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FIRST SUBSTANTIATED RECORD OF DORY SNAPPER *LUTJANUS FULVIFLAMMA* (LUTJANIDAE) FROM THE EASTERN MEDITERRANEAN SEA

SUMMARY

The authors report on the capture of a medium sized specimen of Dory snapper *Lutjanus fulviflamma* (Forsskål, 1775) from the Syrian coast but also for the eastern Mediterranean Sea. It was a medium sized specimen which measured as 245 mm total length (TL), 195 mm standard length (SL) and weighed 208 g. The specimen was described including some morphometric measurements and meristic counts. This Syrian *L. fulviflamma* could be considered as a Lessepsian migrant due to the vicinity of Suez Canal, incoming from the Red Sea.

INTRODUCTION

Of the 103 species belonging to the family Lutjanide known as snappers and mainly inhabiting tropical and subtropical marine waters (Allen, 1985), only four species occur in the Mediterranean Sea (Golani *et al*., 2021). They are all non-indigenous species incoming from the Red Sea as red snapper *Lutjanus argenticulatus* (Forsskål, 1775), Dory snapper *L. fulviflamma* (Forsskål, 1775) and emperor snapper *L. sebae* Cuvier, 1816, or from the eastern Atlantic as dog snapper *L. jocu* (Forsskål, 1775).

Investigations regularly conducted through the entire Syrian coast with the assistance of local fishermen allow to collect a specimen of *L. fulviflamma*. The purpose of this paper is to describe the specimen and give some comments about the distribution of the species in the Mediterranean Sea.

MATERIAL AND METHODS

On 20 September 2022, a specimen of *Lutjanus fulviflamma* was caught using a beach seine at a depth of 7 m. The capture occurred off Banias city, located on the Syrian coast by 35° 12′ 52.2″ N and 35° 56′ 56.1″ (Fig. 1). The specimen was measured to the nearest millimetre and weighed to the nearest gram. Morphometric measurements, meristic counts and total body weight are summarised in Table 1. The specimen was preserved in 10 % buffered formalin and deposited in the Ichthyological Collection of the Marine Sciences Laboratory, Faculty of Agriculture, Tishreen University (Reference No: MSL 14/2022).

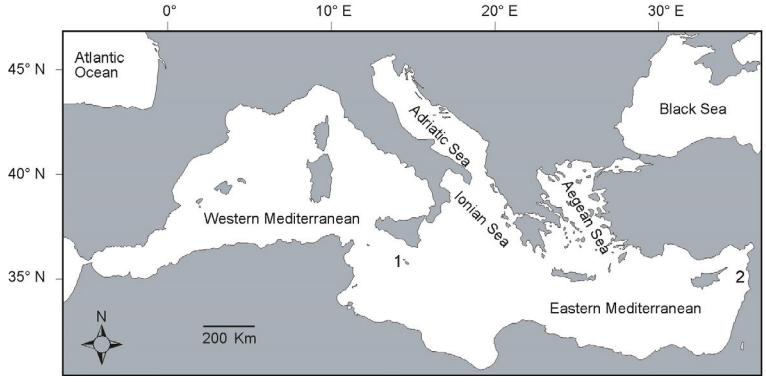

Fig. 1. Map of the Mediterranean Sea, indicating the capture sites of two specimens of *Lutjanus fulviflamma* by chronological order. 1. Malta Islands (Vella et al., 2015). 2. Syrian coast (this study).

RESULTS AND DISCUSSION

The specimen of Dory snapper *Lutjanus fulviflamma* was measured as 245 mm total length (TL), 195 mm standard length (SL) and weighed 208 g. It was a medium sized specimen; large specimens reach 350 mm TL (Allen, 1985). It was identified based on the combination of main morphological characters, as follows: body moderately deep, perorbital space formed 3.4 from head length, no gap between temporal scale bands of each side, preopercular notch and kob poorly developed, vomerine tooth patch triangular with a medial posterior extension. gill rakers on lower limb of first arch 12, total rakers on first arch 19, dorsal fin with 10 spines and 14 soft rays; anal fin with 3 spines and 8 soft rays, posterior profile of dorsal and anal fins angular, pectoral fins with 15 rays; caudal fin slightly emarginate. Colour: silver and upper sides dusky; lower sides whitish; whitish on belly, a series of 4 yellow stripes on sides, a prominent black spot at level of lateral line below base of anterior part of soft portion of dorsal fin, fins yellowish (Fig. 2).

Fig. 2. Specimen of *Lutjanus fulviflamma* (Reference No: MSL 14/2022) captured from the Syrian coast. Scale bar = 50 mm.

General morphology, morphometric measurements, meristic counts and colour are in total agreement with the previous descriptions of the species (Allen, 1985; Randall *et al.*, 1997; Vella *et al.*, 2015; Golani *et al.*, 2021). Therefore, *L. fulviflamma* could be included in the Syrian ichthyofauna (Saad, 2005; Ali, 2018).

Table 1. Measurements in mm with % of total length (TL), standard length (SL), meristic counts and total body weight carried out in the specimen of *Lutjanus fulviflamma* (Reference No: MSL 14/2022) captured from the Syrian coast.

Reference of the specimen	**MSL 14/2022**		
Morphometric measurements	**mm**	**% TL**	**% SL**
Total length (TL)	245	100.0	125.6
Standard length (SL)	195	79.6	100.00
Body depth (BD)	62	25.3	31.8
Head length (HL)	72	29.4	36.9
Eye diameter (ED)	17	6.9	8.7
Preorbital space	21	8.6	10.8
Pre-dorsal length (Pdl)	71	29.3	36.4
Pre-pectoral length (Ppl)	63	25.7	32.3
Pre-pelvic length (Ppl)	74	30.2	37.9
Pre-anal length (Pal)	137	55.9	70.2
Meristic counts			
Dorsal fin rays	X+14		
Anal fin rays	III+8		
Pelvic fin rays	I+5		
Pectoral fin rays	15		
Total body weight (TBW) g	208		

Lutjanus fulviflamma is widely distributed throughout the Indian Ocean from South Africa to the Red Sea. The species was recorded for the first time in the Mediterranean Sea from Malta in 2013 (Vella *et al*, 2015), relatively far from Suez Canal and no new finding was reported to date in this sea. Therefore, Vella *et al*. (2015) noted that such occurrence in the Central Mediterranean Sea remains obscure and could not be considered as a Lessepsian migration (*sensu* Por, 1971) but the consequence of a human transportation via ballast water tanks or an aquarium release from marine vessels visiting the area. This opinion is corroborated by Zenetos *et al*. (2016) who noted that shipping, corridors, aquaculture and aquarium trade are responsible for transportation of thousands of species around the world, including the Mediterranean Sea. Similar patterns could explain the occurrence of the other Lutjanid species in the Mediterranean Sea (Zenetos *et al*., 2016; Golani *et al*., 2021).

The present specimen constitutes the second record of *L. fulviflamma* in the Mediterranean Sea and the first record for Levant Basin. A migration from Malta Islands to the Syrian coast remains doubtful. Therefore, the Syrian *L. fulviflamma* could be considered as a Lessepsian migrant due to the vicinity of Suez Canal, incoming from the Red Sea, although a ship transport or mariculture escapee cannot be totally ruled out. Two specimens only were caught from 2013 to date in the Mediterranean Sea, so it clearly appears that other captures are needed prior to state that a substantial population is successfully established in this sea.

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