

DANIO FRASERI HORA AND MUKERJI (PISCES: CYPRINIDAE): A NEW REPORT TO KERALA AND SOUTHERN WESTERN GHATS

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Abstract

While conducting surveys for potential ornamental fishes in the fresh water bodies of the river Periyar, three specimens of *Danio fraseri* Hora and Mukerji, were collected from a stream joining to the river Periyar, at Desom, near Alwaye on 6 October 2001. It is the only species so far known under the genus *Danio* with a hypertrophied lower lip forming a loose flap along the lower jaw. This is a new locality record for Kerala and southern Western Ghats.

Keywords

Danio fraseri, new locality record, Periyar, Cochin, Kerala and southern Western Ghats

Abbreviations

A - Anal fin rays (2 to 3 unbranched rays and 16 branched rays)
C - Caudal fin rays- 19
D - Dorsal fin rays (2 unbranched rays and 13 branched rays)
Ll - Lateral line scales: 36-38.
Ll/D - Scales in the lateral line to dorsal fin base: 8
Ll/V - Scales in the lateral line to ventral fin base: 1½.
L tr. - Lateral transverse scales: 9 ½ to 10½;
P - Pectoral fin rays (1 unbranched rays and 11 to 13 branched rays)
V - Ventral fin rays (1 unbranched rays and 7 branched rays)

Introduction

During the course of a survey on potential ornamental fishes in the fresh water bodies of Periyar, in Ernakulam District, Kerala, specimens of *Danio* sp were collected along with other fishes. The fishes were identified as *Danio fraseri* Hora and Mukerji

and confirmed by the Zoological Survey of India. A review of the literature showed the distribution of *Danio fraseri* in Deolali, Nasik District, Maharashtra. Hora and Mukerji (1935); Fraser (1942); Barman (1983, 1991); Talwar and Jhingran (1991); Singh and Yazdani (1993); Jayaram (1981 and 1999).

Reports of Barman (1991) and Singh and Yazdani (1993) showed the presence of *D. fraseri* in the Nasik District of Maharashtra, even recently. But, its occurrence extending to southern Western Ghats or to Kerala has not been reported so far.

Materials and Methods

Danio specimens measuring 53mm standard length (SL) were collected by using scoop net from a fast flowing wide stream in Madathumoola, joining to the River Periyar, at Desom, near Alwaye, Cochin, in Kerala State on 6 October 2001. Water in the stream was clear with mud, sand and boulders in the bottom, with a pH of 7.2, temperature 27.2°C and salinity zero. There were plants like *Echornia*, *Pistia* and Red Cabamba. Fishes were fixed in 10% formalin for identification. Measurements were taken to the nearest 0.1mm by using a dial calipers. Data are presented as percentages. For the confirmation of the identification, fishes were sent to the Zoological Survey of India, Chennai.

***Danio fraseri* Hora and Mukerji**

Systematic position

Super Order - Ostariophysa
Order - Cypriniformes
Family - Cyprinidae
Sub family - Rasborinae

Distribution

India: Nasik District, Bombay, Maharashtra; Alwaye, Ernakulam District, Kerala.

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Diagnostic features

D ii / 13; P i / 11- 12; V i / 7; A ii-iii / 16; C 19. Ll - 36-38; L tr. 9 ½ - 10½; Ll / D: 8 & Ll / V: 1½. Body elongate, its depth 30.2% of Standard Length (SL) and laterally compressed. Head small, its length 28.3%, depth 24.5 % of SL. Mouth small, obliquely directed upwards; lower lip hypertrophied forming a loose flap along lower jaw, the upper lip normal. This specific character separates this fish from other *Danio* species. Snout 26.7 % of head length (HL); eyes large and 33.3 % of HL. Barbels two pairs, rostral pair longer and extends up to the maxillaries, the maxillaries small and stump like. Fins hyaline. Predorsal length 54.7, prepectoral length 30.2, preventral length 69.8 and preanal length 62.2% of SL. Scales large with bluish black dots. Lateral line complete with 38 scales; lateral transverse rows of scales 9½ to 10½; lateral line to dorsal 8; lateral line to pelvic 1½ and lateral line to anal 1½ to 2. Pre dorsal scales 16.

Colour: In life - back of the body brilliant blue and belly silvery-white. Three blue longitudinal lines alternating with golden yellow lines extend along the whole length of the body. The middle one is the longest. It is deeply coloured in the caudal peduncle. The colour extends up to the tip of the caudal fin rays. The yellow lines are broken down into small loops and dots in the anterior region. A dark spot is present at the superior margin of the gill opening. Scales are with shining bluish-black dots.

Remarks

Comparative analyses of features of *Danio fraseri* with other *Danios* like *Danio malabaricus* and *Danio aequipinnatus* showed similarity in colour and appearance. They all live in fast flowing water bodies in groups in different areas, but we could not collect more than one species from the same locality.

Danio fraseri differs from them in having the hypertrophied lower jaw, longer rostral barbels (rudimentary in *Danio malabaricus* and *Danio aequipinnatus*); small and stump like maxillary barbels (vestigial in *Danio malabaricus* and *Danio aequipinnatus*); presence of tubercles on snout and in 38 lateral line scales.

Specimens of *Danio fraseri* collected from Periyar showed differences from the specimens reported by Barman (1991) in having head length (HL) equal to fork length (FL); narrower body and the lateral transverse scales.

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Figure 1. *Danio fraseri* Hora and Mukerji