

THE TRIALS OF BREEDING *CORYDORAS TRILINEATUS*

by Deborah Ralph

Firstly let me introduce you to this striking little catfish. With the scientific name *Corydoras trilineatus* what else could its common name be but Three-line Catfish? It has a distinctive mid-body lateral stripe, bordered in white, so as to create an impression of 3 lines. It is a South American species and comes from Peru and Brazil. As with most *Corydoras*, sexing is not easy but generally the adult females are more robust than their mates. The fish grow to about 5 cm in length and are easy to keep, given clean water and a neutral pH. They are no bother to any other fish and form a perfect addition to a community tank.

Our mixed community tank had housed a number of these catfish for over a year and, deciding it was time to attempt breeding, we removed 2 females and 4 males to a clean 18" x 9" tank, which they had to themselves. The bottom of the tank was bare but some Java moss was present and there was a sponge filter. A varied diet of live foods, consisting of Tubifex, white worms and *Daphnia*, together with some greens was provided.

We waited and waited, in all for about 3 months without result, despite resorting to various potential triggers, such as the old cold-water change trick of delaying the change for 2 weeks, followed by a nice big change, delivered to appear like rain. We even collected buckets full of rain water for them and there were a number of thunderstorms about but these also had no effect. Running a diatom filter on the tank also failed and indeed, nothing we tried seemed to give the desired result, although with all the good food, the fish should have been well conditioned. They just continued to sit under their cover and enjoy their 5-star holiday away from the crowd, lapping up all the live food on offer.

Well, like most people, we have only so much patience and as we needed the breeding tank for other purposes, we decided enough was enough. However, after our efforts in catching the 6 from our community tank we decided not to return them immediately. All hope was not yet gone. A 2' x 1' tank, whose previous tenants (now moved elsewhere) had similar water conditions was given a half water change and also a thorough cleaning with a diatom filter. In this bare-bottom tank, at a temperature of 27°C and at neutral pH, was added freshly washed Java moss, a box-filter seeded with a small amount of used filter-wool and about 150 Checker Barbs - *Capoeta oligolepis*, which were a month old and needed more room. The 6 *Corydoras trilineatus* were also placed in this tank. A couple of days later the fine foods fed to the Checker Barbs began to cloud the water, so a small internal power filter was set to work. This had the desired effect.

The next morning the fish were fed earlier than usual. at about 8 a.m. Some 3 hours later a casual glance at the tank revealed a number of whitish opaque round things, a few on the front glass and a few on a small part of the Java moss that was caught in the bottom of the internal filter. Eggs!! The thoughts went flashing through my mind that those Checker Barbs spawn young or I must be seeing things. Anyway, after the initial surprise had worn off, more eggs were seen in a clump of Java moss and on the other walls of the tank although, unfortunately,

the catfish seemed to have finished their spawning frenzy. Luckily there was available an 18" x 9" tank with similar water conditions, that was quickly made empty. The Java moss containing the catfish eggs was transferred, in water, to this tank. A small amount of shell-grit was added, together with some Promethyasul to stop the eggs from moulding. The overhead lamp was moved away, so as to avoid direct lighting. As most of the eggs seemed to have been transferred with the Java moss, the remainder were left in the tank where they were laid, until the following day, when it was noted that they were still present and were fertile. They were then rolled off the glass, one by one, and placed in a dish that was sitting on the bottom of the tank. They were then placed in a small plastic tank and floated in the new tank, containing the other eggs. An airstone and some Promethyasul were added. In this way it would be easier to watch their progress.

We estimated that only about 80 eggs had been laid, most of them individually. A number of those in the Java moss had developed fungus. The water in the small floating tank was changed twice daily, with water from the tank containing the other eggs. Hatching occurred after 3 days at 26°C and the fry were free-swimming immediately, although they did have yolk-sacs. Hatchlings from the small tank were carefully poured into that containing the others. They did not start to feed for a further 2-3 days but then took micro-worms and brine shrimp nauplii. The tank was given daily 10% water changes, without siphoning of any debris, as the fry seemed to need this until about 1 week old. They could also be counted more easily now and on moving the Java moss aside, we reckoned we had about 40 little *Corydoras trilineatus*. At 1 week old they were quite a good size and were swimming about actively and feeding very well. The depth of the water was about 7".

Eight days after the catfish first spawned they repeated the performance. The eggs were picked out, placed into a small plastic tank and treated as before. However, they were kept in the small tank for a couple of days after hatching, until they were ready to take food. The second spawning produced about 100 eggs but over half of them succumbed to fungus. The resulting fry did not seem to do as well as those kept in the small tank, even with 75% water changes twice daily, so they were gently released into the larger tank, with their 1-week older brothers and sisters. Water changes were kept up.

At about 2 weeks of age the young catfish had grown to a good size and, shapewise, were miniatures of their parents but unlike the latter, they had black masks over their eyes. They also had black blotches on their grey-coloured bodies. They were really quite active and ate a lot of micro-worms and brine shrimp. However, they were now onto tablet food, which helped a lot.

Ten days after the second spawning the adults were at it again. This time they began at about 11 p.m. on a Saturday but as there were then only a few eggs present and our presence seemed to be disturbing the fish, we left them to it, alone and in darkness. The next morning, instead of a sleep-in, I was picking eggs out of Java moss. It seemed to be a weekly ritual. This time we found about 125 eggs but more than half of them later developed fungus. The rest were hatched as before but then were placed in a net-breeder in the tank with the older ones. They progressed much better in the net-breeder and were released once they began to feed. Their siblings from the 2 earlier spawnings did not bother them, but they were all kept very well fed with micro-worms, brine shrimp nauplii and tablet and other foods that sank. Water changes were maintained, at 10% 3 or more times weekly, with tap-water being used this time. At 3 weeks of age, the fry were offered white worms and they immediately took to them.

The young *C. trilineatus* are now showing the mid-body lateral stripe but they still have a number of black blotches over their greyish bodies. The black mask over the eyes is still very noticeable but why they should have this, yet lose it at a later stage is something of a puzzle. The black blotch on the dorsal fin is now very distinctive but this will be retained.

In conclusion I would like to add that we still do not know exactly what was the trigger for spawning - or perhaps it was a combination of factors. Was it because the spawning tank was above our eye-level, giving the fish some privacy? Did the young Checker Barbs or the small foods they needed help? Or was it the flowing water resulting from the internal power filter? Other possible triggers were the bi-weekly water changes of 25%, the switch from live foods only to heavy supplements of tablet and pellet foods, or a neutral pH at the start, followed by a quick drop to around 6.3, despite the regular water changes. Who knows? Possibly, the fish just felt like it but whatever the reason, it was certainly our pleasure to be able to raise young from *Corydoras trilineatus*, a little treasure.
