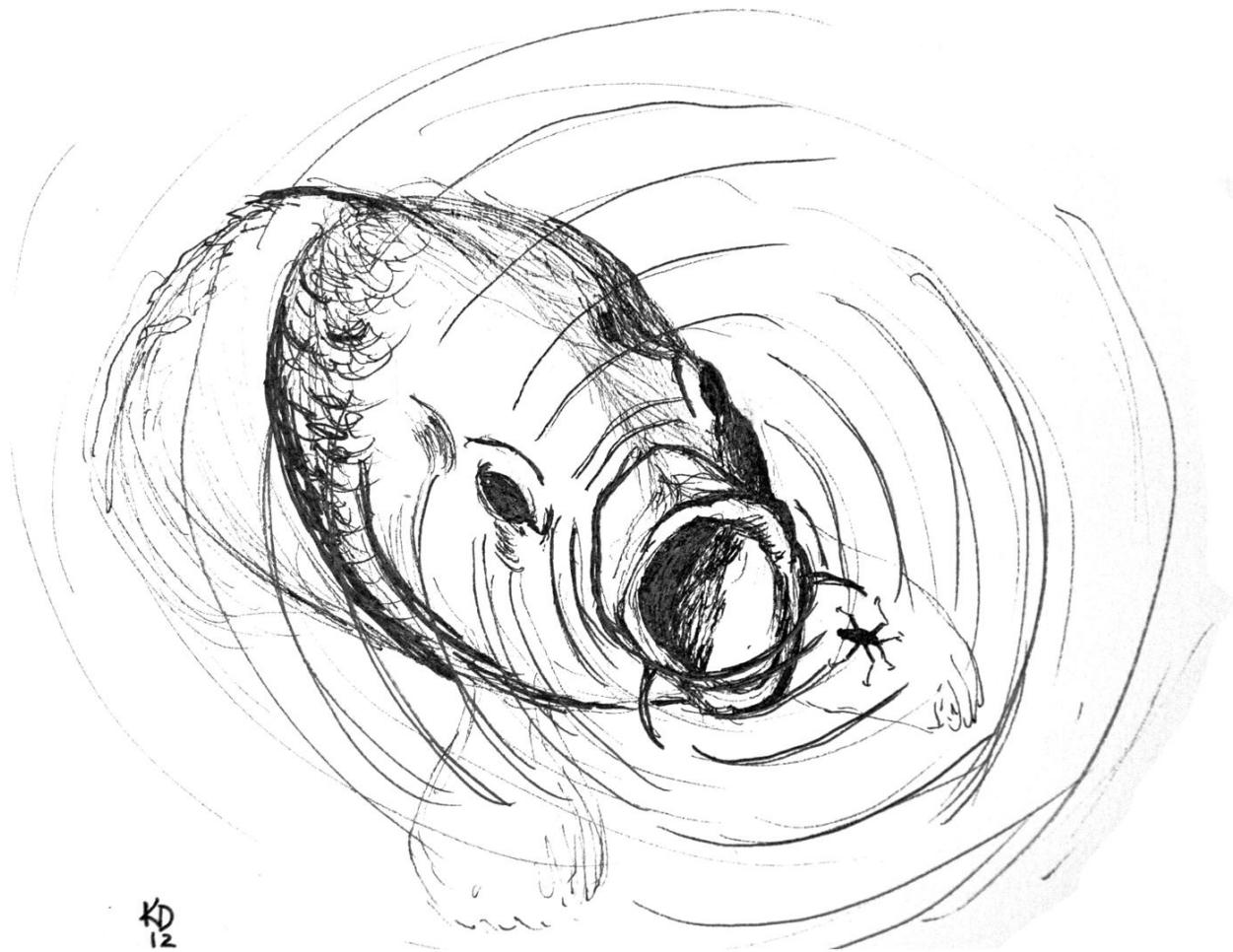


The Darter

July- August 2012



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St. Louis, Missouri

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MASI's official web page: www.missouriaquariumsociety.com
 Join the all-new MASI FishHeads Forum. See web page for instructions.

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Opinions expressed by the contributors are their own and do not necessarily reflect the opinions of the Missouri Aquarium Society, Incorporated.

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Places to Be / Things to See

SATURDAY July 28, 2012
Executive Council, 7:30 PM, Hosted by Mike Hellweg

SUNDAY August 12, 2012
Auction, 11:00 AM @ Gardenville Masonic Hall

THURSDAY August 16, 2012
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

THURSDAY September 20, 2012
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

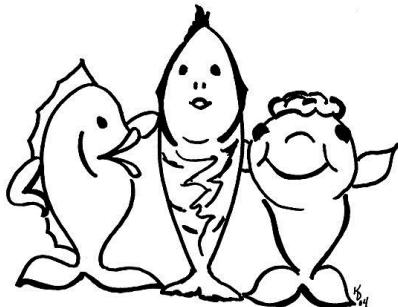
SATURDAY October 6, 2012
Swap Meet, Gardenville Masonic Hall

THURSDAY October 18, 2012
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

SUNDAY November 11, 2012
Auction, 11:00 AM @ Gardenville Masonic Hall

THURSDAY December 20, 2012
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

Membership



Yearly membership in the Missouri Aquarium Society, Inc. is \$20 per calendar year. Membership includes the Darter subscription for the year, which is currently 6 issues. New memberships and renewals can be submitted at club functions such as meetings and auctions, or by contacting Ron Huck, our membership chair.

Auction Chairman's Message

Mike Hellweg

The August 12th auction is coming up quickly. We're going to be making a couple of changes.

1. First, the start time: since nearly everyone's there by 11:00 and milling around for an hour, we'll be starting at 11:00 instead of noon. This will give our out-of-town bidders an extra hour of bidding before they have to leave, and will get all of our volunteers out of there an hour earlier as well. Hopefully everyone will be able to get home in time to get their fish in tanks, rest a bit before work on Monday, and enjoy a Sunday evening dinner with the family.
2. Second, the number of silent auction items: we'll now allow up to four items to be sold at silent auction with a minimum sale price. So items 15 – 18 will be either regular auction items or silent auction items. We'll be ending them for item 15 at 1:00, item 16 at 1:30, item 17 at 2:00 and item 18 at 2:30.

It takes lots of hands to make our auctions run smoothly. We can use help getting things set up at 9:30 AM, running the auction throughout the day, and closing it down at the end of the day. If you want to volunteer and aren't sure what you can do to help, drop me a note at the email address below. Otherwise, I hope to see you all there!

And for now, 'nuff said
Mike
auction@missouriaquariumsociety.com

HAP Report March – April 2012

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Derek Walker	<i>Juncus effuses spiralis</i>	Soft Corkscrew Rush	OB	10	3145
Derek Walker	<i>Najas sp. roraima*</i>	Spiny Naiad	V	5	3150
John Van Asch	<i>Canna glauca Orange Crush*</i>	Orange Crush Canna	V	10	755
John Van Asch	<i>Canna glauca Orange Crush</i>	Orange Crush Canna	OB	10	765
Marlon Felman	<i>Typha gracilis</i>	Thin Dwarf Cattail	OB	5	115
Pat Tosie	<i>Aponogeton madagascariensis</i>	Madagascar Lace Plant	IB	20	330

Reproduction Key: V = Vegetative, OB = Outdoor Bloom, IB = Indoor Bloom, S = Seedling

* = MASI First

Ten Tips for Beginners and Other Fishkeepers

By Susan priest

Reprinted from the June 2012 Modern Aquarium of the Greater City Aquarium Society

- 1 When you are choosing the location for an aquarium, pretend you are looking for a spot where you might put a **baby's crib**. In particular, avoid a place with a chilly draft, or direct sunlight. Also stay away from an area with a lot of foot traffic. You will, of course, need a nearby electrical outlet.
2. When you are setting up a new aquarium and need to establish the **nitrogen cycle**, start with one or two fish, and add a cup of gravel from a mature tank. A friendly (and smart) salesperson in a pet store should be glad to supply you with some. He or she knows that if they help you to make a good start of it, that you will surely be back to purchase more fish. Friendly is much easier to pick than **smart**, but you can use this as a kind of test. If the salesperson is not smart enough to give you a little ripe gravel, then they probably won't be smart in answering your fishkeeping questions either, and you might want to move on!
3. NYC tapwater has a pH of 7.0 (neutral). Most freshwater tropical fish will adjust to this. However, you owe it to each of your fishes to do a little homework, and find out what **level of acidity** they will do best in. Don't mix acid loving fishes with those which prefer alkaline water. For example, if you mix livebearers, most of which prefer acid conditions, with certain of the cichlids which prefer alkaline conditions, then neither of them will be happy. (See tip #9)
4. If a fish somehow finds its own way to the floor, the best "tools" to use in picking it up are **your own wet hands**. Don't reach for a towel or a fishnet or a dustpan or a paper cup. Just scoop it into your hands, you know, like that Allstate guy on T.V. I'd be willing to bet that he is a fishkeeper too!
5. If you are a gardener, or even if you have houseplants, don't let the water from your tanks go down the drain. **Fish water** is loaded with "stuff" which is beneficial to African violets and philodendrons, tomato plants and petunias, as well as pretty much anything else that grows in soil. A convenient method of transferal is to siphon the water from a tank directly into your watering can. If you want to fix your plants a **super double whammy**, add some of your favorite terrestrial plant fertilizer to the fish water. I have been using Miracle Grow for many years with observable benefits. Make sure the soil around your plants is already moist before you fertilize, as this will help with absorption (kind of like a sponge that won't soak up water unless it is already wet). **Important:** If the tank water has **salt** in it, **do not** put it on your plants.
6. A **tight fitting lid** is every fish's friend. Most fish are jumpers to one degree or another, and this will protect them from their own instincts. It will also keep things from accidentally falling in. (Pretzels and the occasional beer bottle have been known to end up in a tank.)
7. If the **Baensch Atlas** advises your particular species of fish would benefit by the presence of **floating plants** in their tank, do not fear. If you are afraid that too long of a photo period will overheat the water or, worse than that, create an algae bloom, relax. If you likewise dread the thought of paying any amount of money for floating plants which will not thrive because you are holding back on lighting due to fear #1 and fear #2, once again, you can rest easy. The solution to your problem is in a box under one of your aquariums. Just pull out all of the plastic plants which you have long since retired. Detach them from those "V" shaped things that are designed to be buried in the gravel as an anchor. Then cut the "plants" into any sized pieces you want, and toss them into your tank. **Voila!** You now have floating

plants that don't need any light at all! They will provide just as much shelter to fry as salvinia. They will harbor just as much infusoria as duckweed. They will also make your fishes less likely to take a leap, thereby reducing the likelihood that you will need tip #4. Since you don't have to go out and buy them, they are basically free, and you can boil them or soak them in bleach if they start to look funky (of course, your fishes won't notice if they do).

8. Your mailbox is probably just as full of aquarium supply catalogs as ours is. If you are setting up filters, then I'm sure you have seen the prices they want for **filter media**. Yikes! Here is a tip to save you some money. Every discount or dollar store sells **hair curlers**. (For some reason they are always pink.) Some of them are foam and some of them are hard plastic with about a million little fingers on them. They are especially good when it comes to providing a large surface area for the colonization of beneficial bacteria, but they also serve admirably as a means of mechanical filtration. You can use them in canister filters, box filters, and even some power filters. If you shop around you will have no problem finding a large package of these things for \$1.00. You can buy different sizes and slip one inside of another to get even more bang for your buck. Even if you buy them in a grocery store where they cost a little more, you will still be saving a bundle.

9. **Build a library.** Nowadays, the first thing anyone does when they want to know something about something is turn to the internet. Internet "search engines" have their place, but they can't replace a solid set of reference books. If they could, then Amazon.com/books (as well as other internet book sellers) would show up as a blank page on your computer screen. Slightly used books are very affordable, and the variety of available titles is much larger than you will find in a bookstore. So, let your fingers do the shopping as you fill your bookshelf.

10. **Find a fish friend**, you know, someone to schmooze with about anything and everything fishy. Someone to help carry buckets, someone you can "borrow" filter floss from, someone who has already built their library. If you are lucky like me, your best fish friend lives in the same house with you. Or, if you have found your way to the **GCAS**, and are reading this copy of **Modern Aquarium**, then you have a fish friend or two sitting right next to you. Nothing enhances the enjoyment of the tropical fish hobby like someone to share it with, **so enjoy already!!**

From The Fish Room

By Ed Millinger

If you haven't checked out Cafe Press and the MASI items that Derek Walker has created you must do so. There is a link on our website. One of the new items is a great looking wall peel that measures 22 by 14 inches, it can be moved without hurting the wall surface.

I'm pleased to report that the issues of **FAMA** that I left at the doctors and dentist office last year are still there. Hopefully some youngsters will be inspired to explore the world of fish keeping as a result.

In the May/June issue of the magazine **Amazonas** Kurt Zahringer has a great article on page 78 that covers the Arrowhead Puffer (*Tetraodon suvattii*).

Animal Planet is showing new "Tanked" episodes and now Nat Geo Wild has a new series "Fish Tank Kings". On one episode of "Tanked" they built an aquarium on a pinball machine. On the first showing of "Fish Tank Kings" they built aquariums that were set in the Miami Marlins new baseball stadium, right on the field next to the dugouts. Go to livingcolor.com and check out the many fantastic creations they have made.

Tanks for reading and have a fishtastic day.

Reflections: Fish Photography: Are We There Yet?

By Ron Coleman

Reprinted from the May 2008 Cichlid Blues of the Pacific Coast Cichlid Association

Perhaps you are thinking of purchasing a new camera? Among your many considerations of price, brand and features, you may wonder if taking photographs of fish may sway your decision. It might, but it might not...

There is no question that digital photography has transformed the taking of pictures of fishes. The cost of the cameras has not changed that much: you can spend anywhere from under \$100 to \$5000 or more, but that has always been true. And of course, despite the advertisements, you get what you pay for. The real game changer has been the cost of the media. Assuming that you already have a computer -- so we can remove that from the cost equation -- the big difference is that now each photo is virtually free once you have the camera. This was not the case when you had to purchase film, and get it processed into prints or slides. As such, anyone can now take many times more photos with little fear. Back in the day, you thought carefully before squeezing the shutter button, now you can just delete any images that you do not like.

For those of us who photograph underwater, this has been an extraordinary change. Previously, taking photographs underwater meant loading film into the camera, shooting 24 or 36 shots, then getting out, trying to reload the camera while keeping everything dry, then going back in the water. Now, I regularly shoot 400 or more shots in a day of underwater shooting without fiddling with the camera.

Are the shots better? Yes and no. Before, you had to really think carefully about what you were doing and you could not afford to take chances. Now, you can just shoot and see what you get. The odds that you catch that perfect image now are many times higher than they were in the past because you can sort through your photos after the fact to select the best, a critical thing when dealing with fish which are never in the same exact spot again. And of course, if you want to go that route, you can now do unbelievable cropping, editing, and adjusting using tools like Photoshop.

Looking back at old issues of Tropical Fish Hobbyist or even the Cichlid Blues, it is worth pausing for a second to realize how difficult it was for the photographers using film to get the stunning photos that they did.

So if the recording and editing portion of the process is now much improved (and I recognize that there are some purists who argue, perhaps rightfully so, that digital images can never meet the extreme quality of perfectly shot film), what about the cameras? How do they stack up?

I am not going to argue that this camera is better than that camera -- we all have our favorite brands -- but I am more interested in asking whether we have reached the holy grail for digital cameras, namely can I carry one camera that will do it all? Naturally, that means different things for different people. The advertisements would have you believe that if you just buy camera x, you are done. I am not so sure, even today.

I use a camera for several things related to fish. I take photos of fish in tanks. I take photos of fish habitats when I travel, and I take photographs of fish underwater. Is there one camera that can do all that? The answer is important for several reasons. If one camera would fit the bill, then I could just purchase that camera and be done. I would also not have to carry multiple cameras. No more extra power converters, chargers, media cards, readers, etc. Right now, I always have one camera on me but when I am in the field, I typically have about three cameras and all the accessories with me.

So why so many cameras? The fact that I shoot around and under water is a big issue. Regular cameras simply do not do well near water. Freshwater is problematic, but saltwater is deadly. Think about this carefully if you are planning a trip to Hawaii or Mexico. I remember many years ago shooting photos in Hawaii of the surf when a tiny bit of salt water spray hit my Nikon FM (a wonderful film

camera). The camera was instantly toast. The salt water creeps into the electronics and irreparably destroys the circuit board. Modern cameras are even more susceptible to this because they have more electronics and are more cheaply made. To take underwater photos, you need to put a typical land camera in some sort of housing to keep it safe and dry. I have tried many of these. The biggest problem is that the housing has to fit the camera exactly so that you still have access to the camera controls. So, if you purchase a new camera, you need to purchase a new housing and often the housing costs more than the camera! On top of this, the housing is usually bulky. Drawbacks aside, this is how I actually shoot most of my photos these days. I use a Nikon D90 inside a Seaand-Sea underwater housing.

The other big problem is speed or what is commonly referred to as “shutterlag”. This is a critical thing to consider if you are thinking about purchasing a camera and you have any desire to photograph fish. Fish do not stay still. They are constantly moving. The trick to fish photography is to capture a split second in a fish’s life, and many of the digital cameras make this very difficult to do. You have probably noticed this phenomenon when you tried to take a picture of a group of people using a “point and shoot” digital camera. You press the shutter button and there is a tiny, but noticeable, delay before the actual photo is taken. This is not typically a problem when photographing people or landscapes because people move slowly and most landscapes do not move at all. But when you line up that perfect shot of a fish, whether it is in a tank, or underwater, and you push that button... that subtle delay is more than enough for the fish to move a little, or a lot, and you do not get the shot you intended.

I am not saying that you cannot shoot great photos with these cameras. You can. But it is challenging and it requires that you train yourself to push the shutter in anticipation of where the fish will be a tiny bit in the future. You can do it, but it can be very frustrating. The higher-end digital cameras (i.e., DSLR cameras) do not have this problem, but they all require an expensive bulky housing.

All of this leads me to talk about the Nikon AW100. Just before heading to Costa Rica last December, I saw an advertisement for the new Nikon AW100 and I was intrigued. It is a point and shoot camera so I know that the images can never be quite as good as a full-size digital SLR camera like the Nikon D90. Simple physics tells us that the tiny lens of a point and shoot camera cannot match the optics of a highly machined series of lens elements found in a modern high performance Nikon lens, but how close can we get? So, I bought one to give it a try (they cost around \$300).

What does the camera claim to do? It says that it is a 16 Megapixel camera. On the one hand that is a lot of megapixels, on the other hand, megapixel count is largely meaningless. The really important factor is the size of the CCD (charge coupled device) that records the image. The one in the Nikon AW100 is certainly adequate for most images.

More intriguing to me was the promise that the camera was “waterproof”. For someone who works in and around water, that was a real eyecatcher. Supposedly you can just take this camera underwater, with no housing or other protection, down to about 33 feet. Can you? Yes and no. As a person who has learned over 40 years not to get cameras wet, it took a large amount of courage to dunk this thing in a bucket of water for the first time. It worked! So, yes you can. As I said, I got this camera just days before heading to the tropics and so off I went ready to put this marvel to the test while snorkeling in Costa Rica.

I got some nice photos so at first I was impressed, but after several days of use, I noticed a peculiar ring of “fog” inside the viewfinder. The weird thing is that the fog was not necessarily coupled with snorkeling. Certainly snorkeling would bring it on, but so would holding the camera a certain way, with my finger wrapped over the lens area, which is pretty much unavoidable. I discovered, as have others judging from online reviews, that the heat of a hand, combined with enough humidity are sufficient to cause condensation inside the camera. (Imagine much unhappiness at this point). This is not necessarily permanent, some time in direct sunlight often will cure the condensation, but it can be a real pain to work around.

The bigger problem was with shutter lag. I tried many times to get some closeup photos of convict cichlids nesting. Each time I would line up the shot, push the shutter and yet I would manage to capture only the tail of a fleeing fish, or part of the body as the fish slipped down into the substrate.

So, is this camera a write-off? By the way, I believe Fuji has a similar camera available, which I have not tried. The Nikon AW100 certainly is not the perfect solution. The holy grail remains out of my reach. However, despite its shortcomings I still really like this camera for two reasons. First, it shoots nice video. The quality is not the same as a dedicated video camera like the Sony CX350 that I usually use (again, in a bulky underwater housing), but it is certainly pretty good. And you can capture still images from that video. This partly solves the shutter lag problem. Rather than shoot stills, I simply shoot video and grab the frames I like or need.

The really big advantage of this camera is that it is small. It fits in my pocket, and that means that I always have it on me. Even the best camera in the world, with perfect optics and all the features you could ever want, is no good for getting “the shot” if that camera is sitting at home and you are not. I managed to get several irreplaceable shots with the AW100 simply because I had it on me when I needed it.

So, are we there yet? Can you buy one camera and have everything you need? Probably not. The Nikon AW100 is a major step forward allowing you to take your camera wherever you go and not worry about water (including rain, snow, surf, saltwater, etc) but it is not perfect and the condensation issue will drive you crazy at times. However, in my opinion, even a few photos that I could not have gotten had I not had this camera, make it a worthwhile investment.

Last Minute Fry Saving Egg Yolk Drop Soup

Scrumptious Meals & Live Food Treats 11/2007

By John Todaro

Reprinted from the April 2012 Bulletin of the Brooklyn Aquarium Society

This is a really high protein recipe that should put weight on fry fast. It's also very easy and fast to make. I've been using this recipe since I was a teenager (more years ago than I like to think about). If your fish suddenly have spawned and you now have a tank full of hungry fry and you have nothing in the pantry to feed them... Quick -- Start boiling a pot of water. Get an egg from the fridge and boil it! If you can't memorize this recipe (Duh!) you should tape on your fridge door. It's a fry lifesaver!

INGREDIENTS: 1 Hard boiled egg & pot of boiling water.

YOU WILL ALSO NEED: 1 clean handkerchief.

1 small plastic container with cover and half filled with water.

1 eye dropper.

PREPARATION: Boil some water and drop in the egg, boil about 20 minutes until it's hard boiled. Cool the egg either in cool water or place it in a bowl of ice cubes. When cool remove the yolk and place it in the center of the handkerchief or other clean cloth. Fold the hankerchief so as to screw the cloth tightly and with your fingers mash the yolk and force it through the cloth, dipping or scraping the mashed egg into the container of water, force all the yolk through the cloth (there will always be some left over).

FEEDING: Use the eyedropper, to feed the fry, no more than they can eat in a couple of minutes.

Feeding small meals throughout the day is better than one big meal. Uneaten egg yolk can foul the water quickly and you can say goodby to your fry. You can refrigerate the mixture for a few days. If it starts to smell (rotten egg smell), discard the mixture and boil another egg.

Threadfin Rainbows

By Joe Graffagnino

Reprinted from the March 2012 Reporter of the North Jersey Aquarium Society

The Latin name for these beautiful fish from New Guinea and northern Australia is *Iriatherina werneri*. These nervous and sensitive fish thrive in slow moving streams with heavy vegetation. According to the Master Index of Freshwater Fishes, they enjoy a pH of 6.0 – 8.0, with a designated hardness from 5 -12 and a water temperature of 79 – 86 degrees Fahrenheit.

I keep two males and 4 females in a 10 gallon tank, with a corner filter containing charcoal and ammonia chips and one or two artificial yarn spawning mops. They prefer a dark green mop that hangs from a

cork or 35mm film canister to almost an inch from the bottom of the tank. I keep no gravel or plants in the tank, only the mop. I have tried either light blue or black yarn mops with little success. With the dark green mop I have been averaging 40 eggs per week. They prefer to lay their eggs between the middle of the mop to the bottom. I pluck the eggs from the mop on a weekly basis moving them to a plastic shoebox where I allow the eggs to hatch with a slight amount of Acriflavine to prevent fungus. In a few days you can see the tiny babies swimming across the top of the plastic box. I then move the fry to a larger plastic box to grow out. These are slow growing fish that need rotifers, artemia or Small Fry Food. After a few weeks, with 3 times a week water changes (only with aged water), they are large enough to take baby brine shrimp.

Water changes are extremely important for this fish to maintain good health. I change the water in a 35 gallon tank next to the Threadfin rainbow fish tank. After the freshwater has been filled in the larger tank, I wait several hours or the next day to take water from that tank to replace water removed during a water change. Using this mixture of new and aged water, there is no stress on the parents or fry. I feed the adults live or frozen brine shrimp and cyclopeeze, because their mouths are small, twice daily and perform weekly water changes of 20%, as outlined above, in the adults' aquarium.

Threadfin rainbows are one of the most beautiful freshwater fish I have ever seen. The females are a silvery color, but the males have long flowing fins of black, red and yellow. The males use a flickering of their fins to attract the females to spawn. If you want to keep an interestingly beautiful fish that will give you hours of enjoyment, then I highly recommend these graceful beauties.



The Pygmy Loaches of the Genus *Yunnanilus*

Paul V. Loiselle

Reprinted from the March 2012 Reporter of the North Jersey Aquarium Society

Southeast Asia has long been an important source of freshwater aquarium fish. With few exceptions - clown loaches spring immediately to mind - the majority of the fish exported from this corner of the world have been pond or tank-bred rather than wild-caught and a remarkably large percentage of the species produced by Asian breeders are not native to the region. However, over the last decade hobbyists have been treated to a steady stream of colorful novelties from Bur-ma and Vietnam, countries that were long inaccessible to exporters. The great majority of these newcomers are representatives of the Family Cyprinidae. This influx of novel barbs, danios and rasboras should come as no surprise, given that the fish fauna of Asia is overwhelmingly dominated cyprinid fishes. However, other groups have also benefitted from this upsurge of interest in Asian fishes, perhaps none more so than the three families of the fishes popularly referred to as loaches.

Many of these new loaches are representatives of the Family Cobitidae. The cobtid genera *Botia*, *Chromobotia*, *Ya-suhikotakia* and *Pangio* have a long history in the aquarium hobby. The current influx of new loaches also includes representatives of two other families less familiar to aquarists, Nemacheilidae, (river loaches) and Balitoridae (hillstream loaches). Nemacheilid loaches comprise over 400 nominal species, of which perhaps half are valid. The taxonomy of the group is extremely unsettled, due largely to the fact that most of these fish adhere to a very generalized body plan and display few of the anatomical specializations that facilitate the recognition of discrete evolutionary lineages. Most of these loaches are rather elongate fishes that sport two pairs of barbels, a somewhat emarginate caudal fin and very small, deeply embedded scales. As few river loaches are more than 8" total length and many are very attractively patterned with vertical bars, lateral stripes or large dark spots irregularly disposed against a lighter background, it is hardly surprising that many nemacheilids have been enthusiastically welcomed by aquarists throughout the world.

The pygmy loaches of the genus *Yunnanilus* are small fishes, ranging in size from 38.0 mm (1.5") to 80.0 mm (3.25") SL. *Yunnanilus* tend to be deeper-bodied than the generality of nemacheilid loaches and differ from them in their very widely spaced nostrils, the anterior of each pair being placed at the tip of a fleshy tube. The first species of the group was described from Lake Inle in Burma by Boulenger in 1893 as *Nemacheilus brevis*. A number of morphologically similar species from the Yunnan region of southwestern China were subsequently described (Regan, 1904; Chaudhuri, 1911)). In 1925, the American ichthyologist John Treadwell Nichols recognized that these small Chinese loaches represent a discrete evolutionary lineage. He described *Yunnanilus* as a subgenus of *Nemacheilus*. Subsequent researchers (Berg, 1938; Kottelat and Chu, 1988) have raised *Yunnanilus* to generic rank.

As implied by the name *Yunnanilus* [little fish from Yunnan], these loaches were initially thought to be endemic to the Yunnan Plateau. Jayaram (1981) recognized that Boulenger's *Nemacheilus brevis* was actually a *Yunnanilus*, while other species have subsequently been collected from Burma and Vietnam. Kottelat and Chu revised the genus in 1988, describing an additional six species from the Yunnan Plateau and citing a number of additional taxa which they did not formally describe due insufficient material. They predicted the further survey work in southern and western China would result in the discovery of additional *Yunnanilus* species. Their prediction has been fully borne out. Since publication of their paper, Chinese researchers have described an additional twenty-three of these diminutive loaches from Yunnan, Guangxi and Guizhou provinces!

Although the overwhelming majority of these loaches are native to China, the three species currently available through commercial channels hail from southeast Asia. The doyen of the trio,

Yunnanilus brevis (Boulenger 1893) is native to Lake Inle and the adjacent He-Ho Plains in Burma's Shan State. It has also been reported from elsewhere in the Salween River basin. As its species name [*brevis* = short], this is a small species, barely exceeding 50.0 mm (2") SL. Like many of its congeners, *Y. brevis* has a sexually dimorphic color pattern. The flanks of males [Figure 1] are marked by a series of dark spots along the midlateral line. In females [Figure 2], the flanks sport a continuous midlateral stripe.



Figure 1 A male *Yunnanilus brevis*. The pattern of spots along the midlateral line is not particularly well developed



Figure 2. This female *Y. brevis* clearly shows the midlateral stripe that characterizes her sex

A second, as yet undescribed Burmese species is sold under the trade name *Yunnanilus* sp. "Burmese rosy". This species hails from Salween River basin in northern Burma, where it shares its habitat with the popular *Danio margaritari-us*. The Burmese rosy loach is another diminutive species, barely reaching 2" SL. It is also a sexually dimorphic species, but contrary to the case of *Y. brevis*, male *Yunnanilus* sp. "Burmese rosy" sport a continuous black midlateral stripe [Figure 3], while females have a mottled color pattern [Figure 4]. The common name of this species is something of a mystery, as the base color of breeding males changes from pale beige to tangerine orange, not pink!



Figure 3. A male *Yuannanilus* sp. "Burmese rosy". The body and fins of sexually active males of this species become vivid tangerine orange.



Figure 4. A female *Yunnanilus* sp.

The third member of this trio, *Yunnanilus cruciatus* (Rendahl 1944) hails from coastal rivers of central and northern Vietnam. Like the preceding two species, *Y. cruciatus* is a dwarf species. However, it is not characterized by a sexually dimorphic color pattern, both sexes sporting a series of narrow black bars on their light beige flanks. It is nevertheless not that difficult to distinguish the sexes. Males [Figure 5] are noticeably slimmer than their decidedly more full-bodied consorts [Figure 6].



Figure 5. A male *Yunnanilus cruciatus*. This individual was moved to a photographic tank to have his color pattern recorded. Under aquarium conditions, the verticle bars are much darker.



Figure 6. Although this female *Y. cruciatus* shares the male's color pattern, her plumper appearance is a reliable indicator of her sex.

Yunnanilus are gratifyingly hardy little fish. Most species of the genus hail from bodies of water that lie in karstic regions. They are thus quite comfortable in hard, alkaline water - pH 7.0 - 7.8, hardness values to 15° DH. They are much less tolerant of dissolved waste build-up. Regular partial water changes or the use of a chemically active filter medium such as PolyFilter© are thus essential to keep them in good health. They are most comfortable over a temperature range of 70° - 78° F. but can tolerate brief exposures to temperatures in the low 80° F. range. They are not picky eaters and will eagerly consume a wide range of live, frozen and prepared foods. However, as these little loaches have very small mouths, it is important to offer them food items they can easily ingest. My fish were quite enthusiastic over frozen bloodworms. However, most frozen bloodworms are simply too large for them to get their mouths around. The easiest way to get around this problem is to dice up a fingernail-sized chunk of the frozen product with a razor blade and offer the fish the resulting minced bloodworms. *Yunnanilus* find frozen glassworms equally palatable. These insect larvae have a much less rigid exoskeleton than do bloodworms, so the loaches have no difficulty at all slurping up even large individuals.

We tend to think of loaches as bottom-dwelling fish and expect them to be rather sedentary aquarium residents. "Sedentary" most emphatically does not describe *Yunnanilus* behavior. These are active little fishes, whose pattern of activity reminds me of the mid-water swimming *Corydoras hastatus*. While their activity - except at feeding time - is largely restricted to the lower half of the water column, they are much more often out and about than are many of their larger cobtid cousins. A number of nemacheilid loaches - the genera *Mesonemacheilus* and *Schistura* spring immediately to mind - have a reputation for not playing nicely with others. *Yunnanilus*, to the contrary, are extremely social little fish that appear to appreciate the company of conspecifics and can be expected to live amicably with a wide range of heterospecific tankmates. I kept my *Y. brevis* in a Lake Inle community that also housed

Danio erythromicron, *Microras-bora rubescens* and *Sawbwa resplendens*. My current trio of *Y. cruciatus* has at one time or another shared their tank with *Puntius hexazona*, *Tanichthys thacbaensis*, *Poropanchax normani* and *Microgeophagus ramirezi*. They presently cohabit peacefully with *Boraras naevus*, *Betta dimidiata* and *Aristogrammoides pucallpaensis*. Simple prudence should preclude housing little loaches with larger or more aggressively territorial tankmates.

When I was researching this article, an initial on-line search to determine whether these fish had been bred in captivity turned up no spawning reports. I posed the query to Matt Ford, who as manager of the **Seriously Fish** website is much more adept at navigating the virtual world than I. Matt confirmed that to the best of his knowledge, no English accounts of *Yunnanilus* spawnings had been published. However, he was kind to forward two German articles documenting the successful breeding of the Burmese rosy loach. Deciphering the results of computer translations of German into English can be something of a challenge, but the gist of the articles in question was fairly simple to follow. This species is an egg-scatterer. Pairs kept in a well-planted tank will spawn more or less continuously and as long as they are well fed, small numbers of fry can be expected to appear on a more or less regular basis. Whether the same approach would work for other *Yunnanilus* remains to be determined. However, the general tenor of both articles was sufficiently encouraging for me to contemplate moving my very ripe female *Y. cruciatus* and the larger of the two males into a five gallon tank with a mature sponge filter and a very large clump of Java moss and stuffing them with glassworms!

Perusal of the scientific literature reveals that most of the Chinese representatives of the genus are very attractively patterned fish, while living individuals of one species, *Yunnanilus niger* Kottelat and Chu 1988, are a uniform velvet black. Unfortunately, it is unlikely that aquarists will see these Chinese species anytime in the near future. These fish have extremely restricted ranges and most of them have been very adversely impacted by invasive exotic species or the degradation of their fragile habitats. However, the headwaters of the Salween, Mekong and Red Rivers all lie on the Yunnan Plateau. As it seems likely that further exploration of the middle reaches of these basins in Burma, Laos and Vietnam will turn up additional *Yunnanilus* species, I am certain that aquarists can anticipate welcoming other representative of the genus to the ranks of aquarium fishes.

Literature Cited

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2012



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BAP Report

Steve Edie

Member	Species	Common	Pts	Total
<u>May 2012</u>				
Marlon Felman	<i>Cryptoheros cutteri</i>	Blue Eye Cichlid	10	105
Mike Hellweg	<i>Betta burdigala</i> @	Dwarf Betta	40	4979
Mike Hellweg	<i>Geophagus steindachneri</i> "Nieva" *	Nieva Mouthbrooding Geo	15	4994
Mike Hellweg	<i>Girardinus microdactylus</i>	Smallfinger Topminnow	5	4999
Mike Hellweg	<i>Labidochromis caeruleus</i>	Yellow Lab	10	5009
Mike Hellweg	<i>Pseudotropheus joanjohnsonae</i>	Pearl of Likoma	10	5019
Cory Koch	<i>Haplochromis</i> sp. "Tomato" *	Species 35	15	2287
Cory Koch	<i>Limia sulphurophila</i>	Purple Sulphur Limia	5	2292
Cory Koch	<i>Psammochromis riponianus</i> "Boyanga, Uganda" #@		10	2302
Jim Miller	<i>Pelvicachromis subocellatus</i> @		30	2779
Pat Tosie	<i>Betta</i> "Mahachai" *		15	3960
Pat Tosie	<i>Geophagus steindachneri</i> "Nieva" *		15	3975
Derek Walker	<i>Characodon</i> sp. "Guadalupe Aguilera" *		20	2640

June 2012

Marlon Felman	<i>Xenotaenia resolanae</i> @		30	135
Marlon Felman	<i>Xenotoca eiseni</i> #@	Red-tailed Goodeid	15	150
Charles Harrison	<i>Phallichthys quadripunctatus</i> "Punta Pena" @	Merry Widow	10	2495
Charles Harrison	<i>Skiffia multipunctata</i> "La Luz" @	Spotted Skiffia	40	2535
Mike Hellweg	<i>Danio tinwini</i>	Gold Ring Danio	15	5034
Mike Hellweg	<i>Paracyprichromis nigripinnis</i> "Blue Neon"		20	5054
Jerry Jost	<i>Benitochromis nigrodorsalis</i> @		30	1555
Jerry Jost	<i>Betta edithae</i>		15	1570
Jerry Jost	<i>Corydoras habrosus</i> *	Salt & Pepper Dwarf Cory	15	1585
Jerry Jost	<i>Corydoras paleatus</i>	Peppered Cory	10	1595

Cory Koch	<i>Melanotaenia</i> sp. "Blue Hole" (Sentani, Papua '05)		10	2312
Cory Koch	<i>Pyxichromis orthostoma</i> "Lake Nawamps" #@		10	2322
Cory Koch	<i>Tropheus</i> sp. "Black" *		20	2342
Jim Miller	<i>Hyphessobrycon pulchripinnis</i>	Lemon Tetra	15	2794
Jim Miller	<i>Tilapia bythobates</i> @		30	2824
Ed Millinger	<i>Guianacara gaeyi</i> *	Bandit Cichlid	20	655
Nick Scarlatis	<i>Ameca splendens</i> @		30	205
Pat Tosie	<i>Characodon</i> sp. "27 de Novembre"		15	3990
Pat Tosie	<i>Dermogenys pusilis</i>		10	4000
Derek Walker	<i>Hypsophrys nicaraguensis</i>	Nicaragua Cichlid	15	2655
Kurt Zahringer	<i>Brachyrhaphis roswithae</i> *		15	460
Kurt Zahringer	<i>Oryzias woworae</i>		10	470

* = First MASI species spawn (5 point bonus)

** = First MASI species and genus spawn (10 point bonus)

*** = First MASI species, genus and family spawn (15 point bonus)

@ = C.A.R.E.S Species at Risk (Double base points)

= Species previously submitted = 0 points, except for C.A.R.E.S. = base point bonus

^ = Species previously submitted, limited points for additional color varieties

Sources:

Cal Academy - <http://research.calacademy.org>

CARES - <http://www.carespreservation.com>

Editor's Notes

Steve Deutsch

The sharp-eyed among you might have noticed something different about this Darter. It is 30 pages long. I usually try for 32. Those who would like a longer Darter could consider writing an article. I have run out of time to select and format exchange articles, and decided to stop here and at least make sure you get this much. Hopefully you will enjoy the articles that did make it.

Next deadlines for articles are August 15, October 15, and December 15.

Registration Form

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EVENT SCHEDULE

Thursday, October 18, 2012

8:00 PM ~ 10:00 PM, Registration
8:00 PM - 10:00 PM, "Get to Know You" Social
in the Hyatt Hotel Bar, near the Koi Pond

Friday, October 19, 2012

9:00 AM ~ Field Trips Depart
5:00 PM ~ Field Trips Return
4:00PM - 8:00PM ~ Registration Hours
6:00 PM ~ Buffet Dinner (TBA), Vendor Rooms
Open
7:00 PM-- Speakers (TBA), Vendor Rooms
8:30 to Midnight: In-Room Shopping Spree and
Social up on the Third Floor. Hospitality Suites
will be Open!

Saturday, October 20, 2012

9:00AM ~ Noon: Registration Desk Open
10:00 AM: Speaker (TBA)
11:30 AM: Speaker (TBA)
12:30 PM: Lunch Break
2:00 PM: Fish Show Closed for Judging
2:30 PM: Speaker (TBA)
4:00 PM: Speaker (TBA)
5:30 PM: Speaker (TBA)
7:00 PM: Cocktail Hour
7:30 PM: Banquet Dinner, Fish Show Awards,
Speaker: Heiko Bleher special presentation.
10:00 PM: Hospitality, Fish Show Room Open
for Viewing

Sunday, October 21, 2012

8:00 AM: All-Day Auction: Registration Begins
10:00 AM: Auction Starts
12:30 PM: Lunch at Auction
(Fish Showroom Breakdown, Volunteers Always
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SPEAKERS



**Heiko Bleher
with Three
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**Ian Fuller with
a New
Presentation
on Corydoras!**



**Hans-Georg
Evers with
Two Exciting
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**Eric Bodrock on
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Club Hopping 2012

Steve Edie

Note: Some of this year's dates are tentative.

July 11-15 – Indianapolis: American Cichlid Association – Annual Convention

July 13-15 – St Louis: Gateway Guppy Associates – Annual Show

Aug 12 - St Louis: Missouri Aquarium Society – Auction

Sept14-16 – Dallas: Federation of Texas Aquarium Societies – Annual Convention

Sept 19 – Everywhere: Talk Like a Pirate Day

Oct 6 - St Louis: Missouri Aquarium Society – Swap Meet

Oct 12-13 – Schoolcraft, MI: Southwestern Michigan Aquarium Society – Annual Workshop

Oct 18-21 – Herndon, VA: All Aquarium Catfish Convention

Oct 20 – Creve Coeur IL: Tri-County Tropical Fish Society - Auction

Oct 27 - Cincinnati: Greater Cincinnati Aquarium Society - Auction

Nov 1-4 – St Louis: Aquatic Gardeners Association – Annual Convention

Nov 11 - St Louis: Missouri Aquarium Society – Auction

Nov 11 – Milwaukee: Milwaukee Aquarium Society – Fish-O-Ramma Swap Meet

Nov 16-18 – Cleveland: Ohio Cichlid Association – Extravaganza

Check with the individual clubs for more details.

Electronic Distribution Now Available

For those who prefer, the Darter is now available electronically, instead of the paper distribution. To change from paper to electronic distribution, email me at editor@missouriaquariumsociety.com. You will get your Darter sooner and the club will save printing and postage.

The Computer Page

Steve Deutsch

MASI's official web page: www.missouriaquariumsociety.com

MASI's email group: MASIFishHeads Yahoo Group - see web site for joining instructions

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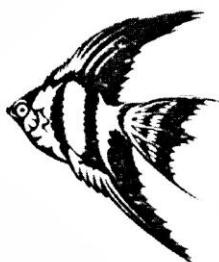
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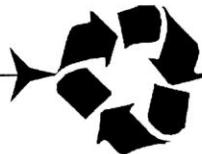
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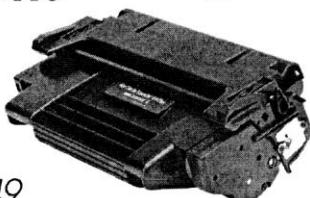
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