

# C1.10

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**Submission date:** 24-Oct-2020 03:34PM (UTC+0800)

**Submission ID:** 1425085762

**File name:** 1.10\_Ecology,\_Environment\_Conservation\_EEC\_,\_25\_July\_2019\_1.pdf (918.63K)

**Word count:** 1558

**Character count:** 8403

## Distribution extension and first record of *Lobocheilos falcifer* (Cypriniformes, Cyprinidae) in Central Java Province, Indonesia

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(Received 17 March, 2019; Accepted 30 May, 2019)

### ABSTRACT

*Lobocheilos falcifer* (Valenciennes, 1842) is a native fish of Java which was described in Cisadane River, Ciliung River and Citarum River, with no additional distribution outside of West Java province. In May 2019, *L. falcifer* was observed and photographed in the Wadaslintang Reservoir, Central Java province. The identification of this species confirms its presence in a new freshwater waters, about 380 km east from its type locality. The specimens of *L. falcifer* were characterized as follows: dorsal fin rays 11; anal fin rays 8; pectoral rays 15-16; ventral fin rays 9.

**Key words :** Biogeography, Distribution, Freshwater Fish, Native Fish

### Introduction

*Lobocheilos* (Cuvier and Valenciennes, 1942) is a family of Cyprinidae native from Sumatra (Iqbal *et al.* 2017a), Borneo (Ciccotto and Hui, 2018) and Java (Roberts 1993). One of the native *Lobocheilos* from Java is *Lobocheilos falcifer* (Cuvier and Valenciennes, 1942) (Weber and de Beaufort 1916). There is only a few information about distribution of *L. falcifer* in Java because of this species was rare. *Lobocheilos falcifer* has not been recorded in many its habitats for

a long time, but it was not listed at IUCN Red List.

The last specimen of *L. falcifer* ever studied originated from major rivers in West Java province (Cuvier and Valenciennes, 1842; Weber and de Beaufort, 1916; Kottelat and Hui, 2008). We report new record individual *L. falcifer* in Wadaslintang Reservoir, Central Java province, which extends the distribution from its type locality. For a native freshwater fish in Java, new records are important contributions for species diversity and understanding biogeography, among other biological topics (Hasan *et*

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al., 2019; Oliveira *et al.*, 2018; Cuevas *et al.*, 2018). As reported in this paper, the new record of *L. falcifer* has helped to improve the knowledge of the species as it extends the distribution range.

## Materials and Methods

### The fish sampling and description of the study sites

Specimens of *L. falcifer* were obtained from a Fisherman during a fieldwork carried out on 14-15 May, 2019 in the Wadaslintang Reservoir (7°32'49"S, 109°46'48"E) (Fig. 1). Administratively, the site is located in Wonosobo Regency, Central Java province, Indonesia. The fishing gear used by the fisherman was a medium hook with bottom and bait used were mosses (Stein *et al.* 2012).



Fig. 1. Wadaslintang Reservoir, the fishing site of *L. falcifer*.

### Fish identification

In order to ensure the validity of the species, the fin radius and morphological characters analysis of *L. falcifer* was carried out based on Weber and de Beaufort (1916).

## Results

### First record

Four (4) specimens of *L. falcifer*, total length between 13.5 and 32.2 cm. All of them were used as preserved specimens in 10% formalin solution and deposited at the Hydrobiology Laboratory, Brawijaya University, Malang, Indonesia (HB.Lf.V. 2017).

### Diagnosis

Barbels four, very small. Snout obtusely pointed,

projecting beyond the lower jaw, porous. Origin of dorsal in advance of that of ventrals, opposite to 10th or 11th scale of lateral line, separated by 11-12 scales from occiput. There are three rows of scales between the lateral line and the root of the ventral fin. Dorsal deeply emarginate, anterior dorsal rays more or less prolonged in adult examples. Origin of anal opposite to 22<sup>nd</sup> or 23<sup>rd</sup> scale of lateral line. Anal much lower than dorsal, more or less emarginate. Ventrals opposite to 12th scale of lateral line and to third branched ray of dorsal. Pectorals and ventrals subequal, shorter than head. Caudal deeply forked. All of these characters were found in every specimen collected from the Wadaslintang Reservoir, Central Java province, Indonesia (Fig. 2). In the present study, fin radius variation of specimens was detected (Table 1), which is due to internal and environmental factors (Turan *et al.*, 2004).



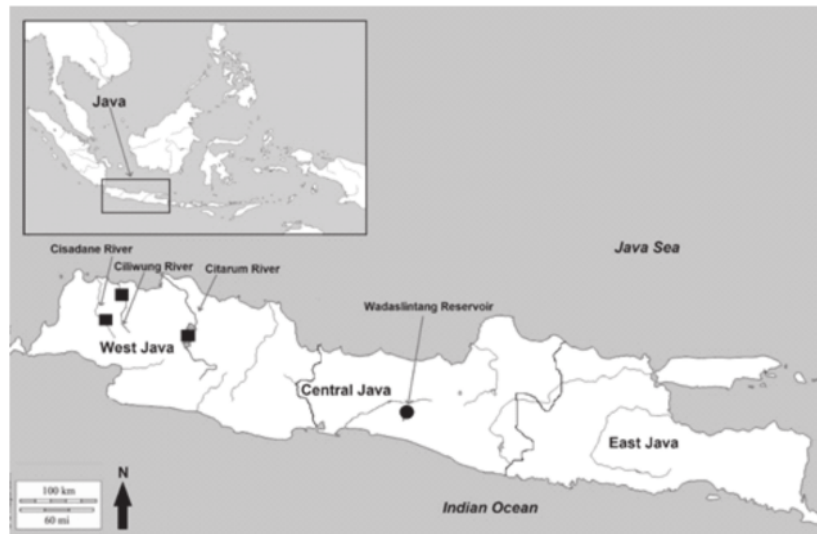
Fig. 2. Specimen of *Lobocheilos falcifer* caught on 15 May 2019 from the Wadaslintang Reservoir, Wonosobo, Central Java province.

## Distribution

West Java: Cisadane River, Ciliwung River and Citarum River (Cuvier and Valenciennes, 1842; Weber and de Beaufort, 1916). Citarum: Cianjur and Purwakarta (Weber and de Beaufort, 1916). Central Java: Serayu River (present this study). The discovery of *L. falcifer* in the Serayu River, Central Java is the first record of this species beyond its type locality (West Java), and represents the easterly extension of previously known distribution about 380 km (Figure 3). There are several studies on freshwater fish in Indonesia which are sometimes limited to single rivers. The case in Sumatra, Tan and Kottelat (2008) have recorded *Lobocheilos ixocheilos* (Kottelat and Tan, 2008) in Batang Hari Basin, then Iqbal *et al.* (2017a) added *L. ixocheilos* also recorded in Musi

**Table 1.** Comparison of fin radius of *L. falcifer* from Serayu River, Central Java with *L. falcifer* from the study of Weber & de Beaufort (1916).

Parameter	Wadaslintang Reservoir, Central Java province	Weber and de Beaufort (1916)
	Min-Max	Min-Max
Dorsal fin rays	11	11-12
Anal fin rays	8	8
Pectoral fin rays	15-16	15-16
Ventral fin rays	9	9



**Fig. 3.** Distribution of *L. falcifer*. Black square are the previous known localities of the species in the major rivers, West Java. Black circle is the recent record from the Wadaslintang Reservoir, Central Java.

Basin where the distance between the location of the first and the second recording was more than 150 km. This species has not been assessed by IUCN Red List, but it would fit the status of Not Evaluated (NE), due to the paucity of information on potential threats, population and distribution (Iqbal *et al* 2017b).

### Conclusion

*Lobocheilos falcifer* is a native freshwater fish that is not only spread in the major rivers, West Java, but this species also exists in the Wadaslintang, Central Java which extends the distribution about 380 km from its type locality. The existence of *L. falcifer* in a remote area added to the data on the distribution of freshwater fish in Indonesia.

### Acknowledgements

The authors would like to thank local fisherman, Mr. Bayu Purnawirawan, Wonosobo Regency, Central Java and Indonesian Ministry of Finance for financial supporting to Veryl Hasan through research program no. 20160221035555.

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