

Mediterranean Marine Science

Vol 15, No 2 (2014)



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doi: [10.12681/mms.906](https://doi.org/10.12681/mms.906)

To cite this article:

GÖKOĞLU, M., ÖZVAROL, Y., & FRICKE, R. (2014). *Synchiropus sechellensis* Regan, 1908 (Teleostei: Callionymidae), a new Lessepsian migrant in the Mediterranean Sea. *Mediterranean Marine Science*, 15(2), 440–442. <https://doi.org/10.12681/mms.906>

Synchiropus sechellensis Regan, 1908 (Teleostei: Callionymidae), a new Lessepsian migrant in the Mediterranean Sea

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Handling Editor: Daniel Golani

Received: 12 May 2014; Accepted: 18 May 2014; Published on line: 24 June 2014

Abstract

A new Lessepsian migrant, *Synchiropus sechellensis* Regan, 1908 (Teleostei: Callionymidae), was recorded for the first time after capture of a single male specimen, during bottom trawl operation in the Mediterranean Sea.

Keywords: Callionymidae, lessepsian species, *Synchiropus sechellensis*, Turkey, Mediterranean Sea.

Introduction

The dragonets of Callionymidae are a group of benthic marine fishes, found in warm and temperate seas from the very shallow waters to depths of at least 900 m (Fricke, 2002). These relatively small benthic fishes (2 to 35 cm in total length) are found on sandy or muddy substrates, among weeds and in coral reefs from tide pools and the surf zone.

The two largest genera, *Callionymus* and *Synchiropus*, have a nearly circumtropical distribution. The Indo-Pacific species of the family have been revised by Fricke (1983a), who distinguished a total of 82 species of *Callionymus* and 27 species of *Synchiropus* (Fricke, 2006).

The family Callionymidae comprises a total of 182 valid recent species in tropical and temperate seas (Fricke 2002); seven species are known from the Mediterranean, six in the eastern basin among which *Callionymus filamentosus* is a Lessepsian migrant (Golani *et al.*, 2006). These family members are not of commercial importance; sometimes they are caught in trawl operations as by catch. They are occasionally used to produce fish meal. They feed on small bottom invertebrates such as worms, snails and crustaceans. Dragonets are oviparous, with pelagic eggs and larvae (Fricke, 1986).

Synchiropus sechellensis was originally described by Regan (1908) based on 2 syntypes from the Seychelles, western Indian Ocean; *Synchiropus altivelis* Regan, 1908 and *Synchiropus normani* Schultz & Woods 1948 are junior synonyms. The species was re-described by

Fricke (1983a). In the most recent revision of the group by Fricke (2002), the species was found to have a distinct distribution in the Red Sea (Gulf of Suez), the western Indian Ocean (Gulf of Aden; Somalia; Seychelles; Maldives), and the south-western Pacific (Chesterfield Islands and New Caledonia). The species is known from depths of 37-68 m in the Red Sea and western Indian Ocean (Fricke, 1983a), and 34-59 m in the south-western Pacific (Fricke, 2000).

Materials and Methods

A single male (the male differs from the female in having a higher first dorsal fin, and an elongated urogenital papilla) specimen of *S. sechellensis* was collected by bottom trawl operation at a depth of 30-50 m in the Gulf of Antalya, on 3 April 2014 (Fig. 1). The species was identified according to Fricke (1983a, 2006), preserved in 4% formalin and deposited at the fish Museum of the Fisheries Faculty of Akdeniz University, Antalya (Collection number: 117). Methods follow Fricke (1983a); fin-ray counts follow Fricke (1983b).

A brief description of the specimens: Body elongated and slightly depressed. Snout short, eye large. Head slightly depressed. Spines of first dorsal-fin elongated, with a short filament. Thorax dark grey. First dorsal-fin with large, rounded dark blotches. Base of anal fin red, distal parts black. Caudal fin with 2 wide, vertical, dark grey bars (Fig. 2).

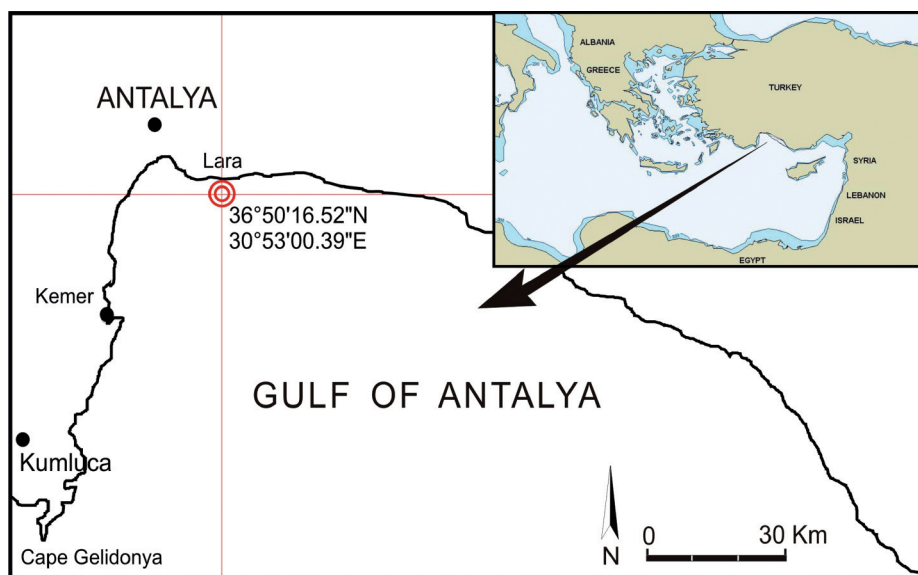


Fig. 1: Map of the studied area.



Fig. 2: *Synchiropus sechellensis* specimen caught in the Mediterranean Sea (A: Body, B: Dorsal view of head, C: Ventral view of head).

Results and Discussion

S. sechellensis has a wide distribution in the western Indian Ocean (Gulf of Aden; Somalia; Seychelles; Maldives), and the south-western Pacific (Chesterfield

Islands and New Caledonia). This is the first occurrence of *S. sechellensis* in the Mediterranean Sea and along the Turkish Mediterranean shores. This species may have been introduced to the Mediterranean Sea by marine traffic and shipping activities.

Table 1. Morphometric and meristic counts of *Synchiropus sechellensis* from the Mediterranean Sea.

| Parameters | | |
|---------------------------|---------------------------|----------|
| Meristic counts | First dorsal-fin spines | IV |
| | Second dorsal-fin rays | 8 |
| | Total pectoral-fin rays | 18-19 |
| | Pelvic-fin rays | I, 5 |
| | Anal-fin rays | VI, 1 |
| | Principal caudal-fin rays | I, 7, II |
| Morphometric Measurements | Wet weight | 10.641 g |
| | Standard length | 8.2 mm |
| | Total length | 10.7 mm |
| | Body width | 16.4 mm |
| | Body depth | 17.16 mm |
| | Caudal-peduncle depth | 7.64 mm |
| | Predorsal length | 22.46 mm |
| | Caudal-fin length | 26.42 mm |
| | Head length | 26.41 mm |
| | Pectoral-fin length | 7.70 mm |
| | Pelvic-fin length | 27.27 mm |
| | Eye diameter | 7.70 mm |
| | Snout length | 9.01 mm |
| | Upper-jaw length | 8.96 mm |
| | Interorbital width | 1.55 mm |
| Preopercular spine length | 5.50 mm | |

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