

## THREATENED FISHES OF THE WORLD: *Cirrhinus reba* (Hamilton 1822) (Cypriniformes: Cyprinidae)

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### ARTICLE INFO

Received: 15 July 2014

Received in revised form: 18 January 2015

Accepted: 20 January 2015

Available online: 21 January 2015

### Keywords:

*Cirrhinus reba*

Reba carp

Vulnerable

Asia

### ABSTRACT

The threatened Reba carp *Cirrhinus reba* is one of the foods high in nutritional value in Asian countries, including Bangladesh, India, Nepal and Pakistan. However, natural populations have been declined due to over-exploitation and various ecological changes in its natural habitats leading to an alarming condition and deserving high conservation importance. This paper recommends actions for the conservation of the remaining isolated population of *C. reba* in Asian countries.

### How to Cite

Hossain, M. Y., Islam, R., Hossain, M. A., Hossen, M. A., Rahman, M. M., Ohtomi, J. (2015): Threatened fishes of the world: *Cirrhinus reba* (Hamilton 1822) (Cypriniformes: Cyprinidae). Croatian Journal of Fisheries, 73, 40-42  
DOI: 10.14798/73.1.786

### COMMON NAME

Raik, Tatkini, Bata, Bhagna in Bangladesh (IUCN Bangladesh, 2000), Raichang in India and Striped carp in Nepal (Froese and Pauly, 2014), Suhnee and Sunee in Pakistan (Narejo, 2006).

### CONSERVATION STATUS

Vulnerable in Bangladesh (IUCN Bangladesh, 2000) and in India (Sarkar et al., 2004; Ahmad et al., 2013).

### IMPORTANCE

*C. reba* (Fig. 1) is a commercially important freshwater fish which is commonly known as Reba carp. This is an important target species for small and large-scale fishers of Bangladesh who use different types of traditional fishing gears such as cast net (*jhaki jal*), square lift net (*tar jal*) and conical trap (*dughair*) (Hossain et al., 2013). It is a good source of protein, calcium and low fatty acid, as well as an ideal dietetic food for human consumption (Afroz and Begum, 2014).



**Fig 1.** *Cirrhinus reba* sample and photo were taken by the author (Md. Yeamin Hossain) from the Ganges River (known as Padma in Bangladesh) on 10 June 2014.

### IDENTIFICATION

D. 10-11(2-3/8); P1. 16-17; P2. 9; A. 8(3/5) (Rahman, 1989).

### DISTRIBUTION

*C. reba* is distributed throughout the Indian sub-continent including Bangladesh (Rahman et al., 2012), India (Talwar and Jhingran, 1991), Nepal (Jha et al., 2006) and Pakistan (Mirza and Alam, 2002).

## ABUNDANCE

Reba carp was abundant in the rivers, streams, canals, reservoirs, lakes, swampland (*beels*, *haors* and *baors*) and ponds in the western and north-western part of Bangladesh (ADB, 1997), but now it is strongly declining in the main streams (IUCN Bangladesh, 2000).

## HABITAT AND ECOLOGY

Reba carp mainly inhabits rivers and clear streams but is also found in tanks, canals, ponds, *beels* and inundated fields (Rahman, 1989; Talwar and Jhingran, 1991). This fish is primarily plankton and detritus feeder, but also feeds on mud, vegetables, crustaceans and insect larvae (Talwar and Jhingran, 1991).

## REPRODUCTION

Size at sexual maturity of male and female *C. reba* were estimated as 11.50 cm total length (TL) and 13.50 cm TL, respectively (Hossain et al., 2013). Spawning season extends from June to August. Fecundity varied from 20722 (150 mm TL) to 211200 (290 mm TL) in ponds, Sindh, Pakistan (Lashari et al., 2007).

## THREATS

Populations of the species from natural water bodies have been declined due to heavy harvest, habitat loss and other ecological changes to their habitat (IUCN Bangladesh, 2000; Sarkar et al., 2004; Ahmad et al., 2013).

## CONSERVATION ACTION

A number of studies on ecology, biology and life history of *C. reba* have been conducted (Rao et al., 1972; Hossain et al., 2013).

## CONSERVATION RECOMMENDATIONS

Studies on the reproductive biology and stock assessment of the fish are required (Hossain, 2014; Hossain and Alam, 2015). Establishment of suitable sanctuaries in selected areas of rivers, streams, canals, reservoirs, lakes and swampland is suggested (Hossain et al., 2008; 2009). Fishing practices (< size at sexual mature fish » 11.50 cm TL for males and 13.50 cm TL for females) during spawning season should be banned strictly (Hossain et al., 2015). The conservation status of *C. reba* should be improved through effective habitat preservation and increasing public awareness and ranching.

## ACKNOWLEDGEMENTS

The authors would like to express their gratitude to the University of Rajshahi (Ref: A-657/5/52/UGC/Agri-2/2013, 12/09/2013) for the financial support of sampling in the Padma River (lower part of the Ganges River), Bangladesh.

## Sažetak

### UGROŽENE VRSTE RIBA U SVIJETU: *Cirrhinus reba* (Hamilton 1822) (Cypriniformes: Cyprinidae)

Ugroženi plavobijeli ciprinid, *Cirrhinus reba*, je kao hrana visokih hranidbenih nutricionističkih vrijednosti u azijskim zemljama, uključujući Bangladeš, Indiju, Nepal i Pakistan. Međutim, prirodne populacije su opale zbog pretjeranog iskorištavanja i raznih ekoloških promjena u svojim prirodnim staništima što dovodi do zabrinjavajućeg stanja i zaslužuje veliku važnosti za očuvanje. U radu se preporučuju akcije za očuvanje preostalih izoliranih populacija *C. reba* u azijskim zemljama.

**Ključne riječi:** *Cirrhinus reba*, plavobijeli ciprinid, osjetljiva vrsta, Azija

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