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FIRST RECORD OF AN UNCOMMONLY COLOURED BLACK BELLY ANGLERFISH, *LOPHIUS BUDEGASSA* (SPINOLA, 1807) (*Osteichthyes Lophiiformes*) IN THE STRAIT OF SICILY (MEDITERRANEAN SEA)

SUMMARY

The finding of a large (642 mm of total length) atypical adult (but with spent gonads) female of black belly anglerfish, *Lophius budegassa* (Spinola, 1807), is reported. The specimen was caught with a commercial bottom trawl, in September 2003 in the Strait of Sicily, at 280 m. Photographic documentation of the body pigmentation (orange with spread brown spots) is shown, and its morphometric-meristic features are presented.

RIASSUNTO

Primo rinvenimento di un esemplare dalla pigmentazione anomala di Lophius budegassa *nello Stretto di Sicilia (Mar Mediterraneo).* Viene descritto un esemplare anomalo di rana pescatrice, *Lophius budegassa* (Spinola, 1807), catturato da uno strascico commerciale nello Stretto di Sicilia, nel Settembre del 2003. L'esemplare, una femmina adulta (ma con gonadi spente) di 642 mm di lunghezza totale, si distingueva dalla norma solo per la colorazione del corpo arancione con macchie grigie. Sono presentati i dati morfometrici e meristici per l'esemplare anomalo, che rappresenta il ritrovamento atipico della specie più orientale nel Mediterraneo.

INTRODUCTION

Commercial anglerfishes (a.k.a. monkfishes or toadfishes) are represented in the Mediterranean by two close species: the white belly (*Lophius piscatorius* Linnaeus 1758) and the black belly (*Lophius budegassa* Spinola, 1807) anglerfish (CARUSO, 1986), which are mainly caught as by-catch during bottom trawl-

ing (RELINI *et al*., 1999; UNGARO *et al*., 2002). In general, the two species, which can reach a large size (CARUSO, 1986; RELINI *et al*., 1999), are not distinguished either by fishermen or in the fish markets. Despite their unattractive aspect, the demand for these species (as whole or toileted, "frog-tail", specimens) for human consumption has increased in the last years because of the delicate consistency of the meat, leading to generalized stocks depletion.

Lophius budegassa is a bentho-demersal fish occurring from a few meters up to 800 m of depth, with a preference for the bottoms laying between the outer shelf edge and the upper slope (50-500 m). In respect to the companion species, *L. piscatorius*, the black belly anglerfish shows a more southern distribution (Mediterranean and Eastern North Atlantic, from the British Isles to Senegal; DUARTE *et al.*, 2001). Information on the current status of knowledge about anglerfishes has been recently reviewed for both Atlantic (THANGSTAD *et al*., 2002) and Mediterranean (UNGARO *et al*., 2002) stocks.

The occurrence of specimens showing aberrant (albinism and blindness) or atypical (body pigmentation) morphological features has already been reported in the literature for both the North Atlantic (PEREDA & GANCEDO, 1994; LANDA *et al*., 1998) and the Western Mediterranean (ALLUÈ & SANCHEZ, 1986). However, atypical colored anglerfish have never been described in the Strait of Sicily (Central Mediterranean Sea), in spite of the large-scale commercial activity deployed in the area, and the experimental trawl surveys carried on since 1985 (LEVI *et al*., 1998).

This note reports the capture, in the Strait of Sicily, of one black belly anglerfish showing an atypical pigmentation of the body, a record representing the second documented case of such anomaly for the Mediterranean Sea (ALLUÈ & SANCHEZ, 1986).

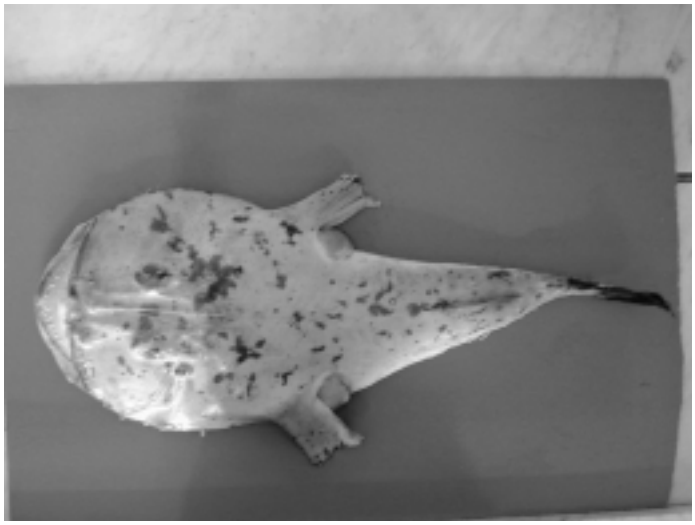
MATERIALS AND METHODS

The atypical specimen of *L. budegassa* was caught in September 2003, by a stern trawler of Mazara del Vallo (M/P Fortunata), at 280 m of depth. The trawler was targeting rose shrimps (*Parapenaeus longirostris*) over the "Zembra Nord" fishing ground, off the North Tunisian coast (37°22' N, 10°48' E). Once in the IAMC-CNR laboratory, the specimen was de-frost (overnight) and photographed. Basic counts and absolute measurements were taken, mainly following LANDA *et al*. (1998). Hence, the specimen was dissected and gonads and viscera examined in order to assess sex and macroscopic maturity condition (according to the 5-stage scale in DUARTE *et al*., 2001). The eviscerated specimen was frozen again and stored in –35°C, with a specific collection label of IACM-CNR (code: Aty-Lop-bud-01).

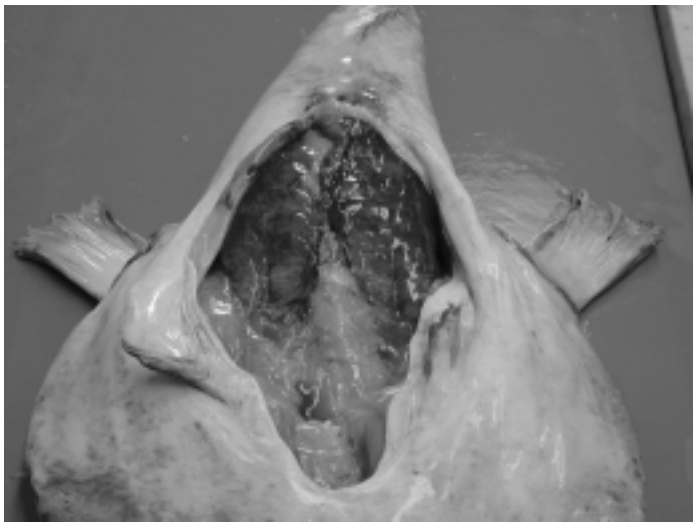
RESULTS

The atypical specimen of black belly anglerfish was a large female, of 642 mm total length and 3326 g whole body weight. The macroscopic body traits and the peritoneum features looked normal with the exception of the pigmentation of the back and of the fins (Figs. 1a/b); orange with diffuse

a



b



Figs. 1a/b — Back and ventral view of the atypical specimen of *Lophius budegassa* (Spinola, 1807), 642 mm total length, trawled in the Strait of Sicily (Mediterranean Sea).

brown spots of several sizes (instead of the typical homogeneously brown reddish with small white and brown spots) the first, and discolored (instead of the usual darkish distal margin) the seconds.

The band-shaped orange-reddish ovaries were in spent condition (stage 5), the gonad weight representing 1.7% of the somatic (eviscerated) body weight. Morphometric and meristic data are presented in Table 1.

Table 1
Measures (absolute in mm or g) and meristic counts of the atypical specimen of Lophius budegassa *(Spinola, 1807), trawled in the Strait of Sicily (Central Mediterranean Sea).*

Total length	642
Standard length	572
Body thickness	257
Interorbital space	45
Horizontal eye diameter	31
Vertical eye diameter	22
Illicium length	112
1st dorsal fin 2nd ray length	58
1st dorsal fin 3rd ray length	47
1st dorsal fin 4th ray length	broken
1st dorsal fin 5th ray length	23
1st dorsal fin 6th ray length	18
Illicium - 6th dorsal fin ray space	198
First - second dorsal fin space	105
2nd dorsal fin 1st ray length	60
2nd dorsal fin base length	125
2nd dorsal fin - caudal origin space	67
Caudal fin base length	27
Maximum caudal fin length	115
Pectoral fin base length	49
Maximum pectoral fin length	77
Pelvic fin base length	20
Maximum pelvic fin length	54
Anal fin base length	101
1st anal fin ray length	56
Anal fin - caudal origin space	54
Total body weight	3326
Somatic body weight	2741
Stomach weight	452
Gonad weight	47
1st dorsal fin rays	VI
2nd dorsal fin rays	IX
Caudal fin rays	IX
Pectoral fin rays	XVIII
Pelvic fin rays	V
Anal fin rays	VIII

According to the MEDITS experimental trawl surveys (1994-2003), which are carried on a yearly basis in the Italian side of the Strait of Sicily (MED-FEAG, 2005), *L. budegassa* shows a wide distribution on the area, with a frequency of occurrence (positive hauls) ranging 5-36% in the outer shelf (51-200 m) and 21-53% in the slope (201-800 m); the corresponding density index (DI) is 2-11 N/km^2 and 3-17 N/km^2, respectively.

Notwithstanding the relatively common occurrence of the species in both commercial and experimental bottom trawl catches, the present finding is the first documented case for the Strait of Sicily of such an atypical black belly anglerfish.

Parasitism instead of genetic alteration caused by bad water/bottom quality has been considered as the most likely reason of such anomalies (LANDA *et al.*, 1998), but the present specimen did not revealed any apparent sign of infection.

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