

A New Star in the Galaxy

The Celestial Pearl Danio, *Celestichthys margaritatus*

by ALEXANDER A PRIEST

The celestial pearl danio is a fairly new species, discovered in August of 1996. Originally, it was given a tentative scientific name of “*Microrasbora* sp. ‘Galaxy’” and a common name of “galaxy rasbora.” (It was initially considered to be a member of the *Microrasbora* genus, due to its similarity to *Microrasbora erythromicron*.) It has now been officially described by taxonomist Tyson R. Roberts at the Smithsonian Tropical Research Institute in the **Raffles Bulletin of Zoology** in February 2007, and placed in a new genus. It is now known as *Celestichthys margaritatus* (which means “heavenly fish adorned with pearls”) and is presently the only species in the genus *Celestichthys*. It belongs to the subfamily Danionae and to the family Cyprinidae. The first article in a commercial magazine on this fish was in the December 2006 issue of the British publication, **Practical Fishkeeping** in its “Interesting Imports” column¹.

then, additional populations have been discovered around Hopong, a town in the Shan State of eastern Myanmar³. Fortunately, this fish has also been found to breed in the home aquarium (it was first bred in captivity in England by Pete Liptrot and Paul Dixon of the Bolton Museum Aquarium); and domestically bred stock is usually available, although demand generally remains high.

The celestial pearl danio is a very small fish that only attains a length of about one inch. Nonetheless, before its introduction to the aquarium hobby trade, these fish were caught, dried, and sold for food by the local people. A can of approximately 500 *C. margaritatus*, when sold as food, brought in about 25 kyat (or about \$3.90 U.S. dollars). Now, when sold to the aquarium trade, each fish live is worth about one kyat. This means that 500 live fish can bring in nearly \$80 — a significant increase, especially for residents in a country that remains one of the poorest nations in southeastern Asia.



Celestichthys margaritatus - male



Celestichthys margaritatus - female

When the celestial pearl danio was first introduced to the hobby (as the “galaxy rasbora”), its exact collection location was kept secret for commercial reasons. That location was eventually discovered to be shallow wetland ponds in the Salween Basin, northeast of Inle Lake in Myanmar (formerly Burma). The bright colors and small size of this species made it an instant hit with hobbyists. It immediately became so popular that only two months after its introductory article on them, **Practical Fishkeeping** reported that catches were down to just a few dozen per day, apparently due to over-collection².

As a result, in February 2007, the government of Myanmar banned exports of the fish. Since

One of my all-time favorite fish is the pearl gourami, *Trichogaster leerii*. To a great extent, the celestial pearl danio reminds me of the pearl gourami. It is one pretty little fish. Its body is sprinkled with small, pearly dots, calling to mind (for me at least) the pearl gourami. (Interestingly, the chest of males is more orange, another similarity to the pearl gourami.) The gill covers of the celestial pearl danio are transparent, allowing the blood-red gills beneath to be clearly visible. The background body color of males is bright blue, with males being more brightly colored than females, and having more red on their fins. The caudal peduncle is higher in males than in females. The red fins have black bars and patterns, which

are more numerous and darker in males. In general, females are less colorful and have rounder bodies. While a generally peaceful species, males will flare out their fins “squaring” to each other, resulting in some spectacular displays (when you are lucky enough to catch them at it, as this is also a very shy species).

These fish are egg scatterers. I have read and been told that their tank should have marbles, or

Java Moss, or a screen to allow eggs to fall into and to prevent the adults from eating the eggs. I have also read and been told that the fry need live micro organisms to feed on for the first few days of their lives. Well, I had a group of a half-dozen celestial pearl danios in a five-gallon tank, with no Java Moss, no marbles (in fact no substrate at all), but with two caves (one made from a coconut shell with an *Anubias* sp. coffeeolia plant attached). One day, my wife told me that she saw fry in the tank. Sure enough, with only flake food (they are omnivorous, and will eat flake, pellet, freeze-dried, live, or frozen food, if it is small enough), and very minimal maintenance, my celestial pearl danios spawned, and some fry survived. (It should be noted that this tank had both a box and a sponge filter, and that it is quite possible that naturally occurring microorganisms on the sponge filter were sufficient to feed the newly hatched fry.)

Some collectors claimed that the water in which these fish are collected has a pH of 7.3 (slightly alkaline) with a hardness of 7 GH (slightly hard). My New York City tap water is very soft, and has a neutral pH (7.0, almost exactly). The coconut shell in their tank appears to leach tannins into the water (making it somewhat

Scientific name: *Celestichthys margaritatus*
Common name: Galaxy Rasbora,
 Celestial pearl danio, Fireworks Rasbora
Geographic location: Myanmar (Burma)
Size: Up to 1 inch (2.5cm)
Temperament: Peaceful
Temperature: 70°F-78°F
Acidity: pH 6.8-7.5
Hardness: Slightly hard to slightly soft
Skill level: Intermediate
Minimum tank size: 2.5-5 gallons
Reproduction: Egg scatterer
Nutrition: Omnivorous

tea colored) so that the actual pH my fish spawned in was slightly acidic (6.8 or so). In their native habitat, the water temperature is around 70°F, but since the water is shallow, it is also prone to rapid temperature fluctuations.

So, you can see that this is basically a relatively tough and adaptable little fish.

It should do well in a fairly wide range of water conditions, and is suitable for almost any community tank of small, peaceful fish. It might

also be a good candidate for a mini or desktop aquarium.

If you see them, they are certainly worth checking out, especially if you have a community tank of very peaceful fish, or a spare small tank available. While they are not all that common yet in pet stores, they do often pop up in Internet sales and auction sites (such as aquabid.com) or in aquarium society auctions. (In fact, I got my fish at a Greater City Aquarium Society auction.)



Map of Myanmar with Lake Inle circled

References

- Clarke, Matt: “The next big thing: *Microrasbora* sp. Galaxy,” **Practical Fishkeeping**, September 2006.
- Clarke, Matt: “Galaxy rasbora under threat” **Practical Fishkeeping** February 2007.
- Clarke, Matt: “New populations of *Celestichthys* discovered” **Practical Fishkeeping**, June 2007.

