HELICOPHAGUS LEPTORHYNCHUS, A NEW SPECIES OF MOLLUSCIVOROUS CATFISH FROM INDOCHINA (TELEOSTEI: PANGASIIDAE)

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ABSTRACT. - Helicophagus leptorhynchus, a new species of molluscivorous catfish from Indochina is described here. It can be differentiated from its congeners H. typus and H. waandersii in having a slender snout and the following combination of characters: length of anal-fin base 34.5-38.2 %SL, length of caudal peduncle 12.9-15.3 %SL, head length 20.8-22.8 %SL, eye diameter 16.1-21.2 %HL

KEY WORDS. - Molluscivorous catfish, new species, Helicophagus, Indochina.

INTRODUCTION
According to Roberts & Vidthayanon (1991), the Southeast Asian molluscivorous catfish genus Helicophagus Bleeker comprises two species: H. typus Bleeker, 1858, and H. waandersii Bleeker, 1858. A comparison of Indochinese and Sumatran specimens of H. waandersii showed that two allopatric species may be recognised, and the Indochinese specimens are described here as a new species, H. leptorhynchus.

MATERIAL AND METHODS
Specimens are deposited in the California Academy of Sciences, San Francisco (CAS), the collection of the second author, Cornol (CMK), Museum of Zoology, University of Michigan, Ann Arbor (UMMZ), National Museum of Natural History, Smithsonian Institution, Washington (USNM), Instituut voor Systematiek en Populatiebiologie, Universiteit van Amsterdam (ZMA) and the Zoological Reference Collection of the Raffles Museum, National University of Singapore (ZRC). The following anatomical abbreviations are used: HL, head length and SL, standard length. All measurements are taken from point-to-point and follow Roberts & Vidthayanon (1991) with the following exceptions: body depth is measured at anus, length of adipose fin is measured from the anterior point of origin to the distal margin, caudal peduncle length is the distance from the base of the posteriormost anal-fin ray to the end of the hypural complex, and head depth is measured at the base of the occipital process. Vertebral counts are reported as preanal + postanal = no. of vertebrae (sensu Kottelat & Lim, 1994) and were taken from radiographs, with the fused PU +U considered a single vertebra and the vertebrae incorporated into the Weberian apparatus counted as four elements.

Helicophagus leptorhynchus, new species
(Figs. 1, 2a)


Helicophagus waandessii (non Bleeker) – Vidthayanon & Roongthongbaisuree, 1993: 18, figs. 2a, 5f, 6f, 7e.

Material examined. - Holotype. - USNM 288676, 210.3 mm SL; Thailand: Ubon Ratchathani province, Mun River at Bung

Received 14 Apr 1999    Accepted 6 Oct 1999
Wai, about 7 km W of Ubon Ratchathani (15°12'30"N 104°47'30"E); WBD-Mekong expedition, 14 Sep.1971.


Diagnosis. - Helicophagus leptorhynchus can be differentiated from all its congers by the following combination of characters: length of anal-fin base 34.5-38.2 %SL, length of caudal peduncle 12.9-15.3 %SL, head length 20.8-22.8 %SL, eye diameter 16.1-21.2 %HL.

Description. - Body long, laterally compressed; in %SL: body depth at anus 19.2-24.2, pre dorsal length 36.7-40.3, preanal length 49.9-55.6, pre pelvic length 39.4-44.1, prepectoral length 19.0-23.1, length of dorsal-fin base 6.2-8.2, length of dorsal spine 11.9-19.9, length of adipose fin 5.6-7.7, dorsal to adipose distance 29.8-36.3, length of anal-fin base 34.5-38.2, length of pelvic fin 10.1-12.6, length of pectoral fin 15.5-18.5, length of pectoral spine 12.2-16.7, depth of caudal peduncle 6.0-7.4, length of caudal peduncle 12.9-15.3, length of caudal fin 19.4-24.1, head length 20.8-22.8, head width 11.8-14.8, head depth 13.2-15.7; in %HL: snout length 28.4-34.7, interorbital distance 38.3-41.7, eye diameter 16.1-21.2, length of maxillary barbel 90.3-114.6, length of mandibular barbel 65.0-81.6; First branchial arch with 3+6 (1), 3+7 (1) or 3+9 (1) gill rakers. Branchiostegal rays 7 (4), 8 (4) or 9 (4). Vertebrae 17/24=46 (1), 18+28=46 (1), 18+29=47 (4), 18+30=48 (2) or 19+29=48 (2).

Fin-ray counts: dorsal 1,6 (5), 1,6,i (5) or 1,7 (2); pectoral 1,7,i (1), 1,9,ii (1), 1,10,2 (1), 1,10,iii (4) or 1,10,iv (4); pelvic 1,5 (12); anal iii,32 (1), iii,34 (1), iv,33 (1), iii,36 (1), iv,34 (2), v,32 (2), v,35 (2), vi,34 (1), iv,36 (1), v,36 (1) or v,37 (1); caudal 9/8 (7) or 9/9 (5). Posterior edge of pectoral spine with 17-19 serrae. Posterior edge of dorsal spine with 15-23 serrae.

Colour. - In 70% alcohol, the specimens are grey on the dorsal regions and the upper third of the flanks. A small patch of grey present on the humeral region, immediately above the pectoral fin. Lower two-thirds of the flanks and ventral regions whitish. Base of fins dark yellow, distal regions of dorsal and caudal fins black, distal regions of other fins hyaline. In life, body silvery to grey or pinkish, dorsal, anal, caudal and pelvic fin reddish.

Distribution. - Known from the Chao Prfaya and Mekong River drainages in Indochina.

Etymology. - From the Greek leptorhynchus (slender) and rhynchos (snout), in reference to the relatively slender snout of this species.

Ecology. - Helicophagus leptorhynchus in the Mekong stays in permanent river channels and does not move into flooded forests; it migrates upstream when water levels begin to rise at the beginning of the flood season and moves downstream as the water clears at the end of the flood season (Rainboth, 1996). Helicophagus leptorhynchus feeds predominantly on bivalves; specimens from the Mun River had bivalves of the genera Corbicula (Corbiculidae) and Physunio (Amblemidae) in their guts (Roberts & Vidthayanon, 1991; pers. obs.).

Remarks. - Helicophagus leptorhynchus is morphologically similar to, and has been previously
**Fig. 1.** Helicophagus leptorhynchus, paratype, CMK 12246, 185.0 mm SL; Laos: Khammouan Prov.: Mekong River.

**Fig. 2.** Schematic illustrations of lateral views of heads: a. **Helicophagus leptorhynchus**, CMK 5094, paratype, 165.6 mm SL; b. **H. waandersii**, ZRC 41528, 197.2 mm SL. Scale bars represent 10 mm.

Identified as **H. waandersii**, but differs from it in having a longer anal fin (34.5-38.2 % SL vs. 31.9-34.3), shorter caudal peduncle (12.9-15.3 % SL vs. 15.6-16.7), longer head (20.8-22.8 % SL vs. 18.9-20.3), and larger eye (16.1-21.2 % HL vs. 14.1-15.9). **Helicophagus leptorhynchus** also has a more slender snout (when viewed laterally) than that of **H. waandersii** (Fig. 2).

Furthermore, the two species do not have the same distribution: **H. leptorhynchus** is known only from the Chao Phraya and Mekong River drainages in Indochina while **H. waandersii** has been reported from drainages in Sumatra and Peninsular Malaysia (Lim & Zakaria-Ismail, 1995). **Helicophagus leptorhynchus** differs from **H. typus** (known only from drainages in Sumatra) in having more anal-fin rays (35-42 vs. 30-32), the premaxillary teeth in two quadratic patches (vs. in a single curved patch), 9-12 (vs. 27-30) gill rakers on the first branchial arch, and absence (vs. presence) of numerous small gill rakers on anterolateral face of the first branchial arch.

**Comparative material**

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*Helicophagus waandersii* - ZMA 120.519, 3 ex., 194.0-267.0 mm SL; Sumatra: Jambi, Batang Hari; P. H. Moolenburgh, 1909. - ZRC 41528, 25 ex., 195.3-224.6 mm SL; Sumatra: Jambi, Angso Duo fish market; H. H. Tan & H. H. Ng, 23-29 Jul. 1997. - ZRC 41905, 1 ex., 371 mm SL; Sumatra: Jambi, freshwater fish market; H. H. Tan et al., 21-28 Nov. 1996.

**ACKNOWLEDGEMENTS**

The authors thank the following for permission to examine material under their care: David Catania (CAS), Douglas Nelson (UMMZ), Lynne Parenti (USNM), Isaac Isbriicker (ZMA), and Kelvin Lim (ZRC). Funding from RP 3982327 to Peter Ng from the National University of Singapore is gratefully acknowledged.

**LITERATURE CITED**


