

The Correct Taxonomic Designation for the Southeast Asian Tinfoil Barb: *Puntius schwanenfeldii* or *schwanefeldi*?

MIKKEL S. CHRISTENSEN*

TAD Aquaculture Development Project
P.O. Box 140
Samarinda, East Kalimantan
Indonesia

Abstract - The Southeast Asian tinfoil barb is a widespread and common cyprinid fish that has considerable potential as an aquaculture candidate. It is a member of the taxonomically disputed genus *Puntius*, to which the java carp, *P. gonionotus*, also belongs. Considerable confusion apparently exists as to the species name of the tinfoil barb, however, as a variety of spellings are utilized. This paper reviews the taxonomic position of the tinfoil barb and shows that the designation *Puntius schwanenfeldii* Bleeker 1853: p.517 is the correct form.

The tinfoil barb (Fig. 1) is a cyprinid fish with considerable potential as an aquaculture candidate for both pond and floating cage culture (author, unpubl. data). It is a typical member of the genus *Puntius*, characterized by having a laterally flattened body, a strongly convex body profile anterior to the dorsal fin and an orange-red coloration of the anal and caudal fins (Fig. 1).

The species can be differentiated from other members of the genus through having: a complete lateral line; a strongly denticulated third dorsal fin-spine; 8-9 scales between lateral line and dorsal fin; origin of dorsal fin opposite to eleventh scale; and 35-36 scales in the lateral line (Weber and Beaufort 1916).

The tinfoil barb was first described under the name *Puntius schwanenfeldii* Bleeker 1853: p.517. Shortly thereafter he placed the species in the genus *Systomus* (*Barbodes*) Bleeker 1860, only to place it and several other species of the genera *Capoeta* and

*Reprint address: AP-PAPEC Project, Caixa Postal 52731, CEP 60151-000 Fortaleza, Ceará, Brazil.

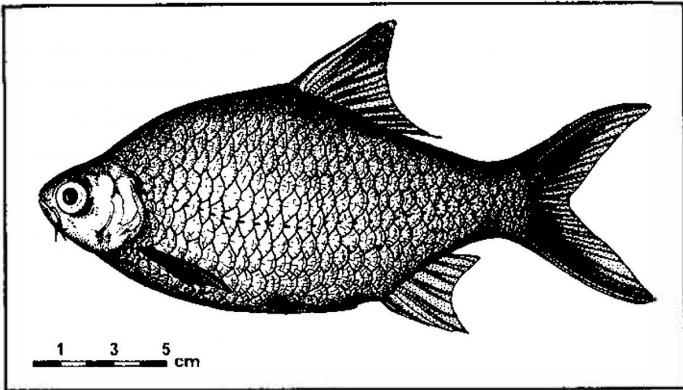


Fig. 1. The tinfoil barb, *Puntius schwanefeldii* Bleeker 1853. This fish was cultured in a floating cage in East Kalimantan, Indonesia, and weighed 180 g.

Puntius back in the genus *Puntius* (Bleeker 1863), which was originally described from the Ganges in India (Hamilton 1822).

Thereafter, however, the confusion began. Some authors wrote the species name with one "i" (Steindachner 1901; Vaillant 1902; Volz 1904), others with two (Weber 1894). These authors included the second "n", whereas others did not (Fowler 1905; von Martens, in Smith 1945) and some left out both "i" and "n" (Weber and Beaufort 1916).

It is highly probable that this was caused by a typographical error, as two fish were named after a Mr. H.W. Schwanefeld in the original paper (Bleeker 1853). Both fish names had the extra "n", but the man's name as listed in the appendix did not. Bleeker himself used the names with the "n" in later publications.

The situation has since been clarified by a ruling of the International Commission on Zoological Nomenclature, which states that in such cases the original orthography is correct, so the species name is *schwanefeldii*.

Unfortunately, the confusion continues in present-day literature. The species name is mostly given without either extra "i" or "n" in Indonesia (Schuster and Djajadiredja 1952; Djajadiredja et al. 1977), but with both in Malaysia (Mohsin and Ambak 1982). In Japanese papers some authors use the correct name (Imaki et al. 1978), others not (Taki et al. 1978; Mizuno and Furtado 1982). This is possibly because Weber and Beaufort's (1916) book *The Fishes of the*

Indo-Australian Archipelago is commonly used in Indonesia and gives the wrong designation, whereas Smith's (1945) book with the correct spelling is utilized in Malaysia and Thailand.

Just to add to the confusion, several authors have stated that the validity of the genus *Puntius* is questionable and some have suggested that all members of this genus be left in the genus *Barbus* until a definitive analysis is complete (Hoedemann 1958; Myers 1960). To leave all of these species in the genus *Barbus* can only be a temporary solution, however, as it includes a large number of genera (Myers 1960). Indeed, the generic name *Puntius* has been added to the official list of zoological generic names (Hoedemann 1961).

The Indian *Puntius* species are probably correctly placed in the genus (Taki et al. 1988). The tinfoil barb and other Southeast Asian barbs are most closely related to the Indian species, so the case for including the Southeast Asian species in the genus is strong (Taki et al. 1978). Taki and his colleagues thus suggested that the name *Puntius schwanenfeldii* continue to be used, an opinion which the author supports.

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