HEMIBAGRUS CAVEATUS, A NEW SPECIES OF BAGRID CATFISH (TELEOSTEI: SILURIFORMES) FROM NORTHERN SUMATRA

Ng Heok Hee
Fish Division, Museum of Zoology, University of Michigan, 1109 Geddes Avenue, Ann Arbor, Michigan 48109-1079, USA.
Department of Biological Sciences, National University of Singapore, 10 Kent Ridge Crescent, Singapore 119260.

Soetikno Wirjoatmodjo and Renny K. Hadiaty
Division of Zoology, Research and Development Center for Biology, Indonesian Institute of Sciences, Gedung Widyasatwaloka, Jalan Raya Jakarta km. 46, Cibinong, Bogor 11961, Indonesia.

ABSTRACT. - Hemibagrus caveatus, new species, is described from the Alas River drainage in Aceh province, northern Sumatra. It can be distinguished from congeners in having a unique colour pattern consisting of 11-13 dark vertical stripes on the sides of the body and a dark horizontal stripe along the lateral line. It further differs from congeners in possessing the combination of the following characters: maximum height of adipose fin 5.3-6.2 % SL, length of caudal peduncle 17.6-19.1 % SL, eye diameter 13.8-15.6 % HL

KEY WORDS. - Hemibagrus, Sumatra, Aceh province, new species.

INTRODUCTION

Hemibagrus are bagrid catfishes that attain standard lengths of up to 800 mm and are found in large rivers throughout the Indian subcontinent, Southeast and East Asia. This taxon was established by Bleeker (1862) to include species with depressed heads, rugose head shields not covered by skin, slender occipital process, and moderately long adipose fins. Subsequent authors since Günther (1864) have synonymised Hemibagrus with Mystus and only recently has the genus Hemibagrus been re-diagnosed (Mo, 1991) by having a depressed head with a thin, plate-like metapterygoid.

While carrying out an ichthyological survey of the Alas River drainage in Aceh province (northern Sumatra), the second author obtained specimens of a Hemibagrus with a unique colour pattern consisting of 11-13 dark vertical stripes on the sides of the body and a dark horizontal stripe along the lateral line. This colour pattern is unknown for any previously described Hemibagrus species and the specimens from the Alas River are described as H. caveatus, new species, in this study.

MATERIALS AND METHODS

Measurements were made point to point with dial callipers and data recorded to tenths of a millimetre. Counts and measurements were made on the left side of specimens whenever possible. Subunits of the head are presented as proportions of head length (HL). Head length itself and measurements of body parts are given as proportions of standard length (SL). Measurements and counts were made following Ng & Dodson (1999).

Fin rays were counted under a binocular dissecting microscope using transmitted light. Vertebral counts were taken from radiographs following the method of Roberts (1994). Numbers in parentheses following a particular fin-ray, branchiostegal-ray, gill-raker or vertebral count indicate the number of specimens with that count. Drawings of the specimens were made with a Nikon SMZ-10 microscope and camera lucida. Institutional codes follow Eschmeyer (1998).

TAXONOMY

Hemibagrus caveatus new species

(Fig. 1)


**Fig. 1.** Hemibagrus caveatus, paratype, MZB 8708, 130.7 mm SL.


**Diagnosis.**—Hemibagrus caveatus can be distinguished from its congeners by the unique colour pattern consisting of 11-13 dark vertical stripes on the sides of the body and a dark horizontal stripe along the lateral line, as well as a combination of the following characters: length of caudal peduncle 17.6-19.1 % SL, maximum height of adipose fin 5.3-6.2 % SL and eye diameter 13.8-15.6 % HL.

**Description.**—Head depressed and broad, body moderately compressed. Dorsal profile rising evenly but not steeply from tip of snout to origin of dorsal fin, then sloping gently ventrally from there to end of caudal peduncle. Ventral profile horizontal to origin of anal, then sloping dorsally to end of caudal peduncle. In % SL: head length 29.7-30.9, head width 18.2-21.4, head depth 15.8-17.2, predorsal distance 10.0-17.7, post-adipose distance 17.1-17.4; in % HL: snout length 36.2-39.1, interorbital distance 29.9-34.3, eye diameter 13.8-15.6, nasal barbel length 33.9-42.6, maxillary barbel length 181.4-270.1, inner mandibular barbel length 47.0-60.1, outer mandibular barbel length 83.0-101.5. Branchiostegal rays 11 (3) or 12 (1). Gill rakers 4+13 (1) or 5+14 (1). Vertebrae 21-21+42 (1) or 22+22=44.

Fin ray counts: dorsal II,7 (4); pectoral I,8 (2) or 1,9 (2); pelvic i,5 (4); anal iv,9 (4); caudal 8/9 (4). Dorsal origin nearer tip of snout than caudal flexure. Dorsal spine stout, with 5-8 serrations on posterior edge. Pectoral spine stout, with 12-17 serrations on posterior edge. Anal origin slightly posterior to adipose origin. Depressed dorsal not reaching adipose fin. Caudal fin forked; upper lobe rounded with upper simple principal ray produced into a filament, lower lobe rounded.

**Colour.**—Preserved specimens have dorsal surface of head and body grey, gradually fading to dirty white on ventral surface. Lateral surface of body with 11-13 dark vertical stripes and a dark horizontal stripe running along lateral line. Dorsal, pectoral, pelvic and anal fins grey, with scattered melanophores on fin rays and interradial membranes. Caudal fin grey, with lighter hue along posterior edge, and on procurent and outer principal caudal rays.

**Distribution.**—Only known from the Alas River drainage in northern Sumatra.

**Etymology.**—From the Latin cavea, meaning cage; in allusion to the pattern of dark vertical and horizontal stripes on the sides of the body, which resembles that of a cage.

**Ecology.**—Hemibagrus caveatus is found primarily in large rivers, although smaller individuals have been found in smaller tributary streams.

**Remarks.**—Four species of Hemibagrus have been reported from Sumatra to date (Tan & Ng, 2000), viz. H. hoevenii (Bleeker, 1846), H. cf. nemurus (Valenciennes in Cuvier & Valenciennes, 1840), H. velox Tan & Ng, 2000 and H. wyckii (Bleeker, 1858). Hemibagrus caveatus is the third species of Hemibagrus known from Sumatra, and can be distinguished from the other two species (as well as all other species of Hemibagrus) in having a unique colour pattern consisting of 11-13 dark vertical stripes on the sides of the body and a dark horizontal stripe along the lateral line. The only other species of Hemibagrus with a colour pattern vaguely resembling that of H. caveatus are the South Asian species H. menoda (from northern India) and H. peuguensis (from Myanmar). In the two South Asian species, however, the colour pattern consists of 9 vertical columns of black spots on the sides of the body and lacking the dark horizontal stripe along the lateral line. Hemibagrus caveatus also has a longer caudal peduncle than H. menoda (length of caudal peduncle 17.6-19.1 % SL vs. 15.2-17.0), and a taller adipose fin (maximum height of adipose fin 5.3-6.2 % SL vs. 3.7-4.9) and larger eye (diameter 13.8-15.6 % HL vs. 11.2-
13.5) than both *H. menoda* and *H. peguensis*.

**COMPARATIVE MATERIAL**

*Hemibagrus hoevenii*

ZRC 29513–29515 (3), 271.6–317.4 mm SL, ZRC 29519 (1), 266.6 mm SL, Sumatra: Jambi; ZRC 39130 (1), 143.3 mm SL, Sumatra: Jambi province, Batang Berbak at Telogolima; ZRC 41526 (2), 232.7–244.4 mm SL, Sumatra: Jambi, Pasar Angso Duo (fish market).

*H. menoda*

ANSP 85796 (1), 113.0 mm SL, India: Bombay. MNHN 1191 (1), 285.4 mm SL, India: Bengal [syntype of *H. menoda*].

*H. wycki*

ZMA 121.811 (1), 106.0 mm SL, Sumatra: Jambi, Batang Hari; ZRC 41900 (5), 270.7–564 mm SL, Sumatra: Jambi, Pasar Angso Duo (fish market).

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**LITERATURE CITED**


