

**REDISCOVERY AND REDESCRIPTION OF *OMPOK WEBERI*
(HARDENBERG, 1936), A POORLY-KNOWN SPECIES OF SILURID CATFISH
(TELEOSTEI: SILURIFORMES) FROM BORNEO**

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ABSTRACT. - *Ompok weberi*, a poorly-known silurid catfish described from western Borneo, is redescribed from fresh material. It has fewer anal-fin rays than all other congeners (40-48 vs. 50-84). It is mottled brown in coloration, similar to members of the *O. leiacanthus* species group and some Southeast Asian members of the *O. bimaculatus* species group, but can be distinguished from them by its non-projecting lower jaw (vs. a projecting lower jaw with an upturned mouth).

KEY WORDS. - *Ompok*, Borneo, redescription.

INTRODUCTION

Ompok La Cépède, 1803, is a genus, with about 35 nominal species, of silurid catfishes commonly found in rivers and swamps of South and Southeast Asia. However, a recent phylogenetic study of silurids (Bornbusch, 1995) indicates that *Ompok*, as commonly used in the literature, is a polyphyletic assemblage consisting of four distinct lineages: *O. bimaculatus* group; *O. eugeneiatus* group, *O. hypophthalmus* group; and *O. leiacanthus* group, with the *O. eugeneiatus* group likely to be more closely related to some *Kryptopterus* Bleeker, 1858, lineages than to any of the other three *Ompok* lineages. The alpha taxonomy of *Ompok* is also poorly understood. Some valid nominal species have been erroneously synonymised (e.g. see Kottelat & Lim, 1995, for a brief account of problems in the *O. bimaculatus* group), while the status of other species cannot be determined as they are only known from types which are thought to be lost. One nominal species in the latter category is *Ompok weberi* (Hardenberg, 1936), a species described from the Kapuas River basin in western Borneo.

We have recently examined small silurid specimens, collected from western and southern Borneo, that show the diagnostic characters reported in the original

description of *O. weberi*. This paper serves to validate and redescribe *O. weberi* on the basis of this fresh material, but we refrain from declaring a neotype. Hardenberg (1936) described *Ompok weberi* from a single specimen from the Kapuas River basin in western Borneo, and subsequently reported on an additional specimen from the Kumai River basin in southern Borneo (Hardenberg, 1937). The whereabouts of these two specimens are unknown and they may be lost. Roberts (1989) attempted unsuccessfully to locate them during preparation of his Kapuas River monograph and we have not been able to locate them in the likely museums in Amsterdam (ZMA), Leiden (RMNH), or Cibinong (MZB) either. Hardenberg reported on the specimens from the Laboratorium voor het Onderzoek der Zee, Batavia (now Pusat Penelitian dan Pengembangan Oseanologi, Lembaga Ilmu Pengetahuan Indonesia, Jakarta) and they may have been deposited there. As neither Roberts nor we have searched the Marine Fisheries Institute, Den Pasar, Bali we are not yet willing to state that the holotype of *O. weberi* is definitely lost.

MATERIALS AND METHODS

Measurements follow Ng & Ng (1996) and were made point to point with dial callipers, or with an

ocular graticule fitted to a binocular microscope; morphometric data were recorded to a tenth of a millimetre. Measurements of parts of the head are presented as proportions of head length (HL); all other measurements are given as proportions of standard length (SL).

Fin rays were counted under a binocular dissecting microscope using transmitted light. Vertebral counts were taken from radiographs. 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 specimens were made with a Nikon SMZ-10 microscope and camera lucida. Institutional codes follow Eschmeyer (1998).

TAXONOMY

Ompok weberi (Hardenberg, 1936)

(Fig. 1)

Callichrous weberi Hardenberg, 1936: 232 (type locality: Padang Tikarbay, western Borneo); 1937: 9.

Ompok weberi - Haig, 1952: 106; Roberts, 1989: 151; Kottelat et al., 1993: 70.

Kryptopterus macrocephalus (in part) - Kottelat et al., 1993: Pl. 33.

Material examined. - BMNH 1994.12.16.228-229, 2 ex., 27.7-29.2 mm SL, Borneo: Kalimantan Tengah, Sungai Serendan, coll. For Peat's Sake, Aug.1994; CMK 14802, 10 ex., 21.6-34.5 mm SL, Borneo: Kalimantan Barat, Sungai Pinyuh, 8 km SE of Anjungan on road to Pontianak (0°20'N 109°28'E), coll. M. Kottelat et al., 21 Apr.1990; ZRC 46124, 2 ex., 23.0-32.1 mm SL, Borneo: Kalimantan Tengah, road from Pangkalanbun to Nipa between Kubu and Nipa, coll. N. Neugebauer et al., 29 Sept.1996.

Diagnosis. - With 40-48 anal-fin rays, *Ompok weberi* is easily distinguished from all other *Ompok* species (50-84 anal-fin rays). It shares with members of the *O. leiacanthus* species group and some Southeast Asian members of the *O. bimaculatus* species group a mottled, brown coloration (vs. translucent coloration in other Southeast Asian *Ompok*), but can be further distinguished from them by a lower jaw which does not project beyond the upper (vs. a projecting lower jaw and an upturned mouth).

Description. - Body and head laterally compressed. Dorsal profile slightly humped, descending gently from dorsal-fin origin to snout tip, and again from the posteriormost dorsal-fin ray to the caudal peduncle. Anterior profile of snout rounded. Anterior pair of

nostrils tubular and anteromedial to maxillary barbel base. Posterior pair of nostrils bordered by fleshy dorsal and ventral membranes and posteromedial to maxillary barbel base. Eyes small, subcutaneous; located in dorsolaterally.

Mouth terminal; gape oblique. Well-developed skin fold present on upper rictal lobe, upper and lower rictal lobes deeply subtended by a submandibular groove.

Teeth villiform. Dentary teeth in slightly curved, elongate bands narrowing posteriorly, reaching from symphysis almost to mouth corners; premaxillary teeth in broader, slightly curved rectangular bands. Vomerine teeth in a single crescentic band.

Maxillary barbels slightly flattened for entire length, reaching to middle of anal fin. Single pair of mandibular barbels present; located slightly anterolateral to gular fold; barbels flattened for most of length, reaching to pectoral fin base.

Gill membranes separate and overlapping, free from isthmus. Branchiostegal rays 7 (1) or 8 (6). Gill rakers short, anteriormost rakers on lower first arch small and widely spaced; 4 (2) on epibranchial and 7(1) or 8(1) on ceratobranchial.

Distal margin of pectoral fin broadly convex, with I,7,i (2) or I,8 (8) rays. Proximal two-thirds of first pectoral-fin element co-ossified into a spine without anterior and distal denticulations. Pectoral spine and articulated segments sexually dimorphic in mature individuals. Males with spine broad and somewhat flattened dorsoventrally, with 4-6 distinct posterior serrations. Female or juvenile with spine slender, without serrations on posterior edges of either spine. Distal margin of pelvic-fin convex, with i,5 (9) or i,6(1) rays. Distal margin of dorsal fin pointed, with i,1 (2), i,2 (5) or i,3 (3) rays and first ray simple; segments of first ray not co-ossified to form spine. Distal margin of anal fin straight, with 40 (1), 42 (3), 43 (1), 44 (3), 46 (1) or 48 (1) rays; separate from caudal fin. Integument over anal fin thickened proximally for slightly more than half of ray lengths; fin-ray erector muscles attaching to base of anal-fin rays, ventralmost extent of muscles that of thickened integument. Caudal fin strongly forked; principal rays 7/7 (2), 8/7 (1) or 8/8 (7). Urogenital papillae of both sexes located immediately posterior to insertions of pelvic fins.

In % SL: head length 18.3-21.2, head width 9.1-15.5, head depth 8.7-16.1, predorsal distance 28.2-

32.8, preanal length 31.5-40.8, prepelvic length 30.1-34.3, prepectoral length 18.9-24.0, body depth at anus 16.7-21.2, depth of caudal peduncle 4.3-7.2, pectoral-spine length 5.8-11.9, pectoral-fin length 11.6-16.6, pelvic-fin length 3.5-8.6, length of anal-fin base 59.2-64.8, caudal-fin length 16.8-24.0; in % HL: snout length 24.2-33.1, interorbital distance 34.3-53.0, eye diameter 14.9-21.1, maxillary barbel length 197.6-329.8, mandibular barbel length 37.3-119.4. Vertebrae 11+30=41 (1), 11+31=42 (5) or 11+32=43 (1).

Colour. – Colour pattern mottled. Dorsal and lateral surfaces of head and body brown with scattered darker patches, ventral surfaces of head, breast and belly more lightly coloured than dorsal surfaces, also with scattered darker patches. Entire length of maxillary barbels also mottled brown; mandibular barbels whitish. First ray of dorsal fin with up to three dark spots distributed along its length, rest of fin hyaline. Pectoral fins hyaline, with a small, dark, vivid spot on the bases of the 3 or 4 innermost rays. Base of pelvic fin with dark band, rest of fin hyaline. Basal half of anal fin-rays with a dark band, distal half of fin hyaline. Base of caudal fin dark, rest of fin hyaline with scattered melanophores occasionally present.

Sexual dimorphism. – We interpret the smaller of the two BMNH specimens as male, because its pectoral spine is proportionately longer than in the other specimen, and bears 5-6 serrations on its inner side (vs. absent in the other specimen), a condition also seen in other silurids (Ng & Ng, 1996; Kottelat & Ng, 1999). The males of the CMK specimens have 4-6

serrations on the pectoral spine. We also note that males of *O. weberi* have a longer urogenital papilla.

Distribution. – *Ompok weberi* has only been collected from the Landak and Kapuas River drainages in western Borneo and the Kumai and Sebangau River drainages in southern Borneo. None of the latter three drainages are contiguous but the intervening habitat, before recent disturbance at least, is more or less continuous peat swamp forest. It would be surprising if *O. weberi* was not distributed generally across this biotype. Since recent material of *Ompok weberi* has only been taken from peat swamps we speculate that it may be a stenotopic blackwater species.

Remarks. – *Ompok weberi* appears to be a relatively small species. Hardenberg described the species from a specimen only 79 mm TL. His second specimen measured 50 mm TL and the material we have examined is only 20-35 mm SL. The smaller BMNH specimen (27.7 mm SL) is either a maturing or already mature male.

Among *Ompok* sensu lato, *O. weberi* shares with the *O. bimaculatus* and *O. leiakanthus* groups a superficial groove that separates the upper and lower rictal lobes, a condition otherwise unknown among silurids (rictal lobes narrowly continuous at the rictus) except in *Wallago* (Bornbush, 1995). Many of the characters Bornbush used to characterise the *O. bimaculatus* and *O. leiakanthus* groups are internal skeletal characters, which we have not examined in *O. weberi*. One character found among the *O. leiakanthus* group, extension of the anal-fin ray

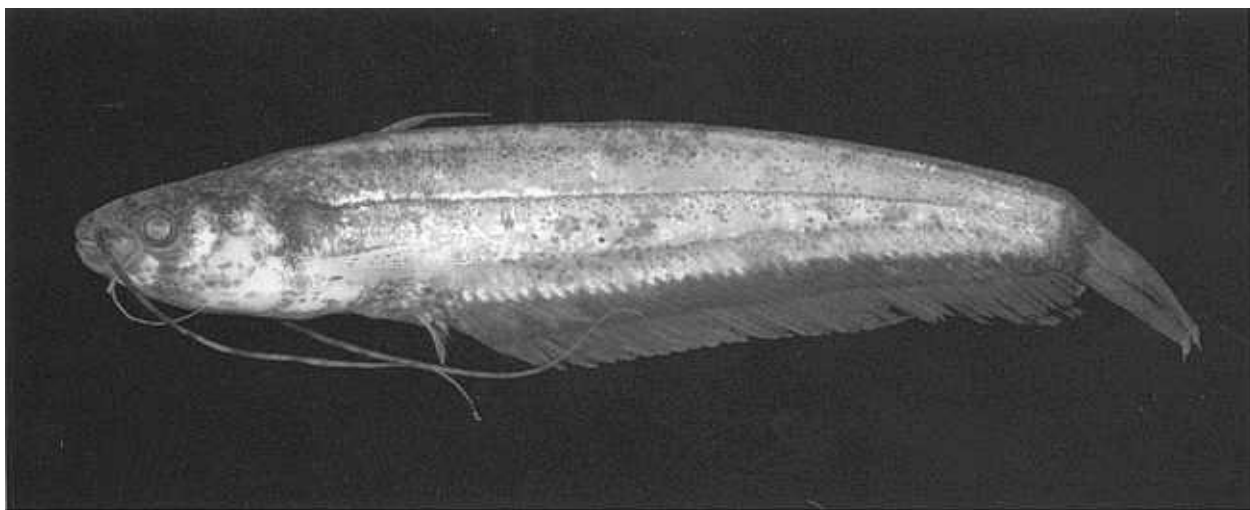


Fig. 1. *Ompok weberi*, BMNH 1994.12.16. 228, 27.7 mm SL

erector muscles ventrally along the anterior margin of the anal-fin rays, is visible without dissection. In *O. weberi* this muscle exhibits the condition found in the *O. bimaculatus* group and among most other silurids. The relationships of *O. weberi* are therefore not likely to be within the *O. leiacanthus* group.

Ompok has been distinguished in keys and field guides by a 'well-developed' dorsal fin with 4 rays, a deeply forked caudal fin and eye behind the rictus of the mouth (e.g. Weber & de Beaufort, 1913; Smith, 1945; Kottelat et al., 1993; Rainboth, 1996). People attempting to identify silurids from Borneo should be alert that *O. weberi* will fail those couplets in regional keys that separate *Ompok* and *Kryptopterus* (*sensu lato*) on the number of dorsal fin-rays. However, with only 41-47 anal fin-rays *O. weberi* is only likely to be confused with *K. minor* Roberts, 1989 or *K. macrocephalus*. Both these *Kryptopterus* species have relatively few anal fin-rays, but not so few as *O. weberi* (Roberts, 1989: *K. minor* with as few as 46 but usually more than 50; *K. macrocephalus* with as few as 48 but usually more than 50). *Kryptopterus macrocephalus* also has a mottled 'colour morph' (see Roberts, 1989: Fig. 114) which may at first glance be confused with *O. weberi*. The fish in the

photograph in Kottelat et al. (1993: Pl. 33) that is labelled as the mottled form of *Kryptopterus macrocephalus* is actually *O. weberi*.

Comparative material. – *Ompok* aff. *bimaculatus*: ANSP 60177, 1 ex., 165.1 mm SL, Thailand: Kratt (holotype of *O. krattensis*); ZRC 43849, 2 ex., 134.1-155.9 mm SL, Java: Bojongsari at Sawangan, artificial lake connected to Cipinang, which joins Ciliwung; RMNH 7811, 1 ex., 205.4 mm SL, Borneo: Tepoe (syntype of *O. miostoma*). *O. fumidus*: ZRC 23976-23978, 3 ex., 44.6-61.8 mm SL, Malaysia: Terengganu, Rantau Abang, 56 km Kuantan to Kuala Terengganu road; ZRC 37517, 1 ex., 42.6 mm SL; Riau Archipelago: Pulau Bintan, Tanjung Pinang. *O. jaynei*: ZRC 40377, 8 ex., 35.0-71.7 mm SL, Borneo: Brunei Darussalam, Belait district, tributary of Sungai Mau, blackwater stream draining out of peat swamp (4°33'41.5"N 114°29'41.7"E). *O. leiacanthus*: ZRC 38538, 1 ex., neotype, Sumatra: Jambi, E end of Danau Arang Arang.

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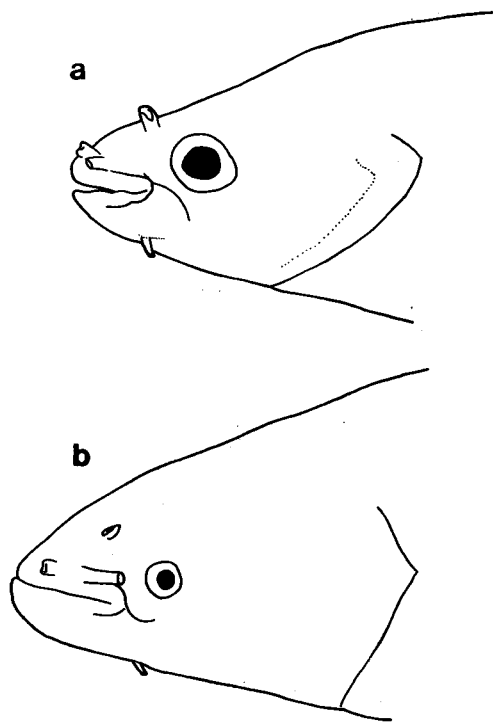


Fig. 2. Lateral views of heads of: a. *O. weberi* (ZRC 46124, 32.1 mm SL); b. *O. jaynei* (ZRC 40377 41.3 mm SL). Scale bar indicates 5 mm.

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