BREEDING OF THE WEATHERFISH IN THE AQUARIUM

Misgurnus (Cobitis) fossilis, Linnaeus

by Wilhelm Schreitmüller

RED by me first successfully in 1913. Beginning of March, 1933, I placed three specimens, which I had kept over winter, in a tank, size 28 x 20 x 18 inches, miscellaneousely planted. Length of fishes, seven, eight and a half and nine inches approximately. Under the sand I had placed a mixture of peat moss, pond mud and river sand, to give the fishes conditions approximating those in nature. Several flat, big stones, placed so that the fishes could get underneath, and two seven-inch long unglazed earthenware tubes were half imbedded into the sand, to provide hiding places. The fishes were constantly in the latter. When a tank is thus arranged the Weatherfish will not dig into the soil.

Toward the middle of March I noticed that the female had gained in circumference. Her horizontal stripes were then very dark. The anus was reddish, and the fins, especially the anal, ventrals and caudal, often had a reddish tinge. Of the two males the larger was constantly near the female. He displayed very strong, dark yellow striping. The thickened first ray of his ventrals was reddish, also the barbels, which usually are dirty yellow. The other, smaller male, was constantly chased by the bigger one and was forced to hide under the stones or in the earthenware tubes.

At eight-forty-five on the evening of May 3rd, I found the fishes engaged in heavy driving. The smaller male was not to be seen. Water temperature, 70 degrees Fahrenheit. Both fishes chased like eels through the tank in a wild chase. The male apparently tried to

THE WEATHERFISH
ing both vents together. At the same time, the male constantly touched his mouth to that of the female and to her throat. It looked as if he were sucking these places. Both fishes trembled constantly while the female ejected about thirty eggs, which were fertilized by the male and affixed near the root of an Isoetes bush. While spawning, the female moved slowly so that the eggs were attached successively. The fishes then remained in this position and did not move (after about thirty eggs had been extruded). After about three minutes, the wild chasing was resumed and another spawning followed. I watched the act fourteen times, until the muddy condition of the water made visibility difficult. I quit my post at 12.30 A.M. and do not know whether the fishes continued spawning.

Early the next morning I looked at the aquarium. The water was fairly clear and the fishes were not to be seen. I saw numerous eggs on the plants, stones and the glass, always close to the bottom and in rows. It looked as if the eggs were connected. They were the size of grape-seed, reddish in color and stuck quite tightly wherever affixed. To count the eggs was impossible, but there were several thousand of them. After two days they had increased in size, apparently swelled in the water; many were fungused, especially those not on plants. I did not bother to remove these, but I did take the extra male out, as I found him feasting on the eggs. The breeding pair were not to be seen for four days. When they emerged from hiding, they also ate their eggs and were taken out. Six days after spawning the female died. The eggs hatched after eight to ten days. They appear glassy. After three days, dark eye spots appear, to which gradually a dark little tail is added. The embryo lies curled in the ovum. After a while it becomes gray in color. When jarred the embryos turn around, but always resume a position with their back downward. I was not able to see the actual emergence. Apparently they hatched during the night. Daily I saw numbers of empty eggs, but never saw the young. They apparently disappear immediately into the mud, where they live on Infusoria and detritus. They probably rove about at night. I never saw any, so I left the tank alone. On July 4, 1913, I decided to "go to the bottom of the situation" and emptied the tank. Nothing was to be seen after all the water was removed. Then I started to take out the mud, etc., and the young Weatherfish appeared. There were seventy-seven in all, scant one and one-quarter inches long. Some I may have missed. The young were quite light in color. The dark brown stripes of mature fishes were very indistinct and light. The ground color is pinkish yellow. Muzzle and barbels are of similar color. The fins are gray to greenish yellow. The diameter of the slim body is from one-eighth to one-fifth of an inch.

They apparently take their first nourishment from the mud. Decaying plants, micro-organisms, etc., are their food. Enchytrae disappeared into the mud and were apparently eaten. Three times a week I fed small sized food mixed with dried powdered lettuce. The food dropped to the bottom and was gone the following morning.

These fishes continue in favor as scavengers by many aquarists, notwithstanding the greater advantages of the various forms of Corydoras for that purpose. Up to the size of four inches, at the most, they are helpful, but beyond that length their wild and eccentric actions stir up the sediment so much that they really become more of a nuisance than anything else.