

CONTRIBUTIONS TO THE STUDY OF BAGRID  
FISHES. 8 SYSTEMATIC POSITION OF HAMILTON'S  
*PIMELODUS RAMA* AND *PIMELODUS*  
*CHANDRAMARA* (SILUROIDEA:  
BAGRIDAE)

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(With 1 Text-figure and 1 Plate)

I—INTRODUCTION

Hamilton (1822) described *Pimelodus rama* from the Brahmaputra river in Assam, and *Pimelodus chandramara* from the Atrai river in Bengal. He considered the two species as related and separated them by the following characters.—

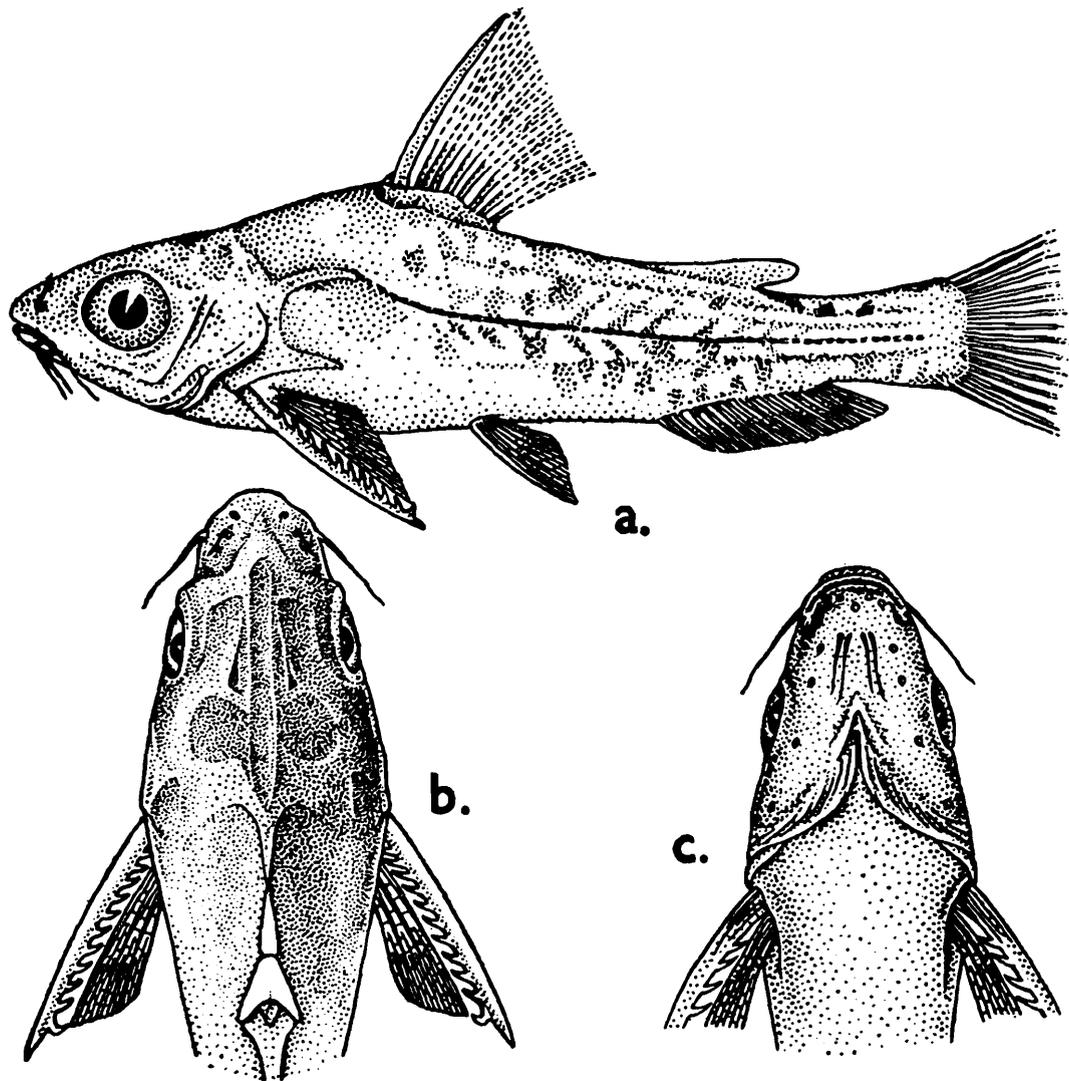
<i>P. rama</i>	<i>P. chandramara</i>
Six barbels.	Two barbels.
Diaphnous, yellowish without dots. Black spot on nape, divided into four lobes.	Diaphnous, with clusters of black dots; golden stripe along lateral line.

Swainson (1839) considered both these species under his genus *Silonia* which course Valenciennes (1840) also adopted. Blyth (1860), after examining Hamilton's manuscript drawings in the Asiatic Society at Calcutta, pointed out for the first time that the unpublished figure of *chandramara* had six barbels distinctly shown, contrary to Hamilton's statement that the species had only two barbels. He considered the species as synonymous with each other and assigned them to his genus *Batasio*. Bleeker (1862) provisionally proposed the genus *Rama* for *P. rama*. Günther (1864) however, considering *P. rama* and *P. chandramara* as different, assigned the former species to *Rita* Bleeker without comment, and the latter to *Mystus* Scopoli with a query. Day (1877) identifying a specimen from the Brahmaputra river as *P. rama*, assigned it to the genus *Leiocassis* Bleeker, but Regan (1913) in his revision of *Leiocassis* doubted the assignment. Shaw and Shebbeare (1938) like Day, obtained certain specimens from the Mahanadi river near Siliguri and referred them to *Leiocassis rama*. Hora and Law (1941) considered *chandramara* and *rama* as synonymous and placed them provisionally under *Rama*. They examined Day's

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*Rec. zool. Surv. India*, 65 (1-4) [1967] 1971.

specimen, also present in the Zoological Survey of India (ZSI. 1111), from the Brahmaputra river and correctly reassigned it to *Batasio* to which genus Shaw and Shebbeare's material should also be referred to.

Recently Rossel (1964) in his report on the collection of fishes made by the German-Indian expedition 1955/58 recorded six specimens, 29-33 mm. in standard length, from Mikir Hills, Kaziranga, Assam, as belonging to *Rama rama*. Through the kind courtesy of Dr. W. Ladiges of Zool. Staatinstitut and Zool. Museum, Hamburg, I have examined four specimens of this lot. Rossel seems to have missed the minute, heavily pigmented nasal barbels. These specimens are referable to *Batasio tengana* (Hamilton) (Text-fig. 1).



TEXT-FIG. 1. Rossel's specimen of "*Rama rama*", misidentification for *Batasio tengana* (Hamilton). a. Lateral view; b. Dorsal view of head and body; c. Ventral view of head and body.

It will be seen that considerable confusion prevails regarding the generic status of these two species. This paper discusses this problem and indicates the probable systematic status of the two species.

## II — SYSTEMATIC POSITION

It may be stated at the outset that *P. rama* and *P. chandramara* are not synonymous with each other. An examination of the illustrations

(Plate I) and descriptions of the two species shows the following differences.—

<i>P. rama</i>	<i>P. chandramara</i>
Dorsal profile deeply arched. Rayed dorsal fin inserted far in advance of the origin of pelvic fin.	Dorsal profile gently elevated. Rayed dorsal fin inserted just above origin of pelvic fin.
Anal fin with about 12 rays.	Anal fin with about 14 rays.
Pectoral fin with about six rays. Cleithral process short.	Pectoral fin with about 9 rays. Cleithral process long.
Upper lip overhanging the snout.	Upper lip not overhanging the snout.
Dorsal spine serrated; fin with seven rays.	Dorsal spine smooth; fin with six rays.
A black spot on the nape and shoulder. A black longitudinal stripe along the lateral line.	No black spots; body speckled with dots.

In both the species six barbels are clearly seen in the illustrations of Hamilton. By virtue of their possessing only three pairs of barbels these species cannot be assigned to *Mystus* Scopoli, *Leiocassis* Bleeker, or *Batasio* Blyth which all possess four pairs of barbels. They cannot be referred to *Silonia* Swainson also, because of the short anal fin.

However, the number of barbels has been controversial and it is quite likely that there may be more or less number of barbels, especially since Hamilton's descriptions and illustrations of these two species have been very defective and inadequate. Thus, in the description of *chandramara* the count of anal fin rays is stated as 17, whereas in the illustration it is only 12.

The available data and the differences as could be ascertained from the illustrations and descriptions indicate that *rama* and *chandramara* are distinct species. Their generic status is, however, vague. It is pertinent to point out that excepting Hamilton, no ichthyologist ever seems to have seen a specimen of these species, and no "type specimens" are also known to exist in any of the world museums.

In the light of the above discussion and pending discovery of specimens of these species, the two are kept provisionally under the genus *Rama*. The generic status of *Rama* can be best determined only by actual examination of these interesting fishes. The following synonymies will indicate the generic change detailed in the foregoing paragraphs. The description is based on the characters known so far, from Hamilton's descriptions and illustrations.

### III—DESCRIPTION

#### **Rama rama** (Hamilton)

1822. *Pimelodus rama* Hamilton, *An account of the fishes found in the River Ganges and its branches*, pp. 176, 377, pl. iii, fig. 55 (type locality, River Brahmaputra, Assam).

1839. *Silonia diaphnia* : Swainson, *The natural history and classification of fishes* ..... , 2. p. 305.  
 1860. *Batasio rama* : Blyth, *J. Asiat. Soc. Beng.*, 29. p. 149.  
 1864. *Pimelodus rama* : Günther, *Catalogue of the Fishes in the British Museum*, 5. p. 92.  
 1877. *Leiocassis rama* : Day, *The Fishes of India*, p. 451, pl. cxv, fig. 2 (River Brahmaputra, Assam ; misidentification).  
 1889. *Leiocassis rama* : Day, *The Fauna of British India including Ceylon and Burma*, Fishes, 1, p. 163, fig. 65 (Assam and East Bengal).  
 1941. ? *Rama rama* : Hora & Law, *Rec. Indian Mus.*, 43, p. 69 (Assam).  
 1948. ? *Rama rama* : Hora, *Rec. Indian Mus.*, 46, p. 69 (North Bihar and Assam).  
 1964. *Rama rama* : Rossel, *Mitt. Hamburg. Zool. Mus. Inst.*, Hamburg, 61, p. 151 (misidentified; Mikir-Hills, Kaziranga, Assam).

*Specimen studied.*—No specimen seen by me.

*Description.*—Body short and compressed. Dorsal profile deeply arched. Head large and slightly depressed. Snout sharply conical or obtusely pointed, but not produced. Jaws subequal and narrow. Villiform teeth on premaxillaries, prevomer and mandibular in bands. Eyes superior, small and in anterior part of head. Orbital rims fused with eye. Supraoccipital covered with skin and with a backward extending process about 2 times longer than wide at its base and extending to the predorsal plate. Three pairs of barbels: one maxillary, one mandibular; one nasal. Maxillary barbels reach eye; others shorter. Gill membranes free from each other and also from the isthmus.

Origin of rayed dorsal fin above half pectoral fin; with seven rays and a spine. Longest ray of dorsal fin not extending to adipose dorsal fin when depressed. Dorsal spine serrated. Adipose dorsal fin short, low, smooth and posteriorly free. Pectoral fins horizontally inserted and with a spine. Pectoral spine with 12 strong, antrorse teeth over posterior margin. Cleithral processes less than half pectoral spine length. Pelvic fins inserted on ventral surface, far away from below the last ray of dorsal fin; with six rays. Pelvic fin reaches anal fin origin. Longest anal ray not reaching caudal fin; anal fin with about 12 rays. Caudal fin deeply emarginate. Lateral line simple, arched above pectoral fin.

*COLOUR.*—Pale yellow above and on sides, dull beneath. A large black spot divided into four lobes may be present on the nape; another similar, but undivided spot on the shoulder.

*Distribution.*—Assam, North Bihar, river Brahmaputra: INDIA. BANGLADESH.

### **Rama chandramara (Hamilton)**

1822. *Pimelodus chandramara* Hamilton, *An account of the fishes of the River Ganges and its tributaries*, pp. 162, 375 (type locality, River Atrai, W. Bengal and Bangladesh).  
 1840. ? *Silundia chandramara* : Valenciennes, *Histoire Naturelle des Poissons*, 15, p. 49 (River Atrai).  
 1860. *Batasio chandramara* : Blyth, *J. Asiat. Soc. Beng.*, 29, p. 149.  
 1864. ? *Macrones chandramara* : Günther, *Catalogue of the Fishes in the British Museum*, 5, p. 75.  
 1877. *Pimelodus chandramara* : Day, *The Fishes of India*, p. 451 (as a synonym of *Leiocassis rama*).

1941. *Pimelodus chandramara* : Hora & Law, *Rec. Indian Mus.*, **43**, p. 32 (as a synonym of *Rama rama*).  
1948. *Pimelodus chandramara* : Hora, *Rec. Indian Mus.*, **46**, p. 68.

*Specimen studied*.—No specimen seen by me.

*Description*.—Body short and compressed. Dorsal profile gently elevated. Head large and depressed. Snout rounded and not produced. Jaws subequal. Villiform teeth on premaxillaries, and mandibular in bands. Eyes large and protuberant and in anterior part of head. Orbital rims fused with eye. Supraoccipital covered with skin or not covered and with a backward extending process; no interneural shield. Three pairs of barbels: one maxillary, one mandibular and one nasal. Gill membranes free from each other along postero-lateral borders, but completely free from isthmus.

Origin of rayed dorsal fin above end of pectoral fin; with six rays and a spine. Adipose dorsal fin short, low, smooth and with the posterior margin free. Longest ray of dorsal fin not extending to adipose dorsal when depressed. Dorsal spine smooth. Pectoral fins horizontally inserted and with a spine. Pectoral spine with about 6 to 8 antrorse teeth over posterior margin. Cleithral processes half pectoral spine length. Pelvic fins inserted on ventral surface, below the last ray of dorsal fin. Pelvic fins not reaching anal fin origin. Longest anal ray not reaching caudal fin; anal fin with about 14 rays. Caudal fin deeply emarginate. Lateral line simple.

*Colour*.—According to Hamilton, diaphnous all over, with black dots on sides. A golden stripe on either side of lateral line.

*Distribution*.—River Kosi, Malda, river Mahananda, Purnea: INDIA. River Atrai, Dinajpur, Rangpur: BANGLADESH.

#### IV — ACKNOWLEDGEMENTS

I am thankful to Dr. W Ladiges, Zool. Staatinstitut und Zool. Museum, Hamburg for readily lending me the material of "*Rama rama*" and to the Director, Zoological Survey of India for his kind permission to borrow the material.

#### V — SUMMARY

The systematic position of two species of Hamilton, *Pimelodus rama* and *Pimelodus chandramara*, is discussed. It is pointed out that these two species are rare in that no ichthyologist except Hamilton seems to have seen specimens of these species. The probable status of these species in the family Bagridae is elucidated. A brief description based on published illustrations and data is reconstructed, to facilitate easy identification for future field collectors.

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