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REDESCRIPTION OF *ACROCHORDONICHTHYS ISCHNOSOMA* BLEEKER, 1858, A POORLY-KNOWN SPECIES OF AKYSID CATFISH (TELEOSTEI: SILURIFORMES) FROM SUMATRA AND JAVA

Ng Heok Hee
Fish Division, Museum of Zoology, University of Michigan, 1109 Geddes Avenue, Ann Arbor, Michigan 48109-1079, USA

Tan Heok Hui
Department of Biological Sciences, National University of Singapore, 10 Kent Ridge Crescent, Singapore 119260

ABSTRACT. – *Acrochordonichthys ischnosoma* Bleeker, 1858, a poorly-known species of akysid catfish is redescribed from the holotype and fresh material from Sumatra. It can be distinguished from congeners in having the unique combination of the following characters: head width 18.3–21.6% SL, dorsal to adipose distance 9.0–10.1% SL, body depth at anus 9.1–10.0% SL, a third of the premaxillary toothband exposed when the mouth is open, maximum width of humeral process 13.6–18.4% its length, 39–41 vertebrae, an angular anterior margin of the adipose fin and a long, slender male genital papilla.

KEY WORDS. – *Acrochordonichthys*, Akysidae, catfish, Sumatra, Java, redescription.

INTRODUCTION

Catfishes of the genus *Acrochordonichthys* Bleeker, 1858, are cryptically-coloured species generally found at the bottoms of rivers throughout Southeast Asia. They have a highly rugose skin with tubercles arranged in longitudinal rows along the side of the body, a long, low adipose fin, and an emarginate caudal fin. Until the recent revision by Ng & Ng (2001), the genus has been poorly studied, mainly due to difficulty in distinguishing the species.

One of the nine species regarded as valid by Ng & Ng (2001) is *Acrochordonichthys ischnosoma* Bleeker, 1858, which was known only from the holotype collected in the Citarum River in western Java. Since then, the second author has managed to obtain fresh material of this species from the aquarium trade that were collected in the Musi River in southern Sumatra. Due to inadequate knowledge of *A. ischnosoma*, we have written this paper to redescribe the species based on the holotype and the recent material obtained.

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 & Ng (2001).

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. Institutional codes follow Eschmeyer (1998).

TAXONOMY

Acrochordonichthys ischnosoma Bleeker, 1858
(Figs. 1, 2 & 3a)

Acrochordonichthys ischnosoma Bleeker, 1858: 232 (type locality: Tjitarum [=Citarum] River, Java); Bleeker, 1859: 136; Bleeker, 1862: 70, pl. 84, fig. 4; Günther, 1864: 96; Weber & de Beaufort, 1913: 367; Kottelat *et al.*, 1993: 74 (in part); Ng & Ng, 2001: 392, Fig. 4.

Material examined. – Holotype – BMNH 1863.12.11.151, 97.4 mm SL, Java: Parongkalong, provinciae Preanger, in flumine Tjitarum.

Others – UMMZ 23772, 5 ex., 51.4–64.0 mm SL; ZRC 46408, 33 ex., 33.6–61.4 mm SL; Sumatra: Palembang, from Musi River.

Diagnosis. – *Acrochordonichthys ischnosoma* can be distinguished from congeners of the *A. ischnosoma* species group by a greater dorsal to adipose distance (9.0–10.1% SL vs. 4.4–8.7) and about a third (vs. less than a fifth) of the premaxillary toothband exposed when the mouth is open. It can be further distinguished from *A. guttatus* in having a more slender body (body depth at anus 9.1–10.0% SL vs. 10.9–12.8) and a thicker humeral process (maximum width of humeral process 13.6–18.4% its length vs. 10.0–11.8); from *A. mahakamensis* by an angular (vs. rounded) anterior margin of the adipose fin; and from *A. strigosus* by an angular (vs. rounded) posterior margin of the adipose fin and a long, slender (vs. short, thick) male genital papilla.

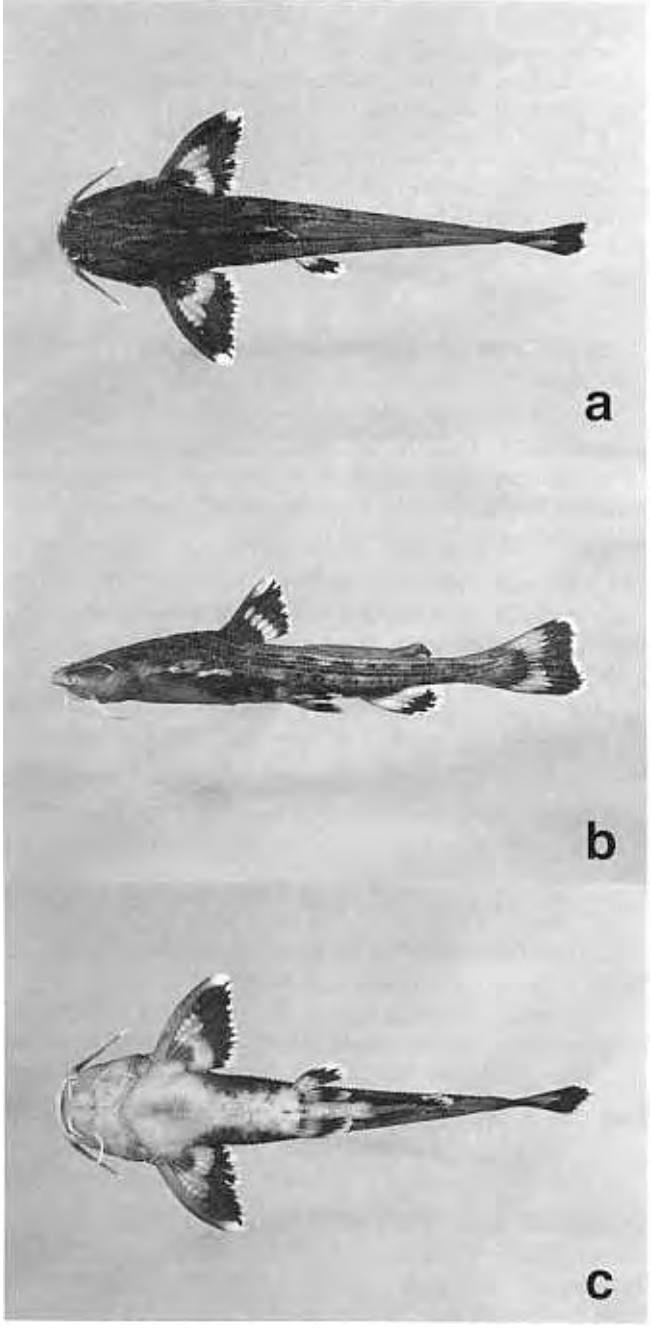

Fig. 1. *Acrochordonichthys ischnosoma*, ZRC 46408,52.4 mm SL; a. dorsal; b. lateral and c. ventral views.

Description. – Head broad and depressed, 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. Head covered with small tubercles with poorly demarcated and indistinct margins, body with such tubercles arranged in 5–6 longitudinal rows on each side. Occipital process narrow, tip tapering, reaching interneural. One third of premaxillary toothband exposed when mouth closed. In % SL: head length 21.8–23.2, head width 18.3–21.8, head depth 10.7–12.9, predorsal distance 35.3–38.8, preanal length 66.3–69.5, prepelvic length 50.5–52.7, prepectoral length 23.0–24.5, body depth at anus 9.1–10.0, length of caudal peduncle 19.4–22.3, depth of caudal peduncle 4.7–6.3, pectoral-spine length 17.3–24.3, pectoral-fin length 18.8–24.8, length of dorsal-fin base 8.5–12.3, pelvic-fin length 11.6–13.6, length of anal-fin base 10.5–13.0, caudal-fin length 14.8–18.7, length of adipose-fin base 27.1–31.3, dorsal to adipose distance 9.0–10.1; in % HL: snout length 33.8–39.0, interorbital distance 31.3–35.5, eye diameter 4.2–8.5, length of nasal barbel 6.0–10.9, length of maxillary barbel 62.0–83.0, length of inner mandibular barbel 20.2–27.8, length of outer mandibular barbel 43.6–63.5. Branchiostegal rays 5 (18). Gill rakers 0+4 (1), 1+4 (10) or 1+5 (2). Vertebrae 18+21=39 (1), 19+20=39 (5), 20+19=39 (5), 21+18=39 (1), 20+20=40 (4), 21+19=40 (1) or 20+21=41 (1).

Fin ray counts: dorsal I,4,i (18); pectoral I,6,i (17) or I,7 (1); pelvic i,5 (18); anal iii,5,ii (1), iii,6 (2), iii,6,i (10) or iii,7 (5); caudal 6/6 (1), 7/6 (12) or 7/7 (4). Dorsal fin origin nearer tip of snout than caudal flexure. Pectoral spine stout, with 6 (3), 7 (12) or 8 (3) large serrations on posterior edge. Caudal fin weakly emarginate.

Males with a long genital papilla located immediately posterior to anus (Fig. 2a). Females with a conical genital papilla located immediately posterior to anus (Fig. 2b).

Colour. – (Based only on Sumatran material) Dorsal surface of head ranging from pale brown with scattered dark drown pots to chocolate brown, fading to a cream colour on lateral and ventral surfaces. Dorsal surface of body predominantly pale brown, with dark brown spots scattered randomly. Lateral surfaces of body with chocolate brown markings arranged as a series of longitudinal patches forming a faintly reticulate pattern. Disposition of chocolate brown patches sometimes giving the impression of five to seven pale brown spots present on dorsolateral surface of body. Belly and chest cream, without spots. Dorsal, pectoral, pelvic and anal fins cream with two dark brown bands, one at base of fins and another near edge. Caudal fin cream, with dark brown band near edge and dark brown patch at base of caudal peduncle, arranged to form a large hyaline patch at proximal end of each caudal lobe. Barbels and pectoral spines cream, with dark brown spots on dorsal surfaces.

Distribution. – Known from the Citarum River drainage in western Java and the Musi River drainage in southern Sumatra.

DISCUSSION

Ng & Ng (2001) divided *Acrochordonichthys* into two species-groups based on distinct differences in morphology. With its narrower head (head width 18.3–21.6% SL), and 39–41 vertebrae, *A. ischnosoma* is easily distinguished from members of the *A. rugosus* species-group as defined by Ng & Ng (2001). Besides *A. ischnosoma*, there are four species of *Akysis* belonging to the *A. ischnosoma* species-group, viz. *A. guttatus* Ng & Ng, 2001, *A. mahakamensis* Ng & Ng, 2001, *A. septentrionalis* Ng & Ng, 2001, and *A. strigosus* Ng & Ng, 2001.

Ng & Ng (2001) also remarked that the holotype of *A. ischnosoma* (which was the only specimen of this species available to them for examination) was not well preserved and somewhat dehydrated. However, they reasoned that there would be relatively little shrinkage (and significant changes in morphometric values) because of the presence of little fleshy tissue on *Acrochordonichthys*. Our study corroborates this observation, as all of the morphometric data that they used to distinguish *A. ischnosoma* from congeners in its species-group have been found to be valid characters when the data from fresh material was included. One valid character that Ng & Ng (2001) did not use in diagnosing *A. ischnosoma* was the greater exposure of premaxillary teeth when the mouth is closed. They did not utilize this character because the upper lip is somewhat fleshy, and they were unsure of the validity of this character based on observing the (badly preserved) holotype alone. Our study has shown that the premaxillary teeth are also more exposed in fresh material of *A. ischnosoma*, and is therefore diagnostic of this species.

The coloration of *Acrochordonichthys*, particularly those of the *A. rugosus* species-group, has been shown to be highly variable by Ng & Ng (2001). However, this variation is considerably less marked in *A. ischnosoma* (and other members of the *A. ischnosoma* species-group). The dorsal surface of the head exhibits considerable variation, ranging from light to chocolate brown, but the body coloration exhibits little variation. A series of longitudinal chocolate brown patches arranged to form a faintly reticulate pattern is present in all of the material we examined, there being only a slight difference in the degree of coverage of the chocolate brown area on the dorsolateral surfaces of the body. Although the holotype of *A. ischnosoma* is bleached and its original colour is no longer discernible now, its colour pattern is illustrated in Bleeker (1862: Pl. 84, Fig. 4), and it is consistent with the little variation seen in the Sumatran material.

Acrochordonichthys ischnosoma can be distinguished from congeners of the *A. ischnosoma* species group by a greater dorsal to adipose distance (9.0–10.1% SL vs. 4.4–8.7) and a greater exposure of the premaxillary teeth when the mouth is closed (one third vs. one fifth; Fig. 3). It can be further distinguished from *A. guttatus* in having a more slender body (body depth at anus 9.1–10.0% SL vs. 10.9–12.8) and a thicker humeral process (maximum width of humeral process 13.6–18.4% its length vs. 10.0–11.8) and from *A. mahakamensis* by an angular (vs. rounded) anterior margin of the adipose fin. It can be further distinguished from *A. septentrionalis* in having a more slender head (head depth 10.7–12.9% SL vs. 12.8–15.8) and from *A. strigosus* by an angular (vs. rounded) posterior margin of the adipose fin and a long, slender (vs. short, thick) male genital papilla.

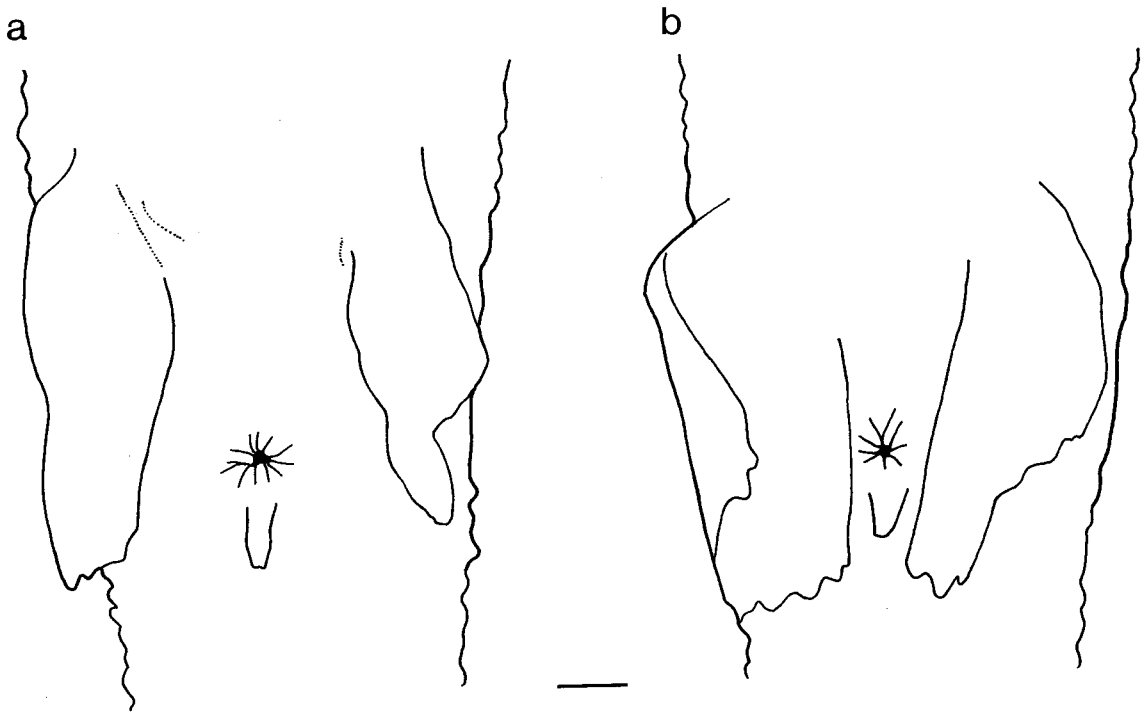

Fig. 2. Schematic illustration of genital papilla in *Acrochordonichthys ischnosoma*: a. male, UMMZ 23772, 64.0 mm SL; b. female, UMMZ 23772, 52.0 mm SL. Scale bar indicates 1 mm.

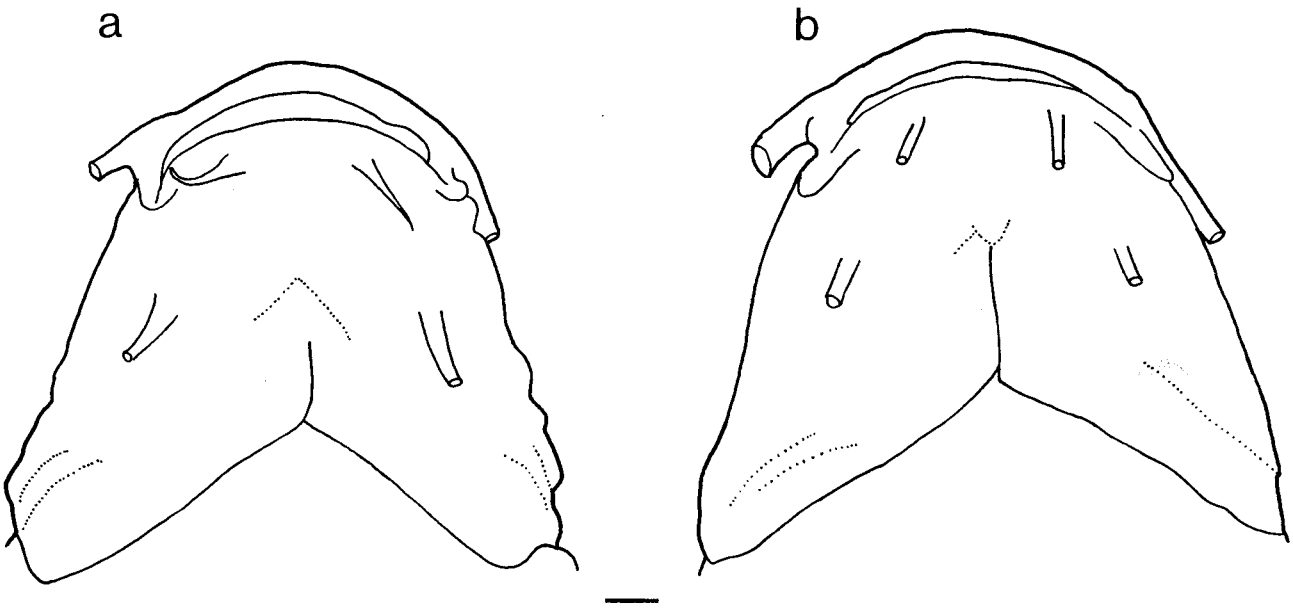

Fig. 3. Ventral views of heads of: a. *Acrochordonichthys ischnosoma*, UMMZ 23772, 64.0 mm SL; b. other members of the *A. ischnosoma* group (*A. septentrionalis*, NIFI, holotype, 101.3 mm SL illustrated). Scale bar indicates 1 mm.

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