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First Record of the Cyprinid, *Cyclocheilichthys heteronema*, from Lake Tonle Sap of the Mekong River System

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The Southeast Asian cyprinid, *Cyclocheilichthys heteronema* (Bleeker, 1853), differs from congeneric species by having, among other characters, a pair of multifid maxillary barbels. The geographic range of the former had long been thought to be restricted to the southern half of the Malay Peninsula and western Borneo (e.g., Weber and de Beaufort, 1916; Smith, 1945) until Sontirat (1976) reported it from the lower Chao Phraya River in the Indochinese Peninsula. However, neither Roberts (1989) nor Kottelat (1989) included the Chao Phraya basin in the range of *C. heteronema*, in their regional checklists of freshwater fishes.

In September 1992, the senior author collected a female specimen of *C. heteronema* from Lake Tonle Sap, a large lake connected to the Mekong River via the Tonle Sap River, in Cambodia, thus confirming the occurrence of the species on the Indochinese Peninsula. The specimen, which is discussed below, is deposited in the Fish Section, National Science Museum (Nat. Hist.), Tokyo (NSMT).

Cyclocheilichthys heteronema (Bleeker, 1853) (Fig. 1)

Material examined. NSMT-P 35891, 75.8 mm standard length (SL), female, collected from Lake Tonle Sap at Siem Reap, Cambodia, 10 Sept. 1992.

Description. Body deep (greatest depth at origin of dorsal fin, 40.0% of SL), compressed (body width 15.5% of SL). Head small (head length [HL] 27.2% of SL), with numerous small pit organs forming many zigzag rows. Snout length equal to orbital diameter (33.0% of HL). Postorbital length 42.5% of HL. Interorbital length 37.9% of HL. Mouth subanterior. A pair of multifid maxillary barbels, each with small branches; length of barbel 50.1% of HL. Gill rakers short, 3+7=10 on first gill arch. Caudal peduncle length 21.1% of SL, depth 13.8% of SL. Dorsal fin rays iv, 8, last simple ray osseous, with 22 serrae. Dorsal-fin origin about midway between snout tip and caudal-fin base (predorsal length 55.1% of SL). Pectoral-fin rays i, 16. Pelvic-fin rays i, 9. Origin of pelvic-fin slightly in advance of dorsal fin origin (prepelvic length 48.4% of SL). Lateral line complete. Pored scales in lateral series 33+4=37. Scale rows between dorsal-fin origin and lateral line 5.5, between lateral line and pelvic-fin origin 4.5, between lateral line and anal-fin origin 6.5. Predorsal scales 11. Circumpeduncular scales 16. Vertebrae 16+17=33.

Color in alcohol.—Head and body pale brown. Dorsal and caudal fins with blackish membranes, other fins pale.

Distribution. *Cyclocheilichthys heteronema* seems to be common on the southern half of the Malay

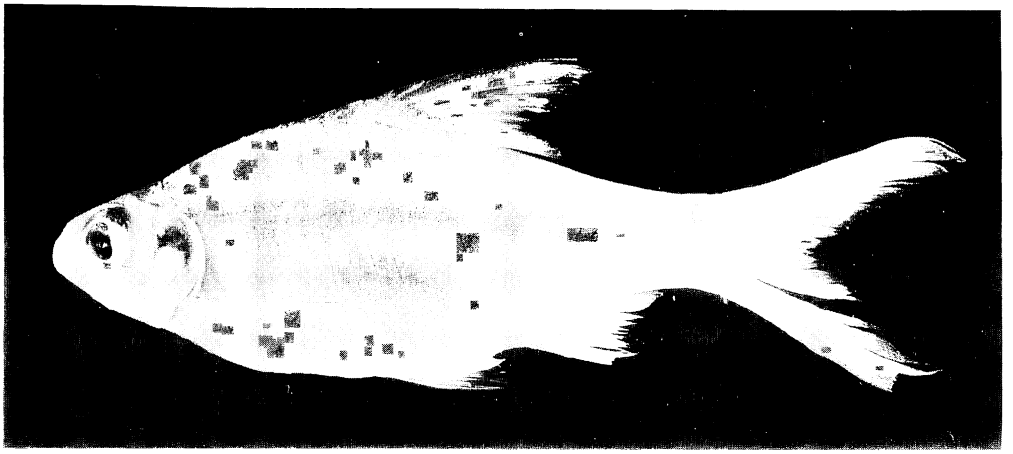

Fig. 1. *Cyclocheilichthys heteronema*, NSMT-P 35891, 75.8 mm SL, from Lake Tonle Sap, Cambodia.

Peninsula, having often been recorded (Tale Noi—Smith, 1945, Sontirat, 1976; Sauk—Sontirat, 1976; Kuala Pilah—Herre and Myers, 1937; Malacca—Weber and Beaufort, 1916; Muar Johore—Herre and Myers, 1937, Sontirat, 1976; Negri Sembilan—Sontirat, 1976). However, the species has been recorded from only two localities on the Indochinese Peninsula (the Chao Phraya River at Ayuthaya—Sontirat, 1976; Lake Tonle Sap at Siem Reap—this paper) and three localities in Borneo (the Mandalam River—Weber and de Beaufort, 1916; the Sambas River—Bleeker, 1853; the Kapuas River—Vaillant, 1893, Imaki et al., 1981, Roberts, 1989), suggesting restricted distribution in these areas.

Remarks. The Lake Tonle Sap specimen described above was clearly a mature female, containing ripe eggs which were visible through the body wall.

It agreed with the original description of *C. heteronema*, based on two specimens from west Borneo (Bleeker, 1853), and the description of the species based on 14 specimens from the Malay Peninsula and Chao Phraya River by Sontirat (1976), in all meristic and morphometric characters, except for lateral line scale count (33 + 4: c. f. Bleeker 35 [total]; Sontirat 32–34+2–3) and body depth. The greater body depth (40.0% of SL) of the present specimen (c.f. Sontirat: 26.0–36.8% of SL) may be due to the gravid state of the former.

Acknowledgments

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Literature Cited

Bleeker, P. 1853. Zevende bijdrage tot de kennis der ichthyologishe fauna van Borneo. Zoetwatervisschen van Sambas, Pontianak en Pengaron. Nat. Tijds. Ned. Ind., 5: 427–462.

Herre, A. W. C. T. and G. S. Myers. 1937. A contribution to the ichthyology of the Malay Peninsula. Bull. Raffles Mus., 13: 5–75.

Imaki, A., A. Kawamoto and A. Suzuki. 1981. Results of an ichthyological survey in the Kapuas River, west Kalimantan, Indonesia. Res. Inst. Evolut. Biol. Sci. Rep., 1: 33–54.

Kottelat, M. 1989. Zoogeography of the fishes from Indochinese inland waters with an annotated checklist. Bull. Zool. Mus. Universiteit van Amsterdam, 12: *1–54*.

Roberts, T. R. 1989. The freshwater fishes of western Borneo (Kalimantan Barat, Indonesia). Calif. Aca. Sci., San Francisco. xii+210 pp.

Smith, H. M. 1945. The fresh-water fishes of Siam, or Thailand. Bull. U.S. Nat. Mus., 188: i–xi+1–622, 9 pls.

Sontirat, S. 1976. Revision of the southeastern Asiatic cyprinid fish genus *Cyclocheilichthys*. Ph. D. Dissert., Univ. Michigan, Ann Arbor. vii+140 pp.

Vaillant, L. 1893. Contribution a l'étude de la faune ichthyologique de Borneo. Nouv. Arch. Mus. Hist. Nat. Paris (3), 5: 23–114, 2 pls.

Weber, M. and L. F. de Beaufort. 1916. The fishes of the Indo-Australian Archipelago. 3. Ostariophysi: II. Cyprinidae, etc. E. J. Brill, Leiden. xv+455 pp.

メコン水系から初記録の *Cyclocheilichthys heteronema*

土井　敦・多紀保彦

1992年9月10日にカンボジアのトンレサップ湖の北岸シェムリアプ地先で，コイ科魚類の標本1個体を採集した．標本は発達した背鰭棘状軟条，頭部に列状に並ぶ無数の孔器，下方向に6小分枝を備える1対の口顎髭等の特徴をもつことから，*Cyclocheilichthys heteronema* と同定された．本種はマレー半島南部，ボルネオ西部に分布することが知られていたが，インドシナ半島のメコン水系からは初記録である．

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