitment, a key process for fisheries. Changes in marine currents, derived from atmospheric climate variability, may modify transport and survival of larvae and juveniles, as well as the distribution and abundance of phytoplankton and zooplankton.

Changes in seawater temperature and salinity may also impact the physiology and the distribution ranges of fish migration routes, due to changes in prey abundance and distribution. (Papaconstantinou, 2014). These changes may affect the status of the Turkish marine fauna and give rise to rare occurrence in Northern Aegean Sea.

Although the presence of this species does not clearly indicate that there is an established population in the northern Aegean coasts of Turkey, these findings together with previous information (Karakulak et al., 2006) suggest that the species, even if rarely, inhabited in the northern Aegean coasts, its spread into the area is

not a single event and could re-occur in different sections of the northern Aegean in coming period. If such case happens, it can be speculated that *D. volitans* may have the potential to adapt successfully to the changing environmental conditions.

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