

I am writing to address my concerns about the betta fish currently being kept in the school office. His most basic care needs are not being met by the school. This is not necessarily the school's fault, as sadly, there is a colossal amount of misinformation commonly accepted as fact about this species. This misinformation is widely believed by many people who are not versed in fishkeeping, and is even spread by pet stores and the like to make more sales. They are more than willing to sell improper equipment and give horrible basic care advice. I highly recommend that something is done about the school betta fish: whether it be improving his living conditions or rehoming him to someone that can meet his needs. If nothing is done about his conditions the fish will not live anywhere near his full lifespan (the lifespan of a betta fish--when properly taken care of--is 5-7 years. Sometimes more!) and the quality of life for his time here will be very poor.

I'd like to further address the conditions that the fish is currently in. He is currently swimming in, at most, a single gallon of water. A betta fish cannot live long in a container of that size. A commonly stated myth about betta fish is that they live in small, dirty puddles in the wild, however this is not true. Betta fish in the wild live in rice paddies, which, while often shallow, still provide miles of horizontal swimming space. It is true that bettas can temporarily survive in very small spaces of poorly oxygenated water, such as in times of drought, however they do not naturally inhabit these spaces for long, and surviving is not the same as thriving. A person could live in a small bathroom for their whole life, but that doesn't mean they'll be happy or healthy. Being kept in such a small space leads to high amounts of stress, as well as atrophy of the fish's muscles. The bare minimum recommended tank size for a betta fish to live a healthy life in is three gallons, with at least five gallons being preferred. They are active fish that need to exercise

their muscles, and a larger tank also has more room for dilution of waste product which means the water stays cleaner longer. It is also easier to keep a larger tank at a stable temperature.

On the subject of temperature, that is also an issue. The betta fish in the school office has no form of heating device for his container. Bettas, hailing from the warm climate of Thailand, are tropical fish, and for their long-term health need to be kept between 76-80 degrees Fahrenheit. The ambient temperature of the school is far colder. Temperatures below this margin result in stress and lethargy, both decreasing the health and lifespan of this beautiful creature and making him more vulnerable to disease.

In addition, I feel it is necessary to address the big issue of the nitrogen cycle in terms of fish health. Nitrifying bacteria are responsible for converting toxic ammonia (released by fish waste as well as any uneaten food) into nitrite, which is then converted into nitrate. This nitrate is basically harmless in small amounts (less than 20ppm). The nitrogen cycle is important to establish, as *any* amount of ammonia or nitrite is highly toxic to the fish living in that water. In a small, unfiltered container such as the one in the office, the nitrogen cycle cannot be properly established. This means the fish being kept in the office is constantly being kept in water that is poisonous to him, which leads to stress, illness, ammonia burns, fin rot, an overall negative quality of life, and eventually premature death.

I understand that the school did not know these facts when the decision was made to acquire this animal. However, I believe it is in everyone's best interest for the fish's environment to be improved. Schools are places of learning, and as such students should be taught that this is not the proper way to care for a pet. If the fish is to remain at this school, he needs at least a 3 gallon tank with a filter and a heater. Precautions should also be taken with cycling his tank when

he's put into it so that his water will be livable. I personally offer to donate a 5 gallon tank with a filter and heater if the school is not able to acquire one. I will also personally set up the tank if needed, and come in during lunch or before school to do any required maintenance. Otherwise, I also offer to just take the fish home if a bigger tank is not an option for the school. All I want is to ensure the health and longevity of the beautiful and intelligent betta fish that currently calls this high school his home. A proper setup is not only absolutely necessary for him, but also very educational to all who see his little ecosystem, and displays respect and responsibility towards living things, which is an important message to the many students that see this animal every day.