

THE FISHMONGER

INSIDE THIS ISSUE:

<i>My Troubles With Algae</i>	2
<i>Fish Tuberculosis</i>	3
<i>For Sale / Wanted</i>	4
<i>Preparing for a Power Outage</i>	5
<i>A Simple Quiz for Simple Aquarists</i>	6
<i>Committee minutes</i>	6
<i>How to Buy a Used Tank</i>	7

Reminders:

- Our next **meeting** is Wed Sept 3rd, 7:30, at the Vancouver Aquarium Marine Science Centre in Stanley Park. Enter at door #5 at the north end of the Aquarium Buildings.
- Please mark all your auction items clearly with your membership number. Those not marked cannot be auctioned. Only paid up members will be able to participate in the auction.



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EDITORIAL

Summer is winding down and fall is fast approaching. It's time to start thinking about those fish and tanks that we neglected while we were away on holidays and spending weekends at the lake.

This month's articles span a wide range of topics. The first is a personal reflection by me on problems I had with my own tanks and this leads into an article on one of the potential hazards of fish keeping. I've also included articles on how to buy a used aquarium and a somewhat timely piece on how to plan for when the power goes out.

The October Fishmonger will have the theme of Discuss. I am appealing to all club members to help me out. If you have ever kept discuss, bred discuss or had discuss sushi I need to hear from you. Send me your articles, notes, pictures or anecdotes and I'll make sure you get all the credit.

I look forward to seeing you all at the September meeting

Ron Guenther

CLUB NOTICES

- Thanks to Jeff Marliave for his excellent talk at our June meeting on the challenges of setting up and maintaining realistic tank backgrounds and habitats.
- Our regular November meeting is replaced by our annual Monster Auction. Next month's Fishmonger will have all the details including copies of buyer and seller forms and the rules.
- 2003 memberships are now on sale for \$10 for the remainder of the year. Membership renewal / signup forms are on page 9.
- New members are always welcome. Should you know anyone who is a keen hobbyist, or someone just starting in the hobby, bring them along to the next meeting.
- We are now distributing The Fishmonger electronically. Please send an email to rguenther@bayleaf.com to ensure you get on the distribution list. We are no longer mailing them out but there will be a limited number of copies available at the monthly meetings.
- Getting original articles for this newsletter is tough so please help us out and write a few words on anything fish related. It doesn't have to be long or fancy and I'll even spell check it for you.

My Troubles With Algae

By Ron Guenther

The Setup:

I have been keeping fish on and off for 20 years but I've had fish continuously for the last 6 years. Like many beginners, I started with a 27 gal community tank and I experienced the usual problems with new tank syndrome, fish mortality due to overcrowding and species incompatibility. After a while I learned my lessons and things were good.

My final lesson was the importance of a quarantine tank after a new batch of fish brought a disease into my tank. I dumped well over \$100 of anti-biotics and chemicals into that sick tank and the end result was I had to start over anyways. It was a lesson well learned.

Over time my first tank became two, and then some of those fish bred and eventually I ended up with six tanks at home and one in my office at work.

The Problem:

I considered myself lucky to have never had a serious algae problem in any of my tanks, especially since all of my tanks are on display, as opposed to being hidden in a fish room and they all get varying amounts of natural bright sunlight.

This all changed a few years ago with a new aquarium. It was for my new office and I wanted it to be perfect. I am into cichlids so I spent way too much buying natural rock to best simulate the natural conditions of my beloved mbuna. This rock was my undoing. I did not properly disinfect / sterilize it before building my dream tank and I would come to regret this.

Within two months I noticed a small amount of black hair algae and other weird organic growth in this tank. Never having had this problem I figured all I needed was another algae eater. I moved fish back and forth between this tank and three others, never realizing I was sowing the seeds of my doom. Within six months I had this algae problem in four of my cichlid tanks.

My First Solution:

Once I realized how I had been cross contaminating between tanks I got smarter. I used separate nets and made sure to disinfect them after each use. I didn't

transfer fish or tank decorations between the infected tanks and the others. Basically I treated the algae like any other fish disease. My other tanks stayed pristine but...

Unfortunately none of the remedies I tried ever worked. Every month I'd clean the algae from each infected tank and add loads of algacide and hope it would miraculously go away. Just like a bad debt, it never did. I tried various changes to water chemistry, covering the tanks to cut off natural sunlight but it was to no avail.

My Final Solution:

Finally I had enough. I got rid of all the fish from the four tanks infected tanks. I stripped out all of the gear, tank decorations, pumps and filters and disinfected it all in a strong bleach solution. Whatever I could not disinfect I threw away. This included the plastic plants, hoses, air stones, biowheels and all the gravel and rocks. Drastic maybe, but I had tried everything else.

I started those tanks from scratch and so far I've had no return of those algae problems.

In hind sight, it seems obvious to just strip them down but I never assumed that simple algae could be such a menace. This stuff could clog every filter in a tank in a week and could cover every surface in two. It gave me a new appreciation for the conservation officers fighting Eurasian Milfoil in our warm water lakes.

PostScript:

While stripping down these tanks, I cut myself a number of times on sharp bits of rock and gravel. Since I was disinfecting everything in a strong bleach solution I wasn't worried too about an infection it but it reminded me of something I had read. I tracked down this article and included it in this edition.

We often forget that aquariums are living systems. As with any living systems we have to respect them because they have a nasty way surprising us.

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Fish Tuberculosis

By Leslie Keefer

Originally published in the *Delta Tale*, Volume 32, #2. Potomac Valley Aquarium Society Addendum by Clara Brentwood (reprinted from *aquarticles*)

Original Article

At the ripe old age of nine, I won my first fish at a carnival. My hobby had begun, much to my mother's dismay. She was convinced that we were all going to catch a disease from my fish somehow. I always told her she was silly and you couldn't catch any diseases from fish. I have no intentions of admitting to her that she was right. Eighteen years later, I have encountered my first zoonotic disease. Currently I have a ten-gallon tank set up as a hospital tank harboring the piscine equivalent of tuberculosis. Most references actually call this disease Fish TB, but it is not actually TB and it is transmissible to animals other than fish. Fish TB is caused by *Mycobacterium marinum*, a bacterium closely related to the TB bacteria, *Mycobacterium tuberculosis*. There are actually over fifty species of bacteria related to tuberculosis that can cause disease. They are typically able to live in any number of environments, in soil, water and animals.

I am a histotechnologist, which, to those of you unfamiliar with health care, is the person who takes tissue and turns it into stained slides for pathologists to use in their diagnoses. It is often difficult to diagnose *M. marinum* bacteria this way and often requires a culture. A typical lab wouldn't usually bother with all this for an aquarist, but being able to do my own lab work is one advantage to this profession. When I discovered what I thought to be TB in my tank, I made slides of a sick fish and luckily located the bacteria without having to go through the trouble of culturing. *Mycobacteria* are acid fast, which means they stain bright pink against a blue background.

For those of you without a histology lab at your disposal, the symptoms of Fish TB are usually wasting, lesions on the body, skeletal deformities (a few of mine developed curved spines), and loss of scales and coloration. This is a relentless disease. I have read that it is not considered treatable; however, I figured my 15-year-old Raphael catfish deserved a chance. Against the advice of my veterinarian, I have not euthanized my afflicted fish (over half died shortly after the disease bloomed anyway). The typical drugs for treating fish are the same as for humans, most often a combination of two drugs administered for at least three months. Currently I am trying Kanacyn (Kanamycin). Once the fish

became emaciated I had no luck saving them. Traditional tricks for curing diseased fish, such as adding salt and raising the temperature, are ineffective and in the case of the raising temperature may even be detrimental. The bacteria grow better in warmer water; their optimum temperature is 30°C. They have no problem with salt either; they can infect saltwater fish as well as freshwater.

Mycobacterium marinum is considered slow growing, meaning it will take about two to three weeks for symptoms to develop after initial contact. People do not often become infected, although it is possible. The bacteria usually enter the skin in small abrasions or cuts when you are performing tank maintenance. In humans, the symptoms are usually restricted to skin and soft tissue destruction. Lesions appear, first small and purple, and gradually grow. Treatment is difficult. The bacteria can also infect bones and tendons that can feel like arthritis (Handbook of Dermatology and Venereology, chapter 16, Cutaneous Tuberculosis and Atypical Mycobacterial Infection by Dr. L. Y. Chong). Certain types of fish tend to be more prone to carrying Fish TB, such as labyrinth fishes (bettas, gouramis). The outbreak in my tank occurred after adding six female *Betta splendens* to a community tank.

Prevention is key to avoiding this disease since it is so difficult to cure. The immune system is usually enough to prevent an infection in healthy fish. Stress, which suppresses the body's immune system, and/or wounds in fish are most likely to allow an infection to take hold. Therefore, eliminating stress is paramount. Although aquarists don't frequently get this disease, using gloves when cleaning infected tanks is highly recommended. Starting a siphon by mouth is also a good way to expose yourself unnecessarily to the bacteria. If a tank has been infected, it is considered best to bleach it well and dry it out before restocking it.

Information in this article was obtained from several sources, an infectious disease specialist, several pathologists at the facility where I work, my veterinarian, and a medical text chapter written by Barbara Brown and Richard Wallace Jr., as well as my own experiences.

(Continued on page 4)

AQUARTICLES ADDENDUM, August 2003: *After reading the above, Clara Brentwood sent Aquarticles the following account of her personal encounter with fish TB:*

I am one of the unfortunate people who caught this *Mycobacterium marinum*. I had a cut on my finger and cleaned the fish tank. In December 2002, I first noticed a small bump on the inside of the middle knuckle on my left index finger. I thought I had jammed my finger.

The lesions grew, became purple, and spread around the knuckle. An orthopedic surgeon operated about the first of April 2003, and opened my finger and took a culture. He failed to get the culture to grow, so it couldn't be identified. I was on an oral antibiotic, cephalexin. Two weeks later the pus started pouring out of the wound. I went to the doctor the next day and was put in the hospital and started on intravenous vancomycin. I was in the hospital five days, then sent home with a pic line, and continued the treatment at home for another two weeks. In the meantime, I was going to hydrotherapy to keep the wound draining.

Two weeks later the nodules were still growing, the pus was worse, and my finger was swelling and looking deformed. I was put back in the hospital and started on biacin and euthambutol. The hand surgeon operated on my finger, and gave me about a 50% chance of not losing it. She cut it down both sides and the back, and on into my hand where it was spreading. I took hydrotherapy twice a day, and was hospitalized for 13 days. The cultures came back with a diagnosis of acid fast bacillus; the infectious disease doctor thought it was water-borne from a fish.

After being discharged, I am continuing my medication for at least 6 months. My finger is deformed and will need plastic surgery when the infection is entirely gone. The bacterium destroyed my tendons and joint in the infected finger.

Finally the State of Tennessee laboratory identified this, after 3 months, and this was identified as *Microbacterium marinum*.

I was extremely weak and bed-ridden for a month after leaving the hospital, and still do not have my strength back. It has been three months since my second hospitalization. Some of the fatigue might be the medication.

I thought you might like to hear about how this affected me. From what I read, cases in humans are rare, so I thought I might be of some help to your research.

Infectious disease doctor - Dr. Paul Wheeler
Hand surgeon -Dr. Jane Seigel

If you would like any more information, I would be glad to supply it.

Thank you for your informative article and I hope I have been of some help to you.

- Clara Jessup Brentwood, TN 37027 Age 65 - female
- e-mail doddieis@comcast.net

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FOR SALE / WANTED

- Barry Mah has two inch Frontosa babies for sale at \$15 each. Email Barry at barry.leslie@telus.net if interested.
- VAHC Club T shirts and sweatshirts are now available. Prices vary by style and size. See Les Brown at the September meeting if you are interested.

Preparing for a Power Outage in Winter

By Frank Greco AnimalForum.com staff

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When winter is upon you, it's a good idea to make plans for maintaining your aquarium during a power outage. Even a short outage can lead to disaster and loss of animals if you are not prepared.

The first thing to do in an outage is to unplug your filters. If the power is off for a long time, toxins such as hydrogen sulphide and ammonia build up in the filter. When the power comes back on, the filter will spew this toxic cocktail back into your tank, perhaps killing the fish. Once power is restored, clean out all filters before using them.

Preserving biological filtration is another matter. If you use rotating biowheels, remove them from the unit and submerge them in the tank proper. For fluidized bed filters, remove as much water as possible from the unit, leaving the sand covered by only 1/4" to 1/2". For trickle filters, you can pour water through them once an hour or so or wrap them in plastic film in order to maintain humidity. Of course, for any of these filters, hooking them up to a 12-volt bait pump (small bilge pumps) will ensure their continued operation. During a power failure in cold weather, maintain temperature as best you can. Since glass is a poor insulator, heat loss can be rapid as the house temperature drops. Perhaps the easiest way to prevent heat loss is to wrap the tank in Styrofoam or some type of insulating blanket (the thermal type, such as are used to insulate water heaters).

Styrofoam can be purchased in sheets and cut to fit the size of the tank. Make sure it is a tight fit, and use duct tape to fasten the pieces together. Do not forget to insulate the bottom of the tank (if it is exposed) and the top. Punch a few small holes in the top for the airlines.

If you are using an insulating blanket, wrap it around the tank, using duct tape to keep it in place. While these methods will not prevent heat loss, they will slow it down. Never heat tank water on the stove and pour it back into the tank. Such wide temperature swings will virtually ensure that your fish will come down with a parasitic infestation. Better to allow the temperature to slowly drop, since the fish will adjust to it (to a point), than to play temperature see-saw.

Next, work on aeration and filtration. The simplest way to aerate is to remove buckets (or cups, if it's a small tank) of tank water and pouring them back into the tank

from a height of 6 inches. Do this at least once an hour, more if the animals seem to need it. Another simple method involves hooking an airstone to a bicycle pump and pumping air into the tank as above.

The addition of 1 cc of 3% hydrogen peroxide per 10 gallons once an hour can also be used, but this is good only for short power outages since the addition of too much peroxide will destroy the biological filter. This should be used only as a last resort.

Perhaps the best way to aerate/filter your tank is to use battery-powered air pumps. There are two types available to the hobbyist, one of which works on "D" batteries while the other works on a 12-volt car or boat battery. Either will work, but the life of the "D" cell pump is short and you will have to replace batteries often. The 12-volt pump is better.

Hook your air pump to an airstone or boxfilter containing carbon and zeolite, or, better yet, a biologically active sponge filter and box filter combo. A 12-volt bait pump (bilge pump) may also be used to aerate/filter the tank, but they use more power than most 12-volt air pumps. The air lines should be run through the cover.

Unless you know the power will be off for a long time, do not feed the fish. Most fish can survive 3-5 days without feeding. If you must feed (for the health of the animal or your own piece of mind), feed sparingly. Remember, your tank's life support system has been compromised, and adding more organics will hasten water degradation.

If you follow my advice, your aquatic charges should make it through the power outage with little or no problems. Once the outage is over, do a 25% water change (remember to use your gravel cleaning siphon) and replace the carbon or whatever chemical filtrants you are using. Also watch for signs of disease (mostly Ich, which looks like white spots) and treat as necessary.

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A Simple Quiz for Simple Aquarists

By Terry Ranson

Originally published in Vol. 2, No.1 . The Newsletter of the Tri-State Aquarium Society, December 1999 (reprinted from aquarticles)

Here's a simple quiz to test the knowledge of aquarists:

1. Keeping aquariums is: a) A science b) An art c) A hobby d) None of the above

2. The most difficult fish to net out of an aquarium is the: a) Coolie loach b) Managuense cichlid c) Marbled Hatchet fish d) None of the above

3. The most beautiful fish is: a) The Blue Gularis b) The Moorish Idol c) The Discus d) None of the above

4. The most difficult fish to breed is: a) Any saltwater species b) Discus c) Large catfish d) None of the above

5. If an aquarium is filled with water to fifty percent its capacity, it is: a) Half empty b) Half full c) Twice as large as it needs to be d) None of the above

6. The most dangerous aquarium inhabitants are: a) Piranhas b) Lionfish c) Sharks d) None of the above

1. Keeping fish is neither art nor science, nor even a hobby. It is an addiction.

2. The most difficult fish to net out of an aquarium is the one you most want to catch. All the other fish in the tank will swim into your net as you attempt to catch the one you are after.

3. The most beautiful fish is one that is healthy and displaying its breeding colors.

4. The most difficult fish to breed is the one you most desperately want to spawn for you.

5. If an aquarium is filled with water to fifty percent capacity, it is leaking.

6. The most dangerous aquarium inhabitants are whatever is in there as you reach in for that light fixture you dropped in the water, especially if you are barefoot on a wet concrete floor.

Answers: All the answers are: d) None of the above

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COMMITTEE MINUTES

The VAHC Steering Committee meets on the first Tuesday night after the club meeting each month. We get together at members homes to talk about club business and see what the host has going on in their aquariums.

The June meeting was held at Bart's home in Coquitlam. Thanks to Bart for hosting the meeting. Here are a few of the topics we discussed:

- Summer Club events
- 2003 VAHC Calendar of Events / upcoming speakers

Our next meeting will be on Tuesday September 9th at Ron's home. His address is 5424 Sophia Street, Vancouver. The meeting starts at 7:45 so if you are a club member and are interested in helping out with the club, be sure to come out. Some of the topics on the agenda include:

- November Monster Auction
- 2003 VAHC Calendar of Events / upcoming speakers
- VAHC Club Constitution

How to Buy a Used Tank

By Kent Cannon

Originally Published on the website dafishnews.cjb.net (reprinted from [aquarticles](http://aquarticles.com))

How do you beat the high cost of keeping fish? Seems like every time you turn around you have to buy something! Fortunately, there are many ways to cut down on the little costs that make up our hobby. This month, the DIY project is going to come from a ground-floor perspective. Just because new tanks are expensive, it doesn't mean that you have to start out with a new one in order to have healthy fish! I am always looking at the want ads and the nickel shopper for a good deal on tanks. The truth is that many people buy their tanks in a weak moment and end up losing \$60 or more and then give up! The tank then goes to the storage shed or the garage only to sit there, in the way, for several years until it is given away or sold at a yard sale. I have only purchased two new tanks in my entire career as a cichlidiot! Both of those were kits, and only one of those had decent equipment with it. When you buy like that, you get stuck with whatever they throw in, kind of like a white elephant gift. Since then I have wised up and have found many a good deal, many for less than a dollar a gallon with all of the accessories thrown in!

The things to look for when buying a used tank are fairly simple:

- **Don't buy a tank with broken glass!** If someone is willing to give you a tank with one broken pane and you are up to repairing it, then great - but don't spend money on a broken one.

- **Don't buy tanks with chipped corners.** Glass can and will run from a chip. That is not to say that you can't get by with a chip, but don't pay good money just to wake up one morning to a wet living room full of dead fish and broken glass! If you do have a tank with a chip, take some emery cloth and buff all of the edges of the chip so that it cannot run. - Never spend more than a dollar a gallon. I can buy a brand new tank for about a buck a gallon, so why would I purchase a used one for the same price? I try to keep the price at around \$.50 to \$.75 per gallon. Nice thing is, when buying a used tank you get all of the accessories that you would have had to pay extra for had you bought it at the store!

- **Avoid bare tanks.** When you have to spend money on lighting, filtration, UGF, and a heater, you are going to be out some serious money. Most people who have a tank have the accessories. The only tanks that I have seen without any are tanks that were used for snakes

or hamsters or some other small animal. I bought three tanks from a fellow with all of the accessories, and as I was leaving he asked me if I wanted a canister filter. He gave me a Magnum 350 Deluxe with all of the parts in working order for free!

When you get the tank home, take a long, careful look at the condition of the silicone! Make sure, after wiping it out, that the silicone is not brittle and turning yellow.

- If the silicone is questionable, take the time to scrape out the old silicone and replace it. When you do this, be sure to take out all of the old silicone. Old silicone will not bond well with the new and there is always the possibility of a leak. I bought a nice tank and spent a whole lot of time scraping out the old silicone and replacing it, but I neglected to replace the silicone holding the center brace. I got up one morning to find the brace hanging down in the tank and the front glass bowing out almost two inches! Take your time and do it all.

- Wipe down every area that is going to be caulked with a 25% vinegar solution and dry.

- I use GE-brand window and door silicone that I get at the local building supply. It's cheap and it's the same stuff that you buy at the LFS for a lot more money. Do not use the stuff labeled for kitchens and baths! It contains mould inhibitors that will kill your fish!

- Take some masking tape (I use the blue kind for painters) and mask both sides of every corner about 3/8" out from the corner. This will help you get real nice, professional-looking corners. If you don't, it won't affect the strength but it will not look as nice.

- Put the caulk in all of the joints in a continuous bead. Dampen your finger in a bowl of water and smooth the bead to a neat, concave surface. Wipe your finger on a rag or paper towel regularly and keep it moist, and you will make some real nice-looking joints!

- As soon as you are done smoothing out the beads, carefully remove the masking tape. Do not touch up the silicone again or you will probably have a mess on your hands.

- Finally, test your tank outdoors. Don't take a chance

(Continued on page 8)

and have to replace the carpet or hardwood floor because you were impatient! Buy a piece of Styrofoam at the local building supply and cut it out to match the bottom of your new tank. Set your tank on this, fill it up all the way, and leave it for a couple of days if possible. The Styrofoam will take up any difference in the surface that you set the tank on and not create undue stress on the tank.

Keep your eyes open! Who knows what treasure is out there to be found? You may just come home with that tank you have been dreaming about but just couldn't afford. Now you can spend those extra dollars on fish instead of spending everything on a tank only to have it sit empty until you can afford to buy some fish to put in it! Good luck and happy fish keeping!

###

VAHC 2003 Membership Application

**** 1/2 Year 1/2 Price Special (July – Dec 2003) ****



New Membership: _____ Existing Membership Number: _____

First Name: _____ Last Name: _____

Postal Address: _____

City: _____ Province: _____ Postal Code: _____

Contact Number: _____ Email Address: _____

Individual Membership (\$10.00) Family Membership (\$12.50)

Additional Names (Family Membership Only): _____

My main areas of interest are:

As a club member you are expected to assist with the planning, organising and running of club activities. I would like to assist with (Check all that are applicable):-

- Monthly Auctions
- Annual Auctions
- Write an article for the Fishmonger
- Printing and distribution of the Fishmonger
- Chair a monthly meeting
- Co-ordinate club membership
- Guest Speaker co-ordination
- Co-ordinate with fish stores
- Organizing Summer Social Event
- Let me know what I can do to help
- Other (please specify) _____

YES - I agree to the sharing of my telephone and email address with other club members.

NO - Please do not give out any of my personal details.

(Please circle your response)

Signed: _____

Date: _____

Please submit your payment (Cheques payable to VAHC) to: Les Brown 5802 Grouse Woods Cr. North Vancouver V7R 4V2