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## **Ichthyological note – Note ichtyologique**

First catch of *Fistularia commersonii* Rüppell, 1838 in the Bay of Marseille (France, northwestern Mediterranean Sea)

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by

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**Résumé.** – Première capture de *Fistularia commersonii* Rüppell, 1838 dans la baie de Marseille (France, Méditerranée nord-occidentale).

Le poisson flûte est considéré comme le champion des invasions lessepsiennes. Dans les années 2000, après une croissance exponentielle de ses populations en Méditerranée orientale, il est devenu très abondant dans les débarquements des pêcheries de cette région. Dans cette étude est signalée la première capture de deux individus de poisson flûte dans la baie de Marseille (France, Bouches du Rhône) en octobre 2016, constituant la capture avérée la plus nord-ouest de la Méditerranée. Cette espèce est un prédateur piscivore très actif. L'individu échantillonné, une femelle de 99 cm LT, avait consommé 6 poissons appartenant à 3 genres : *Spicara*, *Symphodus* et *Atherina*.

**Key words.** – Fistulariidae - *Fistularia commersonii* - Marseille - lessepsian invasion.

The bluespotted cornetfish, *Fistularia commersonii* Rüppell, 1838, one of the most invasive lessepsian fish species (Streftaris and Zenetos, 2006; DAISIE, 2008), continues its expansion

westward and is colonizing all the Mediterranean Sea (Azzurro et al, 2013). This Indo-Pacific fish species (Fritzsche, 1976) comes from the Red Sea and enters the Mediterranean through the Suez Canal probably in the 1970s (Bariche et al., 2014), but was first formally recorded in January 2000 on the coast of Israel (Golani, 2000). A few years later the bluespotted cornetfish becomes abundant in the fishery landings of the eastern Mediterranean and began to expand in the eastern basin (Golani, 2010; Bariche & Kajajian, 2012). Then, it spreads rapidly in the eastern and central Mediterranean (Bilecenoglu et al., 2002; Azzurro et al., 2004; Kalogirou et al., 2007; Bariche and Kajajian, 2012), and enters the western Mediterranean basin colonizing the Thyrenian Sea in the North and the coast of Magreb in the South (Azzurro et al., 2013). *F. commersonii* was first seen along the French Mediterranean coast in 2007 (Porquerolles) and captured in Corsica in 2008 and along the coast of Alpes-Maritimes and Var in 2010 (Bodilis et al., 2011). In the Bay of Marseille, *S. commersonii* has been previously seen and photographed underwater by Sabine Boulad in 2010 at Planier Island (Figure 1), but had never been fished before in this area.

## **RESULTS AND DISCUSSION**

This note signals the first catch of two individuals of the bluespotted cornetfish, *Fistularia commersonii* Rüppell, 1838 in the Marseille Bay by a professional fisherman, Mr Fernando, onboard the traditional fishing boat “La Marie”. This species was fished by trammel nets set on hard bottoms at less than 20 m depth on October 7, 2016. One individual was bought, identified and its total (TL) and standard lengths (SL) measured to the nearest cm (Fig. 2a). Its stomach content was removed and analyzed under a binocular microscope. The same fisherman caught another individual of *F. commersonii* in November 2016 (Banaru, pers. comm.).

The specimen collected was a female measuring 99 cm (TL, 82 cm SL), with a caudal filament of 17 cm long, and a total mass of 347.2 g. Its stomach content was composed of six small teleost fish: one centracantid *Spicara* sp. (6.8 cm TL), three labrids *Symphodus ocellatus* (around 3 cm, 5 cm and 6 cm TL), one atherinid *Atherina* sp. (5.5 cm TL) and one fish too digested to be identified (Fig. 2b). The three fish species identified were native species living either in the water column (*Spicara*, *Atherina*) or on hard substrates and seagrass beds (*S. ocellatus*). These species were also found in the stomach contents of *F. commersonii* by Bariche et al. (2009) on the coast of Lebanon in the eastern Mediterranean and by Castriota et al. (2012) in the central Mediterranean Sea. A high diversity of fish species was recorded in the diet of the bluespotted cornetfish by these authors, with 41 species observed by Bariche et al. (2009) and 15 species by Castriota et al. (2012). The most important prey were *Spicara smaris* and *Boops boops* in Lebanon (Bariche et al., 2009), and *Sardinella aurita* and *Boops boops* in Sicily (Castriota et al. (2012), all schooling fish species living in the water column. Labrids, which live on hard bottoms or in seagrass beds were also frequently preyed by *S. commersonii* in these two regions, as observed in Marseille.

Most capture and underwater observations of the bluespotted cornetfish on the Mediterranean coast of France occurred in autumn, mostly in October - November (Bodilis et al., 2011) at the end of the warm season, as it was the case in Marseille. In autumn the seawater is still warm in the northwestern Mediterranean, with a deep and stable thermocline (Bensoussan et al., 2010). These conditions and the east-west direction of the North Current in this area may favor the arrival of the bluespotted cornetfish from Ligurian or more southern populations, as also hypothesized by Bodilis et al. (2011). However, Azzurro et al. (2013) in modeling the expansion of *F. commersoni* in the Mediterranean Sea, suggest that the north of the western basin, particularly the Gulf of Lions, may not represent a favorable area for the establishment of this species. We will see if this species become more frequent and abundant in fishermen

nets in the northwestern Mediterranean Sea in the coming years. As *F. commersonii* is an efficient piscivorous predator (Bariche et al., 2009), one may wonder, if its abundance increases as it was the case in the eastern Mediterranean (Kalogirou et al., 2007; Bariche et al., 2009), how it will interact with the other local predators and what will be its impact on the functioning of local food webs and coastal fisheries.

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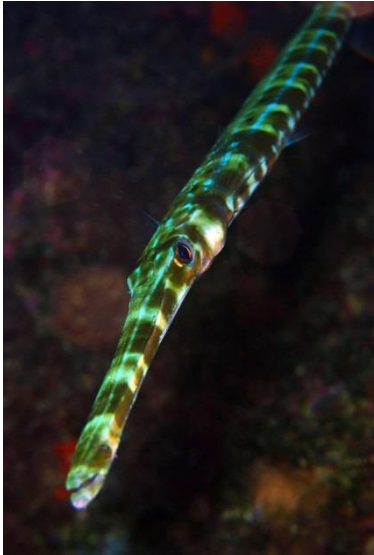


Figure 1. - Underwater picture of *Fistularia commersonii* at Planier (8 m depth) in Marseille Bay, 2010 (Photo: Sabine Boulad).

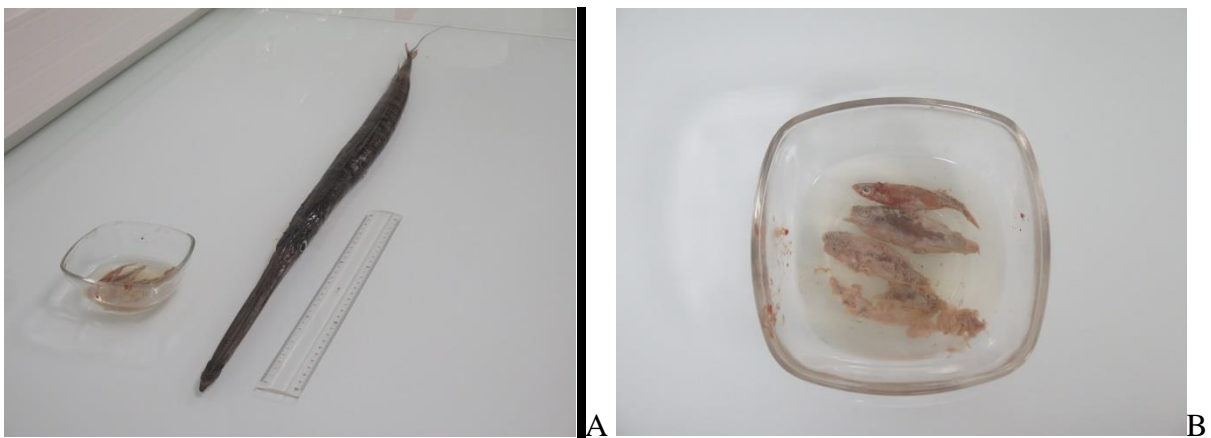


Figure 2. – **A:** *Fistularia commersonii* caught in Marseille Bay in October 2016. **B:** Teleosts from stomach content of *Fistularia commersonii*. (Photos: Charles-François Boudouresque)