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Short communication

A NOTE ON CAUDAL FIN ABSENCE IN *Symphodus roissali*, RISSO 1810 (PISCES: LABRIDAE) RECORDED IN THE NORTHERN ADRIATIC

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Summary

On 08th August 2006 an tailless adult of five-spotted wrasse, *Symphodus roissali* (RISSO, 1810), were caught in the Cesarica cove (Northern Adriatic Sea). A possible reasons and causes for such phenomena are argued.

Keywords: Labridae, *Symphodus roissali*, Northern Adriatic, caudal fin absence.

INTRODUCTION

Skeletal anomalies and complete or partial abnormal absence of certain fins have been reported for various fish species. The information on these anomalies is restricted at most to one or a few aberrant individuals accidentally observed in wild populations (Marr, 1945; Babu-Rao, 1975; Alvarez-Leon, 1980; Valente, 1988). In the Adriatic Sea also these findings are not scarce and they are limited to occasionally caught specimens (Morović, 1954; Jardas and Morović, 1973; Jardas and Homen, 1977) without connection to any known cause. Some higher frequency of spinal deformities was reported for red mullet, *Mullus barbatus* but without detailed analysis (Jardas and Morović, 1975), big-scale sand smelt, *Atherina boyeri* (Tutman et al., 2000), and grass goby, *Zosterisessor ophiocephalus* (Dulčić, 2004). Caudal fin absence was observed for several specimens of common sole, *Solea solea* (Dulčić and Soldo, 2005), with discussion on the possible causes for these anomalies. This paper describes the absence of caudal fin in

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five-spotted wrasse *Symphodus roissali* (Risso, 1810) caught in Northern Adriatic Sea.

MATERIAL AND METHODS

On 08th August 2006 one tailless specimen of five-spotted wrasse, *Symphodus roissali* (Risso, 1810), were caught in the Northern Adriatic (Cesarica cove in Velebit channel; 44° 33' 46.12"N; 15°01'16.24"E). Fish were caught by hand line hook from shore at approximately 1.5 meters depth. Substrate at the site was mostly rocky overgrown by algal cover and small fractions of sand in between. Unfortunately, the specimen were not preserved.

RESULTS AND DISCUSSION

The five-spotted wrasse caught was a male, measuring 9.2 cm and 14.1 g. On this specimen an incomplete formation of the tail fin complex were observed (Fig. 1). The entire fins of caudal structure was lacking while the caudal peduncle remains. The wound is entirely healed and grown over with scales. Also, the trunk seems to be slightly more developed then in normal fish.



Figure 1. Specimen of Symphodus roissali lacking caudal fin
Slika 1. Jedinka vrste Symphodus roissali bez repne peraje

Other features of these species, like physical coloration, meristic and morphometric characters were consistent with previous descriptions (Jardas, 1996).

The specimens weight data bounced from the growth curve of *S. roissali* from Adriatic Sea (Matić-Skoko, S., unpublished data). Based on the length reported, the specimen should be 11.7 g weight and about 3 years old. Considering the length–weight relationship given by latter author ($a=0.0109$; $b=3.121$) the expected weight of 11.7 g, a value lower to the observed one, indicates that this specimen has not grown following the previous estimated relationship. It seems that lacking of the caudal fin leads to an increase of trunk muscle and this is a probably reason of increased body weight when compared with individuals of the same age.

In most fishes the caudal fin represents a fundamental design feature responsible for locomotor dynamics functionally important for forward motion and turning, and also represents the most posterior region of the vertebrate axis (Lauder, 2000). A wide range of physical, chemical and biological factors may cause body anomalies of different species in natural and reared conditions (see in Tutman et al., 2000). According to Schäperclaus (1992) there are five major categories of possible causes for fish malformation: hereditary factors, damage during embryonic development, injuries, diseases and damage due to environmental factors. In the present case the probably reason of tail absence is caused by attack of some predator during juvenile stage because of a very good healed tip of caudal peduncle, but without additional data we are not able to support such a hypothesis. A fish which survives injuries face several major problems such as blood loss, overcoming osmotic disturbances, infections, slow healing, avoidance of enemies, hunger and great changes in ability to swim (Gunter and Ward, 1961). Consequently, caudal fin loses by injury often leads to greater development of trunk muscles because the whole body take his function and accommodated for that functional problem by modifying its movement to compensate. So, it has not only survived the loss of the tail, but adapted to it. Similar situation was observed in a individual of golden grey mullet, *Liza aurata* losing its tail probably by the attack of bluefish, *Pomatomus saltator* in Neretva River delta (Tutman, P., pers. observ.). It seems that wounded fishes which survive in nature have broad basal relationships with the environment and when part of this relation is abruptly obliterated the remainder sometimes suffices to maintain life (Gunter and Ward, 1961). Better understanding of that phenomenon would throw some light upon the non-lethal limits of variation in harmful hereditary and morphogenetic processes. In that case, the status of such fish anomalies in Adriatic Sea needs to be evaluated on a continuous and accurate basis.

Sažetak**ZABILJEŠKA O NALAZU RIBE *Symphodus roissali*, RISSO 1810 (PISCES: LABRIDAE) BEZ REPA U SJEVERNOM JADRANU**

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Na području uvale Cesarica u sjevernom Jadranu 8. kolovoza 2006. ulovljen je odrasli primjerak ribe kosirica ili kraška (*Symphodus roissali*, RISSO, 1810) (Pisces: Labridae) bez repa. U radu se raspravlja o mogućim razlozima i posljedicama ovakve pojave.

Ključne riječi: Labridae, *Symphodus roissali*, sjeverni Jadran, nedostatak repne peraje

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