

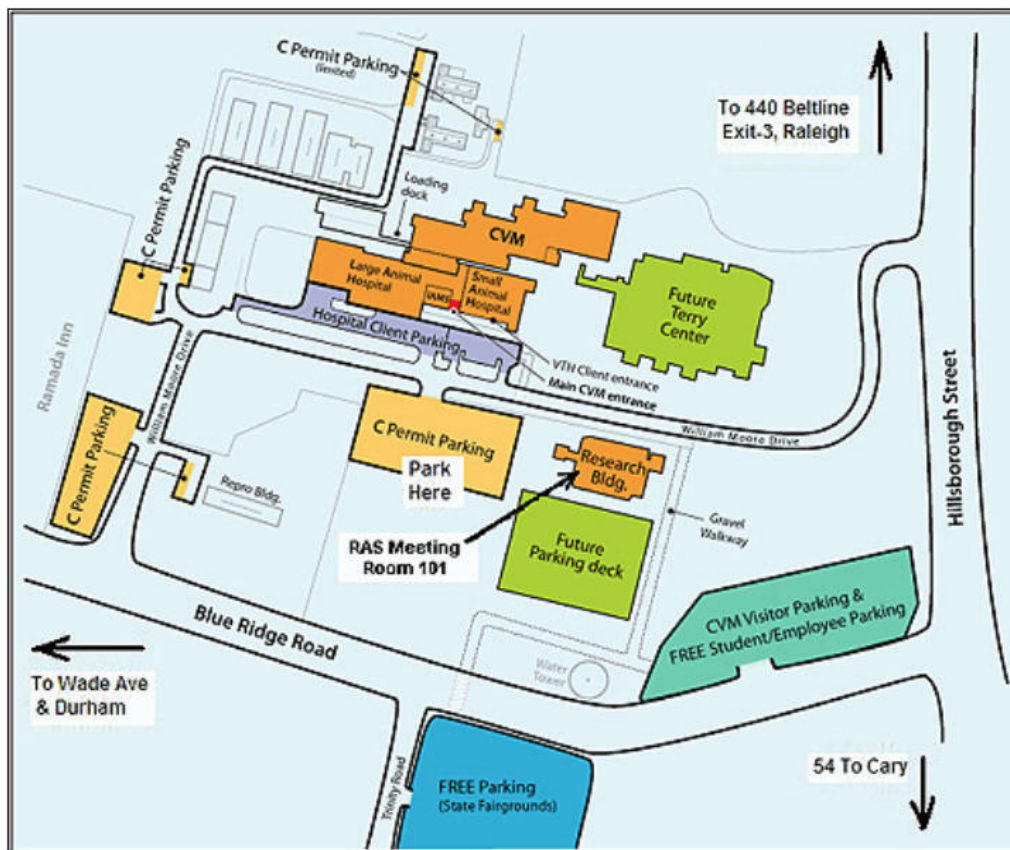


# The Raleigh Aquarium Society

P.O. Box 31564, Raleigh, North Carolina 27612-1564  
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## MARCH 2011

The Raleigh Aquarium Society (RAS) meets on the first Thursday of each month at 7:30 pm. All meetings are held in room 101 of the Research Building on the campus of the NCSU College of Veterinary Medicine located at 4700 Hillsborough Street in Raleigh, North Carolina. Typical meeting agendas begin with a discussion of assorted business topics, followed by a program of interest to the membership, and conclude with a raffle of fish, plants, and equipment/supplies. Complimentary light refreshments are provided and guests are always welcome. For more information, visit our website at <http://www.raleighaquariumsociety.org/> or email us at [raleighaquariumsociety@yahoo.com](mailto:raleighaquariumsociety@yahoo.com). You can also join our Yahoo chat group located at <http://groups.yahoo.com/group/raleighaquariumsociety/>.



# 2011 Calendar of RAS Club Events:

<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>
Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>
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<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>
Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

	<b>Club Meetings</b>	<b>Business Meetings</b>	<b>Workshop</b>	<b>Fish Food</b>	<b>Field Trips</b>	<b>Other</b>
<b>January</b>	6 <sup>th</sup>	20 <sup>th</sup>				
<b>February</b>	3 <sup>rd</sup>	17 <sup>th</sup>			12 <sup>th</sup>	
<b>March</b>	3 <sup>rd</sup>	17 <sup>th</sup>				
<b>April</b>	7 <sup>th</sup>	21 <sup>st</sup>			2 <sup>nd</sup> (PVAS)	
<b>May</b>	5 <sup>th</sup>	19 <sup>th</sup>				
<b>June</b>	2 <sup>nd</sup>	16 <sup>th</sup>	10 <sup>th</sup> -12 <sup>th</sup>		tbd	
<b>July</b>	7 <sup>th</sup>	21 <sup>st</sup>		tbd		
<b>August</b>	4 <sup>th</sup>	18 <sup>th</sup>			tbd	
<b>September</b>	1 <sup>st</sup>	15 <sup>th</sup>				
<b>October</b>	6 <sup>th</sup>	20 <sup>th</sup>			tbd	
<b>November</b>	3 <sup>rd</sup>	17 <sup>th</sup>				
<b>December</b>	1 <sup>st</sup>	15 <sup>th</sup>				

## **March 2011 Program (3/3/11 @ 7:30pm):**

Australian native and ANGFA/NANFA member Peter Unmack will be our guest speaker this month to discuss Rainbowfishes. Rainbowfishes, or the family Melanotaeniidae, are a small group of fishes that are only found in Australia and New Guinea. Currently there are 75 species in the family, but that number will eventually top 100 species given how poorly explored New Guinea is. Over the years, rainbowfishes have developed an ardent following in the aquarium hobby, due largely to the bright and diverse colors present in the different species. This talk will introduce aspects of the genetic relationships and biogeography of the group and provide details on books/websites for obtaining more information. He'll give his philosophy on keeping, breeding and raising rainbows as well as showing some of the brilliant diversity present in this fascinating group of fishes. Also, don't forget to bring your items for the raffle and your interest for the silent auction. We hope you can join us.

## **Club Officers and Committee Chairs:**

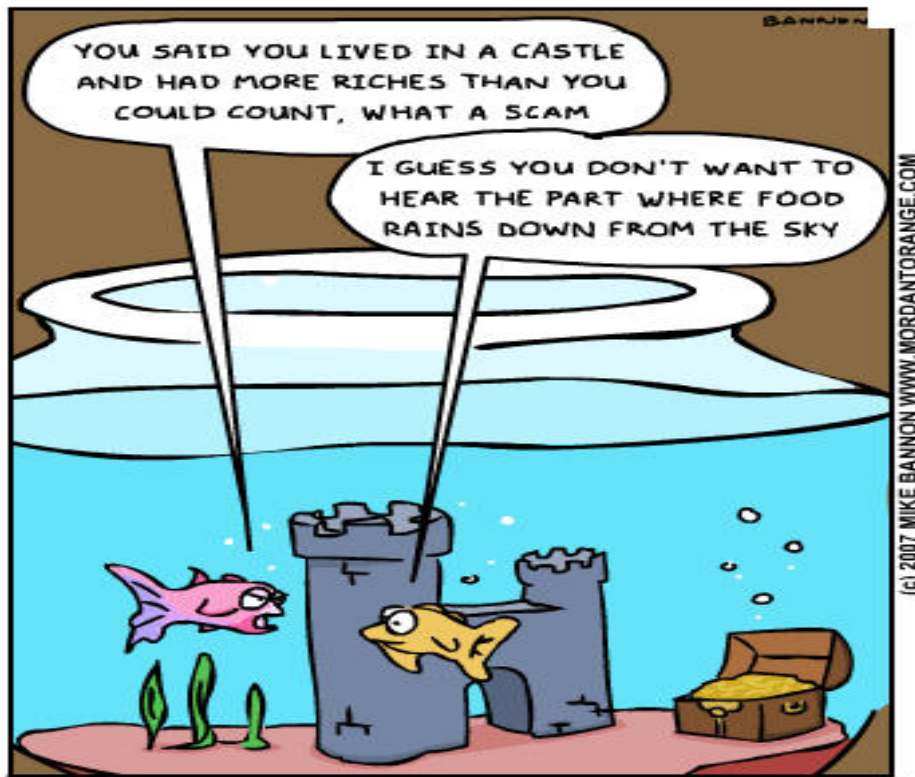
President/Program Chairperson:	Todd Wenzel [wenzelt@netzero.com]
Vice-President:	Linda Twaddle [ltwaddle@yahoo.com]
Secretary/Newsletter Editor:	Michael Maieli [michaelmaieli@aol.com]
Treasurer:	John Patterson [jrpatter@hotmail.com]
Workshop Chairperson:	Chris Smith [ctyank@frontier.com]
Breeders Award Chairperson:	Larry Jinks [bapman13@hotmail.com]
Raffle/Silent Auction Chairperson:	Shawn Smith [ssmithulg@hotmail.com]
Utility Chairperson:	Jim Corbett [microfixer1@yahoo.com]
Yahoo Group Administrator:	Gerald Pottern [gbpottern@yahoo.com]
Webmaster:	Walter Wu [chunker.geo@yahoo.com]

## **Editor's Corner:**

2011 marks the thirtieth anniversary of the Raleigh Aquarium Society. Accolades for this achievement go out to you, our members, for making this possible. Your interest and support is greatly appreciated and evidenced by the growth of our club, now at nearly 200 individuals from throughout the Triangle/Triad region and beyond. We have begun to distribute a roster and member name tags (buttons) at the meetings in an effort to update our records and promote member interaction. We ask for your feedback, cooperation, and patience as we work through changes planned for this year.

Contributions to this newsletter are always welcomed and encouraged. This includes articles, items for sale/trade/need, activity updates, etc. Please submit your information to the club secretary via electronic mail [raleighaquariumsociety@yahoo.com] or at the club meetings. Newsletters will be published the last Thursday of each month (in anticipation of the upcoming meetings) and sent blindcopy to your e-mail address on file; items received by that time will make it into the current issue. Any questions, comments, or concerns about this newsletter should be addressed to the club secretary. Likewise, if you do not wish to receive the newsletter or if you have any updates to your contact information (name, address, phone, email), please inform the club secretary.

# Something's Fishy:



ANOTHER FIRST DATE ENDS POORLY FOR TODD



No, Brian! Don't do it!

# Fish Facts:

*<Information of interest to the membership from other club members or organizations>*

## February Silent Auction Report

By Larry Jinks

The second installment of our silent auction met with continued success as ten people placed bids on nine auction lots. Fish offerings included a mature pair of firemouth cichlids donated by Todd Wenzel and a bag of six adult yellow Labidochromis cichlids (BAP entry from Frank Montillo). Three bags of Valisneria from John Patterson generated quite a bit of interest from the membership and visiting guests. Invertebrates rounded out the auction with two bags of red cherry shrimp and a variety of snails. The club netted \$14.00 from the auction and increased participation from the membership on both the buying and selling side. As the silent auction picks up steam it will become an income source for the club, an outlet for members to move their fish and plants and an increasingly valuable source of quality live stock for club members.

## Breeders' Award Program Report

By Larry Jinks

February's club meeting saw the entry of Frank Montillo into the Breeders' Award Program. Frank presented a brief, but informative, talk on the nigrans rainbows (*Melanotaenia nigrans*) that spawned for him. He obtained these rainbows from Peter Unmack's collection. Frank also entered into the silent auction a bag of six very good size yellow Labidochromis cichlids (*Labidochromis caeruleus*) that spawned in his tanks. These African cichlids are native to Lake Malawi.

The Breeder of the Year competition is heating up as Frank Montillo has tied Larry Jinks for the lead with Todd Wenzel close behind. This competition was established to stimulate club members to spawn more fish and to make information and specimens available to club members. The prize will go to the BAP member who brings in the most points in the calendar year. It's still early in the year, so get to work on spawning those BAP entries!

Breeder of the Year Standings (as of March 1, 2011):

1. Todd Wenzel = 660
2. Neil Frank = 290
3. Gerald Pottern = 165
4. Dave Herlong = 120
5. Larry Jinks = 60
6. Frank Montillo = 25

# Fish Migrations:

<Information of interest to the membership regarding club road trips>

## Highly Successful Club Road Trip

By Larry Jinks

On Saturday, February 12<sup>th</sup>, the year's first club road trip yielded rave reviews. Four people (club members Chris Smith, Larry Jinks, John Patterson, and John's friend Jennifer) set off for Animal Jungle in Virginia Beach. A reasonable departure time of 9:00 AM put us in Virginia Beach around noon. The drive, in the capable hands of John Patterson, was a pleasant experience filled with swapping fish stories and camaraderie among the members.

Animal Jungle in Virginia Beach is an excellent tropical fish store. In addition to a large ocelot type jungle cat in its own compound, they had very good offerings of South and Central American cichlids, African cichlids, tetras, barbs, plecos, anabantoids, shrimp, and a good selection of live plants. I was amazed at the variety of anabantoids. They offered six species of licorice gouramis (*Parosphromenus*) as well as others that I had only seen on websites. I also witnessed a young pair of *Nandopsis salvini* cichlids cleaning and defending a spawning site in one of the tanks. I availed myself of the 25% discount that Chris arranged for the club and came home with six *Parosphromenus deisneri* (even though I wasn't buying any fish on this trip). Chris had a field day picking out three species of freshwater shrimp (sunset, tiger, and Amano), some *Otocinclus* catfish, blue-eyed emperor tetras (*Inpaichthys kerri*), and a single *Badis burmanicus*. John was not left out of the frenzy as he acquired beautiful odessa and black ruby barbs, as well as glass bloodfin and blue-eyed emperor tetras.

After a pleasant and tasty early dinner at a local establishment, we stopped at one other pet shop then headed for home satisfied with our trip and purchases. As an experienced veteran of many club road trips in New Jersey, this trip was definitely worth the time. I look forward to more of these experiences provided by our club, including future adventures to the Atlanta Area AS spring auction, the Potomac Valley AS spring auction, and the Tideline Aquarium (Charleston, SC) anniversary sale. Stay tuned to this newsletter for dates and details of upcoming trips.

## **Fish Tales (formerly “Fishy Reading”):**

*<Unless otherwise stated, all articles appearing here are courtesy of the Aquaarticles website ([www.aquaarticles.com](http://www.aquaarticles.com)) and are allowed to be republished free of charge for any non-profit club or website provided that their website name, original article, and author credit is given. RAS club members are encouraged to submit relevant articles for inclusion in next month’s newsletter by sending electronic copy to the Club Secretary.>*

### **Traveling With Pet Fish**

by Gerald Pottern (*New article, Raleigh Aquarium Society & North American Native Fishes Association, 01/11*)

To safely transport pet fish, you must consider:

- 1) Keeping temperature within an acceptable range.
- 2) Water quality, especially dissolved oxygen and ammonia.
- 3) Psychological stress during netting and transport.

The safest way to travel with fish is to place them directly in an insulated cooler or thick-walled styrofoam box, or in sturdy plastic bags laid inside the cooler or insulated box. For fish larger than 5 inches or any fish with sharp spines, placing them directly in the cooler is the safest method, as it’s difficult to find bags large and sturdy enough for large fish, and they may suffocate in bags if you don’t have enough air space. Using a cooler also allows you to run a filter or aeration when you’re stopped for the night. Pet shops, meat markets, and scientific or medical labs often have thick-wall styrofoam boxes to give away or sell cheap.

If the cooler lid does not close snugly and you don’t want water sloshing out into your car, you can either tape the lid shut with strong packing tape or place a large heavy-duty trash bag or leaf bag inside the cooler. If using a bag as a liner, make sure to spread out the bottom so that fish cannot get trapped and suffocate in folds in the bag corners. The cooler or bag should contain about 1/3 water and 2/3 air to provide adequate oxygen. Trap as much air as you can in the bag, twist the top, fold it down, and secure it with a thick rubber band (or two). Twisting the plastic bag makes it water-tight, and folding the twist down before putting the rubber band on keeps it from un-twisting. Small punctures by fin spines shouldn’t cause a problem, but check the bag periodically when you stop to make sure the air space above the water hasn’t collapsed, which could suffocate the fish.

Smaller fish (under 5 inches) can be transported directly in coolers (as above) or in sturdy plastic bags laid in the cooler. If you’re moving fish that cannot be mixed (different water conditions, or fish that may injure one another), then use sturdy polyethylene bags without “expansion folds” in the corners that can trap and suffocate fish. Ask your local pet shop for fish bags. Depending on bag size and fish size, you can put several fish in each bag, provided they are similar in size. Fill each bag 1/3 with water (and fish), 2/3 with air (or an oxygen tank, if you have access), twist the top, and either tie a knot or fold it down and secure with a rubber band. Lay the bags down in the cooler to maximize the air/water surface contact area. Water holds very little dissolved oxygen, so a large air space is crucial for replenishing the dissolved oxygen.

Kordon breathing bags (best for small fish) require no internal air space, as oxygen and carbon dioxide diffuse through the plastic, but they do need air space around the bags. Do not pack breathing bags directly against each other, but use newspaper, cardboard, towels, socks, styrofoam peanuts, etc to separate them. Do not float breathing bags in the aquarium; they do not “breathe” underwater. If you must use bags with expansion folds, place them upside-down in the cooler so the folds are up in the air. Zipper-type bags are also risky, as they can unzip if a sudden jolt forces water against the zipper. If you must use them, dry the top of the bag after zipping and reinforce it with sturdy packing tape. And remember to leave at least twice as much air volume as water volume inside each bag.

If you’re traveling with just one or a few small bags of fish in hot or cold weather, place extra bags or bottles of warm or cool water as needed beside them in the cooler. This will provide extra “thermal mass” to keep the temperature in the fish bags from heating or cooling too fast. For cold-tolerant fish, letting them cool down gradually is safer than keeping them warm because they will need less oxygen when cool.

Feed your fish normally up to two days before traveling for fish larger than 2 inches, and up to one day before traveling for smaller fish. Then stop feeding for one or two days before travel to empty their intestines. Fish will continue releasing ammonia from their gills, even without food, but starving them for a day or two will reduce their solid waste production and thus reduce the risk of ammonia poisoning and oxygen depletion during transport. Bacteria that consume fish waste (plus uneaten food and dead fish) will also use up oxygen in the bag.

For catching fast or nervous fish out of the aquarium, use two nets: one held still for catching the fish, and one to herd the fish toward the still net. Try to catch and transfer your fish quickly, to minimize chasing and frightening the fish. Prolonged chasing and exhaustion can disrupt their osmoregulation (blood-salt balance), increase their oxygen need, and make them more susceptible to stress-induced infections. Once you arrive at your destination, open the cooler or box in a dimly-lit area and leave it alone for 10 to 15 minutes before removing bags or fish. Certain kinds of fish “freak out” and may die when suddenly exposed to bright light and handling after prolonged darkness.

When moving an established aquarium, treat your filter media just as carefully as your fish, to protect the vitally important nitrifying bacteria that grow in the filter media. These “friendly” bacteria consume ammonia and nitrite, and help maintain good water quality. If your filter bacteria dry out, suffocate, or overheat during transport, your fish might survive the trip and then die of ammonia or nitrite poisoning a week after setting your tank back up, especially if you have large fish or a crowded tank. Drain out most of the water from your filter so it doesn’t become anaerobic, but the media needs to stay wet and protected from heat. If you have sponge filters or foam filter blocks, these can be placed directly in the cooler with your fish (remove the hard plastic base and airlift tube), where the bacteria will continue to absorb ammonia released by the fish.

Shrimp and crayfish need something to cling to in the cooler or bag, or they will injure each other trying to get a foothold on something. Live aquatic plants such as Java moss, or synthetic yarn or filter foam scraps will work. I keep small strips of filter foam or acrylic yarn in aquarium filters just for this purpose. The material is colonized by nitrifying bacteria that consume ammonia during travel, in addition to providing a foothold for shrimp and crayfish. Live plants in the dark do consume a little oxygen, but it is negligible compared with animal oxygen use. Live plants also continue absorbing ammonia in the dark, which is beneficial to fish and other aquatic animals during travel.

## The Nitrogen Cycle - How Mother Nature cleans house

by Alan Ruben (*First published in The Daphnian, Boston Aquarium Society, Winter 2002, Aquarticles*)

Let's start off really basic. How far you get along into this is up to you. Fish make Waste - Bacteria get rid of Waste. Complex enough for you? OK, we can get a little more specific.

Fish produce Ammonia(NH<sub>3</sub>) as the majority of their waste. Ammonia is toxic to fish so we wouldn't want that to build up in our aquarium. Luckily, there are types of bacteria that use Ammonia as part of their metabolism. They use up the available Ammonia and convert it to a compound known as Nitrite(NO<sub>2</sub>). So, all is safe and sound, right? No. Unfortunately, Nitrite is also very toxic to fish.

Bummer. Now it happens to be that another type of bacteria come along and use this Nitrite in their metabolism. They scrounge up all the Nitrite they can find and convert it to a compound known as Nitrate(NO<sub>3</sub>). So all is safe and sound? YES! Well for the time being...

Nitrate is MUCH less toxic than either Ammonia or Nitrite but should not be allowed to build up. SO...the way to keep the Nitrate level down is...Water Changing.

I knew you didn't want to hear that but that's the way it is. For the majority of aquariums, water changing is just part of the scenery. No way around it. Anyone who tells you otherwise is trying to sell you something (in my not so humble opinion).

Got the concept? Want more specifics? Are you sure? Ok, you asked for it.

When first setting up an aquarium, the tank and all of the folderol inside of it are relatively clean and free of bacteria, especially the kinds that we want. An aquarium takes time to establish a colony of "bugs" to get at the nasty wastes. This is what we call a Bacteria Bed, or also a Bio-Filter

1. A new aquarium gets set up. (assume water etc. is ok)
2. Fish get introduced.
3. Fish get fed ( I would hope).
4. Fish swim happily in enjoyment of their new home.
5. Fish produce waste.
6. Ammonia from the waste starts to build up (TOXIC).
7. Bacteria start growing that use Ammonia.
8. Ammonia level starts to drop as Nitrite level builds (TOXIC).
9. Bacteria start growing that use Nitrite.
10. Nitrite level starts to drop as Nitrate level slowly rises (Much less Toxic)
11. Aquarist (that's you) keeps Nitrate levels in check by doing weekly, partial water changes.
12. Aquarist enjoys years of happy fish keeping and goes on to win the Nobel Prize.

Well, you never know... The point of this is, that the "break in cycle" takes some time to get going. A new tank isn't ready for a full load of fish because the Bio-Filter hasn't built up yet. Go slowly. Good things come to those who wait.

Had enough? Up for more? We can get more technical...ok then. The types of bacteria that go through this Nitrogen Cycle are known as Aerobic Bacteria. Simply put, this means that they use Oxygen in their daily lives to do all the wonderful things they do. Without Oxygen, they cannot live. (Sound familiar?). They grow on surfaces in the aquarium. On the walls, gravel, decor, filter materials etc.

The best way to get these Aerobic bacteria to grow is to give them plenty of oxygen by having well aerated water AND to give them plenty of places to grow. For many years, it was thought that Nitrosomonas and Nitrobacter were the primary culprits in this dance of waste management in the aquarium. Recent research by Dr. Tim Hovanec of Aquaria/Marineland in California has shown that we may have been mistaken for all these years.

Now there's lots more that can be said on this subject, but I am tired and I think my Pizza might be here. Also do some web searching. There are many great resources out there. If you really want to rock your world, go out and get "Ecology of the Planted Aquarium" by Diana Walstad. Then take everything I just said and turn it inside out!

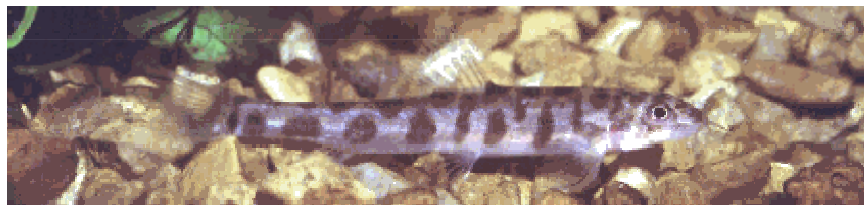
Well, not really, but you'll see. Now go get some fish!



### Sand Loaches - They Breed by Themselves

by David Banks (*First published: In Depth, newsletter of The Tropical Fish Club of Burlington, Aquarticles*)

It has been said very often, it is not the hobbyist which breed fish, it is the fish that breed. All we can do is try to help, and sometimes we don't even do that. Such was the case when our *Acanthocobitis urophthalmus* spawned. I just went in one day and noticed some strange behaviour going on in our ten gallon planted tank. It just so happened that the only fish in the tank were the sand loaches, as the last of the other fish, Odessa barbs, had just died of old age. The other thing in the tank was a couple of small apple snails.



Sand loach, *Acanthocobitis urophthalmus*, photo by Peter Lewis, copyrighted.

We bought the sand loaches at a local pet store; they didn't know anything about them and I had never seen them before. But we bought all they had, I think there were about five. They were very inexpensive, only \$1.49 from what I remember. I assumed that they were probably not going to get very big. They were just under two inches when we got them and they did grow a little but not much. They definitely fattened up some too as they got older. They were very thin and long and would perch themselves on the bottom of the tank on their pectoral fins. They are cream colored, or sand colored, with faint vertical stripes the entire length of their body. They did seem to chase each other from time to time, but never for very far, and they never did any damage to each other. They seemed somewhat shy, but would come out from the very thickly planted Anubias and Windelov Java ferns whenever food was in the tank. You would also see them around the tank just hanging out. Overall they seemed like a great little fish to have.

I had seemingly done nothing to help them spawn, but in reality I guess I had. They very much enjoyed the very thickly planted tank, and I had provided them their own tank with no other fish. I apparently had also given them a huge food source. After noticing that they had spawned, I had also noticed that the two apple snails were nothing more than empty shells. I'm not sure if the apple snails had just died or if the sand loaches had killed and eaten them. Loaches in general are known to be very good at eliminating unwanted snails from an aquarium, but these snails were very large comparison.

The breeding activity was very apparent: there were three loaches left in the tank when the first spawning took place. One was very slender and not quite as big; the other two were more bulky and a little bit larger than the other was. I believe the smaller slender one was the male. I walked into our fishroom and immediately noticed that something was going on in this tank. Two of the fish, what I believe were a female and the one male, were darting around the tank very quickly together. They would stop and the male would very quickly try to wrap himself around the female and then they would be off again. I noticed very small opaque eggs everywhere and as I watched saw eggs going flying several times when the pair were "wrapped" together. The eggs would just go everywhere when they released from each other and started darting all over the tank again. I tend to feed the fish just

before going to bed, it was already very late, but we watched this for about twenty minutes. They were apparently at the end of this spawning cycle anyway since I only saw eggs a few times. There were hundreds of eggs all over the tank! I was amazed at how many eggs had been produced from this fairly small fish. Maybe the male had been spawning with both females, but I only saw him with one.

I decided to siphon some eggs out to a separate tank to see if I could try to raise some of them. I left many eggs in the spawning tank hoping they would survive, but by the next morning I couldn't see a single egg. I still hoped that some would make it since the tank was so densely planted, but I never saw any fry in that tank. The ones that I had taken out hatched very quickly, in about 24 hours. They were the smallest fry I had ever seen, just clear little slivers clinging to everything. There were probably sixty or more eggs and I think that almost all had hatched. I waited a few days before trying to feed them. The first food was "filter grunge"; I would take a seasoned sponge filter and squeeze it into the tank. They needed very small food and this seemed to work pretty well. I later added APR and after a few weeks started with newly hatched brine shrimp. I had quite a few that seemed to be growing, but then I had to go away for a few days. When I returned there were only a handful left, but of these I raised five up to adulthood.

We had lost one of the females shortly after the first spawn, but still had one pair left. We did have a second spawning too, about 1 month later. I was unfortunately not able to get any eggs the second time and lost both fish within a couple of weeks. I am guessing that the spawning had taken too much out of them. It was a very frenzied and an exhausting courtship. I would see them stop at times as if to catch their breath, they were definitely breathing very hard and rapidly. We had these fish for close to two years but they always had tank mates. I am guessing that they may have spawned earlier but I just never saw any eggs as they were probably eaten as soon as they were laid. But then again, maybe these were the only times and we just so happened to see it each time.

Note: I had carefully marked the calendar with the dates on the spawns and the egg hatching and the fry free swimming. But these spawns happened in October or November so the calendar was recycled before I was able to transfer the data to this article. The fry are now almost two years old, so I am considering removing all of their tankmates and trying to spawn these fish again, in the same tank even. I believe I have at least one pair, maybe more than that. I am not sure, as you rarely see them for very long. I might even add a few apple snails again.



## **Fish Hooks (formerly “Web Links”):**

- US Directory = [www.fishforums.net/index.php?/topic/292232-local-aquarium-society-directory/](http://www.fishforums.net/index.php?/topic/292232-local-aquarium-society-directory/)
- Aquatic Gardeners Association (located in Denton, TX) = [www.aquatic-gardeners.org/](http://www.aquatic-gardeners.org/)
- Atlanta Area Aquarium Association (located in Atlanta, GA) = [www.atlantaaquarium.com/](http://www.atlantaaquarium.com/)
- Betta Habari (located in Houston, TX) = [www.bettahabari.org](http://www.bettahabari.org)
- Brooklyn Aquarium Society (located in Brooklyn, NY) = [www.brooklynaquariumsociety.org](http://www.brooklynaquariumsociety.org)
- Capital Cichlid Association (located in Silver Spring, MD) = [www.capitalcichlids.org](http://www.capitalcichlids.org)
- Central Alabama Koi & Water Garden Society (located in Midfield, AL) = [www.pondpals.org](http://www.pondpals.org)
- Charlotte Area Aquarists Society (located in Charlotte, NC) = [www.aquacharlotte.org](http://www.aquacharlotte.org)
- Columbia Marine Aquarium Club (located in Columbia, SC) = [www.columbiamac.org](http://www.columbiamac.org)
- Delaware County Aquarium Society (located in Springfield, PA) = [www.dcas.us](http://www.dcas.us)
- East Tennessee Reef Club (located in Knoxville, TN) = [www.easttnreefclub.com](http://www.easttnreefclub.com)
- Florida Marine Aquarium Society (located in Plantation, FL) = [www.fmas1955.org](http://www.fmas1955.org)
- Greater Pittsburgh Aquarium Society (located in Pittsburgh, PA) = [www.gpasi.org](http://www.gpasi.org)
- Jersey Shore Aquarium Society (located in Freehold, NJ) = [www.jerseyshoreas.org](http://www.jerseyshoreas.org)
- Kingfish Services (located in Boston, NY) = [www.kingfishservices.net/](http://www.kingfishservices.net/)
- Long Island Aquarium Society (located in Stony Brook, NY) = [www.liasonline.org](http://www.liasonline.org)
- Louisville Tropical Fish Fanciers (located in Louisville, KY) = [www.ltff.net](http://www.ltff.net)
- Marine Aquarium Society of the Carolinas (located in Raleigh, NC) = [www.reefkeeping.com](http://www.reefkeeping.com)
- North Carolina Koi & Watergarden Society (located in Raleigh, NC) = [www.nckws.com/](http://www.nckws.com/)
- Ohio Cichlid Association (located in Strongsville, OH) = [www.ohiocichlid.com](http://www.ohiocichlid.com)
- Potomac Valley Aquarium Society (located in Fairfax, VA) = [www.pvas.com/](http://www.pvas.com/)
- Raleigh Aquarium Society (located in Raleigh, NC) = [www.raleighaquariumsociety.org/](http://www.raleighaquariumsociety.org/)
- South Jersey Guppy Group (located in Griggstown, NJ) = [www.guppysa2z.com](http://www.guppysa2z.com)
- Tropical Fish Society of Rhode island (located in Seekonk, RI) = [www.tfsri.net](http://www.tfsri.net)

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## Fish Market (formerly the “Trading Post”):

*<Please contact the Club Secretary to list items in this section.>*

- **FOR SALE: Cherry Wood Fishtank stand** (74.5” long x 19.5” wide x 30.5” high) for a 150 gallon aquarium, complete with a top (hinged lid & light fixture but no bulbs), some filtration apparatus, and miscellaneous supplies @ \$200.00. Contact **Marjorie Gurganus [(919) 412-8411** or [marjorie.gurganus@gmail.com](mailto:marjorie.gurganus@gmail.com)]. {expires 4/1/11}
- **WANTED: Large male Betta** needed for breeding purposes (preferably longer than 2 inches). Contact **Emily Erickson [(919) 781-5419** or [emily.erickson72@gmail.com](mailto:emily.erickson72@gmail.com)]. {expires 4/1/11}
- **FOR SALE: Reverse Osmosis/Deionized water**, @ \$0.75 per gallon. Contact **Jason Green [(919)454-7025** or [jasongreen009@gmail.com](mailto:jasongreen009@gmail.com)]. {expires 4/1/11}
- **FOR SALE: Blackworms**, @ \$14.00/pound or \$8.00/half pound. Contact **Gerald Pottern [(919)556-8845** or [gbpottern@yahoo.com](mailto:gbpottern@yahoo.com)]. {expires 12/31/11}
- **FOR SALE: Assorted exotic fish** - 8” Vieja melanura “Lago Yaxha” @ \$40.00/pair or \$5.00 for 1.5” fry, Cryptoheros chetamulensis “Rio Chahal” @ \$2.00/each, Cryptoheros sajica males @ \$5.00/each, Cryptoheros myrnae females @ \$5.00/each, Telmatochromis bifrenatus “Mbita Is shell” @ \$1.00/each, Aulonocara baenschi males @ \$10.00/each, Endler’s Livebearers @ \$2.00/pair, Xiphophorus montezumae “Tamasopo” @ \$5.00/pair. Quantity discounts available. Contact **Eric Hanneman [(919)561-0301** or [primarypredator@nc.rr.com](mailto:primarypredator@nc.rr.com)], {expires 05/31/11}
- **FOR SALE: Frozen food order**, @ \$10.00/pound for bloodworms, \$12.00/ pound for mysis, and \$14.00/pound for spirulina gut loaded brine shrimp. Contact **John Patterson [(919)264-4011** or [jrpatter@hotmail.com](mailto:jrpatter@hotmail.com)] prior to the end of February for delivery at the March meeting {expires 03/31/11}

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## **RAS Sponsors:**

*<The following local businesses give RAS club members discounts on purchases when displaying a valid RAS membership card. Please help support these stores. If you would like to be a sponsor, please email the club secretary at [raleighaquariumsociety@yahoo.com](mailto:raleighaquariumsociety@yahoo.com).>*

**Down Under Saltwater Fish & Coral** (15% discount on dry goods, 20% discount on livestock)

1543 US Highway 70 West, Garner, NC 27529; (919)662-8820; [www.downundersaltwater.com](http://www.downundersaltwater.com)

**Fins, Furs, & Feathers Pet Center** (10% discount on everything except tanks)

303 South Horner Boulevard, Sanford, NC 27330; (919)718-0850;

**Pet Mania** (10% discount on everything)

7901-125 Falls Of Neuse Road, Raleigh, NC 27615; (919)676-3225; [www.petmanianc.com](http://www.petmanianc.com)

**Pet Paradise** (10% discount on everything)

9101-141 Leesville Road, Raleigh, NC 27613, (919)848-8881;

**Reef Keepers Aquarium** (10% on everything)

1673 Old US Highway 70 West, Clayton, NC 27520; (919)359-2424; [www.reefkeepersaquarium.com](http://www.reefkeepersaquarium.com)

**The Pet Pad** (10% discount on everything)

1347 Kildaire Farm Road, Cary, NC 27511; (919)481-6614; [www.petpadpets.com](http://www.petpadpets.com)

**Triangle Tropical Fish** (10% on everything except tanks and stands)

3600-36 North Duke Street, Durham, NC 27704; (919)479-0088; [www.triangletropicalfish.com](http://www.triangletropicalfish.com)

# RAS Membership Application:

Membership in the Raleigh Aquarium Society entitles you to these member privileges...

- Voting rights on all club business.
- A discount card for purchases at all participating local club sponsors.
- Club discounts at club functions.
- Ability to post items for sale in the Trading Post section of the newsletter.
- Ongoing education from knowledgeable experts in the hobby (local and national).

**Annual RAS club membership dues are \$15.00 and run from March 1st to February 28th of the next year. Payment is due by March 1<sup>st</sup>. Individuals joining at any other time will be charged \$5.00 plus \$1.00 for each remaining month of the calendar year.**

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Telephone(s): \_\_\_\_\_

Email: \_\_\_\_\_

Areas of Interest: \_\_\_\_\_

*Please mail this completed application to:*

**Club Secretary  
Raleigh Aquarium Society  
P. O. Box 31564  
Raleigh, NC 27612-1564**

*or hand it to the club secretary at any club meeting. Thank you for your interest and participation.*