

## A new alien fish in the Mediterranean Sea – *Platax teira* (Forsskål, 1775) (Osteichthyes: Ephippidae)

Murat Bilecenoglu<sup>1\*</sup> and Murat Kaya<sup>2</sup>

<sup>1</sup>Department of Biology, Faculty of Arts & Sciences, Adnan Menderes University, 09010, Aydin, Turkey

E-mail: [mbilecenoglu@adu.edu.tr](mailto:mbilecenoglu@adu.edu.tr)

<sup>2</sup>Department of Hydrobiology, Faculty of Fisheries, Ege University, 35100, Izmir, Turkey

E-mail: [murat.kaya@ege.edu.tr](mailto:murat.kaya@ege.edu.tr)

\*Corresponding author

Received 17 May 2006; accepted in revised form 5 June 2006

### Abstract

A single *Platax teira* (Forsskål, 1775) specimen was captured off Bodrum (southern Aegean Sea, Turkey) on 5 March 2006. It is the first record of this fish species in the Mediterranean Sea. Introduction of the species is probably due to an aquarium release.

*Key words:* *Platax teira*, Ephippidae, alien fish, aquarium release, Mediterranean Sea

### Introduction

Thirty three alien fish species, originally from the Red Sea and the Indo-Pacific Ocean, were listed from the Turkish coastline, 21 of the species reached the Aegean Sea (Bilecenoglu et al. 2002, Bilecenoglu 2004). Recently, four more species were added to the Turkish ichthyofauna: underwater observations at Fethiye Bay revealed the presence of *Torquigener flavimaculosus* – a species hitherto known from few records in the Levant Sea (Bilecenoglu 2003, 2005); *Heniochus intermedius* (Gökoglu et al. 2003) and *Hippocampus fuscus* (Gökoglu et al. 2004) were recorded from Antalya Bay; and *Lagocephalus sceleratus* was captured off Gökova Bay (Akyol et al. 2005).

In the present note, the teira batfish, *Platax teira* (Forsskål, 1775), is recorded for the first time from the Levant Sea, based on a single specimen collected in Bodrum (southern Aegean Sea, Turkey). It is the first representative of the family Ephippidae in the Mediterranean.

### *Platax teira* (Forsskål, 1775)

**Material examined:** One specimen, 44.5 cm total length, 38.9 cm standard length, 3380 g in weight (Figure 1), captured on 5 March 2006 at a water depth of 12 m (by speargun), rocky substrate, 36°57' N – 27°27' E, Poyraz harbour, southwest of Karaada (Bodrum, southern Aegean Sea coast of Turkey) (Figure 2), collected by C. Olcay, determined by M. Bilecenoglu.



**Figure 1.** *Platax teira* (Forsskål, 1775) speared from Bodrum, southern Aegean Sea (Turkey). Standard length is 38.9 cm.

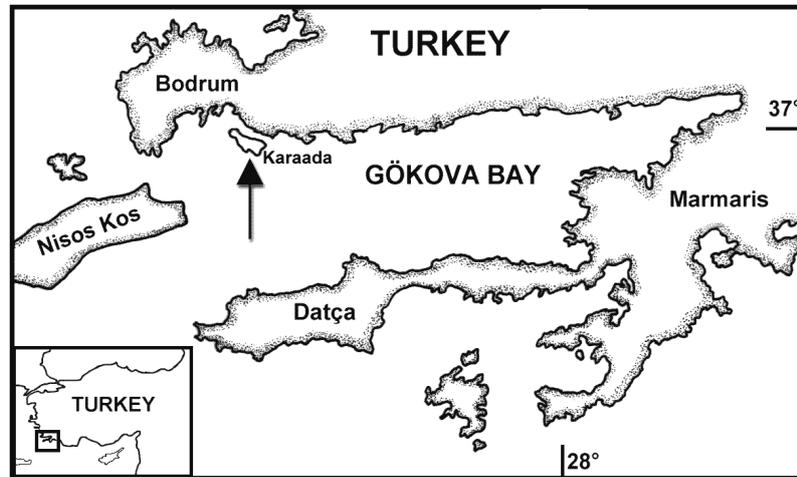


Figure 2. Capture locality of *Platax teira* (Forsskål, 1775) from the southern Aegean Sea (Turkey), shown with an arrow

**Description:** Dorsal finrays V+30 (spines hidden in the front margin of the fin, increasing in length posteriorly), anal finrays III+23, ventral finrays I+5, pectoral finrays 16, caudal finrays 16, lateral line scales 61 ( $\pm 2$ ). Morphometric measurements and body proportions (as %) are given in Table 1. Body orbicular, deep and strongly compressed laterally, its depth 2.66 times of head length and 1.31 times in SL. The front head profile is almost vertical; large adults ( $> 35$  cm SL) show a bony hump from top of head to interorbital region. Opercular membranes are united to isthmus. The eyes are small, slightly larger than the preorbital length, 4.50 times in head length. Preopercle smooth, no spines on the opercle. The mouth is small; not protractile. Maxilla does not reach posteriorly to a vertical through the anterior of the eye. Lower jaw with five clearly visible pores on each side of jaw. Jaws with slender bands of tricuspid teeth, the middle cusp not much longer than lateral cusps; no palatines; vomer teeth present. Pectoral fin base slightly in front of pelvic fin base. Caudal fin truncate. Snout and interorbital area without scales. Rough and small body scales partly covering the fleshy bases of dorsal and anal fins. Color of the single specimen examined is mainly brownish with a dusky bar through the eye. Another wider dark bar extends from dorsal fin origin to belly, enclosing a black blotch (located below the pectoral fin tip). A smaller dusky blotch is located above the anal fin origin.

Pectoral and pelvic fins dusky yellow, the belly is yellowish as well. Dorsal and anal fins with black margins posteriorly. Measurements, counts and body coloration of the Mediterranean *P. teira* specimen agree with descriptions of Heemstra (2001).

**Remarks:** Members of the family Ehippidae are known from the Atlantic, Indian and Pacific Oceans (Nelson 1994). The teira batfish is an inshore species distributed in the tropical and subtropical waters of the Indo–West Pacific region, i.e. Red Sea to South Africa, Arabian Sea, Somalia, Japan, southeastern India, Taiwan, Hong Kong, Philippines, Indonesia, New Guinea, northern Australia, New Zealand and Melanesia (Dor 1984, Sommer et al. 1996, Francis et al. 1999, Ni and Kwok 1999, Heemstra 2001; Manilo and Bogorodsky 2003, Marimuthu et al. 2005). The habitats of the species include shallow coral reefs, seaweed rich ecosystems, mangrove areas, and also wrecks and deep reefs of up to 70 m depth (Heemstra 2001). It is caught by various fishing gears (handlines, nets, traps, speargun etc.), but is considered of only a minor commercial importance (Sommer et al. 1996, Heemstra 2001). Its long-finned juveniles are common in the saltwater aquarium trade, and specimens of the congeneric *P. orbicularis* were collected off Florida, where it was postulated they were released by aquarists when they outgrew their aquaria (Semmens et al. 2004).

**Table 1.** Morphometric measurements of *Platax teira* (Forsskål, 1775) captured off Bodrum (Turkey)

Measurements	Value (cm)	Proportion (%)
Total length (TL)	44.5	
Standard length (SL)	38.9	87.4 TL
Body depth (BD)	29.5	75.8 SL
Head length (HL)	11.3	38.3 BD, 29.0 SL
Eye diameter (ED)	2.46	21.8 HL, 46.1 IOD
Preorbital length	2.96	26.2 HL
Postorbital length	5.86	51.9 HL
Interorbital distance (IOD)	5.34	47.3 HL
Depth of caudal peduncle	4.98	12.8 SL, 16.9 BD
Prepelvic length	8.8	2.3 SL
Preanal length	24.5	63.0 SL
Predorsal length	18.0	46.3 SL
Length of dorsal fin	21.2	54.5 SL
Length of anal fin	10.1	26.0 SL
Anterior internasal distance	1.77	15.7 HL
Posterior internasal distance	4.08	36.1 HL

Five species of the genus *Platax* are known from the Indian and Pacific Oceans (Heemstra 2001). *Platax teira* can be distinguished from *P. batavianus* by the shape of tricuspid teeth (middle cusps slightly longer than lateral cusps in the former, 3 to 4 times longer in the latter); from *P. boersii* by having vomer teeth, nape hump (adults) and more lateral line scales (56–66 vs 44–52); from *P. orbicularis* by having less dorsal soft rays (29–34 vs 34–39) and smaller interorbital distance in head length (42–50% vs 35–42%); from *P. pinnatus* by snout shape (not produced in *P. teira*) and number of pores on each side of lower jaw (5 in the former, 3–4 in the latter). The wing-like dorsal and anal fins, orbicular body shape and the coloration of *P. teira* easily distinguish the species from all other Mediterranean fishes.

There are several records of *P. teira*, as a fish host to parasites. A teira batfish specimen off New Zealand was heavily infested by parasitic copepods (Francis et al. 1999). Some parasitic copepods from the family Caligidae (i.e. *Caligus rotundigenitalis*, *Anuretes anomalus*, *A. branchialis*, *A. plaxi*) were found in *P. teira* from Taiwan waters (Ho and Lin 2000, Ho 2004). The Lepocreadiidae (Digenea) is the most commonly

reported family in Ehippidae: Bray and Cribb (2003) recorded three digeneans from *P. teira*, *Neomultitestis aspidogastriformis*, *Multitestis magnacetabulum* and *Diploproctodaeum rutellum*. The Mediterranean specimen of *P. teira* was checked externally for parasites, but none were encountered.

Teira batfish are known to associate with floating seaweed, debris and artificial reefs as juveniles and even adults, and are therefore capable of drifting considerable distances (Francis et al. 1999, Jackson et al. 2004, Marimuthu et al. 2005). Though Suez Canal maybe suspected as a mode of entry for the species, no data at present support this assumption. *Platax* species are commercially valuable in the aquarium trade (Heemstra 2001, Semmens et al. 2004), and it is likely our specimen was discharged into the Mediterranean by aquarists.

#### Acknowledgements

We are indebted to Mr. Cafer Olcay for providing the teira batfish specimen. Special thanks to Dr. Stephan Gollasch and Dr. Bella Galil for their valuable comments, which helped us to improve the manuscript.

## References

- Akyol O, Unal V, Ceyhan T and Bilecenoglu M (2005) First confirmed record of the silverside blaasop, *Lagocephalus sceleratus* (Gmelin, 1789), in the Mediterranean Sea. *Journal of Fish Biology* 66: 1183–1186
- Bilecenoglu M (2003) Kizildeniz Gocmeni Balon Baligi (*Torquigener flavimaculosus* Hardy & Randall, 1983), Turkiye kiyilarindan ilk gozlemler. *Sualti Dunyasi Dergisi* 74: 38–39
- Bilecenoglu M (2004) Occurrence of the Lessepsian migrant fish, *Sillago sihama* (Forsskal, 1775) (Osteichthyes: Sillaginidae), from the Aegean Sea. *Israel Journal of Zoology* 50: 420–421
- Bilecenoglu M (2005) Observations on the burrowing behaviour of Dwarf Blaasop, *Torquigener flavimaculosus* Hardy & Randall, 1983 (Osteichthyes: Tetraodontidae) along Fethiye Coasts, Turkey. *Zoology in the Middle East* 35: 29–34
- Bilecenoglu M, Taskavak E, Mater S and Kaya M (2002) Checklist of the marine fishes of Turkey. *Zootaxa* 113: 1–194
- Bray RA and Cribb TH (2003) Lepocreadiidae (Digenea) from the batfish of the genus *Platax* Cuvier (Teleostei: Ehippidae) from the southern Great Barrier Reef, Queensland, Australia. *Systematic Parasitology* 55: 1–9
- Dor M (1984) CLOFRES, Checklist of the fishes of the Red Sea. Tel Aviv: Israel Academy of Sciences and Humanities, 437 p
- Francis MP, Worthington CJ, Saul P and Clements KD (1999) New and rare tropical and subtropical fishes from northern New Zealand. *New Zealand Journal of Marine and Freshwater Research* 33: 571–586
- Gokoglu M, Bodur T and Kaya Y (2003) First record of the bannerfish (*Heniochus intermedius* Steindachner, 1893) from the Mediterranean Sea. *Israel Journal of Zoology* 49: 324–325
- Gokoglu M, Bodur T and Kaya Y (2004) First records of *Hippocampus fuscus* and *Syngnathus rostellatus* (Osteichthyes: Syngnathidae) from the Anatolian coast (Mediterranean Sea). *Journal of the Marine Biological Association of the United Kingdom* 84 (5): 1093–1094
- Heemstra PC (2001) Ehippidae. In: Carpenter KE and Niem VH (eds) *FAO species identification guide for fishery purposes. The living marine resources of the Western Central Pacific. Bony fishes part 4 (Labridae to Latimeriidae), estuarine crocodiles, sea turtles, sea snakes and marine mammals, Volume 6*, pp 3611–3622, FAO, Rome
- Ho JS (2004) Invasiveness of Sea Lice (Copepoda, Caligidae) in Marine Aquaculture. *J. Fish. Soc. Taiwan* 31(2): 85–99
- Ho JS and Lin CL (2000) *Anuretes grandis* n.sp., a caliginid copepod (Siphonostomatoida) parasitic on *Diagramma pictum* (Pisces) in Taiwan, with discussion of *Anuretes* Heller, 1865. *Folia Parasitologica* 47: 227–234
- Jackson LA, Reichelt RE, Restall S, Corbett B, Tomlinson R and McGrath J (2004) Marine ecosystem enhancement on a geotextile coastal protection reef – narrowneck reef case study. *Proceedings of the 29<sup>th</sup> International Conference on Coastal Engineering*, p 1–13, Lisbon, Portugal
- Manilo LG and Bogorodsky SV (2003) Taxonomic composition, diversity and distribution of coastal fishes of the Arabian Sea. *Journal of Ichthyology* 43(suppl. 1): 75–149
- Marimuthu N, Wilson JJ and Kumaraguru AK (2005) Teira batfish, *Platax teira* (Forsskal, 1775) in Pudhumadam coastal waters, drifted due to the tsunami of 26 December 2004. *Current Science* 89 (8): 1310–1312
- Nelson JS (1994) *Fishes of the world*. John Wiley & Sons, Inc., 3<sup>rd</sup> ed., 600 p., Canada
- Ni IH and Kwok KY (1999) Marine fish fauna in Hong Kong waters. *Zoological Studies* 38 (2): 130–152
- Semmens BX, Buhle ER, Salomon AK and Pattengill-Semmens CV (2004) A hotspot of non-native marine fishes: evidence for the aquarium trade as an invasion pathway. *Marine Ecology Progress Series* 266: 239–244
- Sommer C, Schneider W and Poutiers J–M (1996) *FAO species identification guide for fishery purposes. The living marine resources of Somalia*, 376 p, FAO, Rome