

# A small collection of fresh-water fishes from Kalimantan, Borneo, with descriptions of one new genus and three new species of Cyprinidae

by

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With 5 figures

## ABSTRACT

A list of fresh-water fishes recently collected from the Mentaya drainage, Kalimantan Tengah, and from the area of Banjarmasin, Kalimantan Selatan, Indonesian Borneo, is presented. A new species of *Barbus* and a new species of *Osteochilus* are described; a new genus and species belonging to the cheline group and characterized by numerous gill-rakers, pharyngeal bones of peculiar shape and an incomplete lateral line is described. One specimen of a possibly new species of *Parluciosoma* and one probably representing a new genus in the bariliine group are described without formal naming. *Rasbora taeniata* and *R. bankanensis* are reported for the first time from Borneo. *Eirmotus octozona* and *Pelteobagrus ornatus* are also recorded for the first time; they have been previously known respectively from Central Thailand and the Malayan Peninsula.

## INTRODUCTION

The fishes listed here were collected in March 1978 by Mrs. E. Korthaus, Mr. A. Hanrieder and Dr. and Mrs. W. Foersch, in March 1979 by Mrs. Korthaus and in June-July 1979 by Mr. Hanrieder in a very poorly known part of Indonesian Borneo: the Mentaya Drainage in the area of Sampit, Kalimantan Tengah. They also collected some specimens in the montanous area North East of Banjarmasin, Kalimantan

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Selatan. Through Mrs. Korthaus, we later received a small collection made by an Indonesian aquarium fish exporter, Mr. F. Hudoro.

The fishes of the family Belontiidae have already been studied and described by Dr. J. VIERKE (1979a, b, c, d) who reported *Betta anabatooides* (Bleeker, 1850), *B. taeniata* Regan, 1909, *B. foerschi* Vierke, 1979, *Parosphronemus parvulus* Vierke, 1979 and *Sphaerichthys acrostoma* Vierke 1979 from the Mentaya drainage. BREMBACH (1978) described *Hemirhamphodon chrysopunctatus* from the same collection.

The biotopes have previously been described by the collectors (FOERSCH 1979a, b, c; FOERSCH & KORTHAUS 1979; KORTHAUS 1978a, b, 1979a, b, c).

### ABBREVIATIONS USED

|           |                                                        |
|-----------|--------------------------------------------------------|
| BM (NH)   | British Museum (Natural History), London               |
| CMK       | Author's collection                                    |
| h. l.     | head length                                            |
| l. l.     | scales along course of lateral line                    |
| l. tr.    | number of longitudinal rows of scales under dorsal fin |
| MHNG      | Muséum d'Histoire naturelle, Geneva                    |
| MNHN      | Muséum National d'Histoire naturelle, Paris            |
| RMNH      | Rijksmuseum van Natuurlijke Historie, Leiden           |
| s. l.     | standard length                                        |
| st. d.    | standard deviation                                     |
| USNM      | National Museum of Natural History, Washington         |
| $\bar{x}$ | mean value                                             |
| ZMH       | Zoologisches Museum der Universität, Hamburg           |

### SYSTEMATIC ACCOUNT

#### FISHES COLLECTED IN THE MENTAYA DRAINAGE

The specimens listed have been collected in a flooded forest in a still un-mapped area approximately 50 to 100 km North of Sampit, Kalimantan Tengah (Central Borneo), Indonesia.

#### CYPRINIDAE

##### *Chela* (Malayochela) cf. *maassi* (Weber & de Beaufort, 1912)

MHNG 2057.97, 1 specimen, Hanrieder, June-July 1979.

The single specimen at hand is too poorly preserved to make a definite identification. The presence of two rows of teeth on the pharyngeal bones allows us to place it in the subgenus *Malayochela* Banareescu, 1968. *Chela maassi* has since been recorded once from Borneo (BANARESCU 1968).

**Pectenocypris** gen. nov.

Type species: *Pectenocypris korthausae* spec. nov.

Generic diagnosis: The new genus differs from all other cyprinids in the morphology of the branchial arch. The gill-rakers number approximately 75 on the ceratobranchial and approximately 20 on the epibranchial. The pharyngeal bone is thin and excavated, with a forked postero-lateral process. The teeth number three and are in a single row. Each tooth is stout with an expanded occlusal surface. The proximal tooth bears three small denticles and the distal one a single denticle (fig. 1a-c). The ethmoid bloc is depressed and the kinethmoid is rod-shaped. The snout is long and the mouth upturned. There is no pectoral axial lobe or scale. Vertebrae: 36, including the four anterior vertebrae forming the weberian apparatus. The scales bear concentric and longitudinal striae (fig. 1d).

Relationships: The depressed and somewhat expanded ethmoid is typical of chelines, but unlike that group, the kinethmoid is rod-shaped and not triangular. In overall appearance, the fish most closely resembles *Inlecypis* (see HOWES 1980b). It appears to have a 'generalized' cheline morphology with a highly specialized branchial arch; the pharyngeal bone being unlike that known in any other cyprinid.

Etymology: *pecten* (lat.): comb, in allusion to the numerous gill-rakers; *kyprinos* (κυπρίνοζ) (gr.), *cyprinus* (lat.): the carp; *cypris*: a common suffix for small cyprinids.

**Pectenocypris korthausae** spec. nov. (fig. 1e)

HOLOTYPE: 24.5 mm s.l., MHNG 2073.72, collected by Mrs. Korthaus in March 1979, approximately 50 to 100 km North of Sampit.

PARATYPES: 6 specimens, MHNG 2073.73-78, same data as holotype; 1 specimen, MHNG 2073.81, cleared, alizarin and alcyan stained, same data as holotype; CMK 1455-1457, same data as holotype; 1 specimen, MNHN 1981.856, same data as holotype; 1 specimen, USNM 227297, same data as holotype; 4 specimens, BM(NH) 1981.5.26: 11-14, same data as holotype; 1 specimen, MHNG 2073.82, collected by Mr. Hanrieder at Palangan, Mentaya drainage, Kalimantan Tengah.

OTHER MATERIAL: 2 specimens, MHNG 2073.79-80, same data as holotype, dried and badly preserved.

Description: D 2/7; A 3/5; P 13; V 8-9; C 5-9/17/6-9; 30-33 scales along normal course of lateral line, 7-10 of them being perforated;  $\frac{1}{2}$  8  $\frac{1}{2}$  scales in transverse line; 14 scales around caudal peduncle.

Measurements: in % of standard length; in brackets: in % of head length. Standard length: 21.5-28.5 mm. Total length 120.9-128.4%, head length 23.2-28.5% [ $\bar{x}$ : 26.1, st.d. 1.37]; head depth 14.0-16.4% [ $\bar{x}$ : 15.2, st.d. 0.68]; head width 11.7-13.1% [ $\bar{x}$ : 12.4, st.d. 0.46]; body width 8.3-11.3% [ $\bar{x}$ : 10.0, st.d. 0.90]; body depth 12.8-19.6% [ $\bar{x}$ : 16.9, st.d. 1.60]; depth of caudal peduncle 8.3-10.4% [ $\bar{x}$ : 9.4, st.d. 0.60]; length of caudal peduncle 17.0-22.3% [ $\bar{x}$ : 19.9, st.d. 1.35]; predorsal length 50.6-53.1% [ $\bar{x}$ : 5.8, st.d. 0.82]; eye diameter 7.8-9.7% [ $\bar{x}$ : 8.7, st.d. 0.62] (30.6-37.8% [ $\bar{x}$ : 33.4, st.d. 2.49]); snout length 5.6-6.8% [ $\bar{x}$ : 6.1, st.d. 0.29] (21.6-24.3% [ $\bar{x}$ : 23.4, st.d. 1.04]).

Colour pattern: Body brown, belly whitish. A black spot at the base of the caudal fin. A black epaxial stripe extending from behind the upper edge of the opercle to caudal spot.

Etymology: *korthausae*: named for Mrs. Korthaus, one of the collectors.

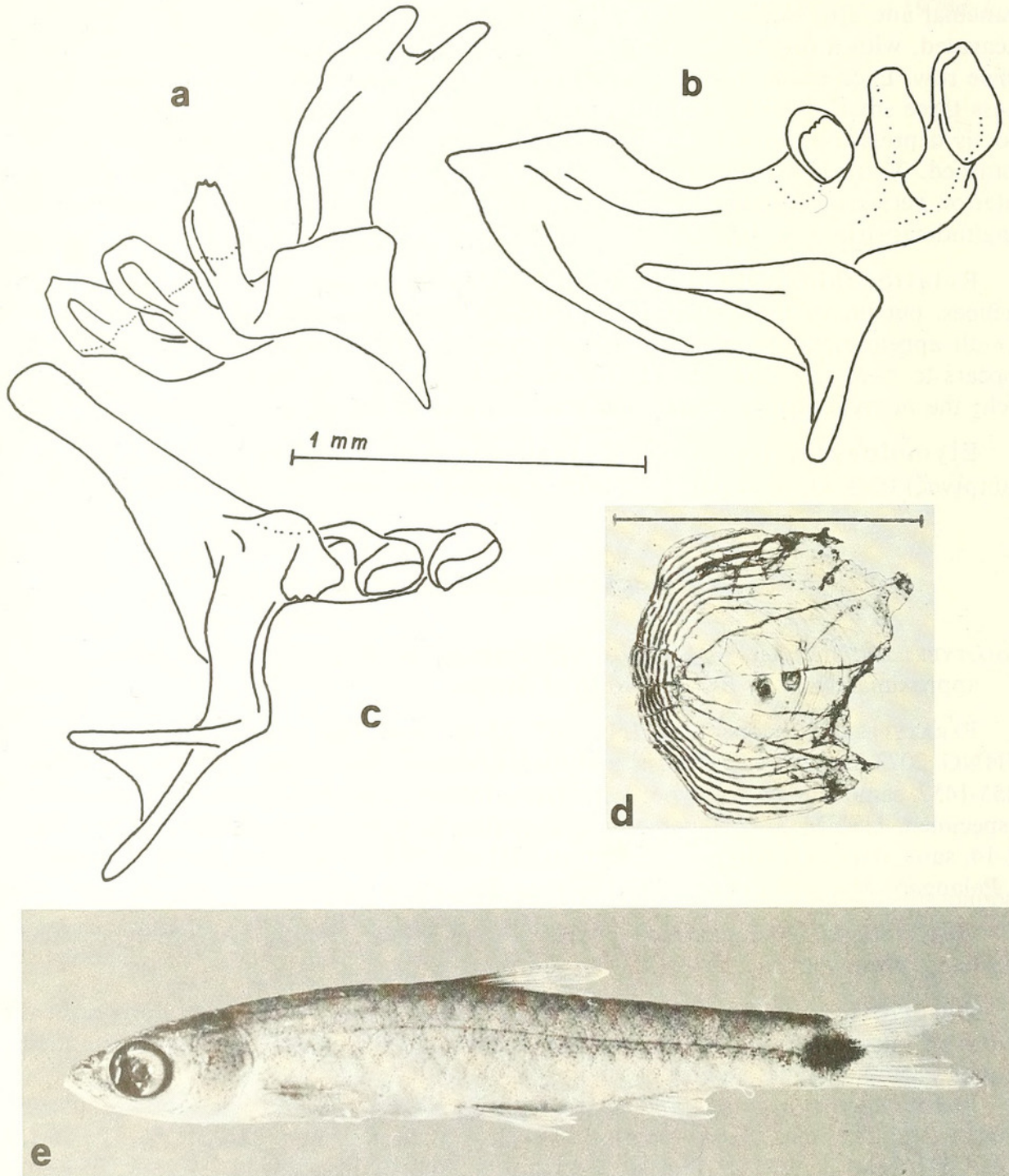


FIG. 1.

*Pectenocypris korthausae* gen. spec. nov. a-c Right pharyngeal bone of MHNG 2073.81: a Inner aspect, b Outer aspect, c Ventral aspect; d Scale of MHNG 2073.82; scale 1 mm; e HOLOTYPE, MHNG 2073.72, 24.5 mm s.l.

Remarks: The specimens probably represent adult size, although the four dissected have no ripe reproductive organs.

The dissection of MHNG 2073.82 revealed a short S-shaped digestive duct containing rotifers and small crustacea.

***Parluciosoma cephalotaenia* (Bleeker, 1851)**

MHNG 2058.1-8, 8 specimens, Korthaus, March 1978.

MHNG 2058.9-15, 7 specimens, Hanrieder, June-July 1979.

This species is reported for the first time from Kalimantan Tengah. It had hitherto been recorded from western Borneo, southern peninsular Malaysia, eastern coast of Sumatra, Banka and Biliton (BRITTAN 1954).

***Parluciosoma* spec. cf. *dusonensis* (Bleeker, 1851) (fig. 2b)**

MHNG 2057.96, 1 specimen, Korthaus, March 1978.

There is only a single specimen which appears to be a new species. The nearest relative seems to be *P. dusonensis* from which it is easily distinguished by the combination of the following characters:

- 32 + 2 scales on lateral line (v. 27-29 + 2 in *P. dusonensis*);
- body depth 26% of s.l. (v. 20-24% in *P. dusonensis*), 125% of head length (83-105);
- a somewhat distinctive colour pattern: very faint dark lateral stripe and absence of a lighter area under it.

Comparative morphometric data of this specimen, of two specimens of *P. dusonensis* collected in the same area (fig. 2a) and of three from the Mulu National Park, Northern Sarawak (BM(NH) 1978.3.20.184-186) are presented on table 1.

***Rasbora einthoveni* (Bleeker, 1851)**

MHNG 2057.86-88, 3 specimens, Hanrieder, June-July 1979.

MHNG 2057.89-93, 5 specimens, Hanrieder, June-July 1979.

*Rasbora labuana* Whitley, 1953, a species omitted by BRITTAN (1954, 1971), is possibly a synonym of this species.

***Rasbora pauciperforata* Weber & de Beaufort, 1916**

MHNG 2057.32-82, 51 specimens, Hanrieder, June-July 1979.

MHNG 2057.83, 1 specimen, Korthaus, March 1979.

MHNG 2057.84, 1 specimen, Korthaus, March 1978.

Hitherto known only from Malaya, Sumatra and Biliton. *Rasbora beauforti* Hardenberg, 1938 possibly is a synonym of this species.

TABLE 1.  
Comparative morphometric characters of *Parluciosoma dusonensis* and *P. sp. nov. cf. dusonensis*.

|                                  | <i>Parluciosoma dusonensis</i> (Bleeker, 1851) |                               |                               |                               |                               |                               |                            |        |        |        |        |        | <i>Parluciosoma sp.</i> |        |
|----------------------------------|------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------------------|--------|--------|--------|--------|--------|-------------------------|--------|
|                                  | MHNG 2057.94-95                                |                               |                               |                               |                               |                               | BM (NH) 1978.3.20: 184-186 |        |        |        |        |        | MHNG 2057.96            |        |
| standard length [mm]             | 71.0                                           | 78.0                          | 86.9                          | 85.5                          | 87.3                          | 90.0                          |                            |        |        |        |        |        |                         |        |
| lateral line                     |                                                | 29                            | 27                            | 28 + 2                        | 28 + 2                        | 32 + 2                        |                            |        |        |        |        |        |                         |        |
| transverse line (to pelvic base) |                                                | $\frac{1}{2}4/1/\frac{1}{2}$  | $\frac{1}{2}4/1/\frac{1}{2}$  | $\frac{1}{2}4/1/\frac{1}{2}$  | $\frac{1}{2}4/1/\frac{1}{2}$  | $\frac{1}{2}4/1/\frac{1}{2}$  |                            |        |        |        |        |        |                         |        |
| circumpeduncular scales          |                                                | $\frac{1}{2}4/1/1\frac{1}{2}$ | $\frac{1}{2}4/1/1\frac{1}{2}$ | $\frac{1}{2}4/1/1\frac{1}{2}$ | $\frac{1}{2}4/1/1\frac{1}{2}$ | $\frac{1}{2}4/1/1\frac{1}{2}$ |                            |        |        |        |        |        |                         |        |
|                                  | % s.l.                                         | % h.l.                        | % s.l.                        | % h.l.                        | % s.l.                        | % h.l.                        | % s.l.                     | % h.l. | % s.l. | % h.l. | % s.l. | % h.l. | % s.l.                  | % h.l. |
| total length                     | 128.2                                          |                               | 127.5                         |                               | 128.3                         |                               | 139.8                      |        | 127.5  |        | 111.9  |        |                         |        |
| head length                      | 24.6                                           |                               | 23.2                          |                               | 23.4                          |                               | 23.2                       |        | 23.2   |        | 20.8   |        |                         |        |
| snout length                     | 5.3                                            | 25.7                          | 6.4                           | 27.7                          | 6.3                           | 27.0                          | 6.8                        | 29.3   | 6.4    | 27.5   | 5.1    | 24.6   |                         |        |
| eye diameter                     | 7.9                                            | 32.0                          | 7.1                           | 28.7                          | 6.4                           | 27.5                          | 6.8                        | 29.3   | 6.4    | 27.5   | 6.7    | 32.1   |                         |        |
| length of caudal peduncle        |                                                |                               |                               |                               |                               |                               |                            |        |        |        |        |        |                         |        |
| depth of caudal peduncle         | 20.0                                           | 81.1                          | 19.6                          | 84.2                          | 19.2                          | 82.4                          | 19.6                       | 84.8   | 19.2   | 82.4   | 20.9   | 100.5  |                         |        |
| predorsal length                 | 10.7                                           | 43.4                          | 11.9                          | 51.0                          | 11.7                          | 50.0                          | 13.6                       | 58.6   | 11.7   | 50.0   | 11.3   | 54.5   |                         |        |
| preanal length                   | 54.2                                           |                               | 54.8                          |                               | 56.4                          |                               | 55.2                       |        | 56.4   |        | 53.8   |        |                         |        |
| prepelvic length                 | 69.9                                           |                               | 70.4                          |                               | 74.0                          |                               | 71.5                       |        | 74.0   |        | 68.3   |        |                         |        |
| body depth                       | 50.0                                           |                               | 47.5                          |                               | 49.6                          |                               | 48.4                       |        | 49.6   |        | 55.3   |        |                         |        |
| head depth                       | 20.4                                           | 82.9                          | 23.2                          | 100.0                         | 24.5                          | 104.9                         | 24.0                       | 103.5  | 24.5   | 104.9  | 25.9   | 124.6  |                         |        |
|                                  | 15.2                                           | 61.7                          | 13.6                          | 58.4                          | 14.1                          | 60.3                          | 14.4                       | 62.1   | 14.1   | 60.3   | 15.2   | 73.3   |                         |        |

**Rasbora taeniata** Ahl, 1922

MHNG 2057.21-24, 4 specimens, Korthaus, March 1978.

MHNG 2057.15-20, 6 specimens, Hanrieder, June-July 1979.

MHNG 2057.25-26, 2 specimens, Korthaus, March 1979.

BRITTAN (1949, 1954) considered *R. agilis* Ahl, 1937 as a synonym of *R. taeniata*. Later (1971: 275), he treats both as valid species but gives no real discussion for this decision. The only diagnostic character mentioned is the relative body depth (about 3.6 times in s.l. in *R. taeniata* as against 4.8 in *R. agilis*). If these names really represent valid species, then possibly our material should have to be called *R. agilis*. Until such time as intraspecific variability is known, we prefer to use only the older name.

The reported distribution of *R. taeniata* (see BRITTAN 1954) is the same as for *R. pauciperforata*. This range can now be extended to include Borneo.

It is interesting to note here that TWEEDIE's remarks (*in* BRITTAN 1954) on sympatric occurrence and relative frequencies of these two species are verified by the material at hand, *i.e.* both were collected (and seem to shoal) together and *R. pauciperforata* is more numerous (51/7 in a sample from one locality).

**Rasbora bankanensis** (Bleeker, 1853)

MHNG 2071.17-18, 2 specimens, Hanrieder, June-July 1979.

This species has already been reported from Banka, Sumatra and the Malay Peninsula. A comparison of our material and specimens from Sungei Selatar, Singapore (BM(NH) 1970.9.3: 21-30) shows them to be conspecific.

**Barbus** \* **foerschi** spec. nov. (figg. 2c, d; 3)

HOLOTYPE: 52.6 mm s.l., MHNG 2058.98, collected by Mrs. Korthaus in March 1978, approximately 50 to 100 km North of Sampit.

PARATYPES: one, 33.5 mm s.l., MHNG 2059.01, collected by Mr. Hanrieder in June-July 1979, in the same area as holotype; two, 46.6 and 33.8 mm s.l., MHNG 2058.99-100, collected by Mr. Hudoro in May 1980.

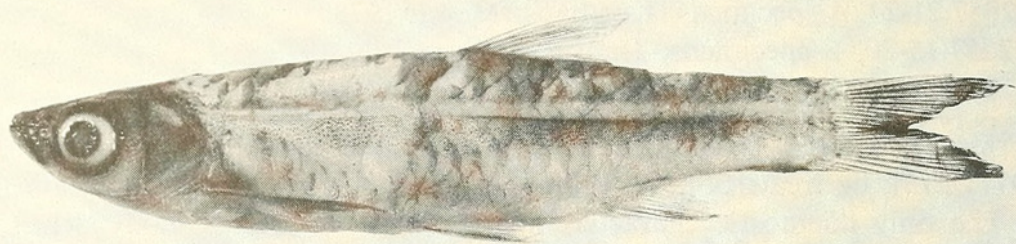
**Diagnosis:** A new species of *Barbus* which may be distinguished by the combination of the following characters: a complete lateral line with 24 perforated scales; four barbels; last simple dorsal ray osseous and serrated behind;  $\frac{1}{2}$   $\frac{4}{1}{3}$  scales in transverse line between dorsal and ventrals ( $\frac{1}{2}$  refers to that portion of the mid-dorsal scale); a striking colour pattern consisting in six vertical bands on head, body and caudal peduncle, and four blotches between the second, third and fourth vertical bands and at the base of the dorsal fin.

**Description:** Morphometric and meristic characters are shown on table 2. The scales are radially striated.

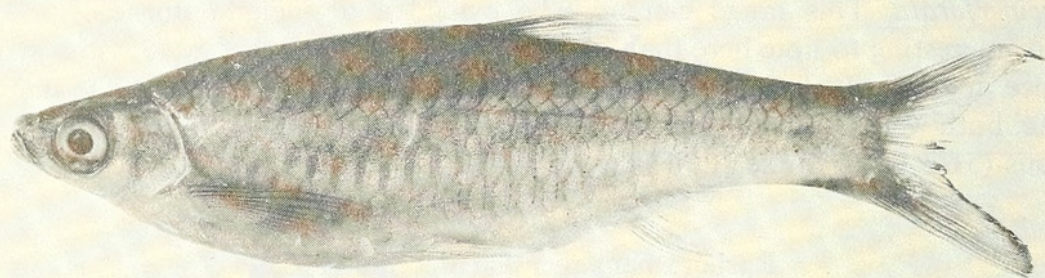
The pectoral fins reach the base of pelvic fins; the tips of the pelvic fins do not reach anus.

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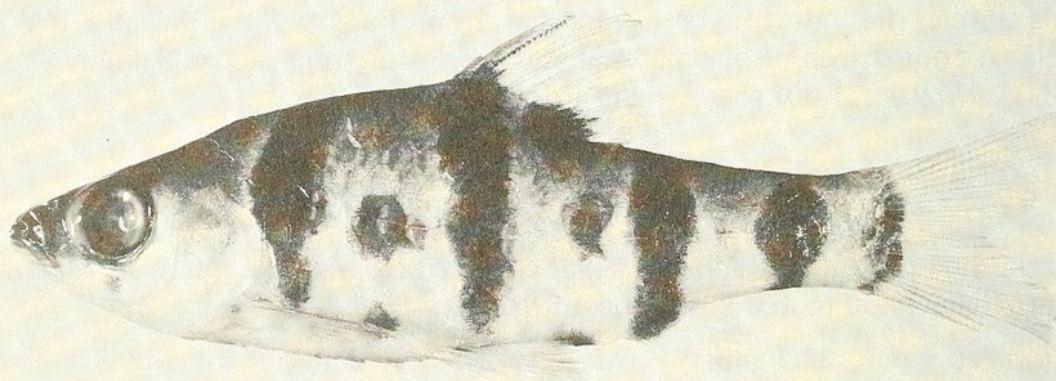
\* Until the relationships among the Eurasiatic barbs are thoroughly studied, we prefer to keep all of them in the artificial genus *Barbus* Cuvier, 1817, following the current *modus vivendi*.



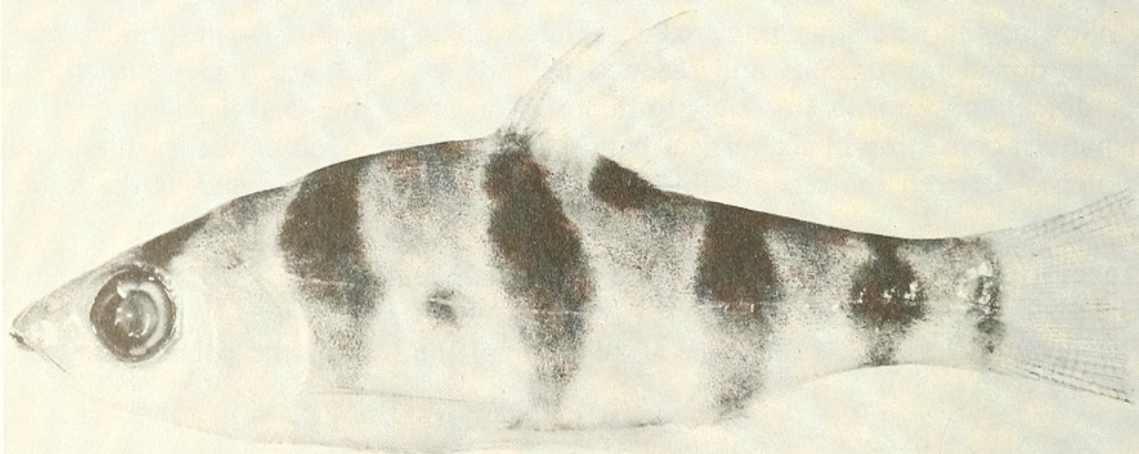
a



b



c



d

Vertebrae 29-30. Seven or eight short gill-rakers on first gill arch. Right pharyngeal teeth 5-4-2 (fig. 3).

Colour pattern: Ground colour light yellowish brown; upper part of body reddish brown and with blackish markings which are of two kinds: bars and spots.

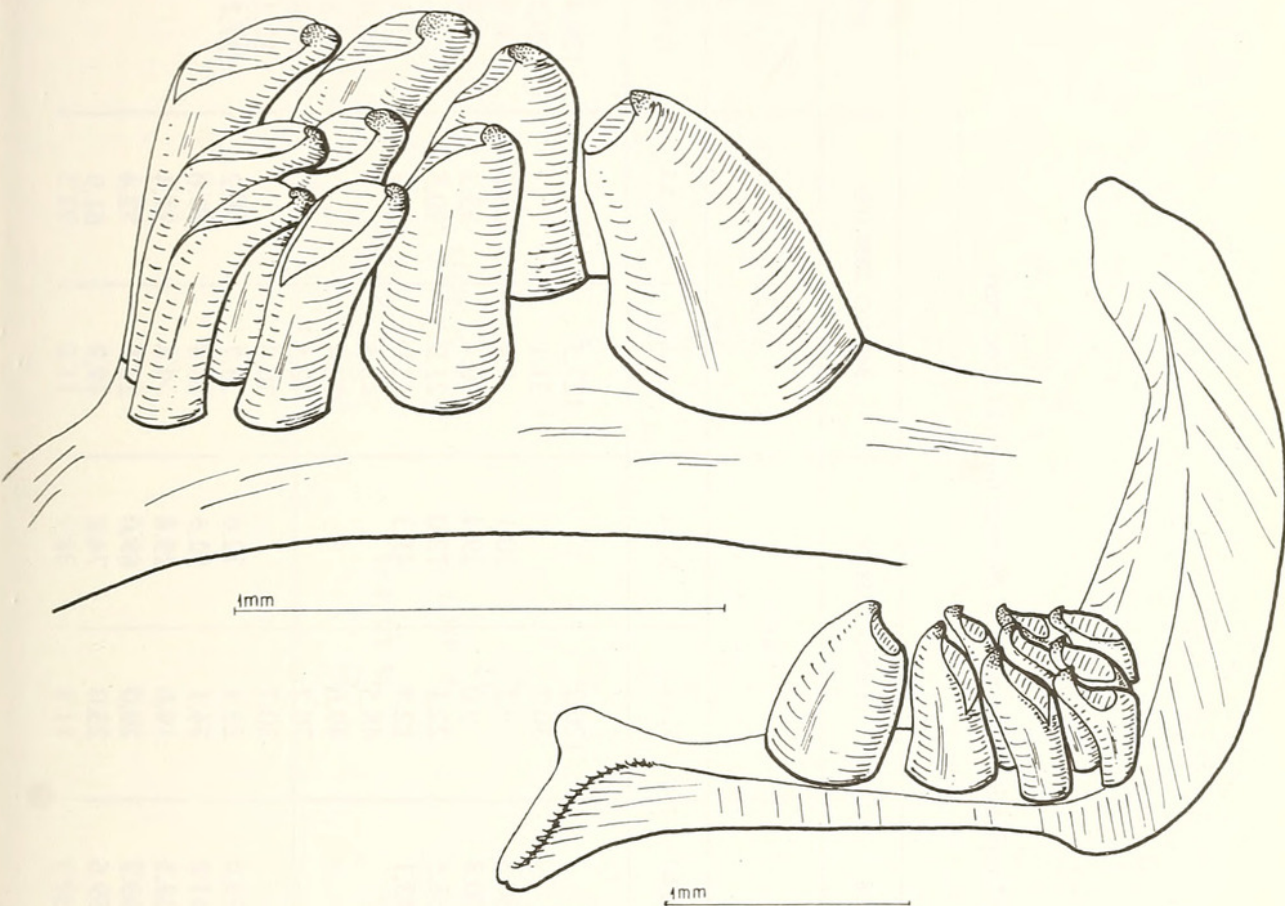


FIG. 3.

*Barbus foerschi* spec. nov. Right pharyngeal bone of MHNG 2058.99.

All the bars begin on the dorsum and, apart from the first, are vertical. The first one curves dorso-anteriorly and broadens until reaching the lateral line, where it covers the second and third scales and a part of the two adjacent scales. It ends slightly behind the pectoral fin insertion. The second one extend upwards to cover the anterior part of the dorsal fin (base of the first two branched rays); ventrally it reaches a point situated

FIG. 2.

*a* *Parluciosoma dusonensis* (Bleeker, 1851) MHNG 2057.94, 71.0 mm s.l.; *b* *Parluciosoma* sp. cf. *dusonensis* MHNG 2057.96, 90.0 mm s.l.; *c-d* *Barbus foerschi* spec. nov.: *c* HOLOTYPE, MHNG 2058.98, 52.6 mm s.l.; *d* PARATYPE, MHNG 2058.99, 46.6 mm s.l.

TABLE 2.  
Morphometric and meristic characters of *Barbus foerschi* spec. nov.

|                              | MHNG 2058.98 |        | MHNG 2058.99 |        | MHNG 2059.100     |        | MHNG 2059.01 |        |
|------------------------------|--------------|--------|--------------|--------|-------------------|--------|--------------|--------|
| standard length [mm]         | 52.6         |        | 46.6         |        | 33.8              |        | 33.5         |        |
|                              | % s.l.       | % h.l. | % s.l.       | % h.l. | % s.l.            | % h.l. | % s.l.       | % h.l. |
| total length                 | 126.2        |        | 120.2        |        | 127.5             |        | 128.4        |        |
| head length                  | 27.8         |        | 30.7         |        | 31.1              |        | 29.2         |        |
| snouth length                | 8.6          | 30.8   | 9.2          | 30.1   | 8.9               | 28.6   | 6.9          | 23.5   |
| eye diameter                 | 8.6          | 30.8   | 9.0          | 29.4   | 10.4              | 33.3   | 9.8          | 33.7   |
| length of caudal peduncle    | 19.0         | 68.5   | 22.1         | 72.0   | 21.9              | 70.5   |              |        |
| depth of caudal peduncle     | 12.0         | 43.1   | 12.7         | 41.3   | 13.0              | 41.9   | 13.1         | 44.9   |
| predorsal length             | 46.2         |        | 48.5         |        | 48.5              |        | 48.4         |        |
| prepelvic length             | 45.6         |        | 49.6         |        | 52.4              |        | 47.8         |        |
| preanal length               | 68.3         |        | 70.2         |        | 72.5 <sup>1</sup> |        | 67.8         |        |
| body depth                   | 29.8         |        | 30.7         |        | 30.8              |        | 32.2         |        |
| head depth                   | 22.1         | 79.4   | 22.1         | 72.0   | 23.7              | 76.2   | 21.2         | 72.5   |
| length of base of dorsal fin | 16.9         | 61.0   | 16.1         | 52.5   | 18.3              | 59.0   |              |        |
| length of base of anal fin   | 8.0          | 28.8   | 9.0          | 29.4   | 9.8               | 31.4   |              |        |
| length of pelvic fins        | 17.7         | 63.7   | 20.0         | 65.0   | 22.5              | 72.4   |              |        |
| length of pectoral fins      | 16.5         | 59.6   | 23.0         | 74.8   | 19.2              | 61.9   |              |        |

|                                            |                                   |                                   |                                   |                                   |                                   |                                   |                                   |
|--------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| length of median caudal rays               | 10.1                              | 36.3                              | 11.8 <sup>2</sup>                 | 38.5 <sup>2</sup>                 | 11.0                              | 35.2                              |                                   |
| length upper caudal lobe                   | 27.6                              |                                   |                                   |                                   | 29.0                              |                                   |                                   |
| length of last simple anal ray             | 14.1                              | 50.7                              | 15.2                              | 49.7                              | 14.2                              | 45.7                              |                                   |
| length of longest dorsal ray               | 20.0                              | 71.9                              | 15.9                              | 51.8                              | 24.3                              | 78.1                              |                                   |
| length of last simple dorsal ray           | 14.5                              | 52.1                              | 21.5                              | 69.9                              | 21.0                              | 67.6                              |                                   |
| interorbital width                         | 10.3                              | 37.0                              | 9.4                               | 30.8                              | 8.3                               | 26.7                              | 10.1 34.7                         |
| perforated scales on lateral line          | 24                                | 24                                | 25                                | 25                                | 25                                | 25                                | 25                                |
| scales in transverse line                  | $\frac{1}{2}$ 4/1/4 $\frac{1}{2}$ | $\frac{1}{2}$ 4/1/4 $\frac{1}{2}$ | $\frac{1}{2}$ 4/1/4 $\frac{1}{2}$ | $\frac{1}{2}$ 4/1/4 $\frac{1}{2}$ | $\frac{1}{2}$ 4/1/4 $\frac{1}{2}$ | $\frac{1}{2}$ 4/1/4 $\frac{1}{2}$ | $\frac{1}{2}$ 4/1/4 $\frac{1}{2}$ |
| scales between dorsal and pelvic base      | $\frac{1}{2}$ 4/1/3               | $\frac{1}{2}$ 4/1/3               | $\frac{1}{2}$ 4/1/3               | $\frac{1}{2}$ 4/1/3               | $\frac{1}{2}$ 4/1/3               | $\frac{1}{2}$ 4/1/3               | $\frac{1}{2}$ 4/1/3               |
| circumpeduncular scales                    | 12                                | 12                                | 12                                | 12                                | 12                                | 12                                | 12                                |
| predorsal scales                           | 9                                 | 9                                 | 9                                 | 9                                 |                                   |                                   |                                   |
| scale of 1.1. under front margin of dorsal | 8                                 | 8                                 | 8                                 | 8                                 | 8                                 | 8                                 | 8                                 |
| scale of 1.1. above front margin of anal   | 15                                | 15                                | 16                                | 16                                | 16                                | 15                                | 15                                |
| scale of 1.1. above pelvic base            | 8                                 | 8                                 | 8                                 | 8                                 | 9                                 | 9                                 | 9                                 |
| Dorsal                                     | 3/8                               | 3/8                               | 3/8                               | 3/8                               | 3/8                               | 3/8                               | 3/8                               |
| Anal                                       | 3/5                               | 3/5                               | 3/5                               | 3/5                               | 3/5                               | 3/5                               | 3/5                               |
| Pelvic                                     | 9                                 | 9                                 | 9                                 | 9                                 | 10                                | 10                                |                                   |
| Pectoral                                   | 15                                | 15                                | 16                                | 16                                | 15                                | 15                                |                                   |
| Caudal                                     | 5/17/5                            |                                   |                                   |                                   |                                   |                                   |                                   |
| serrae on last simple dorsal ray           | 21                                | 18                                |                                   |                                   | 12                                |                                   |                                   |

<sup>1</sup> belly damaged.<sup>2</sup> extremities of caudal lobes damaged.

behind origin of the pelvics. It does not reach the ventral midline. The third bar begins behind the base of the dorsal fin and terminates on the anterior part of the anal fin. The fourth crosses the middle of the caudal peduncle and the fifth the base of the caudal fin. The last three bars meet their opposites at the ventral midline.

There is one spot on the lateral line, between the first and second vertical bars, another between the second and third bars, and one, more or less distinct, in a similar position between the third and fourth bands. On either side, one spot lies between the base of the pectoral and pelvic fins, below the first lateral line spot. One spot occurs in front of the anus, approximately below the second one on the lateral line. There is a large spot covering the dorsal midline below the posterior part of the dorsal fin. This pigment appears to extend onto the lower part of the dorsal fin membrane between the fourth and the last fin rays.

Head: ventral surface light yellowish brown, dorsal surface and mouth reddish brown. An oblique black band crosses the eye.

Fins hyalin, except for some markings on the dorsal and caudal fins already described above.

The first and second spots on the lateral line may be absent. The two smallest paratypes have dark brown ground colour on the body above lateral line, with slender light stripes around the bars.

**Discussion:** Following WEBER & DE BEAUFORT (1916: 171-172), this species would key out in the group *Barbus pentazona pentazona* Boulenger, 1894, *B. pentazona johorensis* Duncker, 1904 (= *B. hexazona* Weber & de Beaufort, 1912) and *B. rhomboocellatus* Koumans, 1940 (= *Barbus pentazona* Bleeker, 1857, preoc.). All these species may be distinguished by a deep body (at least 36% of s.l., against 30-33 in *B. foerschi*).

*Barbus rhomboocellatus* has a very distinct colour pattern and occurs sympatrically with the new species.

*Barbus pentazona pentazona* and *B. p. johorensis* generally have  $5\frac{1}{2}$  scales between lateral line and dorsal (as against  $4\frac{1}{2}$  in *B. foerschi*) and a somewhat different colour pattern, particularly in the adults.

Among other Asiatic barbs with vertical stripes, *B. tetrazona* (Bleeker, 1855) and *B. partipentazona* Fowler, 1934 have an interrupted lateral line and a different colour pattern.

*Barbus everetti* Boulenger, 1894 and *B. lateristriga* (Valenciennes, 1842) have  $2\frac{1}{2}$  scales between lateral line and pelvic insertion and distinctive colour patterns. *Barbus everetti* has  $3\frac{1}{2}$  scales between dorsal fin and lateral line as against  $4\frac{1}{2}$  in *B. foerschi*.

The following specimens have been examined:

|                          |                                      |                  |
|--------------------------|--------------------------------------|------------------|
| BM (NH) 1895.7.2: 64     | <i>Barbus pentazona pentazona</i>    | Sarawak          |
| BM (NH) 1970.9.3: 96-100 | <i>Barbus pentazona johorensis</i>   | Singapore        |
| BM (NH) 1956.6.18: 1     | " " "                                | Sumatra          |
| BM (NH) 1911.2.14: 9-14  | " " "                                | Malay Peninsula  |
| MHNG 2059.3-14           | <i>Barbus partipentazona</i>         | Thailand         |
| BM (NH) 1931.8.21: 37-39 | " "                                  | Malay Peninsula  |
| BM (NH) 1970.9.3: 86-95  | <i>Barbus lateristriga</i>           | Singapore        |
| BM (NH) 1899.1.20: 11    | <i>Barbus everetti</i>               | Sarawak          |
| BM (NH) 1912.12.10: 8-10 | " "                                  | Bunguran Islands |
| BM (NH) 1866.5.2: 186    | <i>Barbus rhomboocellatus</i> (type) | Borneo           |

**Etymology:** named for Dr. W. Foersch, one of the collectors.

***Cyclocheilichthys janthochir* (Bleeker, 1853)**

MHNG 2057.99, 1 specimen, Korthaus, March 1978.

MHNG 2057.100, 1 specimen, Hanrieder, June-July 1979.

BLEEKER (1853) and WEBER & DE BEAUFORT (1916) described this species as having no barbels and examination of a syntype [BM (NH) 1866.5.2: 145] confirms this. The two specimens [and two BM (NH) un-numbered aquarium specimens] tentatively referred to this species conform in every respect with the description except that they both have one pair of very small maxillary barbels hidden in the labial groove. It is possible that there is regression during growth (our specimens measure 68.7 and 85.8 mm s.l., the BM (NH) ones 79.7 and 92.6 mm s.l., vs. 151.4 mm s.l. for the syntype).

Dr. M. Boeseman informed me that the other syntype (RMNH 4959) also has no barbels.

***Eirmotus octozona* Schultz, 1959**

MHNG 2056.27, 1 specimen, Hanrieder, June-July 1979.

This species has hitherto been known only from Bung Bo Raphet, Central Thailand (SCHULTZ 1959). It is now also reported from the area of Banjarmasin (see below).

***Osteochilus microcephalus* (Valenciennes, in Cuvier & Valenciennes, 1842)**

MHNG 2058.34, 1 specimen, Korthaus, March 1978.

Our specimen corresponds to *O. vittatus* as described by WEBER & DE BEAUFORT (1916). According to Mr. J. Karnasuta (pers. comm.) *O. vittatus* is a synonym of *O. microcephalus*.

***Osteochilus pentalineatus* spec. nov. (figg. 4, 5a)**

HOLOTYPE: 56.4 mm s.l., MHNG 2059.02, collected by Mrs. Korthaus in March 1978. Approximately 50 to 100 km North of Sampit.

Diagnosis: A new species of *Osteochilus* which may be distinguished by the combination of the following characters: 30 perforated scales in the lateral line; snout pores numerous; colour pattern consisting in five longitudinal stripes.

Description: D 3/10; A 2/5; P 13; V 9; C 6/17/6; L.1. 31; l. tr. 4/1/5½, 4/1/3 from dorsal to pelvic base, ½ 2/1/2 ½ on caudal peduncle. Vertebrae 28.

Measurements: in % of standard length; in brackets: in % of head length. Total length 125.5%; head length 23.5%; snout length 8.2% (34.5%); eye diameter 7.5% (31.5%); interorbital width 12.2% (52.0%); length of caudal peduncle 18.8% (79.7%); depth of caudal peduncle 12.9% (54.9%); head depth 18.5% (79.0%); predorsal length 43.8%; prepelvic length 50.5%; preanal length 80.0%; dorsal base length 25.0%; anal base length 8.5% (36.0%); length of pectoral fins 17.0% (73.0%); length of ventral fins 18.0% (76.7%); length of caudal lobes 26.5%; length of median caudal rays 11.5% (49.0%); length of last simple dorsal ray 20.5% (86.5%); length of longest anal ray 16.5% (70.0%).

There are 11 predorsal rows of scales. Origin of the dorsal fin is above ninth scale of lateral line; anal origin under 22nd; pelvic origin under the eleventh scale.

There are 34 gill-rakers on the first gill-arch.

The pectorals do not reach the base of the pelvic fins. The tip of the pelvic fins do not reach anus.

Teeth on right pharyngeal bone 5-4-2. The teeth on the first row are thick and stout (fig. 4).

There are two pairs of barbels. The maxillary ones are a little longer than eye diameter. The rostral ones are shorter, they do not reach anterior margin of eye. The lips are papillated.

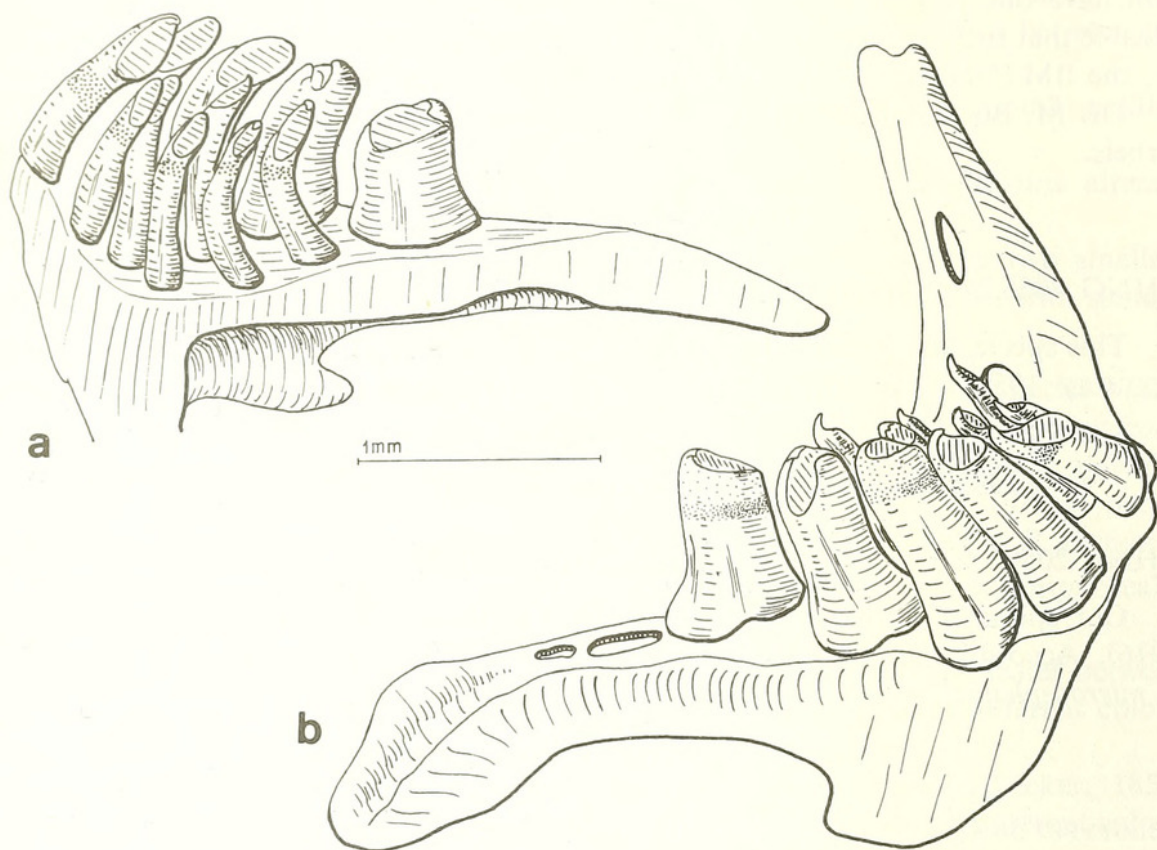


FIG. 4.

*Osteochilus pentalineatus* spec. nov. Right pharyngeal bone of holotype.

Colour pattern: Ground colour reddish brown, lighter on belly, darker on back. Five blackish brown longitudinal stripes, the median one running along lateral line. The upper one ends at rear of dorsal base. The lower one begins at pectoral base and ends at anal base. Fins hyalin; extremity of median caudal rays dark. A row of dark spots between the rays of the dorsal in the lower  $\frac{1}{4}$  to  $\frac{1}{3}$  of its depth. These spots are more distinct posteriorly.

Discussion: The new species is easily distinguished from all the other species of *Osteochilus* by its lesser number of circumpeduncular scales (12, vs. 16-22).

*Osteochilus borneensis* (Bleeker, 1857), *O. melanopleura* (Bleeker, 1852) and *O. kelabau* Popta, 1904 have a greater number of scales along lateral line (respectively: 47-49, 45-53, 38-39).

Most of the species of *Osteochilus* have distinctive colour patterns: *O. schlegeli* (Bleeker, 1851) has a plain or reticulated body, *O. lini* Fowler, 1935 has a plain body, *O. brachynopteroideus* Chevey, 1934 and *O. spilurus* (Bleeker, 1850) have a large black spot on caudal peduncle, *O. pleurotaenia* Bleeker, 1855, *O. waandersi* (Bleeker, 1852), *O. enneaporos* (Bleeker, 1852), *O. microcephalus* (Valenciennes, in Cuvier & Valenciennes, 1842) and *O. salsburyi* Nichols & Pope, 1927 have a dark lateral stripe more or less distinct, *O. triporus* (Bleeker, 1852), *O. intermedius* Weber & de Beaufort, 1916 and *O. bellus* Popta, 1904 have rows of spots on posterior half of body, *O. kahajanensis* (Bleeker, 1857) has a dark lateral stripe and a spot on caudal peduncle.

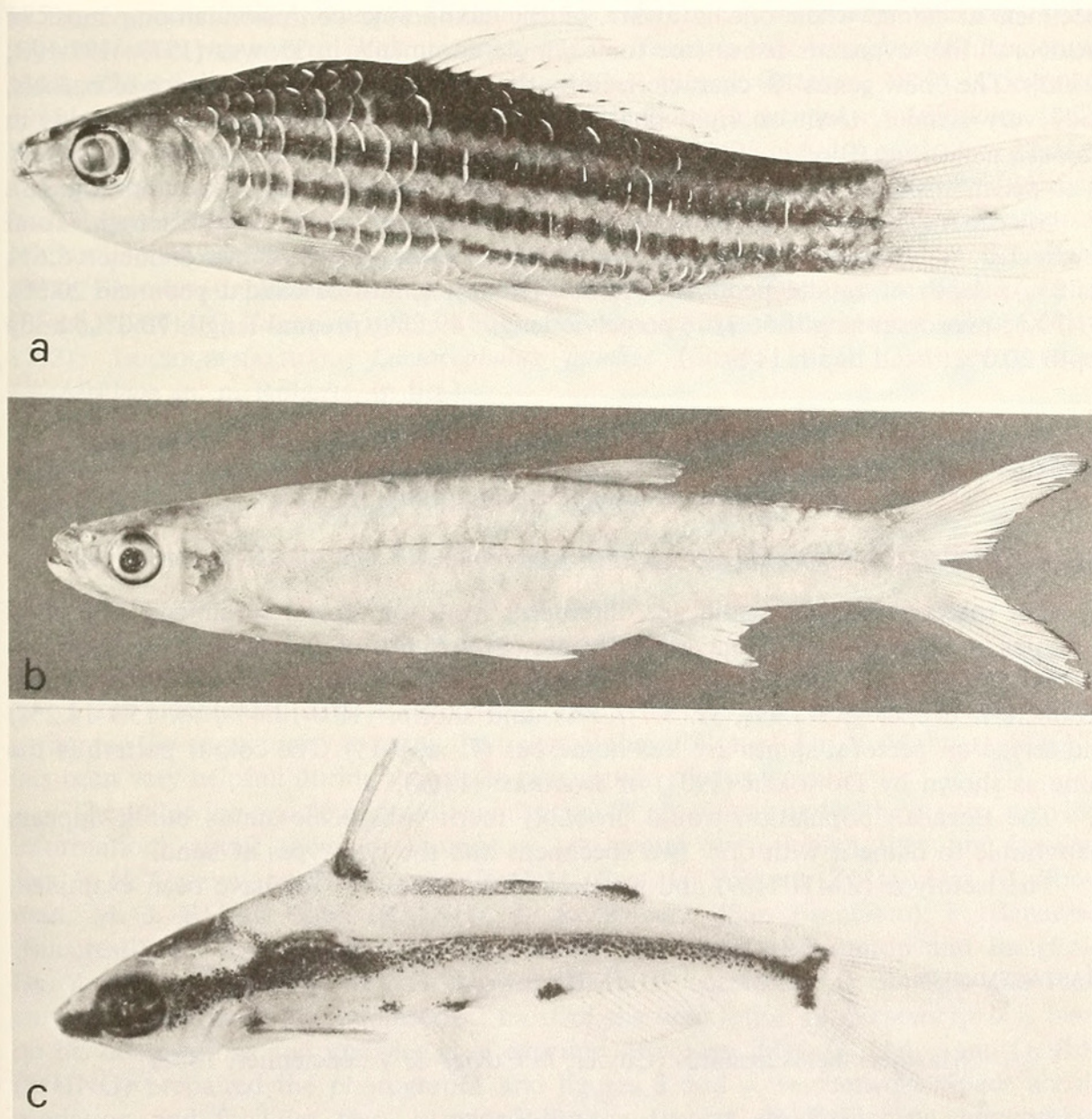


FIG. 5.

*a* *Osteochilus pentalineatus* spec. nov., HOLOTYPE, MHNG 2059.02, 56.4 mm s.l.; *b* Un-named new genus and species, CMK 1452, 75.0 mm s.l.; *c* *Pelteobagrus ornatus* (Duncker, 1904), MHNG 2059.21, 29.6 mm s.l.

*Osteochilus hasselti* (Valenciennes, in Cuvier & Valenciennes, 1842), *O. kappeni* (Bleeker, 1857) and *O. harrisoni* Fowler, 1905 exhibit a colour pattern consisting of rows of spots along side of body. They are distinguished from *O. pentalineatus* by 14-18 branched rays in the dorsal fin (vs. 10 in *O. pentalineatus*),  $\frac{1}{2}$  5/1/6  $\frac{1}{2}$  or  $\frac{1}{2}$  6/1/7  $\frac{1}{2}$  rows of scales in transverse line (vs. 4/1/5  $\frac{1}{2}$ ). *Osteochilus hasselti* and *O. kappeni* have a black spot on caudal peduncle. *Osteochilus harrisoni* has a deeper body (approximately 38% of s.l., vs. 25.5%), 9-10 stripes (vs. 5).

Etymology: *penta* (πέντε) (gr.): five; *lineatus* (lat.): striped.

For the sake of completeness, I have to mention here a cyprinid specimen which seems to represent a new genus somewhat resembling *Megarasbora* Günther, 1868 (an Indian genus) but without barbels. It would be inadvisable to name it with only one specimen at hand, when one is aware of the taxonomic confusion among most of "Rasbora" like cyprinids fishes (see for example comments in HOWES [1979: 192-193; 1980a]). The "new genus" is characterized by the following features: absence of barbels, body very slender, teeth on right pharyngeal bone 5-3 (eventually 4?)-2 [shape as in *Rasbora sumatrana* (Bleeker, 1852)], 1.1. 33, all being perforated 1.tr.  $\frac{1}{2}$  4/1/2  $\frac{1}{2}$ ,  $\frac{1}{2}$  4/1/1  $\frac{1}{2}$  to pelvic fins base,  $\frac{1}{2}$  3/1/1  $\frac{1}{2}$  on caudal peduncle. Standard length 75.0 mm (fig. 5b).

Measurements: in % of standard length; in brackets: in % of head length. Total length 125.3%, head length 22.4%; snout length 6.1% (27.4%); eye diameter 5.6% (25.8%); depth of caudal peduncle 10.5% (47.0%); length of caudal peduncle 20.5% (91.7%); predorsal length 56.7%; prepelvic length 49.2%; preanal length 70.0%; body depth 20.0%; head depth 14%.

#### BAGRIDAE

##### ***Pelteobagrus ornatus* (Duncker, 1904) (fig. 5c)**

MHNG 2059.21-22, 2 specimens, Hudoro, May 1980.

Our material exhibits significant differences from the typical specimens. The body is deeper in material from Malayan Peninsula (24.9-25.6% of s.l.) than in the one from Borneo (16.7-20.7%), predorsal length is shorter (36.4-37.0%, vs. 40.6-42.9%), caudal peduncle is deeper (8.3-8.9%, vs. 5.7-7.4%), and shorter (13.0-13.4%, vs. 15.1-16.2%) and serrae on pectoral spines are less numerous (7, vs. 9-11). The colour pattern is the same as shown by DUNCKER (1904) or JAYARAM (1968).

The Bornean population would probably merit subspecific status but it appears inadvisable to name it with only two specimens and the two types at hand.

The lectotype (ZMH H69) and paralectotype (ZMH H 179) have been examined.

#### MASTACEMBELIDAE

##### ***Mastacembelus armatus* (Cuvier, in Cuvier & Valenciennes, 1831)**

MHNG 2058.88, 1 specimen, Korthaus, March 1979.

MHNG 2058.89, 1 specimen, Hanrieder, June-July 1979.

These two young specimens exhibit the colour pattern which has been described as *Mastacembelus maculatus* var. *dictyogaster* Bleeker, 1852 and *M. billitonensis* de Beaufort, 1939. These forms are discussed in SUFI (1956).

## GOBIIDAE

**Gobioid**, genus and species undetermined

CMK 1270-1271, 2 specimens, Korthaus, March 1978.

It proved impossible to determine these small specimens, even to the generic level.

The following species, not discussed above, are also present in the collection at hand:

**Mentaya drainage:** CYPRINIDAE: *Parluciosoma dusonensis* (Bleeker, 1851), *Rasbora kalochroma* (Bleeker, 1850), *R. sumatrana* (Bleeker, 1852) (? , juv.), *Barbus rhomboocellatus* (Koumans, 1940), *B. eugrammus* Silas, 1956, *B. schwanefeldi* (Bleeker, 1853), *Cyclocheilichthys apogon* (Valenciennes, 1842), *C. heteronema* (Bleeker, 1853), *Mystacoleucus marginatus* (Valenciennes, 1842), *Hampala macrolepidota* (Valenciennes, 1842), *Lobocheilus bo* (Popta, 1904), *Osteochilus spilurus* (Bleeker, 1850); COBITIDAE: *Lepidocephalus octocirrhus* (van Hasselt, 1823), *Botia hymenophysa* (Bleeker, 1852); SILURIDAE: *Kryptopterus macrocephalus* (Bleeker, 1858), *Silurichthys phaiosoma* Bleeker, 1851; SCHILBEIDAE: *Pseudeutropius brachyopterus* (Bleeker, 1858); BAGRIDAE: *Leiocassis hosii* Regan, 1906, *L. fuscus* Popta, 1904, *Mystus cavasius* (Hamilton, 1822); HEMIRHAMPHIDAE: *Hemirhamphodon phaiosoma* (Bleeker, 1852); *H. chrysopunctatus* Brembach, 1978; BELONIDAE: *Xenentodon cancila* (Hamilton, 1822); CHANNIDAE: *Channa striata* (Bloch, 1797), *C. lucius* (Cuvier, 1831); SYMBRANCHIDAE: *Monopterus albus* (Zuiew, 1793); LUCIOCEPHALIDAE: *Luciocephalus pulcher* (Gray, 1832); TETRAODONTIDAE: *Chonerhinos* sp. n. Roberts, in litt.).

**Banjermasin area:** *Barbus binotatus* (Valenciennes, 1842), *Eirmotus octozona* Schultz, 1959; COBITIDAE: *Noemacheilus* cf. *fasciatus* \* (Valenciennes, 1846); CYPRINODONTIDAE: *Aplocheilus panchax* (Hamilton, 1822).

**Confluence of Barito and Sungai Kuan:** AMBASSIDAE: *Chanda wolffii* (Bleeker, 1851).

## ACKNOWLEDGEMENTS

I am indebted to Mrs. E. Korthaus, Dr. W. Foersch and Mr. A. Hanrieder for giving me the opportunity to study the material they collected. Dr. V. Mahnert, MHNG, has been very helpfull during the whole preparation of this work.

The following people allowed examination of specimens under their care, provided informations about them or comments on group with which they are familiar: Drs. P. H. Greenwood, K. Banister (BMNH), Prof. H. Wilkens (ZMH), Drs. M. Boeseman, M. J. P. van Oijen (RMNH), T. R. Roberts (San Francisco), P. Banarescu (Bucuresti), K. C. Jayaram (Calcutta), Mr. J. Karnasuta (Edmonton and Bangkok), Dr. J. Vierke (Husum). Mr. G. Howes (BMNH) corrected my English and made pertinent remarks on the manuscript; most of the description of *Pectenocypris* is based on his observations and knowledge of cyprinid osteology. Mrs. G. Dajoz and G. Roth (MHNG) prepared the photographs and figures 3 and 4, respectively. Space accommodation and facilities were provided by the Institut de Zoologie, Université de Neuchâtel.

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\* It is the intention of the author to revise the Indonesian and Indochinese noemacheilines in a near future.

## RÉSUMÉ

Bornéo est une région encore très mal connue du point de vue ichthyologique. Ceci est montré par le fait que, sur 48 espèces mentionnées ci-dessus, trois (*Barbus foerschii*, *Osteochilus pentalineatus*, *Pectenocypris korthausae*) sont nouvelles, une représentant un genre nouveau (*Pectenocypris*), deux sont vraisemblablement nouvelles mais ne sont pas nommées (*Parluciosoma* cf. *dusonensis*, gen. sp. nov.), cinq sont nouvelles pour Bornéo (*Rasbora bankanensis*, *R. taeniata*, *R. pauciperforata* [si *R. beauforti* est spécifiquement distinct], *Eirmotus octozona* et *Pelteobagrus ornatus* [éventuellement une espèce nouvelle]). Les deux dernières espèces et *Cyclocheilichthys janthochir* ne semblent pas avoir été récoltées depuis leurs descriptions originales.

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