

Channa bistrriata (Weber and de Beaufort), the young of the Snake-head fish *Channa lucius* (Cuvier). ——— In the original description of *Channa bistrriata*, Weber and de Beaufort (1922, *Fish. Indo-Aust. Archipel.*, 4: 322) included the comment that it possibly represented the young of *C. lucius* (Cuvier). The species was characterised with $4\frac{1}{2}$ scales between the anterior rays of the dorsal fin and the lateral line and with body markings consisting of 2 black longitudinal bands, as against $5\frac{1}{2}$ scales and a single interrupted lateral band in *C. lucius*.

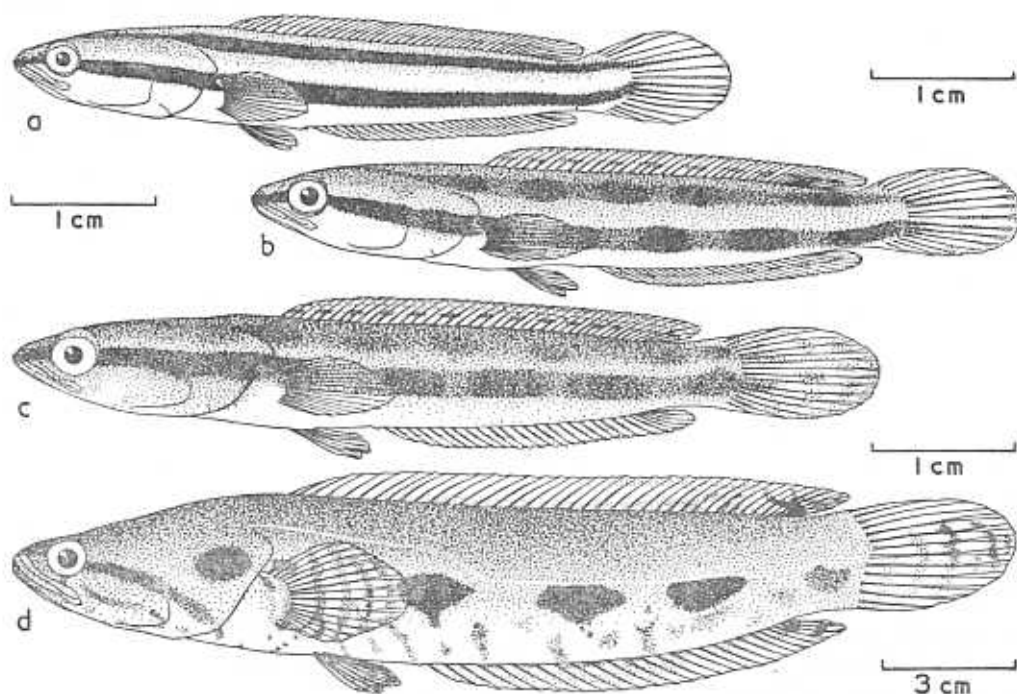


Figure 1. Stages in the colour pattern of *C. lucius* (Cuvier). (a) Nee Soon, Singapore, April 1958. (b) Aquarium specimen, July 1958, from Nee Soon, April 1958. (c) Maran, Pahang, August 1956. (d) Nee Soon, Singapore, April 1958.

Tweedie (1936, *Bull. Raffles Mus.*, 12: 22) listed the species (with 4 specimens identified by de Beaufort) from the Bukit Merah Reservoir and later Herre and Myers (1937, *op. cit.* 13: 70) recorded 26 specimens from Singapore. Tweedie (1949, *op. cit.*, 21: 104) further maintained that *C. bistrriata* was a diminutive species and could not represent the young stage of *C. lucius* since he had specimens of *C. lucius* about equal to and smaller than the *C. bistrriata* but without the 2 pairs of lateral bands and already with the characteristic markings of the adult. I have examined the entire series of 23 specimens of *C. lucius* which were available to Tweedie at that time and can find only 2 such specimens. They measure 68.2 and 74.0 mm. total length and were collected by Cedric Dover from Ampang, Selangor, 28th August, 1926. His specimens of *C. bistrriata* consist of 2 measuring 65.5 and 68.9 mm. from Herre's series from Singapore and 4 of 26.0 to 31.5 mm. from the Bukit Merah Reservoir. It will be noted that the smaller *C. lucius* is only 0.7 mm. smaller than the largest *C. bistrriata*. Tweedie's observation based on this single specimen is hardly significant and furthermore relative size alone is no criterion of the relative age since growth rates can vary. The description he gives of

the markings on those 2 specimens, i.e., "two alternating series of lateral blotches characteristic of the adult", is also not for the adult of the species but for young specimens according to Weber & de Beaufort (1922: 326).

Observations on additional specimens were made possible through the kindness of Dr. J. R. Hendrickson of the University of Malaya when with his assistance I collected a brood of 29 young together with an attendant adult female *C. lucius* from the Swamp Forest area at Nee Soon, Singapore in April 1958. 10 young were kept alive. The remaining series of 19 young (Fig. 1a), were found to agree closely with the original description of *C. bistrriata* except for the presence of $5\frac{1}{2}$ scale rows between the anterior dorsal rays and the lateral line. A re-examination of the 4 specimens from Bukit Merah and the 2 others from Singapore also gave a similar scale count. Mr. J. J. Hoedeman of the Zoologisch Museum, Amsterdam, kindly allowed me to examine the 3 type specimens of *C. bistrriata* (ZMA 103187) in his museum. The scale counts between the anterior dorsal rays and the lateral line are $5\frac{1}{2}$ and not $4\frac{1}{2}$ as originally described.

Of the 10 live specimens a single survived until July 1958, developing the markings corresponding to those given for young specimens by Weber and de Beaufort. My observations indicate that these markings (Fig. 1b), are transitory between younger specimens and the adult (Fig. 1d). I have recently (1961, *Malayan Nat. Journ.*, 15: 15, pl. 4, figs. 24a & 24b) given a brief account of these colour changes. ——— ERIC R. ALFRED, *Singapore National Museum*, 1st August, 1961.

A Syngnathid fish mentioned by van Hasselt. ——— In the published extract of a letter from J. C. van Hasselt to C. J. Temminck in *Algemeene Konst-en Letter-Bode*, 1823, part 1, no. 21, p. 329, there appears the following statement: "Van de Lophobranchien leeft in de rivieren bij Batavia een *Syngnathus*, dien ik heb doen afbeelden, en den naam *Fluviatilis* gegeven heb." The whereabouts of his specimens and the drawing that was prepared remained unknown until Bleeker (1853, *Verh. Bat. Genootsch.*, 25: 1 & 18), pointed out that the manuscript drawing had been left behind in Java and he provided a description of the species from this drawing under the name *Syngnathus fluviatilis* Bleeker. In a later publication Bleeker (1859, *Act. Soc. Sc. Indo-Neerl.*, 6: 188), listed it as a species of *Doryichthys* Kaup, but Dumeril (1870, *Hist. Nat. Poissons*, 2: 598), referred the species to *Microphis* Kaup as he did with all other species of that genus. None of the foregoing descriptions however, adequately characterised the species and accordingly Duncker (1915, *Mitt. Naturh. Mus. Hamburg*, 32: 55), and Weber & de Beaufort (1922, *Fish. Indo-Aust. Archipel.*, 4: 55), described it as a species of doubtful status under the name *D. fluviatilis* (Bleeker), with the comment that it was probably identical with *D. deokhatoides* (Bleeker).

In the course of re-examining the Kuhl and van Hasselt collection of fishes in the Rijksmuseum van Natuurlijke Historie, Leiden in 1959, I located a specimen (No. 3852) of *Microphis brachyurus* (Bleeker) labelled "Syngnathus fluviatilis". It was this label apparently that led Kaup (1856, *Cat. Loph. Fish British Mus*: 57), to include van Hasselt (1825) and Bleeker (1853) in his synonymy of the description of the specimen as *Doryichthys hasselti* Kaup. The specimen which is consequently a cotype of *D. hasselti* Kaup, is mentioned in Weber & de Beaufort (1922, *op. cit.*, 4: 55). In addition to this, I found a dry specimen (No. 1626) of *Microphis boaja* (Bleeker) which was labelled likewise and presumably in error, as "S. fluviatilis". No other specimens were found and it is believed that the fish collected by van Hasselt has been lost.