

The Catfishes of Asia

Family Bagridae part two

By R. Shane Linder

In this article we continue our review of the family Bagridae. The first installment in the series covered the genera: *Batasio*, *Chandramara*, *Rama*, *Pelteobagrus*, and *Hyalobagrus*. This series is not meant to be a comprehensive review of the family Bagridae, but rather a general overview of the genera that are imported for the aquarium hobby with some frequency. The entire series has been updated for the new millennium.

Perhaps a better title for this piece would be "Beauties and Beasts." In this article we look at what are not only some of the most beautiful catfishes in the hobby, but also the hands-down meanest freshwater fishes known. The beauties belong to the genera *Leiocassis*, *Pseudomystus*, *Bagrichthys* and *Horabagrus*. The beasts are members of the genera *Hemibagrus* and *Olyra*.

In Mo's 1991 work he followed Jayaram's 1968 suggestion and divided the genus *Leiocassis* between *Leiocassis* and *Pseudomystus*. This division has been accepted most subsequent authors (Kottelat et al, 1993, Ng & Rachmatila, 1999, Tan & Ng, 2000). That said, there are still some serious problems with this division. Mo, 1991 attempted to define *Leiocassis* as a Southeast Asian genus and stated that Chinese *Leiocassis* examined by him actually belonged to the north Asian genera *Pelteobagrus* or *Pseudobagrus*. Unfortunately, a few Russian and Chinese authors have recently placed some Russian and Chinese catfish in *Leiocassis*. This complicates the topic as now *Leiocassis* is composed of an inter-related group of Southeast Asian species and an inter-related group of north Asian species. However, these two groups, in the same genus, are distantly related to each other. Most of the species familiar to the aquarium hobby have now been placed in *Pseudomystus*.

The genus *Pseudomystus* still needs some serious attention. In the past it has been used to group together nearly all of the "bumble bee-patterned" catfishes of Southeast Asia. The hobby has done the same in that all of these fishes are sold under the name "bumble bee catfish" and nearly always labeled *Pseudomystus siamensis* even though there is more than just this one species imported. It is the same case with the *Pseudomystus stenomus* complex, which usually are found under the common name false bumblebee catfish.

The *Pseudomystus* bumblebee catfishes are all very beautiful. The body is a velvet black highlighted with bands of white or off-white. These catfishes are nocturnal, but with a little patience, they can be conditioned to accept food when the aquarium lights are on. It is a good idea to condition nocturnal catfishes to do this because it is often the only time that you will see them and be able to observe their health. *Pseudomystus*, like some doradids, have a way of disappearing in a tank only to be found months later when you decide to rearrange the tank.

Like many catfishes, it is imperative that they are fed properly and not left to live off of only what they can scrounge up in the aquarium. The hobbyist should also be aware that *Pseudomystus* are efficient predators and will consume fishes up to half of their size. If your tank is missing a couple of tetras or barbs, the bumblebee catfish is almost certainly your culprit. These fishes do well in a community set up, but each individual will need its own cave as they can be quite territorial amongst their own kind. Aggression is often displayed by biting another *Pseudomystus*' caudal fin. Damaged caudal-fins are a sure sign that there are not enough retreats for all of the fish to live comfortably together. All *Pseudomystus* can be sexed in the typical bagrid fashion and the males' genital papilla is even more distinct than in many other bagrids.

Both the bumblebees and false bumblebees can be found in creeks and rivers throughout Borneo, Thailand, Sumatra, Java, and Malaya. Although they come from normally soft acidic waters they can easily adapt to almost any water conditions provided the extremes are avoided. There have been no recorded spawning

successes, but I have come very close to inducing spawning on a number of occasions. The main keys are to separate the sexes, raise the temperature, and feed high protein foods. When the females are gravid simulate a monsoon season with large cool water changes and the addition of a great amount of aeration.

The genus *Bagrichthys* hails from Borneo, Sumatra, Cambodia, and Thailand. This genus is known to the hobby primarily because of the black lancer (*B. macracanthus*). The genus presently contains six species (see table on page ??). *B. macracanthus*, the only member of the genus imported, is truly one of the most beautiful fishes in our hobby. The fish is solid velvet black with a white mid-axial streak that runs from the shoulder to the caudal peduncle. The entire caudal fin is a transparent white and develops flowing extensions with age. The lancer in "black lancer" refers to this fish's disproportionately tall dorsal fin which, when folded down, reaches nearly to the caudal peduncle. These fish can be expected to reach an adult standard length of about eight to ten inches but is slow growing and will require a few years to reach this length.

The black lancer is, by nature, very nocturnal. Once again though, with some conditioning, the fish can be taught to eat with the lights on and even to feed from its owner's hand. If the fish is kept in a community type tank be sure that it receives an adequate diet. Wild specimens have been caught with worms on a hook and line. In the aquarium, bloodworms (chironomid larvae) are eagerly accepted. These fish are often territorial among their own kind, but as with most bagrids, aggression can be severely reduced by keeping one male with two or more females. Lancers are very adaptable to changes in pH and DH and will thrive as long as extremes are avoided. It has been suggested that raising the tank's temperature above 80F for a couple of days helps lancers to cope with the stress of being moved. The sexes are easy to distinguish. Not only does the male possess a genital papilla, but the males' nasal and maxillary barbels are more than twice as long as the females'.

The final beauties belong to *Horabagrus*. Mo's 1991 phylogenetic analysis concluded that *Horabagrus* is more closely related to the Asian schilbeids and thus Mo excluded this genus from Bagridae. While the general arrangement of this series has followed Mo's conclusions, I will deviate in the case of *Horabagrus* and follow Pethiyagoda and Kottelat (1994: 112) who state that until clearer evidence is available *Horabagrus* should be retained in Bagridae. *Horabagrus* contains just two species: *H. brachysoma* and *H. nigricollaris*. Both species are restricted to India and have only very recently become available as regular imports. *H. brachysoma* has been imported as the bullseye cat and imperial cat. The coloration is stunning and very reminiscent of *Mystus bimaculatus*. *H. brachysoma* is normally found in brackish estuaries but adapts readily to freshwater aquariums. This fish will reach at least 214 mm SL (8 ½ inches) and is an efficient predator. It is a fish with a lot of "personality" and, like many larger pimelodids and bagrids, soon becomes a true pet. *H. nigricollaris* comes from freshwater rivers and lakes. The coloration is very similar to *H. brachysoma* but the light shoulder markings wrap over the nape (neck) to form a white collar. *H. nigricollaris* remains a bit smaller at an adult length of just under seven inches.

Now that we have looked at the beauties, let's cover the beasts. Most of the larger "Mystus" catfishes were moved to the genus *Hemibagrus* by Mo in 1991. Two of these, the Asian red tail, *Hemibagrus wyckioides* and the crystal-eyed catfish, *Hemibagrus wyckii*, are imported for the hobby with increasing frequency. Asian red tails used to be quite rare and expensive in our hobby. However, many Asian countries have recently begun serious aquaculture programs aimed at keeping their nation fed. The large *Hemibagrus* species have proven ideal for this and are now being farmed in many Asian nations. A byproduct has been that large numbers of young *Hemibagrus* are now showing up in the aquarium trade. Young Asian red tails in the two to three inch range are becoming a common sight in many pet stores. At this size, the fish's body is nearly black and the tail shows only red highlights. Against the black body, the long white barbels contrast nicely.

H. wyckioides will reach a maximum standard length of just over three feet (95 cm) (Ng & Rainbooth, 1999: 569). It is not just their size that makes them beasts, but also their disposition. In nature, red tails over 12 inches are strictly predatory with other fishes accounting for nearly half of their diet. Crustacea and insects make up most of the remaining half. Barbels, three spot gouramis, and even snakeheads (*Channa* spp.) are

all eaten along with many other fishes. One red tail was even found with the remains of a snake in its stomach. In captivity, specimens over four inches will need their own tank as they will not tolerate tankmates. Captive care is simple, just provide clean water with a good flow from a power head. A couple of large PVC pipes and rounded rocks provide hiding places and complete the set up. Water chemistry is of little concern since these fishes often hunt from the soft acidic waters up-river down to the brackish deltas of the larger Asian rivers.

The crystal-eyed catfish, *Hemibagrus wyckii*, is also quite striking. The entire fish is black with white markings on the caudal and dorsal fins. The eyes are a sky blue much like those of *Panaque suttonorum*. *H. wyckii* is capable of attacking animals of its own size. Sands (1985: 129) claims that it is the "only freshwater fish clearly unafraid of man". In captivity they will reach just under two feet standard length. These fish have tremendous jaw strength. Layley reported that her specimen managed to bite, and nearly flatten, an aquarium heater protected by an aluminum sleeve (1995: 36). A proper set up for a crystal-eyed catfish should be similar to what has been recommended for Asian red tail catfishes. One major advantage that the *Hemibagrus* species have over the large South American catfishes is that they are less skittish in captivity.

The nasty disposition of the *Hemibagrus* species really cannot be over exaggerated. It has been my experience that a fairly small *Hemibagrus* will terrorize even larger aggressive catfishes. I have read accounts of smaller *Hemibagrus* destroying large predatory pimelodids in short order. I even met one aquarist that placed a 12-inch *Hemibagrus wyckioides* in a very large tank (over many THOUSAND gallons) with two two-foot channel catfish (*Ictalurus punctatus*). Even in this large tank both Channel catfish were killed on the first night with the *Hemibagrus*.

This same excessive aggressiveness is found in the members of the bagrid genus *Olyra*. *Olyra* has been considered for many years as the sole genus of the family Olyridae. However, Mo's 1991 phylogenetic analysis of the family showed that *Olyra* is a highly specialized member of Bagridae. Mo recognized *Olyra* as the sister group of the lineage comprising *Bagrus*, *Aorichthys*, *Mystus*, and *Hemibagrus*. These fish resemble small elongate *Hemibagrus* and are known as fighting catfish. In Asia *Olyra* are placed in small aquaria to battle against each other in much the same way as *Betta*. Money is bet on the outcome of the battle. *Olyra* have been imported on a few occasions, but the results are inevitably the same. Only one fish survives import per bag after killing off the other *Olyra* shipped with it.

This article would not be complete without mentioning the responsibility that a hobbyist incurs when they purchase one of these large predators. Give some serious thought to the long term care of these animals before you purchase one. Are you going to want to keep a 200 to 300 gallon aquarium with only one fish in it? Whether you prefer to keep the beauties or beasts, there is no doubt that this family has a lot to offer any aquarist. Next time we will explore the genus complex genus "Mystus".

Below are the valid species, as of April 2000 for the above genera with the exception of *Hemibagrus*, which is currently under revision by Ng Heok Hee at the National University of Singapore.

Leiocassis Bleeker, 1858

Leiocassis brashnikowi (Berg, 1907) China & Siberia: Amur, Onon, Ussuri, & Sungari Rivers & Lake Hanka

Leiocassis herzensteini (Berg, 1907) River Amur, River Onon, River Yalu

Leiocassis hirsutus Herre, 1934 China

Leiocassis micropogon (Bleeker, 1852) Sumatra, Borneo, Malaya

Leiocassis poeclopterus (Valenciennes, 1840) Borneo, Sumatra, Thailand, Java, & Burma

Leiocassis saravacensis Boulenger, 1893 Borneo

Leiocassis ussuriensis (Dybowski, 1872) China: Hunan, Tungting Hu, Shan-si; Shanghai, Suifu, Yachow, Korea; Russia: Amur, Ussuri, & Sungari Rivers, Khanka Lake

Notes: Jayaram 1968: 338 points out that reports of this species far south of its normal range, such as reports from Shanghai, may represent another species.

Pseudomystus Jayaram, 1968

Pseudomystus bicolor (Fowler, 1934) Thailand

Pseudomystus breviceps (Regan, 1913) North Sumatra
Pseudomystus flavipinnis Ng & Rachmatika, 1999 Borneo: Kapuas basin
Pseudomystus fuscus (Popta, 1904) Borneo, Sumatra, & Malaya
Pseudomystus inornatus (Boulenger, 1839) Borneo
Pseudomystus leiacanthus (Weber & Beaufort, 1912) Malaya: Lake Chin Chin, Johore, Kota Tinggi, Malacca, Mawaii, River Plus; Sumatra: Faloeck, River Kwantum
Pseudomystus mahakamensis (Vaillant, 1902) Borneo and East Sumatra
Pseudomystus moeschii (Boulenger, 1890) Sumatra
Pseudomystus myersi (Roberts, 1989) Borneo
Pseudomystus robustus (Inger & Chin, 1959) Borneo: Kinabatangan River
Pseudomystus rugosus (Regan, 1913) Sumatra & Borneo
Pseudomystus siamensis (Regan, 1913) Thailand: River Bangpakong, River Chantabun, Menam Chao Phya, Doi Angka, Menam Khan, Meklong, Mewang, Menam Mun, River Nontaburi, Pak Jong, Menam Tadi, Menam Tapi, Trang; Cambodia, Laos
Pseudomystus stenomus (Valenciennes, 1840) Thailand, Cambodia, Java, Sumatra
Pseudomystus sp. undet Noted by Roberts, 1989 Borneo
Pseudomystus vaillanti (Regan, 1913) Borneo
Bagrichthys Bleeker, 1858
Bagrichthys hypselopterus (Bleeker, 1852) Borneo: River Kapuas, Sintang; Sumatra: Djambi, Palembang, River Mussi, River Rokan
Bagrichthys macracanthus (Bleeker, 1854) Cambodia, Thailand, Sumatra, & Borneo
Bagrichthys macropterus (Bleeker, 1853) Cambodia, Thailand, Sumatra, & Borneo
Bagrichthys micranodus Roberts, 1989 Borneo
Bagrichthys obscurus Ng, 2000 Indochina
Bagrichthys vaillantii (Popta, 1906) Borneo: Mahakam River drainage
Horabagrus Jayaram, 1955
Horabagrus brachysoma (Gunther, 1864) Southern India in estuaries
Horabagrus nigricollaris Pethiyagoda & Kottelat, 1994 Southern India
Olyra McClelland, 1842
Olyra burmanica Day, 1872 Burma: Pegu Yomas
Olyra horae (Prahad & Muderji, 1929) Burma: Indawgyi Lake & India: Menghayala State
Olyra kempfi Chaudhuri, 1912 India: Assam
Olyra longicaudata McClelland, 1842 India: Assam

References

- Riehl R. and Baensch H. A. 1996. "Aquarium Atlas III" (Tetra Press) 1104pp.,
 Finley, L. 1995. Catfish Corner: *Bagrichthys macracanthus*: The Black lancer catfish. TFH Magazine Vol XLIII No. 10: 134-139.
 Jayaram K. C. 1968. Contributions to the study of bagrid catfishes (Siluroidea: Bagridae) 3: A systematic account of the Japanese, Chinese, Malayan, and Indonesian genera. Treubia. Vol. 27 (2-3): 287-386.
 Jayaram, K. C. 1981. The freshwater fishes of India, Pakistan, Bangladesh, Burma, and Sri Lanka: A handbook. Zoological Survey of India, Calcutta, xxii + 475pp., 13pls.
 Jayaram, K. C. 1999. The freshwater fishes of the Indian region (Delhi: Narendra Publishing House). 551pp., 18 pls.
 Khan M. S. et al. "Food and Feeding Biology of a Tropical Freshwater Catfish, *Mystus nemurus* C. & V. With Reference to its Functional Morphology" (My copy of this paper is a photocopy lacking appropriate citation information)
 Kottelat, M., Whitten, A.J., Kartikasari, S. N. and Wirjoatmodjo S., 1993. Freshwater Fishes of Western Indonesia and Sulawesi (Hong Kong: Periplus Editions), 221 pp., 84 pls.
 Layley, D. 1995 "Love at First Bite" Practical Fishkeeping Magazine November: 36-37.
 Mo, T. 1991. Anatomy, Relationships, and Systematics of the Bagridae (Teleostei: Siluridae) With a Hypothesis of

Siluroid Phylogeny (Koeltz Scientific Books) 216pp., 63pls.

Ng, H. H., 1999. *Bagrichthys obscurus*, a new species of bagrid catfish from Indochina (Teleostei: Bagridae). *Revista de Biologia Tropical* 47: 537-543.

Ng, H. H., in press. *Bagrichthys vaillantii* (Popta, 1906), a valid species of bagrid catfish from eastern Borneo (Teleostei: Siluriformes). *Zoologische Mededelingen*.

Ng, H. H. & Tan, H. H., 1999. The fishes of the Endau drainage, Peninsular Malaysia with descriptions of two new species of catfishes (Teleostei: Akysidae, Bagridae). *Zoological Studies* 38: 350-366.

Ng H. H. & I. Rachmatika. 1999. The catfishes (Teleostei: Siluriformes) of Bentuang Karimun National Park, West Kalimantan, Indonesia. *The Raffles Bulletin of Zoology* 47(1): 167-183.

Ng H. H. & W. J. Rainbooth. 1999. The bagrid catfish genus *Hemibagrus* (Teleostei: Siluriformes) in central Indochina with a new species from the Mekong River. *The Raffles Bulletin of Zoology* 47(2): 555-576.

Pethiyagoda R. & M. Kottelat. 1994. Three new species of fishes of the genera *Osteochilichthys*, *Travancoria* and *Horabagrus* from the Chalakudy River, Kerala, India. *J. South Asian nat. Hist.* Vol. 1 No. 1: 97-116.

Roberts T. R. 1989. The freshwater fishes of western Borneo (Kalimantan Barat, Indonesia). *Mem. California Acad. Sci.*, 14: 1-210.

Sands, D. 1985. *Catfishes of The World Volume 5 Bagridae and Others* (Denure Enterprises) 200pp.

Talwar P. K. & A. G. Jhingran 1991(2). *Inland Fishes of India and Adjacent Countries*. Oxford & IBH Pub. Co., New Delhi, 2 vols.

Tan H. H. & H. H. Ng. 2000. The catfishes (Teleostei: Siluriformes) of central Sumatra. *Journal of Natural History* 34: 267-303.

Zakaria-Ismail, M. 1991. "Notes on the Catfish, *Bagrichthys macracanthus* (Pisces: Bagridae) from Peninsular Malaysia" *Malaysia Nature Journal* 46: 35-39

© Catfish Study Group. All Rights Reserved.

