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Aquatic Invasions Records

First confirmed record of the Lessepsian migrant *Pteragogus pelycus* Randall, 1981 (Teleostei: Labridae) for the North African coasts

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Abstract

On July 2010, a single specimen of *Pteragogus pelycus* was captured by gillnets along the coasts of Alexandria, Egypt (approximate position 31°14′N, 29°55′E) between 15 and 25 m of depth. This observation represents the first confirmed record of this species from the North African coasts.

Key words: *Pteragogus pelycus*, Labridae, Lessepsian migration, Egypt, Mediterranean

Introduction

Southern sectors of the Mediterranean have been poorly investigated in the composition of their marine communities (Coll et al. 2010) and records of new species from the north African coasts are of particular relevance to complete inventories and to estimate biodiversity. This information is even more valuable when the recorded species are non indigenous, with biological invasions being a major driver of change to the Mediterranean (Galil 2009). Yet, Mediterranean non-indigenous species are increasing year after year, especially due to the incoming of Red Sea invaders through the Suez Canal (Galil 2009; Zenetos et al. 2011). In this note we report a new occurrence of the sideburn wrasse, *Pteragogus pelycus* Randall, 1981 (Labridae) in the Mediterranean Sea. This is a small non-commercial fish originally distributed along the coasts of the Red Sea and eastern Africa, at depths of 0.5-28 m over seagrass beds and algal flats (Randall 1981). The sideburn wrasse is one of the two non-indigenous labrids that have been reported so far in the Mediterranean Sea, together with *Iniistius pavo* Valenciennes, 1840 (Corsini et al. 2006). It is considered a Lessepsian migrant, which entered the Mediterranean, from the Red Sea through the Suez Canal, where it was recorded for the first time in 1991 along the coast of Israel (Golani and Sonin 1992). Soon after, several individuals were reported from Rhodes (Corsini et al. 1999; Kalogirou et al. 2010), Turkey (Taskavak et al. 2000; Oz et al. 2007; Bilecenoglu 2010), Cyprus (Kaya et al. 2000) and Lebanon (Harmelin-Vivien et al. 2005). Today, *P. pelycus* is considered a successful invader in the Eastern Mediterranean Sea (EastMed 2010).

Results and discussion

On July 2nd 2010, a single specimen of *Pteragogus pelycus* was captured by gillnets along the coast of Alexandria, Egypt (Figure 1) (approximate position 31°14′N, 29°55′E) on rocky bottoms between 15 and 20 m of depths. The individual was immediately photographed (Figure 2) and fixed in 70% alcohol for subsequent analyses. The voucher specimen was deposited at the Biological Reference Collection of the *Insitut de Ciències del Mar* – CSIC of Barcelona with the accession number IIPB_20111014-01.

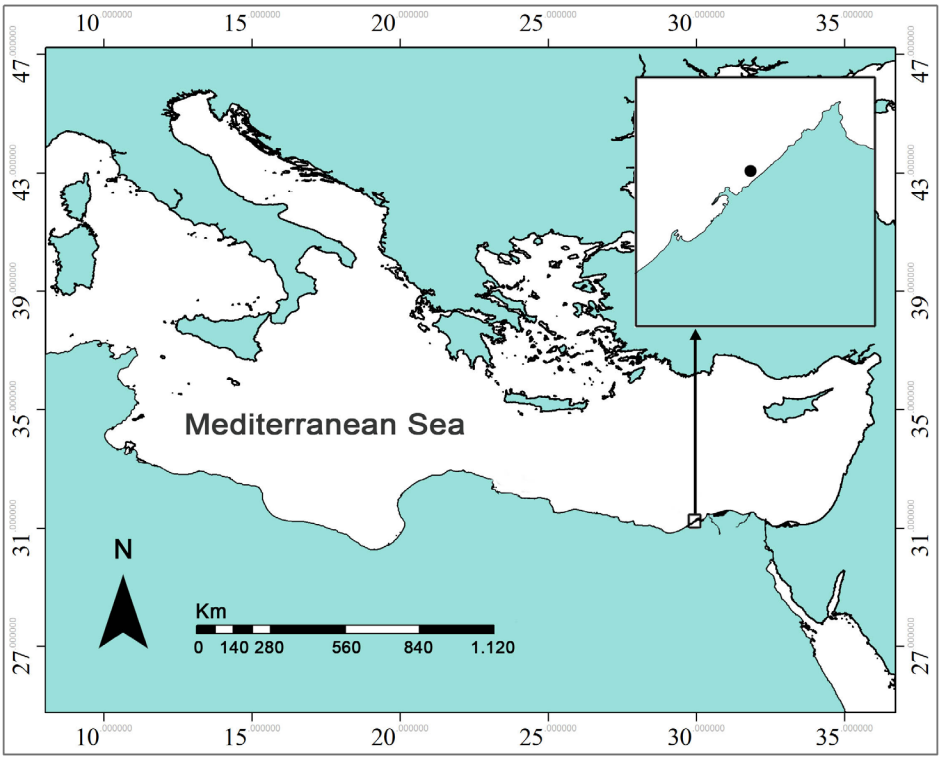

Figure 1. Record location of *Pteragogus pelycus* off Alexandria, Egypt

Figure 2. *Pteragogus pelycus* 130 mm TL (IIPB 20111014-01). Photograph by E. Azzurro.

According to Randall (1981) and Smith and Heemstra (1999) it was identified as an adult male of 130 mm TL; 103 mm SL; Head length 37 mm; Body depth 37 mm: Pre-orbital distance 12 mm; Eye diameter 7 mm. Dorsal rays XI+10; Anal fin rays III+9; Pectoral rays 12; Pelvic fin rays I+5. The colour of the fresh specimen was mostly brown-reddish; dorsal fin light orange, darker at the basis with three black spots between the first and fourth interspinous membrane; caudal and anal fins light orange, pectoral and pelvic fins light red; caudal fin yellow-brown; anal fin yellow-orange with a black margin; eye reddish-orange with a dark pupil.

In the Mediterranean Sea, the sideburn wrasse seems to occupy a well-defined ecological niche. In fact, it can be considered a true invertebrate feeder, strictly associated with *Posidonia oceanica* (Kalogirou et al. 2010; 2012), a Mediterranean endemic seagrass. As a matter of fact, this species is one of the most common non indigenous fishes in the south eastern Aegean Sea (EastMed, 2010), being one of the most abundant wrasses on Posidonia beds, second only to the native *Coris julis* (Linnaeus, 1758) (Kalogirou et al. 2010).

Recent revisions (El-Sayed 1994; Zenetos et al. 2010; Golani 2010) did not include *Pteragogus pelycus* among the north African alien fish species. Nevertheless, one single specimen of *P. pelycus* was probably captured in 1999 along the coasts of Alexandria. This observation was hidden in an unpublished PhD thesis (Gamee 2005), recently cited by Halim and Rizkalla (2011). Therefore our observation represents the first confirmed occurrence of the sideburn wrasse along the North African coasts, even though it is highly possible that an unnoticed population has existed in the Mediterranean Egypt for more than a decade (Gamee 2005). These types of delays in documenting or reporting an invasion are commonly referred to as *detection lags* (sensu Crooks 2005), and are an important constraint in the study of biological invasions. Giving the fortuitous character of non indigenous fish species records (Azzurro 2010) it is likely that many other overlooked invaders occurred, especially among the small not commercial taxa in the less monitored regions of the Mediterranean Sea.

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