Hungry Little Dragons

By Karin Baker

Would you get a pet cat with the intent of having it sustain itself solely on rodents it finds in your backyard? Probably not.

Our backyards tend to be rather small and rodent population is subject to fluctuation. It also is simply very satisfying to have a direct input on an animal's well-being and form a special bond by feeding it. The same is true for most of our aquatic pets. Our tanks are rather small, closed systems compared to the wild. The fauna in our tanks may be subject to fluctuations.

Even the tiniest fish soon learns when to expect food from its caregiver. And yet we still often hear that we should rely on the fauna in our comparatively small systems to nourish a fish with an astonishingly high food require-ment: the Dragonet, or as it is commonly known, the mandarin.

Even in larger systems with abundant live rock, this approach seems rather risky. If all goes well there will always be enough copepods to sustain a dragonet. But what if it doesn't go well? Many people assume the introduction of another pod predator is the only risk to an existing pod popu-lation but fluctuations are not uncommon even in established systems without obvious predation.

I once managed to decimate my tank's fauna by about 90% by dosing high amounts of magnesium to rid my tank of Bryopsis. The Bryopsis went away, but with it went most of my copepods. What a relief it was at that time to know that my dragonets would readily accept frozen foods. More and more aquarists are refusing to rely on natural pod population alone to sustain their dragonets.

One of the most influential people in this trend has been Matt Pederson of the website Marine Ornamental Fish and Invert Breeders (MOFIB) who developed a system to 'wean' dragonets onto frozen foods. At the heart of this system, is the idea that dragonets should be held in a small tank or breeder basket rather than released into the display tank right away. This of course goes contrary to conventional wisdom, which urges people to skip quarantine with dragonets and introduce them to the display tank right away to ensure access to food. In a small area such as a breeder basket or 10 gallon quarantine tank, it is much easier to expose and condition the fish to new foods.

Dragonets do not graduate to the display tank until they vigorously accept frozen foods. Pederson's approach includes the use of live brine shrimp, followed by enriched frozen brine shrimp. The idea is that the current in the tank would pin the brine shrimp against the breeder basket netting and the mandarins would eat them off the net much like they eat pods off the substrate.

This actually did not work very well for me. The netting on my breeder baskets is so small that even right in front of a power head I never gained enough flow to actually pin the brine shrimp against the net. In my effort to follow this tried and true system, I came

across decapsulated hatchable brine shrimp eggs which have proven to be a successful first step in my mandarin weaning process. All of the mandarins seemed instantly attracted to the decapsulated eggs. As an added bonus, those eggs that didn't get eaten hatched into baby brine shrimp.

My original plan was to follow Pederson's recommendation to start with live adult brine shrimp and then wean them onto enriched frozen brine (enriched with Super Selco to make it more nutritious). Although my mandarins rejected both live and frozen adult brine, the Selco seemed to assist in the process by:
(a) flavoring all foods similarly
(b) making it easy for them to sense the food in the water

Small bloodworms and prawn eggs became their favorite food. They soon started to recognize my feeding tool and once they were eagerly accepting frozen fare it was time to release them into the display tank.

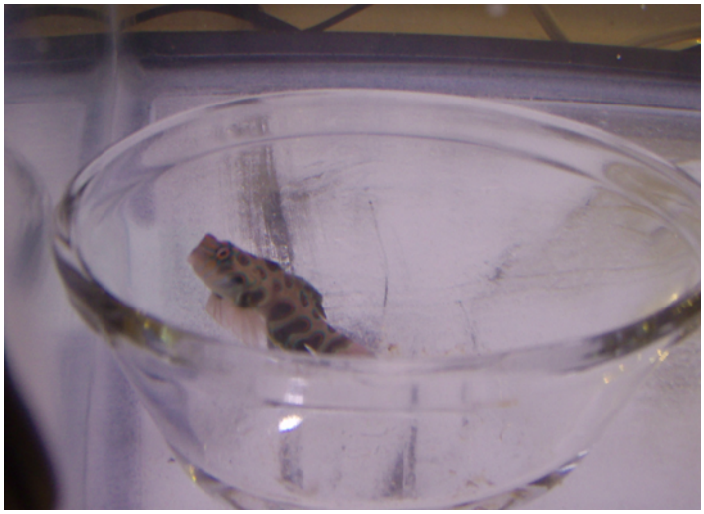
A pair of Target Mandarins waiting for their food to be dispensed into the tank.

Another benefit in training the mandarins in a small tank is that most are quite emaciated by the time they arrive at the LFS. Under the controlled environment of a small tank it is easier to manage their body condition. Matt Wittenrich, the first person to breed large numbers of mandarins in captivity, suggests live mysis shrimp for severely emaciated dragonets. Again this did not work well for my dragonets. The mysis seemed much too fast for my slow moving, skinny fish. The decapsulated brine shrimp eggs were much easier for them to catch.

Are you thinking of adding a pair now that the food supply is well ensured? Well think again. As Wittenrich says: survival is

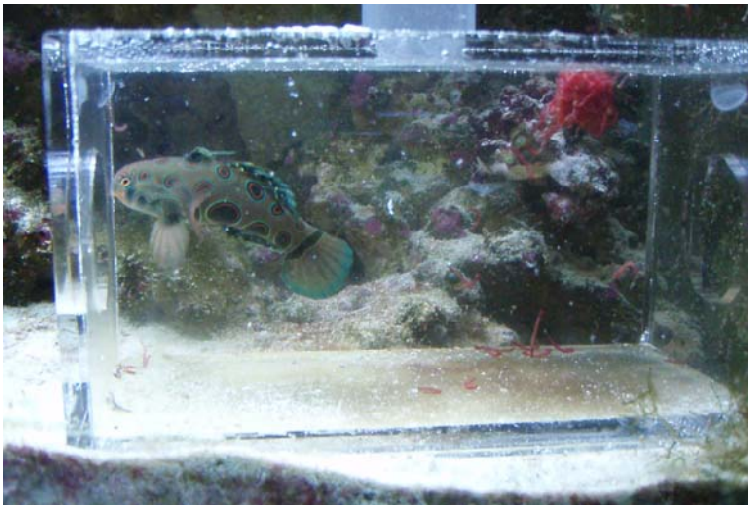
a higher priority than mating. Mandarins, especially spotteds , can be very assertive in defending their territory and are only willing to share it and start spawning when food supply is abundant.
Many fishkeepers with spawning pairs report having to feed at least two or three times a day. Ideally live foods occurring in the tank along with frozen foods build a system that allows for near constant grazing. After my pod population was decimated by my bryopsis treatment, I quickly became aware of this fact. My male became more aggressive towards my female and for the first time his chasing actually escalated into leaving bite marks on the female mandarin. During this time I fell back on something I employed during their train-ing: a feeding station.

In the 10 gallon quarantine tank they had quickly become accustomed to a small glass bowl. Unfortunately due to the higher flow in the display tank this solution was not adequate there. Instead I had a custom feeding station made out of acrylic by Ace Shedd (hobogato) that allowed me to deposit larger amounts of frozen food for the mandarins and retrieve the leftovers safely a few hours later.



A tiny mandarin in a small soufflé bowl.

A male mandarin trying out the acrylic feeding station.



At the same time I was also dosing phytoplankton relatively heavily and the pod population began to rebound fairly quickly. Even with frequent feedings and a good supply of microfauna, it took about 3 months for my current pair of dragonets to stop bickering and truly start grazing and roosting together. Others have experi-enced faster success. Be aware that the dynamics can change again as food supply changes. Females appear to prefer larger males and pairings tend to work out best when a male larger than the female is chosen or at least two fish of similar size. Pairings of a small male with a large female often don't work out well. According to

Matt Wittenrich there are differences in behavior between Synchiropus picturatus (target mandarins) and Synchiropus splendidus (green / red mandarins). While it is possible to keep them together theoretically, in practice it is much easier to keep a pair of dragonets that 'speak the same language' and display the same social behaviors.

In my observations green / red mandarins (Synchiropus splendidus) are both easier to sex as well as more docile, and may be a better choice for an aquarist interested in keeping a pair. In nature no true pair bond between male and female mandarins exists. Male Synchiropus tend to be ready to mate every day while females develop eggs over the course of several days. This discrepancy of interests may lead to further quarreling in the home aquarium setting depending on the male's persistence. Of course when the thorough care and forethought does work out, the pair is a sight to behold. Watching a spawning ascent in the actinic glow right before lights out or finding your pair of spotteds (Synchiropus picturatus) roosting at night in the same rock is priceless. But please consider all of the implications before attempting to keep two in a tank. One very happy mandarin is better than two miserable ones.

In summary the steps to successful dragonet keeping are:

- Do not rely on microfauna alone to sustain your fish.
- Train your dragonet to accept frozen foods vigorously BEFORE releasing them into the display tank.
- Think carefully about the added feeding requirements and potential aggression issues of a pair before purchasing a second mandarin.
- Consider the differences between the Synchiropus species.
- Introduce only very well-nourished male/female dragonets to each other
- If severe fighting occurs, consider the possibility that you may have two males (and you must perma-nently separate the two).
- If fighting between a known male and female escalates to include physical damage to one of the man-darins, increase your feeding frequency or employ a feeding station.

- Karin Baker
(Europhyllia)