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# ADDITIONAL RECORD OF COMMON BREAM *ABRAMIS BRAMA* (CYPRINIDAE) IN THE ADRIATIC DRAINAGE SYSTEM (NORIN RIVER, CROATIA)

*Jakov DULČIĆ & Pero TUTMAN*
Institute of Oceanography and Fisheries, POB 500, HR-21000 Split, Croatia
E-mail: dulcic@izor.hr

## *ABSTRACT*

*On 14 March 2015 an adult specimen of common bream* Abramis brama *was caught with fish trap in Norin River (right bank tributary of the Neretva River, Adriatic drainage system, near settlement Vid, Croatia). This represents the second record of this species for the Adriatic drainage system in Croatia.*

**Key words:** Cyprinidae, *Abramis brama*, Adriatic drainage system, Croatia

# NUOVE SEGNALAZIONI DELL'ABRAMIDE COMUNE *ABRAMIS BRAMA* (CYPRINIDAE) NEL SISTEMA DI DRENAGGIO ADRIATICO (FIUME NORIN, CROAZIA)

## *SINTESI*

*Il 14 marzo 2015 un esemplare adulto dell'abramide comune (*Abramis brama*) è stato catturato con una nassa nel fiume Norin (affluente della riva destra del fiume Neretva, sistema di drenaggio dell'Adriatico, vicino al villaggio di Vid, in Croazia). Questa cattura rappresenta la seconda segnalazione della specie nel sistema di drenaggio adriatico in Croazia.*

**Parole chiave:** Cyprinidae, *Abramis brama*, sistema di drenaggio dell'Adriatico, Croazia

## INTRODUCTION

The common bream, *Abramis brama* (Linnaeus, 1758) (Cyprinidae), inhabits most European drainages from Adour (France) to Pechora (White Sea basin); Aegean Sea basin, in Lake Volvi and Struma and Maritza drainages (Kottelat & Freyhof, 2007). It is not native to Iberian Peninsula, Adriatic basin, Italy, Scotland, and Scandinavia north of Bergen (Norway) and 67 °N (Finland). It is locally introduced in Ireland, Spain, north-eastern Italy, from Marmara basin (Turkey) and eastward to Aral basin, in Lake Baikal and upper Ob and Yenisei drainages (Kottelat & Freyhof, 2007). In Croatia, this species is found only in the waters of the Black Sea drainage system (Glamuzina *et al*., 2013).

## MATERIAL AND METHODS

On 14 March 2015 an adult specimen (Fig. 1) of common bream was caught with fish trap in Norin River (right bank tributary of the Neretva River, Adriatic drainage system, near settlement Vid, Croatia) (43.081644 °N, 17.629486 °E). This represents the second record of this species for the Adriatic drainage system in Croatia.

## RESULTS AND DISCUSSION

The first record of the common bream for the Adriatic drainage system (Mala Neretva River, wider area of Neretva River estuary, Croatia) was on 17 April 2010 (male, total length = 43.8 cm, weight = 1047 g) (Bartulović *et al*., 2010).

One question could arise after this additional record in the wider area of Neretva River estuary: "Has this species established a population?" Although there is still no evidence of a permanent population in the study area (not enough available reports confirmed on a scientific basis), the capture described here might be an indication of that since some fishermen have signalled the species in some parts of Neretva river delta during 2015 (Dugandžić, *pers. comm*.). The only possible explanation for such record is a not sufficiently controlled introduction (in this case of a non-native species).

The common bream has been introduced to the Neretva River and now represents a potential threat to the natural equilibrium of their community. This species may develop stunted high density populations becoming locally abundant, with potential negative consequences both within and beyond the local fish community due to competition for food resources or hybridization (Bartulović *et al*., 2010). Furthermore, common bream often has a pronounced migratory behaviour and may consequently perform considerable distances to lakes within a river system (Volta *et al*, 2013). Successful non-native species are often characterized by high physiological tolerance and functional characteristics different from those of the members of invaded communities and have been reported to affect the functional diversity of communities with possible strong impacts on food webs and ecosystem functioning (see Bartulović *et al*., 2010). These features make the common bream a potentially effective and highly undesirable invader of southern European waters (see Volta *et al*, 2013).

It is quite clear that non-native species can have significant effects on the composition of entire communities by displacement of local species with similar trophic level, by altering the behaviour or habitat selection of prey, resulting in a significant disturbance of the local communities interactions (Cucherousset & Olden, 2011). However, at this point it is not known to what

***Fig. 1: (Left)*** *Abramis brama* ***caught in Norin River (Croatian coast, Adriatic drainage system); (right) male, with nuptial tubercles on the head. (Photo: B. Markota)***
***Sl. 1: Ploščič (****Abramis brama****), ujet v reki Norin (hrvaška obala, jadransko povodje) (levo); samec, dobro vidni paritveni grebenčki na glavi (desno). (Foto: B. Markota)***

extent the occurrence of the common bream in the Neretva watershed is related to environmental quality and to natural biodiversity. Therefore it is evident that understanding on all aspects of the invasion process, from introduction to the establishment, spread and impacts is still required.

Prevention measures should be taken by the administration to avoid the spreading of this species to other reservoirs and river basins. Eradication of introduced fish is practically impossible in large freshwater ecosystems, so prevention of further introductions and translocations is of primary concern.

**ACKNOWLEDEGEMENT**

We thank Mr. Branko Markota (Vid, Croatia) for providing photos and data on specimen of the common bream.

# NOVI PODATEK O POJAVLJANJU PLOŠČIČA (*ABRAMIS BRAMA,* CYPRINIDAE) V JADRANSKEM POVODJU (REKA NORIN, HRVAŠKA)

*Jakov DULČIĆ & Pero TUTMAN*
Institute of Oceanography and Fisheries, POB 500, HR-21000 Split, Croatia
E-mail: dulcic@izor.hr

*POVZETEK*

*14. marca 2015 je bil v ribiško mrežo ujet odrasel primerek ploščiča (*Abramis brama*) v reki Norin (jadransko povodje, desni pritok reke Neretve pri naselju Vid, Hrvaška). Gre za drugi primer pojavljanja te vrste v jadranskem povodju na Hrvaškem.*

**Ključne besede:** Cyprinidae, *Abramis brama*, jadransko povodje, Hrvaška

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