

SYSTEMATIC POSITION OF *LABEO DEVDEVI* HORA WITH A DESCRIPTION
OF THE SPECIES (PISCES : CYPRINIFORMES)

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ABSTRACT

A full description of *Labeo devdevi* Hora is given in this paper with illustrations of the juvenile and adult forms.

INTRODUCTION

Mukerji (1934) reporting upon the fish collections made by Lt. Col. R. W. Burton from the tributary streams of the Mali Hka river, Myitkyina district, Burma stated that *Labeo dyocheilus* (McClelland) is a very variable species and that it may be subdivided into three geographical groups based on their distribution. Besides the Burmese material, Mukerji also examined three specimens labelled as *Labeo dyocheilus* already present in the Z. S. I. Two out of these three examples were purchased from Day collected from Hardwar (ZSI No. 1522) and Simla (ZSI No. 1533) respectively. The third example (ZSI No. F 7932/1) is a skin of a medium sized specimen procured by Dr. S. W. Kemp from Yembung, Abor hills, Arunachal Pradesh. Mukerji thought that Day's two specimens did not represent *Labeo dyocheilus* (*sens. str.*) but considered the Abor example only as the typical form. He further stated that the Western Himalayan form of the species is distinct from the Eastern Himalayan one. He gave a good description of the *forma typica* of *L. dyocheilus* based on the single specimen of Kemp referred to above and also on additional material collected by

Shaw and Shebbeare from Siliguri, Eastern Himalaya. He made only a brief note of the Western Himalayan and Burmese and Thai forms.

Hora (1936) while dealing with the fishes of the Naga Hills re-examined all the above cited material reported by Mukerji and stated that the two specimens of Day (ZSI Nos. 1522 and 1533) do represent *L. dyocheilus* and the single specimen of Kemp from Abor hills and the examples collected by Shaw and Shebbeare from Siliguri, Darjeeling Himalaya are referable to *Labeo dero* (Hamilton). He also considered the five examples of Burton's collections from Mali Hka, Burma initially as *L. dero* and not as *L. dyocheilus* as reported by Mukerji. Later Hora separated the Burmese and Thai forms which differ from the typical *L. dero* in several characters as a new species *L. devdevi*. However, he did not give any description or figures of this fish.

The specific identity of the different material is clarified in Table 1.

AFFINITIES OF *L. DEVDEVI* HORA

Before a description of *L. devdevi* is attempt-

Table 1

Sl. No.	Material	No. of exs.	Identification by Mokerji 1934	Identification by Hora, 1936	Present position	Remarks
1.	ZSI No. 1522, Hardwar Purchased F. Day.	One	Not referable to <i>L. dyocheilus</i>	<i>L. dyocheilus</i>	<i>L. dyocheilus</i>	
2.	ZSI No. 1533, Simla, Purchased F. day.	One	Not referable to <i>L. dyocheilus</i>	<i>L. dyocheilus</i>	<i>L. dyocheilus</i>	
3.	ZSI No. F 7932/1. Yembung (1100 ft.) Abor hills, Arunachal Pradesh, S. W. Kemp coll.	One	<i>L. dyocheilus</i>	<i>L. dero</i>	<i>L. dero</i>	
4.	ZSI Nos, F 11406/1 and F 11409/1, rivers near Siliguri, Darjeeling Himalaya, Shaw and Shebbeare coll.	Six	<i>L. dyocheilus</i>	<i>L. dero</i>	<i>L. dero</i>	
5.	ZSI No. F 11457/1, Phungiu Hka, tributary of Mali Hka river system Burma, R.W. Burton coll.	Three	<i>L. dyocheilus</i>	<i>L. devdevi</i>	<i>L. devdevi</i>	
6.	ZSI No. F 11458/1, Sinan Hka, tributary of Mali Hka river system Burma, R. W. Burton coll.	Two	<i>L. dyocheilus</i>	<i>L. devdevi</i>		Not readily available
7.	A stream at Meh Sord on Burmese boarder, N. W. Tuailand, H. M. Smith coll.	One	<i>L. dyocheilus</i>	<i>L. devdevi</i>		Not readily available.
8.	ZSI No. F 12456/1, Namya river at Kongan Thana, Burma. S. J. Duncan coll.	Four				Hora (1937) referred this material to <i>L. devdevi</i> ; material not readily available.
9.	ZSI No. F 13458/1, Dalu, Upper Burma, Vernay-Hopwood Upper Chindwin Expedition coll.	Four			<i>L. devdevi</i>	Hora & Misra (1941) referred this material to <i>L. devdevi</i> .

ted it seems necessary to discuss the precise systematic position of *L. dyocheilus* and *L. dero* with which *L. devdevi* is undoubtedly related.

McClelland (1839) described *L. dyocheilus* from "clear active currents of the Brahmaputra from Middle Assam." He named the fish as "*dyocheilus*" because of the "pendulous

structure of the snout descending so as to form the appearance of second lip". Hamilton (1822) described *L. dero* from Brahmaputra river in Assam, where it is found at the sides of torrential streams in shallow waters. Hora (1936) studied in detail the two species and gave a number of characters to differentiate them and opined that probably on account of the differences in the habitats of these two

species, *L. dero* is well represented in Museum collections unlike *L. dyocheilus*.⁴

Besides their habitat, *L. dero* and *L. dyocheilus* are principally differentiated by the nature of the dorsal surface of the free portion of the lower lip and the number of scales below the lateral line to pelvic fin base.

L. devdevi is more closely related to *L. dero* than to *L. dyocheilus*. It is separable from *L. dero* by its shorter head, bluntly rounded snout with the depression across it less pronounced and number of scales (Table 2).

DESCRIPTION

Labeo devdevi Hora

(Fig. 1)

Labeo devdevi Hora, 1936, *Rec. Indian Mus.*, 38(3) : 323, 324 (type locality, Mali Hka river, Burma, type specimens not designated originally).— Hora, 1937, *Rec. Indian Mus.*, 39. (4) : 333 (Namyia river, Burma).— Hora & Misra, 1941, *J. Bombay nat. Hist. Soc.*, 42 (3) : 479 (Dalu, Burma).

Specimens studied : Seven examples in total as below—

ZSI F 11457/1, three exs. (one juvenile specimen very much damaged, hence examination not possible), Phungin Hka, tributary of Mali Hka river system, Burma, *R. W. Burton* coll., 1930.

ZSI F 13458/1, four exs., Dalu, Upper Burma, *Vernay-Hopwood Upper Chindwin Expedition* coll., 1935.*

Besides these, *L. devdevi* is also known by the following six examples which are not readily traceable.

ZSI F 114581/, two exs., Sinan Hka, tributary of Mali Hka river system, Burma, *R. W. Burton* coll, 1930.

ZSI F 12456/1, four exs., Namyia river at Kongan Thana, a Kabo or Shan village, Upper Chindwin Drainage, Burma, *S. J. Duncan* coll., 1937.

D. iii/11 ; P. i/15 ; V. 9 ; A. iii/5 ; C. 19 ; LL. 40-41.

Table 2. Characters differentiating *L. devdevi* Hora from its allied species.

S. No.	Characters	<i>L. devdevi</i>	<i>L. dero</i>	<i>L. dyocheilus</i>
1.	Width of gape of mouth	3.85 in head length.	3.28 in head length.	2.78 in head length.
2.	Eyes	3.86 in head length, 1.28 in inter-orbital space width and 1.19 in snout length.	4.71 in head length, 1.57 in inter-orbital space width and 1.72 in snout length.	4.93 in head length, 1.9 in inter-orbital space width and 2.29 in snout length.
3.	Snout	3.36 in head length, with a slight depression and without lateral lobe.	2.8 in head length, with a groove and without lateral lobe.	2.15 in head length, usually without a groove and with distinct lateral lobes.
4.	Tubercles on snout	Inconspicuous and very few in number.	Spiny tubercles, when present, relatively few in number.	Spiny tubercles prominently present, on dorsal lateral and ventral surface of snout.
5.	Scales round caudal peduncle.	19 to 21	22 to 24	21 to 23
6.	Rows of scales below lateral line to pelvic fin base.	5½	7 to 8	5 to 6

* Hora & Misra (1941, p. 479) have stated that 22 examples were collected in this lot. Unfortunately only four are available.

Head moderately large, compressed. Snout bluntly rounded anteriorly, with a slight depression across. Mouth inferior, large and crescentic. Lips thick, fleshy, continuous at the angle of mouth, lower lip papillated, labial fold discontinuous. Lower jaw with a cartilaginous covering on inner sides. Eyes large, situated in anterior half of head, visible from below ventral surface. Nostrils wide, prominent, situated nearer eye than to tip of snout. One pair of small maxillary barbels present at angle of mouth.

fin and pelvic fins do not reach anal fin. Caudal fin deeply forked.

Scales moderate sized, 13 in a transverse series, $7\frac{1}{2}$ rows between base of dorsal fin and lateral line and $5\frac{1}{2}$ rows between lateral line and base of pelvic fin, 18 pre-dorsal scales and 19-21 round the caudal peduncle.

Colour :

In spirit preserved specimens the colour is dark brown above and pale below. A large

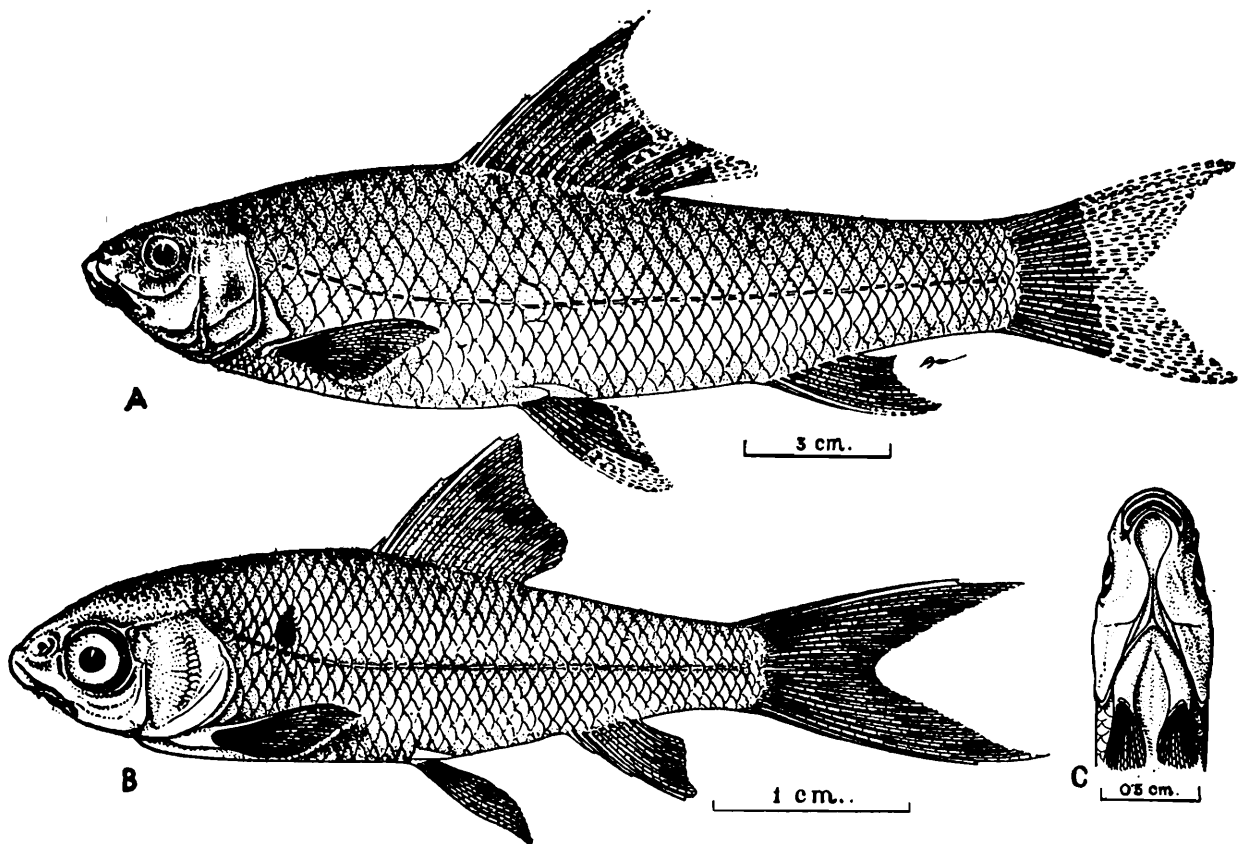


Fig. 1. *Labeo devdevi* Hora, A—Lateral view of the adult (ZSI F 1442, Standard length : 187.0 mm), B—Lateral view of the juvenile (ZSI F 13458/1, Standard length : 37.0 mm), C—Ventral view of the head region of the juvenile.

Dorsal fin inserted just after tip of pectoral fin, nearer tip of snout than caudal fin base (clearly observed in adults) with the outer margin concave. Pectoral, pelvic and anal fins long ; pectoral fin does not reach pelvic

faint black blotch present above mid pectoral fin and just above the lateral line on the sixth and seventh scales. Mukerji mentioned the presence of a blackish pre-caudal blotch which is now not discernible in any of the

specimens examined. The central caudal fin-rays are blackish. The Thailand examples are reported to have a fine series of dusky longitudinal lines on each scale and a faint reddish dot in centre.

According to S. J. Duncan who collected four young specimens from Namya river at Kongan Thana, Burma (ZSI, No. F 12456/1) the colouration of the species is as follows :

“Dark green dorsal surface and white ventral. The scales are small and have a coppery tint. Opercular region with a golden tint. Fins pinkish” (Hora, 1937).

Body proportions *

Length of head 3.28–4.68 (M=3.75), body depth 3.42–4.23 (M=3.82), pre-dorsal length 1.94–2.34 (M=2.11), post-dorsal length 1.55–1.81 (M=1.69), pre-pelvic length 1.75–2.13 (M=1.89), all in standard length. Diameter of eye 3.00–5.33 (M=3.86), head width 1.65–2.1 (M=1.94), snout length 2.85–3.8 (M=3.36), width of gape of mouth 2.68–4.75 (M=3.85), post-orbital length 2.0–2.33 (M=2.17), inter-orbital space width 2.85–3.16 (M=3.04), dorsal fin base 1.02–1.61 (M=1.39), length of caudal peduncle 1.13–1.69 (M=1.42), least depth of caudal peduncle 1.7–3.8 (M=2.73), all in head length. Diameter of eye 1.0–1.86 (M=1.28) in inter-orbital space width and 0.83–1.86 (M=1.19) in snout length. Least depth of caudal peduncle 1.49–2.4 (M=1.88) in its length.

Frequency distribution of fin-rays in specimens of *L. devdevi* examined :

<i>Dorsal fin rays</i>		<i>Pectoral fin rays</i>
iii/11	iii/12	i/15
5	1	6

<i>Pelvic fin rays</i>	<i>Anal fin rays</i>	<i>Caudal fin rays</i>
9	iii/5	19
6	6	6

Distribution : Burma : Phungin Hka and Sinan Hka, tributaries of Mali Hka river system, Namya river and Dalu.

Thailand : Stream at Meh Sord, N. W. Thailand.

Lectotype designation : Hora (1936) did not designate any type specimen for *L. devdevi*. The five examples, collected by R. W. Burton which formed the basis of his discussion, becomes *ipso facto* the original type material (syntypes). Of these five, three are at present available in the National Zoological Collection and one 187.0 mm in standard length from this lot is hereby designated as the lectotype.

Lectotype : ZSI No. FF 1442 from Phungin Hka, tributary of Mali Hka river system, Burma, collected by R. W. Burton, 1930.

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* Data is only of six specimens.

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