

SPLASH

OFFICIAL PUBLICATION OF THE MILWAUKEE AQUARIUM SOCIETY, INC.

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**Milwaukee Aquarium Society
Upcoming Events**

**M.A.S Spring Auction
Sunday March 22nd**

Doors Open 10:30am, Auction Starts at Noon

**Fishoramma Spring Swap
Sunday May 3rd 10am - 2pm**

**Fish Fest 2009
Labor Day Weekend, See advertisement
This Issue**

All Events Are Held At Our New Location

**New Berlin Bowl
16000 W. Cleveland Ave
New Berlin, WI 53151**

<http://www.milwaukeeaquariumsociety.com>

From the Fishroom of the Outgoing President:

Another year has come and gone. What will you do with the New Year?

This is a question I often ask myself. New Year's resolutions seem to be made only so they can be broken. Often we just try to take on changes in our lives that are too big to make in one step or that involve too many variables outside of our control. This year, if I may be so bold as to suggest, try to break large goals and changes down into small more manageable pieces or steps.

For example: MAS is hosting the 2010 ACA (Yes, I know you have heard this before) To reach that large goal MAS is holding Fishfest on Labor Day weekend (Again, I know you've heard this already) To make things even easier Fishfest will be run like the ACA Convention all be it on a smaller scale. This means volunteers are needed to help set-up the show, be liaisons with the speakers and vendors, run the registration table, as well as many other small pieces of the bigger event. Please consider being more than a passive part of Fishfest by either stepping forward to head a position or to make yourself available during the 3 day show and auction to lend a hand where it is needed.

On a more personal level you might want to help someone get into the fish keeping hobby. You could do this by lending your knowledge and experience to help them get through the learning curve of keeping their first fish. Remember how frustrating it was when you were just getting started? Or bring that person to a swap meet or auction to help them find some great deals on everything from tanks to fish to fish food. Maybe that person wants to learn more about the hobby. Invite them to come to a monthly meeting with you.

For those of you who haven't found it yet MAS now has a forum.

You can find it at:

www.milwaukeeaquariumsociety.com


I'd also like to say thank you to all the MAS members who have put up with me as the club's president for the past few years. It has been an honor and a joy to be able to be one small part of the leadership of this club. Thank you.

Another year has come and gone. What will you do with the New Year?

Jeff

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TROPIC LIFE

Spawning *Brycinus longipinnis*:

The Long-fin Alestes Tetra

Ted Judy

The group of African tetras that include Congo, moon, African red-eye and alestes tetras are kept by many aquarists but bred by only a few. I find this to be odd because Congo tetras have become one of the most commonly commercially raised tetras out of eastern Europe, where they are spawned and raised in aquariums. I have been collecting these tetras for a few years, and started thinking outside the box trying to breed them a few months ago. My first real success was *Brycinus longipinnis*. I have gotten a few eggs from other species, and seen a few more go through the courting and spawning motions, but only the long-fin alestes tetra ended up with fry.

I keep a group of *B. longipinnis* in a 40 breeder aquarium as dithers for a pair of cichlids, *Teleogramma brichardi*. The tetras are large and robust enough to handle the aggression of the cichlids. The water conditions in the tank are moderately hard (150 – 200 ppm TDS), KH 3-4, pH 7.0 – 7.4 and a temperature of about 76 – 80 depending upon season. There is a lot of driftwood in the tank that keeps the water lightly stained with tannin. Filtration is provided by a large sponge filter driven by a powerhead, which also creates current. There are several *Anubias barteri* plants tied to the driftwood.

The tetras had been in the tank for a few months before I saw them start to behave in a way that might have been indicative as breeding. All of the fish changed from a solid gold body to a gold body with wavy vertical bars that were light grey in color and somewhat faint. The markings gave the fish a 'dirty' appearance, and I initially thought that they were stressed. I increased water changes hoping to relieve the stress, but the color changes became more intense. After about a week I saw pairs courting over the roots of the plants on the wood, and assumed that the color change was a good thing to see.

I tried a couple methods of getting eggs to hatch. First, I moved a pair to a ten-gallon tank to spawn. That did not work. The pair never settled in and tried to spawn, even after a few weeks in the spawning tank. I tried conditioning the females along in a ten and then adding a male after a large RO water

change. This usually works for most South American tetras, but it did not for these African tetras. The only place I ever saw the tetras spawn was in the 40 breeder they were the most comfortable in.

I also tried moving all the fish out of the tank after I saw them spawn. After a week I did not see any fry, so I put all the fish back. I know now that I did not give the eggs long enough to hatch. More on that later.

Finally I built an egg trap and waiting for the tetras to use it as a spawning site. The egg trap is a shallow dish that sinks with a cover made from needle-point plastic mesh with a lot of 2-3" pieces of yarn threaded through it. When the trap is in the tank the yard sticks up from the trap like grass. The tetras lay their eggs in the yarn and then the eggs fall through the mesh into the dish. It took more than a month before the colony of tetras started to use the trap as a spawning site. Once they did 20 - 40 eggs appeared in the trap every other day. I moved the eggs from the trap to a bare 5-gallon tank with water from the breeding tank. I added a few drops of methylene blue to darken the water and left the lights off. Then I waited. And waited. And waited. I knew the eggs were viable because they were HUGE (2mm in diameter), clear and had eyes moving in them. Most tetras hatch in just a few days. These eggs took 10 days to hatch.

The fry are large, but their mouths are small. I started feeding the fry in the 5-gallon hatching tank with a mix of vinegar eels and Sera micron #1 dry food. The fish were eating, as evidenced by their swollen bellies, but they did not grow quickly. After two weeks they were not much larger than they were at birth. At 4 weeks I decided to move the spawn to a larger aquarium, a 10-gallon, and stepped up feedings. I also started feeding baby brine. I did not see very noticeable growth until six or seven weeks. There were a lot of fry. I put three spawns worth of eggs into the hatching tank and when I moved the spawn to the 10-gallon tank there were over 60 fry. At eight weeks the fry were not large enough to move yet. How slow can they grow?!

This article was written 72 days post hatching day. The fry are still too small at about 1/2", in my opinion, to take into the club BAP auction, so I decided to use my annual hold-back on them. Hopefully they will be large enough in January to share with the club. I certainly have enough to go around.

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BAP Rules Revisions for 2009

The last revision to the Breeder Award Program rules was in 2001. The first order of business for our new BAP co-chairs was to make a new revision. The goals of the revision are to make the rules easier to understand and to make some changes to encourage more participation in BAP.

The biggest change is that you may now turn in different color forms of a species that you have previously submitted to BAP. Here are the rules regarding this new policy:

- Different tank-strain cultivars/color variations and wild-type geographic variants of the same species may be submitted by the same member for points according to the following rules:
 - The tank-strain cultivar may NOT be a physical deformity other than finnage length (for example, the 'balloon' body is a physical deformity that is not allowed)
 - The tank-strain cultivar accepted in the hobby as a verified strain, and the breeder set up the spawn specifically to obtain that strain. (For example, silver, marble, gold marble and koi are all valid color forms of the angelfish *Pterophyllum scalare*.)
 - Multiple submissions may not result from one spawn. (For example, if a breeder spawns two silver angelfish and gets some gold angelfish in the offspring, only one of the two color forms in the spawn may be submitted... honesty should guide the breeder to submit the color form the spawn was expected/intended to produce.)
 - A geographic variant of a species is one that is recognized as being unique in features as compared to other variants of the same species, and is described in scientific and/or hobbyist literature. (For example, *Pelvicachromis taeniatus* geographic variants from Moliwe, Ndonga and Nyete may each be submitted as separate spawns.)

- The first spawn of a species will earn the breeder the full point value for the class. Each subsequent spawn of a different form of the same species will earn the breeder 5 points, regardless of the class of the species. There is no limit to the number of valid forms of the same species that a breeder may submit.
- The ruling of the BAP chairperson regarding the validity of strains, cultivars or geographic variants is final and irrevocable.

The second rules change added the fish category of 'other' to the list of fish that a person seeking Ultimate Breeder needs to spawn to earn that highest level. The chairmen determined that there are many spawn-able fish that do not fall into any of the prescribed categories, and a member seeking Ultimate Breeder should be able to work with them as well. Some of the fish that fall into the 'other' category include gobies, loaches, rays, sticklebacks (and related), puffers, eels, and all marine fish. Members who are currently seeking Ultimate Breeder as their next level in BAP have the choice of meeting either the old or the new criteria.

A section was added that specifically describes unethical actions (cheating) and the consequences for those actions. Though cheating has not been a problem, it is best that the topic be addressed in the rules.

We are also starting a new program in the BAP called the Demanding Dozen. There are many species of fish that are known to spawn regularly in captivity but have never been submitted to our BAP program. One of the goals of the program is to increase our collective knowledge on breeding fish. To encourage members to try harder to crack some of these challenging species, anyone who spawns them will earn bonus points. After a year the fish on the Demanding Dozen list that were spawned will be retired from the list and new species will be added to take their place. Any species that stays on the list for three years will be moved to an MAS Most Wanted list and will be worth even MORE bonus points. The complete description and rules of this new program can be seen in the BAP Rules. Here are the Demanding Dozen species for 2009. Go get 'em!

BAP 2009 Demanding Dozen

Phenacogrammus interruptus – Congo tetra

Acarichthys heckeli – Thread Fin cichlid

Betta coccina – Red Wine betta

Corydoras robinae – Bannertail cory cat

Fundulopanchax sjostedti – Blue Gularis killi

Anableps anableps – foureye livebearer

Sturiosoma aurem – royal farlowella

Crenicichla compressiceps – Green dwarf pike cichlid

Pantodon buccholzi – African Butterfly fish

Puntius denisoni – Rose Line barb

Sewellia lineolata – Tiger hillstream loach

Cyathopharynx foai – no common name (Lake Tanganyika feather-fin)

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Splashing Through The Exchanges

By Jim Everson

SWAM is the newsletter of the Southwestern Michigan Aquarium Society. Each issue will contain a calendar of upcoming events covering a fairly large geographic area. It was in the Nov/Dec '08 issue of SWAM that I read that Mike Pauers was the featured speaker at the Wisconsin Area Killifish Association's Annual Jamboree. Unfortunately I missed the killie show this year but another MAS member who was there said Mike's talk was excellent. Mike has agreed to speak at our February meeting although at the time of this writing we haven't yet picked a subject.

This issue of SWAM contains 8 original articles. Five of these articles were contributed by Chase Klinestecker. Mr. Klinestecker writes about : The Rosy Cichlid-Cryptoheros panamensis, Own Clone: The Marble Crayfish, Puntius narayani, Fundulopanchax walkeri- Mop or Dirt?, and The 3-In-One Worm Culture. Regarding the worm culture, Chase raises Grindalworms and redworms in the same culture. Tiny baby Grindalworms are as small as or smaller than microworms and eliminate the need to keep a separate microworm culture.

Philip Kukulski contributes two articles to this issue of SWAM: Vacation Fry Brine and Tidbit: Cheaper Fluke Tabs. Charlie Grimes writes Let George Do It First (Spawn Sturisoma Festivum). Finally, this issue includes an uncredited humor piece entitled You Might Be A Fishnut...

This issue is Darryl Ullish's final issue as the editor of SWAM. During the 3 years Darryl has been editing SWAM, it has become one of my favorite exchanges!

Another of my "go to" exchanges is The Youngstown Aquarist. (Youngstown Area Tropical Fish Society) The Nov/Dec '08 issue reprints an article by MAS member Tom Wojtech entitled Getting The Lead Out Of Your Pencils. Tom writes about the unexpected appearance of Nannostomus beckfordi fry in a community tank.

Also in this issue, Brian LaNeve writes about Aplocheilus linneatus (Golden Wonder). Brian recommends A. linneatus as a great choice to get started with killiefish. Joe and Maureen Kirksey write about another killie in How We Breed Blue Gularis. Curt Smith's article My Favorite Annuals discusses yet another killiefish Pterolebias phasianus Goias.

Two more reprints round out this issue: Charlie Grimes' article Apistogramma hongsoi, and Kimberly Cool by Bruce Hansen. The Hansen article recounts a 1997 collecting trip in the Kimberly region of Australia.

Speaking of Australia , Austin Braganza will be there by the time this issue of SPLASH goes to print. I'm sure he'll bring back many great stories and pictures when he returns!

Submitted By Austin Braganza

The air is getting cooler but this is still very nice Fall weather, Milwaukee baseball fans are very excited today since the Brewers made the playoffs in the wildcard spot. I am going to move my koi and pond plants indoors this weekend so I don't have to fish around in colder water in a few weeks.

October 2008, The Tropical News, from the Sacramento Aquarium Society (SAS). Ted Judy has received a Complimentary Membership from SAS. Chuck Rambo was at the SAS August general meeting to speak about how Aquariums evolved. After reading a brief account of Chuck's talk I did some research online and found some very interesting articles on the history of aquariums, some with illustrations. Do an internet search for 'history of aquariums' the resulting websites are too many to list

An interesting fact about species like Brichardi and Aphilophus Citrinellum they practice bi parental communal fry care which means not only do the parents care for the young but also juveniles will take care of younger generations of fry.

September 2008, The Granite-Fisher from the New Hampshire Aquarium Society reprints an article Hitching a Ride: Continental Drift and Aquarium Fish by Grant Gussie. This article was first published in the Calquarium, Vol. 41, No.2 Aquarticles. The article describes theories and possible explanations for how species arrived at various South American stream or African lake. www.aqariumarticles.com

July/August/ September 2008 Aquatic Forum by Stark County Aqua Life Enthusiasts Society, Article titled All About Under the Sea Life Part 2 by John Baad. A couple of interesting facts mentioned in the article. We have all heard of dolphins in the sea, did you know there are 3 dolphin species living in fresh water lakes and rivers around the world. One species lives in the Ganges in India, another in the Amazon in South

America and a third species lives in the Yangtze River and Tunting Hu Lake in China

The article also mentions 2 types of Manatees / Sea Cows found in fresh and salt water in the tropical parts of America, Africa and one that lives in the Indian Ocean called the Dugong. There use to be a 3rd Sea Cow named Stellar's Sea cow but became extinct shortly after being discovered by man.

July/August 2008, Cichlidae Communiqué from Pacific Coast Cichlid Association (PCCA), Pam Chin's article Cichlids in the News reprints a book review by Jeremy Gay on Ad Koning's Malawi Cichlids in their Natural Habitat – 4th Edition. Price £45. more info. at: www.britishcichlids.com

The editor's note offers a website for US residents www.cichlidpress.com
This edition mentions a new article on previously unknown species collected by trawl in the extreme depth of the lake not accessible to divers. This review was first published in July2008 issue of Practical fish keeping magazine. www.practicalfishkeeping.co.uk/pfk/pages/home.php

A total of 843 species are discussed and 822 are illustrated with photos of males and females from each species. Jim Everson our librarian is buying a book on Malawi cichlids, I hope it's this one.

Cichlids in the News also includes an article by Mary Clarke on Ocean Nutrition's launch of a new range specialist cichlid foods which covers vegetarian, carnivorous as well as omnivorous species.

The editor Jim Ellenberger of PCCA thanks Ted Judy

www.tedsfishroom.com for his photographs which were used in ACA 2008 recap article by Pam Chin. Ron Georgone won best in show and people's choice award for his Aulonacara species Lwanda.

Here is a list of speakers for the ACA 2008 which will give us an idea of the treat we are in for when we host the ACA 2010 in Milwaukee.

Ted Judy – West African Cichlids

Rusty Wessel – Central American Cichlids

Ron Nielson – Madagascar Cichlids

Hans Koop Van't Jagt on Discus, The Discus Study Group and the South American Study Group.

Wayne Liebel – Discus Nomenclature

Juan Miguel Artigas Azas – Cichlids of Mexico

Ad Konings – Lake Tanganyika

Uwe Romer – Apistogramma

There were also workshops such as Gary Lange's on photography

Vickie Vaughn's on diseases and

Brian Revenaugh's on plants

So please sign up as a volunteer to help the Milwaukee Aquarium Society make this 2010 ACA a big success, every little bit counts.

2009 MAS Breeder/Grow-out Challenge

The Milwaukee Aquarium Society will be conducting a Breeder/Grow-out Challenge in 2009.

This is a great opportunity to learn about a species of fish that you may have never kept before; earn valuable BAP points; and show off your husbandry skills. All while competing for valuable prizes and bragging rights.

The species of fish for each challenge will be announced at the January 23rd general meeting, along with the anticipated entry fees.

Members may choose to participate in one or both challenges.

Breeder Challenge – Participants will receive 5 or 6 adult fish. The goal of this challenge is to be the first to spawn and successfully submit fry from these fish as per the club's BAP rules.

Grow-out Challenge – Participants will receive 5 or 6 juvenile fish. The goal of this challenge is to raise the fry to adult size, and submit one specimen for judging. Judging will take place during Fish Fest weekend in September. Participants will automatically be entered into a special category just for the contest fish. Judging will take place Saturday morning. As an added bonus, the winners will receive free entry into the event's main show.

Contest fish will be distributed at the February 27th general meeting.

Please contact Dan Randall prior to February 15th to sign up.
Home phone: 920-699-2527 (before 6pm)
E-mail: randad2004@yahoo.com

***Barbus candens* – A Small Cyprinid from West Africa**

When most people think about aquarium fish from West Africa they picture small to medium size cichlids, *Synodontis* catfish, large tetras or oddballs like African butterfly-fish or rope fish. The fish diversity of the region actually rivals that of South America, and like any tropical aquatic ecosystem the rivers of Africa have their share of small species as well.

One small species that has only recently been available is the diminutive *Barbus candens*. The fish are found only in the Congo River, only grow to be about an inch long and are similar in appearance to the more commonly recognized butterfly barb, *Barbus hulstaerti*. *B. candens* males have a pale body color that shows some iridescence in light blues or pinks, depending upon the angle of the light and the mood of the fish. The fins are a maroon-red with black highlights. There are three black spots on the flanks. Females are smaller and have less color than the males.

B. candens is a very hardy small barb that can tolerate a wide range of water conditions, so long as the pH is below 7.8 and the hardness is soft to moderate. Soft acidic water with a little tannin encourages the males to show their best color. They are not shy fish and stay out in the open water. Like most barbs they will pick on each other, but do not do any damage. A school of a dozen can easily be housed in a ten gallon tank. They make excellent dither fish for small cichlids, especially *Nanochromis* species. They are not picky eaters so long as the food is the appropriate size. Live foods such as live baby brine and grindal worms will keep the females in spawning condition.

B. candens is an egg scatterer that likes to dive into dense vegetation to lay its eggs. If plants are not available they will lay their eggs in yarn mops. One method of inducing a spawn is to place a pair of barbs in a small aquarium with a pile of yarn that fills $\frac{3}{4}$ of the tank space. Place a well fed female in the spawning tank a day before the male, and do not feed her. The evening before a spawning is attempted, change 50% of the water with cool RO water and then add the male to the tank. Turn off the lights for the rest of the night, and then turn them back on in the morning. The barbs will spawn within a few hours. Remove the pair

later in the day, add a little methylene blue to the water to help the tanks stay dark and then wait.

The eggs that are laid will hatch after about 72 hours. The fry stay near the bottom under the yarn, and to see them the yarn will need to be lifted up and a flashlight shone into the tank. When fry are present feed them some microworms. The worms will survive on the bottom for a few days. The fry grow very slowly and need high quality water. Start small 10-20% water changes with well aged water only a few days after seeing fry. With good water and plenty of microorganisms for food, the fry will be large enough to eat baby brine after about two weeks. The growth rate increases with baby brine, and the babies will grow to about a half an inch at the age of six weeks. At this point they can be added to the colony with their parents without any fear that they will be eaten.

An alternative spawning method is to use the small aquarium with yarn again, but leave a pair in there for two weeks. Feed them regularly with live foods to keep the female in condition. A healthy pair will spawn a few eggs every day, but they will also eat any eggs or fry they can find. Spawning just one pair means that there are only two fish to pick off the eggs. After two weeks there should be several unhatched eggs on the yarn, and the fry from those eggs will survive after the parents are removed. The daily feedings will also encourage a population of microorganisms in the yarn for the newly hatched fry to feed on.

B. candens is only one of several small barbs and tetras that come from West Africa. Most are a challenge to breed, but *B. candens* is relatively easy. The species is rare in the hobby, however, so get them if they show up in a store or at a club meeting. There is no telling when they will be available again.



PISCES PAGE

For Sale - Want - Trade - Give Away

To submit a request for an upcoming issue, please send the desired information to the splash editor at mas.splash@gmail.com

Deadline is the last Friday of Odd-numbered months. You must be a member to post an add in the Pisces Section.

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Pet Jungle

Gary Johnson

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Some Signs of a Sick Fish

by Dr. Adrian Lawler

*(retired) Aquarium Supervisor (1984-1998) J. L. Scott Aquarium Biloxi, Ms
39530*

Original to Aquarticles

Signs of fish disease (or fish stress) can be any abnormal behavior or any change in fish observed externally. Internal signs of disease can be ascertained by dissection of a living anesthetized fish or a dead/ sacrificed fish. Disease organisms or parasites can rapidly increase in numbers in a closed, recirculating small environment as a tank. One should closely observe the fish and tank in order to ascertain any possible problem before a valuable specimen, or a tank, is lost. Daily tank checks should be done to observe for problems. Following is a list of some of the signs one may observe (in freshwater to salt water tanks) indicating a possible problem, with notes, or some possible causes (all causes may not be listed), listed in parentheses (no parentheses indicates fish disease signs may be caused by a number of causes).

Tank Signs (conditions which could indicate present, or future problems with fish)

----Cloudy water (ammonia, bacteria, algae bloom, dinoflagellates [free-living or parasitic], air off, filter

off, decaying organics, hole in substrate over under gravel filter, suspended particulates)

----Protein foam on surface of water (fish, squid, etc. cut up for food not washed well, excess food in tank, something organic decaying in tank)

----Hole exposed to under gravel filter (allows water to bypass substrate and decrease biological filtration)

----Missing or dead specimens, which could be decaying in tank and on the way to fouling tank or causing a bacteria or algae bloom

----Uneaten or excess food in tank; dying plants; sheds from crustaceans (could foul tank, etc)

----Air off, filter or other support equipment not working correctly (could lead to decline in biological filtration and disease control, and result in future tank problems)

Fish Behavior

Movements

- Violent reaction of thrashing, darting, and dying mid-gasp (pH shock or quickly lethal toxins)
- Shimmy (staying in one place and moving side to side) (Bacteria, missing salts)
- Equilibrium decreased, cannot maintain normal position in water (bacteria, dinoflagellates, toxins)
- Scratching on objects in tank (bacteria, parasites, toxins)
- Twitching (bacteria, parasites, toxins, skin irritant)
- Spastic, uncoordinated movements
- Sluggish, lethargic
- Swimming with head up, tail down, at surface
- Constant swimming at surface (dinoflagellates [free-living or parasitic], toxins, pH shock)
- Trying to jump out of tank (dinoflagellates [free-living or parasitic], pH shock, toxins)
- Sticking head out of water and squirting (black-flushing gills) water (dinoflagellates, gill problems)
- Normally bottom fish now at surface
- Normally mid-water or surface fish now at bottom
- Normally hiding fish now out and visible
- Lying on bottom and gasping (near death; heavy bacteria, parasite or dinoflagellate infection)
- Swimming to top, then sinking to bottom

Breathing, opercules, gills

- Gasping, irregular opercular beat, rapid opercular beat (bacteria, dinoflagellates, parasites, toxins)
- Squirting water (parasitic dinoflagellates, gill parasites, gill infection)
- Opercules flared (gill parasites, gill infection, toxin damage to gills, or large gill parasite, as isopod)
- Mouth not closed (usually indicates gill/oxygen problem of some sort, heavy gill infection/infestation;
 - something caught in buccal cavity or throat = food, substrate, etc)
- Rapid or irregular opercular beat (bacteria, dinoflagellates [free-living or parasitic], toxins,
 - hyperplasia, parasites)

Eating

- Not eating (bacteria, parasites, toxins, severe liver damage, internal injury or problem, cancer)
- Losing weight even though eating (*Mycobacterium*, toxins [possibly at time of collection])
- resulting in liver damage)

External Signs

Skin and fins

- Clamped fins (poor water quality, parasites)
- Sunken belly, thin (starved, bacteria, parasites, toxins, liver damage)
- White spots on skin/fins (lymphocystis, bacteria, fungus, dinoflagellates, parasites)
- Fish tissue extensions (various-shaped growths), abnormal growth from skin, fins, etc (hyperplasia, tumor-benign or cancer)
- Dark spots in skin (embedded larvae of digenetic trematodes)
- Bloody spots or streaks or sores on skin/fins, lateral line pits (lymphocystis, bacteria, parasites, toxins)
- Bloated belly, scales raised from scale pockets (dropsy, kidney damage, tumor-benign or cancer)
- Body deformed, twisted, etc (genetic, injury in egg, vitamin/mineral deficiency, old age, etc)
- Fight (or collection) injuries on skin/fins; frayed fins/scale loss (injuries may lead to viral, bacterial, or fungal infections)
- Increase in mucus production; whitish slime (bacteria, fungus, parasites, irritants, toxins)
- Easily visible living objects on skin (parasites, as: leeches, copepods, *Argulus*, isopods, Monogenea)

Eyes

- Cloudy (bacteria, toxins, poor water quality)
- Red, bloody (bacteria, toxins)
- Dark spots in eyes (embedded parasites, tumors)
- Eyes protruding or pop-eye (exophthalmos) (gas bubble disease, lymphocystis or parasites or tumor behind eye in socket pushing eye out, bacteria)
- Eyes sunken (starved, bacteria, *Mycobacterium*)

Opercules

- Flared (gill parasites, gill infection, toxin damage to gills, large isopod on gills)
- Gasping, irregular opercular beat, rapid opercular beat (bacteria, dinoflagellates, parasites, toxins)

Gills

- Pale gill color (viral or bacterial infection, parasites, toxins, internal bleeding)
- Spots on gills (lymphocystis, bacteria, parasites, dinoflagellates)
- Gill lamellae/filaments fused (bacteria, lymphocystis, hyperplasia)

----Gill lamellae/filaments eroded (bacteria, lymphocystis, parasites)

Color

----Silver or gray or white sheen on skin (bacteria, *Mycobacterium*)

----Color changes, either getting lighter or darker (virus, bacteria, parasites, toxins)

Growths

----Filaments, nodules, growths, hyperplasia, etc on skin/fins (lymphocystis, tumors, bacteria, fungus, parasites, irritants, toxins)

See these articles also:

[Aerosols.....\[http://www.aquarticles.com/articles/management/Lawler_Aerosols.html\]\(http://www.aquarticles.com/articles/management/Lawler_Aerosols.html\)](http://www.aquarticles.com/articles/management/Lawler_Aerosols.html)

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[Daily tank checks...\[http://www.aquarticles.com/articles/management/Lawler_Daily_Tank_Checks.html\]\(http://www.aquarticles.com/articles/management/Lawler_Daily_Tank_Checks.html\)](http://www.aquarticles.com/articles/management/Lawler_Daily_Tank_Checks.html)
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Minutes- Board Meeting October 19, 2008

Meeting was called to order at 12:45 pm by Kerri Michels.

In Attendance: Kerri Michels, Jeff Michels, Jerry Michels, Ken King, Done Hinske, Aaron Glass, Jim Everson.

Membership: Jerry Michels reported that there are 52 paid members.

Treasurer's Report: Jerry Michels reported that the club had \$3,595.07 of which the library has \$234.04. The September mini-auction had 21 bags that brought in \$115.00. Year to date there has been 211 bags that have brought in \$1,249.00 for the mini-auctions. Four books were sold. No bills or consignments have been paid for the auction yet.

Web Master: Aaron Glass reported that he doesn't have administrative access or control for the new domain as he hasn't been given the user name or password for complete site access. Jeff Michels is contacting Ted Judy with regards to this.

The Splash: Kerri Michels reported that the deadline for next issue of The Splash is December 1.

Exchanges: No report.

Library: Jim Everson reported that there is nothing new.

Advertising: No report.

Manufacturers Liaison: Kerri Michels reported that she is checking on other clubs lists.

Store Liaison: Don Hinske is taking this position.

P.A.P.: Ken King reports that everything is updated. Committee people need to get information to Ken for points to be awarded.

F.A.A.S: No report.

B.A.P: Jeff Michels reported that there was nothing new.

H.A.P.: Aaron Glass reported that there are a few minor point updates that need to be entered.

Auction: Jerry Michels reported that there was only one priority bag at the auction. In addition, \$3,393.50 was taken in for the auction and dry goods. Jeff Michels reported that there is a possibility of having a “buy it now” table at auctions.

Fish-O-Rama: Aaron Glass reported that the swap meet cards are in the mail.

Christmas Party: Ken King reported that he is working on it. The Christmas party will be held on December 7 at the Mitchell Park Domes pavilion.

Bowl Show: Ken King reported that the Bowl Show has been canceled for 2009.

Guest Speaker: Kerri Michels reported that for October, Jeff Michels will have a presentation on Rack Building. For the November general meeting, Andy Hudson will be presenting on Decorating with Rocks.

ACA: No report.

FishFest 2009: Jeff Michels reported that two speakers have been booked so far; Mike Schadle on Livebearers and Stephen Tanner on Loricariidae.

Old Business: Nothing.

New Business: Jeff Michels reported that the slate needs to get filled for 2009 election nominations. Jim Everson will work on filling the slate with candidates. Jerry Michels will be discussing at the next board meeting about membership packets. Ken King reported that there is a pet store in Cedarburg that will be having their one year anniversary. Ken brought up the idea of having some type of club participation at it with a possible table. Ken will be looking at it more.

Next Board Meeting: Will be held by Jerry Michels on November 8 at 6:00 pm.

Jim Everson made a motion to adjourn the meeting. Ken King seconded. No additional discussion. Motion voted and carried. Meeting adjourned at 2:47 pm by Kerri Michels.

Respectfully submitted,

Aaron J. Glass

November 28th, 2008 General Meeting Minutes

Membership Report: Jerry Michels reported there are 53 paid members

Treasurer's Report: Jerry Michels reported that the club has \$1454.66 with \$183.04 earmarked for the library. Expenses for the Fall Auction have not all been paid yet. The October mini auction had 21 bags and brought in \$84.00. Year to date 232 bags total \$1333.00 have been auctioned off through the mini auctions and 4 library books were sold at the October mini auction for \$7.00 for a year end total of 12 books sold for \$34.00.

The Splash: December 1st submission dead line

Exchanges: Jim Everson reported that Tom Wojtech had a reprint this month.

Library: Jim Everson stated there is a new book in the library, Malawi Cichlids in Their Natural Habitat 4th ed. by Ad Konings. Jim hopes to have a book report for all to read soon.

Advertising: Nothing new to report

Web-master report: Ted Judy reported that he would have the forum up and running by the end of the weekend.

Manufactures' Liaison: Kerri Michels stated there is nothing new to report.

Store Liaison: No Report

P.A.P.: Ken King reported that everything is up to date. Ken stated that all PAP points need to be in to him for the year end.

F.A.A.S: Dan Randall stated there is nothing new to report.

B.A.P.: Jeff Michels stated there is nothing new to report.

H.A.P.: No Report

Christmas Party: Ken King reported that the Christmas Party will be held December 7th and to see him if you need more information.

Board Meeting: The next board meeting is in January at Austin Braganza's home; date TBA

Bowl Show: Ken King reported that unless participation of the bowl show increases for the remainder of 2008 the board will suspend the program for 2009.

Guest Speaker: Andy Hudson will be the speaker at November's meeting speaking on rock scaping. In January, Greg Steves will be speaking about Lake Victoria Cichlids

Old Business: No old business was discussed

New Business: Jeff Michels reported that elections nominations were being taken by Jim Everson and to please see him if you would like to nominate someone else or yourself. Dan Randall will be starting a grow contest in February. Dan will announce the selected species in January.

After the business was concluded a short break followed. The mini auction took place after Andy Hudson's presentation.

Respectfully submitted,

Minutes- General Meeting January 23, 2009

Membership: Jerry Michels reports that there are 20 paid members.

Treasurer's Report: Jerry Michels reported that the club had \$1,372.32 of which the library has \$201.04. The November 2008 mini-auction had 37 bags that brought in \$178.00. For the year ending 2008 the mini-auctions had 269 bags that have brought in \$1,511.00. There were also some books sold at the November 2008 general meeting.

Web Master: Ted Judy reports that there will be changes made soon.

The Splash: Michael Laursen reported that the deadline for the next issue of the Splash is February 1. There are missing minutes that are overdue.

Exchanges: Austin Braganza reported that there was nothing new.

Library: Jim Everson reported that the library is open for business.

Advertising: David Timmer reported that there was nothing new.

Manufacturers Liaison: No report.

Store Liaison: No report.

P.A.P.: Ken King reports that the 4th quarter attendance drawing will be held tonight.

F.A.A.S: Dan Randall reported that articles are being submitted to F.A.A.S.

B.A.P: Jeff Michels reported that for 2009 the BAP responsibilities will be split between Jeff Michels and Ted Judy. In addition, there will be upcoming rules changes to BAP.

H.A.P.: Aaron Glass reported that the last outstanding HAP entry information was received in December 2008. With this information having been received, the final tallies will be updated and any applicable awards and drawings are planned for the February 2009 general meeting.

Auction: David Timmer reported that the next auction will be held on Sunday, March 22 at the New Berlin Bowl.

Fish-O-Rama: Jerry Michels reported that the next swap meet will be held on Sunday, May 3 at New Berlin Bowl.

Grow/Spawn Contest: See Dan Randall for more information.

Christmas Party: Ken King reported that the location for the Christmas part will be changing. Additional information will be coming out with regards to the change.

Board Meeting: The next Board Meeting will be hosted by Austin Branza on Saturday, February 7 at 4 pm.

Guest Speaker: Ted Judy recapped on the upcoming speaker schedule. For tonight's meeting, Greg Steves is presenting on Lake Victorian Cichlids.

ACA: Ted Judy reported that regular planning meetings are starting in March 2009. The first one is planned for March 21. Contact Ted Judy for more information.

Fishfest: Jeff Michels reported that the Fishfest for 2009 will be held September 4-6. A planning meeting will be held after the ACA planning meeting on March 21.

Election: Jim Everson took last nominations. Ed Curran was nominated for Secretary. Ed Curran accepted the nomination and was added as a write in on the ballot. Jim Everson handed out the ballots and the election was conducted.

Old Business: None.

New Business: John O'Connor announced other club events. Michael Laursen announced that he was looking for angelfish donations to replace fish for a person that has health issues and needs replacement stock after an aquarium accident.

Respectfully submitted,

Aaron J. Glass

Secretary

HAP Point Tally

In Pursuit of Master Horticulturist	Total Points	Current Level	Needed to Advance
Warren Berg	390	Expert	110 points plus C/D point requirements
Aaron J. Glass	465	Expert	35 points
Jeff Michels	380	Expert	120 points

In Pursuit of Expert Horticulturist	Total Points	Current Level	Needed to Advance
Austin Braganza	285	Advanced	15 points plus C/D point requirements

In Pursuit of Advanced Horticulturist	Total Points	Current Level	Needed to Advance
Ted Judy	170	Senior	30 points
Eric Rogne	240	None	Need C/D point requirements
David Timmer	140	Senior	60 points plus C/D point requirements
Brian Torreano	120	Senior	80 points plus C/D point requirements

In Pursuit of Senior Horticulturist	Total Points	Current Level	Needed to Advance
Tammy Adyniec	45	None	55 points plus C/D point requirements
Shane Czarnecki	10	None	90 points plus C/D point requirements.
Ray Gettler	15	None	85 points plus C/D point requirements
Doug Higley	20	None	80 points plus C/D point requirements
Michael Laursen	40	None	60 points plus C/D point requirements
Randy Long	20	None	80 points plus C/D point requirements
Bob Nourse	50	None	50 points plus C/D point requirements
Corban Schultz	10	None	90 points plus C/D point requirements

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THE SPLASH

The Splash is the official publication of the Milwaukee Aquarium Society, and is published six times per year under the direction of the Board of Directors. Articles are always welcome. Please submit them to the editor (Michael Laursen) no later than the first day of even numbered months to be included in the next issue. Articles should be sent to the editor in digital format @ mas.splash@gmail.com

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ABOUT THE MILWAUKEE AQUARIUM SOCIETY

The Milwaukee Aquarium Society is an organization devoted to the hobby of tropical fish, both freshwater and saltwater. It's membership consists of hobbyists gaining expertise in all phases of raising and breeding tropical fish, as well as area retailers. Our membership's expertise covers a wide range, from beginners to expert breeders, but all members are interested in promoting the hobby and encouraging others to join in the fun.

General meetings are held monthly, generally the fourth Friday of the month, at 7:30 p.m. at **Hoffers's Tropic Life Pets, 7323 N. 76th Street, Milwaukee**. We thank them for their hospitality. Free parking is always available, and guests are always welcome. No general meetings in July or December.

Annual membership dues are as follows: Families: \$20.00 a year; Individuals: \$15.00 a year. Membership dues provide for the Splash, monthly speakers, community support, annual events, and show support. A yearly subscription to the Splash is available for \$15.00 a year. New or renewal of membership dues should be sent to the treasurer: **Jerry Michels, 6333 W. Boehlke, Milwaukee, WI 53223**

The Splash

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