

TANGANYIKA

Written by Russell McAndrews

Monday, 25 May 2015 21:32 - Last Updated Friday, 19 June 2015 15:23

Tanganyika fishes live in an environment, which is spectacularly unique. Similar to a tropical island like Hawaii, very deep water can be found not far from shore. Dead organic matter sinks to depths approaching one mile. These precipitous walls ensure exceptionally clear water and striking and brightly colored fishes. Temperature wise, the lake is almost uniform top to bottom therefore it is isothermic. Few fish live below 100 meters (300 feet); the bottom does not contain enough oxygen to support fish life. The lake water is warm, hard, alkaline and slightly salty. Specific numbers are not critical so long as the theme is adhered to. Rocky or sandy beaches are prevalent terrain for most of the cichlids available.

Lake Tanganyika has spent somewhere in the neighborhood of 20 million years developing in almost complete isolation. What this means to the fauna of the lake is a unique, wondrously diverse, inherently stable and exceptionally clean habitat. Fauna is a word, which well conveys the extreme diversity to be found, from jellyfish and sponges, to cobra and crabs and all in a fresh water lake. What this means to us is that many of these fish do not tolerate dissolved wastes. Many of the most expensive little jems die quite canary-like at the first hint of trouble. Exceptionally susceptible fishes, they have even been known to “shock out” and die while being bagged for transport. In this event wait a while before disposing of the fish as some do come back. Medium to large, regular water changes and activated carbon are important to overall success with these fishes. Diet is also very important; all too often quantities of meaty foods are fed in instances where they should not be. Research any species you have or intend to obtain. Many of these highly specialized fish are vegetarian by nature and have correspondingly long intestines. Such digestive equipment is not designed to process any quantity of meat and complications will ensue. Neglect is probably the number one killer of Tanganyikans, they will not tolerate it. Even an unnoticed corpse can cause an ammonia spike capable of killing all. This is the advantage of using activated carbon, it keeps the canaries alive.

Any attempt to lump these fish together with generalized statements is doomed to failure. All the adjectives listed above and many not mentioned fall short of adequately describing the diverse specialization achieved in this vast lake. Many have debated the question of how many cichlid phylogenies were present at the lakes formation. Preliminary electrophoretic sampling (enzyme mapping), support the theory of a pair of cichlid ancestors, Lamprologine and Haplochromine. Comparatively, Lakes Malawi and Victoria have both developed from a single

TANGANYIKA

Written by Russell McAndrews

Monday, 25 May 2015 21:32 - Last Updated Friday, 19 June 2015 15:23

colonizing Haplochromine cichlid. Lake Malawi is one-half to one-third the age of Tanganyika and Lake Victoria is less than 50,000 years old. In fact, fossil studies give some indication that Victoria almost completely dried up only 14,000 years ago. This makes Lake Tanganyika and its neighbor's individual pages in a textbook of evolution. Scientists hope that a detailed comparative analysis of all three lakes will teach us more about the on-going process of evolution than all the information to date. Lake Tanganyika gives us a view of what might be in the future for the other younger eco systems. To some degree Tanganyikans can, and for the point of discussion, must be grouped, in this case by reproductive technique.

To breed any of the substrate-spawning cichlids it is important to hatch and feed brine shrimp. Fry will need food immediately after becoming free-swimming but they are so secretive, they are easily overlooked. The way around this is a light daily feeding of newly hatched shrimp so that when the fry hatch out there is food available. With a majority of these species, if you do not feed live baby shrimp you will never see the fry. Julido-chronis are a good exception to this. A pair in a "live" established tank will usually produce a few fry at a time, which seem to find enough to eat to survive in a "dirty" tank. Different species behave differently some pair bonds seem to be permanent while others are quite fragile. Success in raising fry in a crowded community is another area of great variability. A further point worth mentioning is that Tanganyikan cichlids seem to take longer to mature than others sometimes two to three years.

Mouth-brooding species spawning within the confines of an aquarium typically exhibit rigid pecking orders, meaning that an individual removed, even temporarily, could be murdered upon reintroduction. The optimum method for reproducing numbers of these fish is to take no action until the eggs have hatched (7-10 days post spawning depending upon species and temperature), net the female, strip her fry from her buccal cavity and return her to the tank immediately

. By "strip", I mean hold her head down into a small pail half filled with tank water. Using one fingernail, pry open her mouth. The other hand pumps the fills to expel the zygotes. The number of fry being carried is inversely proportional to the carrying time. My interpretation of this is that the longer she carries the fewer fry she can house. Most of these mouth-brooders do not eat their young so they can be raised in the tank with their parents provided there are no predatory species present. Tropheus females have been observed grazing to feed their mouthful of fry and themselves. Gut contents prove that at least one population of *T. duboisi*

TANGANYIKA

Written by Russell McAndrews

Monday, 25 May 2015 21:32 - Last Updated Friday, 19 June 2015 15:23

feeds while carrying and that the fry feed while in the mouth and while still sporting a yolk sack.

T. moorii

females feed their fry but do not ingest any food themselves. One of the oddities of the lake is pair bonding between mouth-brooders although this behavior is found elsewhere; the only instances in East Africa are the Tanganyikan gobies. Male and female apparently share the duties by passing off the eggs to their partner. Behavior is just one thing that makes these fish so fascinating. Many highly evolved and fascinating behaviors can be found.