

Short scientific article
Received: 2016-02-18

DOI 10.19233/ASHN.2016.4

THE SECOND RECORD OF LESSEPSIAN MIGRANT *ETRUMEUS GOLANII* FROM THE NORTH-EASTERN AEGEAN SEA (IZMIR BAY, TURKEY)

Okan AKYOL and Ali ULAŞ
Ege University, Faculty of Fisheries, 35440 Urla, Izmir, Turkey
e-mail: okan.akyol@ege.edu.tr

ABSTRACT

A specimen of Etrumeus golanii (Dussumieriidae) (180 mm TL) was caught on 13th October 2015 with a purse-seine from the Bay of Izmir, north-eastern Aegean Sea, at a depth of 63 m. This is the second finding of this species for the north-eastern Aegean Sea and the eighth report of Lessepsian fish for the Bay of Izmir.

Keywords: *Etrumeus golanii*, Lessepsian fish, new record, Izmir Bay, Aegean Sea.

SECONDA SEGNALAZIONE DEL MIGRANTE LESSEPSIANO *ETRUMEUS GOLANII* NEL MAR EGEO NORD-ORIENTALE (BAIA DI SMIRNE, TURCHIA)

SINTESI

Un esemplare di Etrumeus golanii (Dussumieriidae) (TL pari a 180 mm) è stato catturato il 13 ottobre 2015 con una rete da circuizione nella baia di Smirne, nell'Egeo nord-orientale, ad una profondità di 63 m. Si tratta del secondo ritrovamento di questa specie nell'Egeo nord-orientale e dell'ottava segnalazione di un pesce lessepsiano nella baia di Smirne.

Parole chiave: *Etrumeus golanii*, pesce lessepsiano, nuova segnalazione, baia di Smirne, mar Egeo.

INTRODUCTION

The genus *Etrumeus* was redefined by DiBattista *et al.* (2012) and *Etrumeus golanii* DiBattista, Randall & Bowen, 2012 since a new holotype was previously misidentified as *E. teres* in the Mediterranean. *E. golanii* is an inshore pelagic species, which colonized the Mediterranean from the Red Sea via the Suez Canal in spite of its original Indo-Pacific distribution (Golani *et al.*, 2006).

In the 1990s, it became very common in the Israeli coast, and extended its distribution to Iskenderun Bay and Cyprus (Golani *et al.*, 2006). Six specimens of *E. golanii* were caught off Karataş, Iskenderun Bay during the 1994–1996 sampling period by means of a mid-water trawl, and this was the first report from Turkish seas (Başusta *et al.*, 1997). Between November 1997 and May 1998, *E. golanii* was collected abundantly by purse-seine fishery in the Gulf of Antalya, Turkey (Yılmaz & Hoşucu, 2003). Then, this fish was apparently well established in Cypriot waters, since many specimens were observed in the local market in 1999 (Golani, 2000). Consecutively, *E. golanii* was reported from the Rhodes in December 2003 (Corsini *et al.*, 2005), the Cyclades (*i.e.* Paros, Naxos and Ios islands) in May 2004 (Kallianiotis & Lekkas, 2005), Crete in July 2005 (Kasapidis *et al.*, 2007) and from the Hydra Island in November 2005 (Zenetos *et al.*, 2008) in the Greek Aegean Sea. *E. golanii* reached as far as the Island of Lampedusa in the Strait of Sicily in September 2005 (Falautano *et al.*, 2006). Erguden *et al.* (2009) analysed the length-to-weight relationship of *E. golanii* in Iskenderun Bay, Turkey for the first time. Nevertheless, the fish expanded its distribution not only westward but also northward in the Mediterranean (*i.e.* Aegean Sea). Yarmaz *et al.* (2010) reported a single specimen of *E. golanii* from Dikili coast, Izmir, in February 2009. This was the northernmost record for the Aegean Sea.

This paper presents the second report of the Lessepsian *E. golanii* from the coasts of Izmir, north-eastern Aegean Sea, which, however, does not indicate an established population yet.



Fig. 1. *Etrumeus teres*, caught from Izmir Bay, NE Aegean Sea (Photo: O. Akyol)

Sl. 1: Primerek vrste *Etrumeus golanii*, ujet v Izmirskem zalivu v severovzhodnem Egejskem morju (Foto: O. Akyol)

MATERIAL AND METHODS

On 13th October 2015, a specimen of *Etrumeus golanii* with a total length (TL) of 180 mm (Fig. 1) was captured by a commercial purse-seiner targeting anchovy and sardine off Karaburun, at the entrance to Izmir Bay (Coordinates: 38°33'46"N-26°36'34"E) at a depth of 63 m. The specimen was fixed with a 10% formaldehyde solution and deposited in the fish collection of the Fisheries Faculty, Ege University (ESFM-PIS/2015-08).

RESULTS AND DISCUSSION

The origin of the pelvic fin is behind the dorsal fin. Measurements, counts and selected body proportions

Tab. 1: Morphometric measurements as percentages of total length (%TL) and counts recorded in *Etrumeus golanii*, captured from Izmir Bay, NE Aegean Sea.

Tab. 1: Morfometrične meritve izražene kot delež celotne dolžine (%) in meristični podatki za primerek vrste *Etrumeus golanii*, ujetega v Izmirskem zalivu v severovzhodnem Egejskem morju.

Reference	ESFM-PIS/2015-08	
Measurements	Size (mm)	Proportion (%)
Total length (TL)	180	100.0 TL
Fork length (FL)	159	88.3 TL
Standard length (SL)	153	85.0 TL
Maximum body depth	28	15.6 TL
Predorsal fin length	66	36.7 TL
Prepectoral fin length	38	21.1 TL
Pre-anal fin length	127	70.6 TL
Head length (HL)	34	18.9 TL
Eye diameter	11	32.4 HL
Preorbital length	12	35.3 HL
Meristic counts		
Dorsal fin rays	17	
Anal fin rays	9	
Ventral fin rays	8	
Pectoral fin rays	16	

are shown in Table 1. All the determined measurements and colour patterns are in accordance with the descriptions by Baştuta *et al.* (1997), Golani (2000), Corsini *et al.* (2005) and DiBattista *et al.* (2012).

Lefkaditou *et al.* (2010) endorses that this Lessepsian fish might be considered as rather regularly occurring in the catches of trawl, beach- and purse-seine in the southernmost areas of the Hellenic territorial waters. The species results well established in the South-eastern Aegean Sea (Corsini-Foka *et al.*, 2015). The recent two records indicated that it probably shifted towards northern latitudes due to the changed hydrological conditions. The EastMed report (2010) notified that the North Aegean cold water fauna and the Central-South warm water fauna were changing positions, moving north-

wards along the Aegean coasts. In this way, *E. golanii* appears in the northern Aegean Sea, but it is very rare for now.

As mentioned above, *E. golanii* has been already recorded in the area under study (Yarmaz *et al.*, 2010) and this short report confirms the occurrence of the species in Izmir Bay, north-eastern Aegean Sea. Moreover, with the addition of *E. golanii* to the previously recorded *Saurida lessepsianus* (Russell, Golani & Tikochinski, 2015), *Lagocephalus sceleratus* (Gmelin, 1789), *Siganus luridus* (Rüppell, 1828), *S. rivulatus* (Forsskal, 1775), *Champsodon vorax* (Günther, 1867), *Stephanolepis diaspros* (Fraser-Brunner, 1940) and *Upeneus molluccensis* (Bleeker, 1855) (ESFM-PIS/2016-03, unpublished data), the list of Lessepsian fish in the Bay now counts eight species.

DRUGI ZAPIS O POJAVLJANJU LESEPSKE SELIVKE VRSTE *ETRUMEUS GOLANII* IZ SEVERNOVZHODNEGA EGEJSKEGA MORJA (IZMIRSKI ZALIV, TURČIJA)

Okan AKYOL & Ali ULAŞ

Ege University, Faculty of Fisheries, 35440 Urla, Izmir, Turkey
e-mail: okan.akyol@ege.edu.tr

POVZETEK

Primerek vrste Etrumeus golanii (Dussumieriidae) (180 mm TL) je bil ujet 13 oktobra 2015 z zaporno plavarico v Izmirskem zalivu v severovzhodnem Egejskem morju na globini 63 m. Gre za drugi zapis o pojavljanju te vrste v severovzhodnem Egejskem morju in osmi zapis o pojavljanju lesepskih vrst rib v Izmirskem zalivu.

Ključne besede: *Etrumeus golanii*, lesepske selivke, nov zapis, Izmirski zaliv, Egejsko morje.

REFERENCES

- Başusta, N., Ü. Erdem & S. Mater (1997):** A new Lessepsian immigrant fish species in Iskenderun Bay: Red-eyed Sardine, *Etrumeus teres* (DeKay, 1842). [in Turkish]. Mediterranean Fisheries Congress, 9-11 April, Izmir, pp. 921-924.
- Corsini, M., P. Margies, G. Kondilatos & P.S. Economidis (2005):** Lessepsian migration of fishes to the Aegean Sea: First record of *Tylerius spinosissimus* (Tetraodontidae) from the Mediterranean and six more fish records from Rhodes. *Cybiu*, 29, 347-354.
- Corsini-Foka M., A. Zenetos, F. Crocetta, M.E. Çınar, F. Koçak, D. Golani, S. Katsanevakis, K. Tsiamis, E. Cook, C. Frogli, M. Triandophyllou, S. Lakkis, G. Kondylatos, E. Tricarico, A. Žuljević, M. Almeida, F. Cardigos, S. Çağlar, F. Durucan, A.M.D. Fernandes, J. Ferrario, I. Haberle, P. Louizidou, J. Makris, M. Maric, D. Micu, C. Mifsud, C. Nall, E. Kytinou, D. Poursanidis, D. Spigoli, G. Stasolla, S. Yapici & H.E. Roy (2015):** Inventory of alien and cryptogenic species of the Dodecanese (Aegean Sea, Greece): Collaboration through COST Action Training School. *Management of Biological Invasions*, 6, 351-366.
- DiBattista, J.D., J.E. Randall & B.W. Bowen (2012):** Review of the round herrings of the genus *Etrumeus* (Clupeidae: Dussumieriinae) of Africa, with descriptions of two new species. *Cybiu*, 36, 447-460.
- EastMed (2010):** Report of the sub-regional technical meeting on the Lessepsian migration its impact on Eastern Mediterranean fishery. GCP/INT/041/EC-GREITA/TD-04. 59 pp.
- Erguden, D., C. Turan & M. Gurlek (2009):** Weight-length relationships for 20 Lessepsian fish species caught by bottom trawl on the coast of Iskenderun Bay (NE Mediterranean Sea, Turkey). *J. Appl. Ichthyol.*, 25, 133-135.
- Falautano, M., L. Castriota & F. Andaloro (2006):** First record of *Etrumeus teres* (Clupeidae) in the Central Mediterranean Sea. *Cybiu*, 30, 287-288.
- Golani, D. (2000):** The Lessepsian migrant, the Red-eye Round Herring, *Etrumeus teres* (DeKay, 1842), a new record from Cyprus. *Zoology in the Middle East*, 20, 61-64.
- Golani, D., B. Öztürk & N. Başusta (2006):** The fishes of the eastern Mediterranean. Turkish Marine Research Foundation (Publication No. 24), Istanbul, Turkey.
- Kallianiotis, A. & V. Lekkas (2005):** First documented report on the Lessepsian migrant *Etrumeus teres* De Kay, 1842 (Pisces: Clupeidae) in the Greek Sea. *Journal of Biological Research*, 4, 225-229.
- Kasapidis, P., P. Peristeraki, G. Tserpes & A. Magoulas (2007):** A new record of the Lessepsian invasive fish, *Etrumeus teres* (Osteichthyes: Clupeidae) in the Mediterranean Sea (Aegean, Greece). *Aquatic Invasions*, 2, 152-154.
- Lefkaditou, E., V. Vassilopoulou, G. Petrakis, P. Peristeraki, S. Kavadas, C.Y. Politou, A. Kapantagakis, A. Machias & C. Papaconstantinou (2010):** The effect of Lessepsian immigrants to the Hellenic fisheries. EastMed Sub-regional Technical meeting on the Lessepsian migration and its impact on eastern Mediterranean Fishing. Nicosia, Cyprus, 7-9 December 2010. GCP/INT/041/EC-GRE-ITA/TD-04, pp. 60-73.
- Yarmaz, A., C. Balaban, M. Türkakın, & D. Türker-Çakır (2010):** A new record of Lessepsian migrant *Etrumeus teres* (DeKay, 1842)(Osteichthyes: Clupeidae) from the northern Aegean Sea. *J. Appl. Ichthyol.*, 26, 134-136.
- Yılmaz, R. & B. Hoşsucu (2003):** Some biological parameters of Round Herring, *Etrumeus teres* (DeKay, 1842) in the Gulf of Antalya (Mediterranean Sea). *Ege J. Fish. Aqua. Sci.*, 20:1-8.
- Zenetos, A., V. Vassilopoulou, M. Salomidi & D. Poursanidis (2008):** Additions to marine alien fauna of Greek waters (2007 update). *Marine Biodiversity Records*, Vol.1, e91, pp. 1-8.