

SPAWNING THE FATHEAD MINNOW (or, the Joy and Disappointment of an English NANFA Member) by Derek Jones, Yorkshire, England

A collecting trip for North American native fish means to an Englishman a day's outing to all the importers of coldwater fish in the area. This may seem strange, but apart from Pumpkinseeds and catfish, the only way to find new fish is to look closely at a batch of fish newly imported from the US such as bitterlings, goldfish, etc. to see if one can find one fish that is different from the others in the (usually) concrete trough. This means that the fish have to be viewed and examined from above.

A good collecting trip may result in just one fish, sometimes too small or too plainly colored to be identified, but at least it is one more find for one's collection.

At the beginning of last year, I was rather successful at finding some of these oddball fish. I ended up with three unidentified shiners and two Fathead Minnows (Pimephales promelas). The latter consisted of an adult male and a small female.

I initially concentrated on feeding up the female for later attempts at breeding. While this was in progress, the male gained a full black color all over its body with an even blacker, velvety patch anterior to its dorsal fin. At the same time as the color change took place, the male fish also developed three rows of tubercles on his snout. When these were touched by hand, they felt really hard and rough.

With the female still small and the male in full color, I decided to take a chance at breeding the pair. I did not know how old the male was, but he was about three inches long.

The breeding tank (30" x 15" by 12" deep) was set up by placing a piece of slate on top of three small plant pots, leaving a three-inch space between the underside of the slate and the bottom of the aquarium. This was to be, I hoped, the spawning site.

The male was initially placed in the aquarium and he spent two or three days cleaning and guarding the underside of the slate. The female was then added, and, after a short while, became inquisitive and ventured underneath the slate.

The male immediately gave chase until eventually the female started to hide behind the plant pots. This continued for several days. The fish were being fed at this time with white worms and plenty of daphnia.

I was not able to observe the actual spawning, but one evening, the chasing had stopped and the female was in hiding. I immediately looked underneath the slate and, sure enough, it was covered with eggs--about 25-40 in number. They were transparent with a slight hint of orange in them. The male stood guard over them and almost charged through the glass at me whenever I looked at them.

The male spent the next three days guarding the eggs. He cleaned them by brushing the black, velvety patch in front of the dorsal fin over his eggs. This was always done in the same way so that his dorsal fin did not get damaged. After three days, I could see a few fry. The maximum number was five, but I was not able to rear any of them. Whether this was due to the water being too deep (12") or too cold or warm, I was not sure.

The only thing to do was to try again as soon as possible. In my second attempt, the water was 5" deep; otherwise, the set-up was the same as before. The temperature was governed by the conditions outside of my fish house, but since it was August, it was still quite warm in the daytime, though cool at night. Spawning occurred again about four weeks later in the same manner as described above, and this time I was able to rear five fish to the size of $1\frac{1}{4}$ ". The first food used was microworms, though since the aquarium was well lit with natural light, there was always an abundant supply of algae.

Unfortunately, by this time, winter was upon us. I not only lost the adult fish, but also the five young ones. This was partly due to the effect of moving from one house to another and not having an adequate fish house ready to receive my stock of both tropical and coldwater fish.

Now the search is on again for the odd imports, with trips to all the local aquarium shops. Who knows what I will find...