

## First record of the Brassy Chub *Kyphosus vaigiensis* (Pisces: Kyphosidae) from the Mediterranean coast of Libya

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*In the present paper we report the first record of the Brassy Chub *Kyphosus vaigiensis* (Quoy and Giamard, 1825) from the Mediterranean coast of Libya. It is assumed that this species arrived into the Mediterranean from the Red Sea via the Suez Canal. We stress the need of taxonomic study on the genus *Kyphosus* in the Mediterranean.*

**Key words:** *Kyphosus vaigiensis*; Mediterranean; Libya; invasive

### INTRODUCTION

The Mediterranean Sea, being an enclosed sea located between Europe and North Africa, has become a hot spot for non-native fish species. A recent publication (GOLANI *et al.*, 2021) enumerated 188 non-indigenous fish species in the Mediterranean; this is an addition of 107 species to the list published less than two decades ago (GOLANI *et al.*, 2002).

New fish enter the Mediterranean in three manners: a) Atlantic species expand their distribution via Gibraltar, b) Red Sea species cross the Suez Canal (Lessepsian migrants) and c) species reach the Mediterranean via direct human activity such as aquaculture and aquarium escapes.

In the present paper, we report the first record of the Brassy Chub *Kyphosus vaigiensis* (Quoy and Giamard, 1825) from the coast of Libya. This record contributes additional evidence of the spread of this species in the Mediterranean.

### MATERIAL AND METHODS

On August 2021 two specimens were collected by trammel net at ca. 20 m at location 32°42'17.32"N 21°01'10.20"E (Fig. 1). The specimens were photographed (Fig. 2) but were not saved. All counts and measurements follow HUBBS & LAGLER (1947).

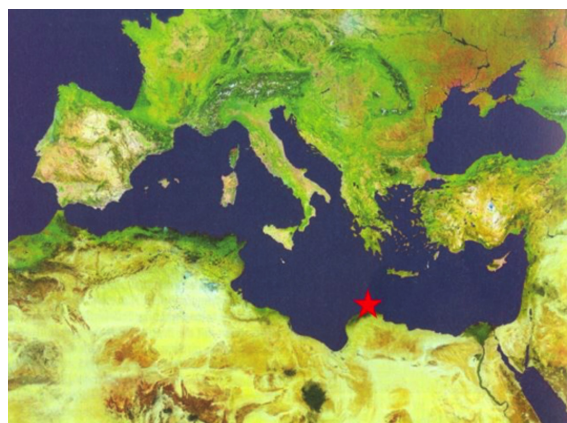


Fig. 1 Map of the site, indicated by a red star, where *Kyphosus vaigiensis* was captured (Talamitha region, Libya).

## RESULTS

*Short description (Based on captured specimen – Fig. 2)*

Body oblong, moderately deep, its depth 40.1% in SL, small head (21.4% in SL). Small mouth, its jaws terminate at the vertical of interior of eye. Snout length slightly larger than eye diameter. Dorsal fin with IX-X spines and 13-14 rays; Anal fin with III spines and 12-13 rays; Pectoral fin short with 18-19 rays. Pelvic fin origin behind pectoral fin origin with I spine and 5 rays. Caudal fin forked. Color: Body brownish-grey. Back dark, becoming lighter on the ventral surface. Thin horizontal lines on the flank. The posterior margin of the operculum and all fins slightly darker than rest of the body.



Fig. 2 *Kyphosus vaigiensis* collected from the coast of Libya

## DISCUSSION

The family of Kyphosidae, Sea Chubs, consists of 17 species in three genera. According to NELSON *et al.* (2016) the genus *Kyphosus* consists of 15 species, while KNUDSEN & CLEMENTS (2013) enumerated only eleven species in this genus. The morphology of most of the *Kyphosus* species is quite similar, thus having a complicated taxonomy with numerous synonyms and

misidentifications. As a result, several names of the genus *Kyphosus* appear in literature as occurring in the Mediterranean, such as *K. bosquii* (LACEPÉDE, 1802) (SAKAI, 2016; ORSI-RELINI, 2017) which according to KNUDSEN & CLEMENTS (2013) is a synonym of the Indo-Pacific *K. bigibus* Lacepède, 1801 and the Mediterranean records are most likely misidentifications. TORTONESE (1986) and FRANCOUR & MOUINE (2008) reported *K. spectator* (Linnaeus, 1766) and later LIGAS *et al.*, (2011) and KIPARISSIS *et al.*, (2012) reported *K. saltatrix* (Linnaeus, 1758); both are synonyms of *K. sectatrix* (Linnaeus, 1758) (KNUDSEN & CLEMENTS, 2013). Another Atlantic species, *K. incisor* (Cuvier, 1831), was recorded from the Mediterranean by ORSI-RELINI (2017), but according to KNUDSEN & CLEMENTS (2013), it is a synonym of *K. vaigiensis*.

The species *K. vaigiensis* has a world-wide distribution and it has been reported throughout the Mediterranean (AL MABRUK *et al.*, 2021). The origin of *K. vaigiensis* in the Mediterranean is not clear. It was first recorded from the Mediterranean from Almuñécar, Granada, Spain as *K. incisor* in 1998 (AZZURRO *et al.*, 2013); thus suggesting a range expansion from the Atlantic Ocean. However, most of the specimens have been recorded from the Levant, including Israel (GOREN *et al.*, 2016) and central Mediterranean as *K. vaigiensis* (see AL MABRUK *et al.*, 2021 and GROUD *et al.*, 2021 from Algeria), thus suggesting that it crossed the Suez Canal as a Lessepsian migrant. As a result of the taxonomic complex, it is not clear how many records of this species have been reported from the Mediterranean. GROUD *et al.*, (2021) mentions ten records of *Kyphosus* spp., however only half of them were identified as *K. vaigiensis*.

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## **Prvi zapis o nalazu *Kyphosus vaigiensis* (Ribe: Kyphosidae) na sredozemnoj obale Libije**

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### **SAŽETAK**

Prvi zapis o nalazu vrste *Kyphosus vaigiensis* (Ribe: Kyphosidae) na sredozemnoj obali Libije. Pretpostavlja se da je ova vrsta u Sredozemlje stigla iz Crvenog mora preko Sueskog kanala. Ističemo potrebu taksonomskog istraživanja roda *Kyphosus* u Sredozemlju.

**Ključne riječi:** *Kyphosus vaigiensis*; Sredozemlje; Libija; invazivne vrste