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Fish Tales

The Official Publication of the Federation of Texas
Aquarium Societies

In This Issue

A Short History of FOTAS

Ancistrus dolichopterus—L183

Digital Camera Basics for the
Aquarium Photographer

FOTAS 2009 Convention Recap

Cichlids and More: Exploring the Rio Comal,
The World's Shortest River

Index

A Short History of FOTAS	3
FOTAS Clubs and Executives	4
Upcoming Events	5
Brazon Walker Library Additions	5
<i>Ancistrus dolichopterus</i> - L183	
-Allen M. Abrahams	6
Digital Camera Basics for the Aquarium Photographer	
-Evan Bowers	8
F.O.T.A.S 2009 Convention recap	
-Kyle Osterholt	14
Cichlids and More: Exploring the Rio Comal, The World's Shortest River	
-Greg Steeves	18

Cover *Herichthys cyanoguttatus*

In this issue...

We review a little bit of FOTAS history. There is surely much more to be told. We will archive and reprint historical data in each issue. You will find a listing of executive officers along with contact information as well as a current club listing. Membership is open to all regional aquatic organizations; for further information, contact any officer or delegate listed.

A complete listing of literature available at the Braz Walker Library is being compiled and will be included in a future Fish Tales issue. In keeping with Braz Walker's memory, Evan Bowers provides us with an insightful article on aquarium photography. Allen Abrahams describes his experiences with a beautiful little South American catfish *Ancistrus dolichopterus*. Greg Steeves gives us a glimpse of the flora and fauna of the Comal River. Kyle Osterholt tops it all off with his FOTAS 2009 Convention Review.

The FOTAS Convention in 2010 in Oklahoma City will see the presentation of literary awards. Details are still being worked out along with award categories. Awards will be available to all members of the nine FOTAS affiliated organizations. Eligible entries must be a member of a FOTAS organization and have had their work appear in Fish Tales, a FOTAS societies publication, or any other regional or national printing. Stay tuned to next month's issue for more details.

Autumn is traditionally a busy time in the Aquatic world. The cooler weather brings with it shows, auctions, picnics and parties. Get out there and support your local aquarium organization. Enjoy the camaraderie that is associated with our hobby.

Coming next issue...

We will explore the C.A.R.E.S. conservation program which FOTAS and some member clubs are already involved.

Welcome back!

After a prolonged hiatus, Fish Tales is alive once again. The Federation of Texas Aquarium Societies is among the longest lived of regional aquatic organizations in the United States of America. It is unfathomable not to have a regular publication, so, with that in mind, the re-launch of Fish Tales has begun. The frequency of publication still has to be determined and will depend largely on content submission but I feel a quarterly issuing is feasible.

Kudos to the Houston Aquarium Society for one heck of a great convention. FOTAS LVIII was a huge success. I enjoyed seeing the regular cast of characters as well as some new folks (those okies ain't so bad). Personally I enjoyed the laid back feel to the whole convention although some key HAS members would have no idea what I was talking about. Great speakers, great show, great banquet and auction and how about that hotel? The Houston Aquarium Society really sets the bar high.

Congratulations to Wally Nida this year's recipient of the Raymond Head and Ernest May Altruism Award. This year also marked the first presentation of the Dr. Keith Arnold Patron award and was presented to its namesake. Seeing Dr. Arnold receiving the award at the FOTAS banquet was a memory I will keep with me forever.

It is my intention that through this publication and the FOTAS website (www.fotaswebsite.com) the many advantages a club has with its FOTAS membership will be realized. Speaking of the website, a special thanks to Evan Bowers for taking on the role of FOTAS webmaster. I'm sure we will see an evolution of our online presence.

I hope you will enjoy this issue and see you all in the New Year.

-Greg



FOTAS officers and delegates Houston TX, 2009. Left to right, Greg Steeves, Charles Jones, Dean Hougen, Diane Tennison, Kyle Osterholt, Dr. Keith Arnold, Marvin England, Kathy England, Carla Johnson, Mike Johnson, Evan Bowers.



Federation of Texas Aquarium Societies

A Short History of FOTAS

In the Beginnings...

June 21, 1952; J.L. Baughman, Chief Marine Biologist at the Marine Laboratory in Rockport, suggested to some visiting aquarists that the Texas aquarium societies should form a state-wide organization and that he would be happy to host the first annual meeting or convention.

June 28, 1953; Several leading aquarists attending the Alamo Aquarium Society show called a meeting to set the stage for the formal convention. A second meeting held that September resulted in the formation of the Federation of Texas Aquarium Societies (FOTAS).

And that's how it began!

The Charter Clubs...

Aquatic Researchers of San Antonio

Houston Aquarium Society, Inc.

Oklahoma City Aquarium Society

And the missing club is?*

Based on information in the annual convention directory

Published by the Alamo Aquarium Society in 1978.

Significant Years...

1980. FOTAS established the Raymond Head and Ernest May Altruism Award to honor a person who has contributed to the aquarium hobby in Texas in a significant way. Hazel Hall of the Alamo Aquarium Society became the first winner.

1980. FOTAS established the Exhibitor-of-the-Year Award for participation in FOTAS sanctioned shows. Allen Monroe of the Brazos Valley Aquarium Society won that year.

1983. The FOTAS Board set up a permanent endowment fund to help underwrite expenses. Later that year, the Board decided to establish a separate fund for the Braz Walker Program in Aquarium Sciences. This program consists of three parts: a research award; a special literature collection (housed at the Texas A&M University Sterling A. Evans Library); and a program to promote writing by FOTAS

club members. Thus far, three research awards have been granted and the literature collection continues to grow. The writing program remains inactive.

1993. The Houston Aquarium Society presented a check in excess of four thousand dollars to FOTAS to support the Braz Walker Program. This represented a significant boost in the ability of FOTAS to carry out the goals of that program.

2002. The Texas Cichlid Association hosted the 50th Anniversary of the founding of FOTAS!

2009. Dr. Keith Arnold FOTAS Patron Award presented for the first time. The award is to be presented annually to a person or persons that have contributed in an exemplary fashion to one or more FOTAS clubs financially or otherwise. The recipient will be able to designate a selection of books to a specific library, the number depending upon the amount of funding available at the time the award is presented..



The first recipient of the Dr. Keith Arnold Award is its namesake. Pictured is Charles Jones (HAS) presenting the award to Dr. Keith Arnold (BVAS) at the FOTAS 2009 awards banquet in Houston Texas.



Nick Andreola guides Austrian ichthyologist Dr. Anton Lamboj on a collecting trip in the San Marcos River, San Marcos Texas September, 2009.

2009 FOTAS Member Clubs



Betta Habari

Brazos Valley Aquarium Society

Dallas Killifish Association

Hill Country Cichlid Club

Houston Aquarium Society

Houston Livebearer Association

Oklahoma Aquarium Association

Texas Cichlid Associa-

Texas Cichlid Association

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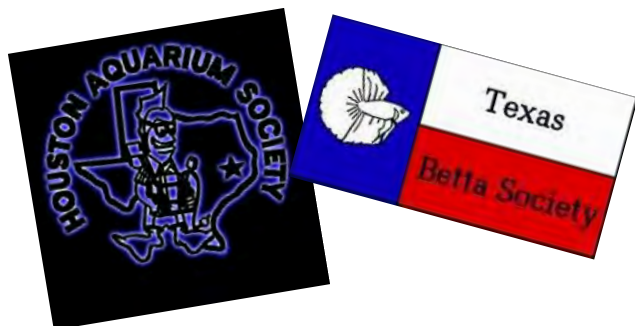
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FOTAS on the web!
www.fotaswebsite.com

Upcoming Events

October 3rd
DKA Meeting

October 10th-11th
OKAA Fall Classic.
Hilton Garden Inn.
801 S. Meridian, Oklahoma City, Oklahoma, USA
73108
Speakers Juan Miguel Artigas Azas, David Stewart,
Gerald Griffin, Mike Wickham.

October 18th
HCCC Monthly Meeting Petsfrontier, San Antonio, TX.

October 23rd-25th
TCA Fall Workshop, Show and Auction.
Hilton Garden Inn DFW South
2001 Valley View Lane, Irving, Texas 75061
Speakers John Hansen, Mike Wise, Eric Hanneman

October 31st
HAS annual Halloween Party

November 7th
OKAA Oklahoma Chapter Meeting
DKA Meeting

November 8th
HAS Fall BBQ

November 14th
OKAA Tulsa Chapter Meeting

November 14th
HCCC Fall Auction

November 21st
OKAA Stillwater Chapter Meeting

December 5th
HCCC Christmas Party

December 12th
TCA Christmas Party

January 16th
TCA Monthly Meeting

Brazos Walker Special Collection of Aquarium Literature Additions

Donated by Gwen and Steve Butler of Bryan, Texas [former members of BVAS]

- Axelrod, H. R. 1971. Breeding Aquarium Fishes. Book 2. T.F.H. Publications, Neptune, N.J. H-941.
- _____ 1980. Tropical Fish. T.F.H. Publications, Neptune, N.J. KW-020.
- _____ & W. Burgess. 1980. Tropical fish in Your Home, Revised edition. Sterling Publiing, New York.
- _____ & _____. 1988. African Cichlids of Lakes Malawi and Tanganyika. 12th edition. T.F.H. Publications, Neptune, N.J. PS-703.
- _____ & L. P. Schultz. 1983. Handbook of Tropical Aquarium Fishes, Revised edition. T.F.H. Publications, Neptune, N.J. PS-663.
- _____ & _____. 1990. Handbook of Tropical Aquarium Fishes, Revised edition. T.F.H. Publications, Neptune, N.J. PS-663.
- _____ & M. E. Sweeney. 1992. The Fascination of Breeding Aquarium Fish. T.F.H. Publications, Neptune, N.J. TS-185.
- Burgess, W. E. 1989. An Atlas of Freshwater and Marine Catfishes. T.F.H. Publications, Neptune, N.J. H-1097.
- Pronek, N. 1982. Oscars. T.F.H. Publications, Neptune, N.J. PS-687.
- Terceira, A. C. 1974. Killifish, Their Care and Breeding. Pices Publishing Corp., Norwalk, CT.
- Wischnath, L. 1993. Atlas of Livebearers of the World. T.F.H. Publishing, Neptune, N.J.

The special collections are now in the Cushing Memorial Library at Texas A&M University, adjacent to the Sterling A. Evans Library. Eventually they will be formally moved into the Braz Walker collection. (3-4 weeks from June 25th).



Synodontis granulatus from Lake Tanganyika. Photo by Lee Ann Steeves.



***Ancistrus dolichopterus* - L183**

Photo by Evelyn Addams.

Allen M. Abrahams

Ancistrus dolichopterus or L183, Starlight Bristlenose Catfish, is a cave spawning native to the black water of the Rio Negro, Brazil. The climate is sub-tropical 73.4 - 82.4°F and native waters for this fish are pH of 6.0 - 7.0. I obtained four 4"+ long wild adult fish from Atlantis Tropical Fish; Peter Rubin. Females and males achieve a size of 4 inches and are the typical stream lined *Loricariidae* sucker mouth shape. The major difference is the male has soft tentacles on the snout, sometimes branched, while the female may have just a few soft tentacles on the snout. It has a dark base with small white dots and narrow white seams on the dorsal and caudal fin edges. One hard and nine soft dorsal rays makes this species atypical for the genus *Ancistrus*.

The fish bred in a 10 gallon tank which contained no substrate nor plants. The tank was filtered by a Hydro Sponge III and a WON Dolphin 3 Star diaphragm air pump. The initial dechlorinated tap water initially had a pH of 7.8. I performed Bi-shipment from Manaus, Brazil. One male was of questionable identity due to absence of any white seams (as pointed out by Peter). I decided to take it

weekly water changes equal to 15% of the tank volume. I used ambient lighting (no direct sun). I fed the fish canned green beans, Cyclop-Eeze, KENS Hi Intensity Color Enhancer Crumble (mfg. by Ziegler), KENS Premium Spirulina Flake and Hikari wafers.

Having water of a higher pH and mineral content, the 10 gallon tank was prepared by soaking a piece of dense African wood with dechlorinated tap water and mulm from a used sponge, then run for a week before the fish were brought home. The water was heated to 81 degrees. Two pair were obtained by Atlantis in Gardener, NY as part of an import shipment from Manaus, Brazil. One male was of questionable identity due to absence of any white seams (as pointed out by Peter). I decided to take it anyway. The fish were warmed in the bag in the tank, then placed in the shipping water in a bucket. Because of the sensitivity to my water parameters, the tank water was slowly trickled into the bucket until the volume is doubled. Half the water was dumped out and the process repeated until the was half empty and the fish

ten gallon tank was half empty and the fish and water were transferred into the tank. The odd male was lost in the first 24 hours either from aggression or inability to acclimate. The tank contained only the wood and the sponge filter. After two months with no breeding, I allowed the wood debris to build up until the water was almost putrid smelling of decayed wood, even with small bi-weekly water changes. I did a very large cool water change and added two clay cone caves. This seemed to spur spawning. Within a week the male was seen to be guarding one cone. A pair laid approximately 30 - 40 orange colored eggs. After spawning, the female retreated to a hiding place under the piece of wood while the male guarded the breeding cone entrance. In a few days the male abandoned that cave to spawn with the second female. Fully formed tiny wigglers appeared soon after with the addition of Cyclop-Eeze. Approximately 25 eggs representing ~80% of the total hatch were viable and hatched after ~5 days.

The fry didn't require any special care. I left them in the 10 gallon tank with the adults. Twenty five fry were counted in the initial spawn. After two more spawns I removed about 40 from the tank at about .5" - 1" with many smaller left in the tank. This collection disrupted the spawning for about a month and triggered some cannibalism. I again eventually induced spawning with meaty foods and a large cool water change. The fry tank used a Hydro Pond sponge & power head for filtration. The adults were left in the breeder tank. I started the fry off on Cyclop-Eeze. After day two I started feeding green beans, KENS Hi Intensity Color Enhancer Crumble, and spirulina flake. The fry grew slowly.

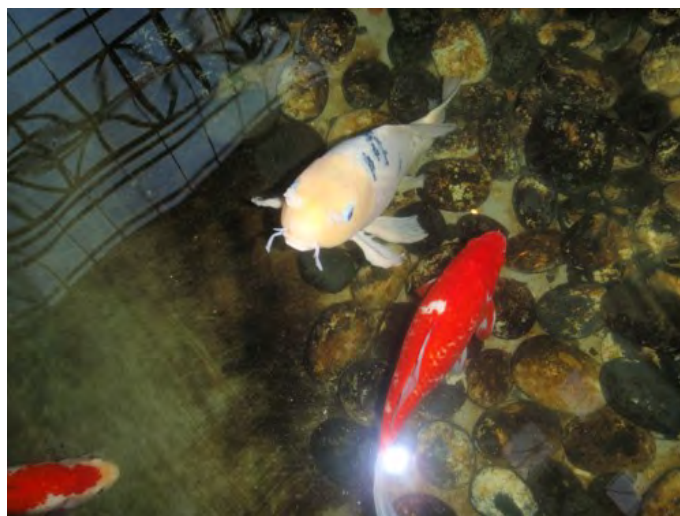
I found several things interesting: that the male guards the eggs; a simulated rainy season (large cool water change) and meaty foods spur spawning. Multiple spawns live together with little cannibalism. Once set up, L183 was very easy to maintain and breed. It was an overall fun experience, even with the loss of one adult fish. The Starlight Bristlenose is one of the most beautiful *Ancistrus* species and a wonderful addition to nearly any tank. *Ancistrus dolichopterus* is a voracious algae eater that really

does clean the glass. Great in smaller tank set ups, it does not get much bigger than 4". There are many dark *Loricariidae* with spots or white seams, not many with both. The L183 has the highest contrast with the brightest spots of them all. All though the fish is somewhat delicate and appreciates black water conditions, it can acclimate to water a bit beyond it's parameters in the wild and be bred successfully.

I may attempt to remove the egg clusters from the breeding tubes to hatch in a net. I think I lose some eggs when the male abandons the cave to breed again. The fry are nearly impossible to catch without disturbing the breeding cycle and breeding seems to stop if fry aren't collected for three or four spawns do to crowding. It takes quite a while for the group to resume spawning. Once they do they do though, it is fairly regular.



Evan Bowers, Marvin England and Spencer Jack at FOTAS 2009, Houston Texas.





Phenacogrammus interruptus

Digital Camera Basics for the Aquarium Photographer

Evan Bowers

I hear a lot of basic questions about cameras and photography so I thought it would be useful to put an article together. This article will attempt to do three things. The first is to provide a high level overview of how cameras work. The second is an attempt to answer the question I hear most. “What do I need to buy?” Lastly, we will discuss the most important camera settings for aquarium photography.

In order to do all that, I will first need to introduce a little bit of photography theory. The first part will be the most complicated, but bear with me through the theory and then we can get to the good stuff.

How Cameras Work – The Basics

There is a lot of complicated theory that describes how a camera works. Luckily for us, we don’t really need to understand that much of it to be able to take pictures. However, there are a few basic concepts

that will really help us out. Photographers use these basic principles in everyday shooting.

Digital sensor

In a traditional film camera the film is what records the light coming into your camera and turns it into a picture. In a digital camera, there is a sensor inside your camera that does the same thing as film, it turns light into pictures. The sensor is sometimes called “digital film”.

Aperture

The aperture of a camera is simply the hole in the lens that the light comes through. A bigger opening means that more light can come in, a smaller opening means it is harder to get light in. If a lens has a big maximum opening it is called a “fast” lens. If a lens has a small maximum opening it is called a “slow” lens. Aperture is typically referred to in f-numbers

sometimes called f-stops. The smaller the number, the larger the opening is. For example, a lens that is rated at f/1.2 has a huge maximum opening and one that is rated at f/5.6 has a much smaller maximum opening.

OK, I know that was a whole bunch of information to start with but really the key thing to remember from all that is that the aperture is the opening the light comes through.

Shutter speed

In order to explain shutter speed I first need to explain what a shutter is. As it relates to a camera, a shutter is a little gate that blocks light from getting to your sensor. In the same way that real shutters will stop the light from coming through a window. The shutter is normally closed but it opens up to let light through to your sensor. Shutter speed simply refers to the amount of time that the shutter is open. That is all there is to it, simple right?

So now we know that the sensor is our film, the aperture is the hole in the lens that the light comes through and the shutter speed is how long the shutter is open for. Now we need to understand how all that is related and why it is important.

Putting it all together

It is actually pretty simple. The first thing to note is that just like film, the picture that the sensor records is very sensitive to light. The more light we let in, the brighter the picture is. For example, a typical shutter speed in normal light is between $1/60^{\text{th}}$ of a second and $1/250^{\text{th}}$ of a second. So, given how fast this all happens, the timing of it is very important.

The amount of light that comes in is controlled by both the aperture of the lens and the shutter speed of the camera. The bigger the aperture, the faster the shutter speed needs to be to let in the proper amount of light (This is because a bigger opening lets in more light). In the old days, you had to take a light reading with a meter and then set your aperture and shutter speed by hand. Today, modern cameras have a light meter built in and can set the aperture and shutter speed on their own.

So, now you're thinking, if the camera can do all this automatically, why did we spend all this time to learn about it? It is because both these things have a big impact on how your pictures look. You are going to see both the aperture and the shutter speed every time you look through your camera. Even though you

probably will not think about these things when you first start using your camera, understanding what they do will help your photography in the long run.

The effect of shutter speed

What shutter speed does is actually very simple. A short shutter speed freezes the action and a long shutter speed will make moving objects blurry. In addition to the subject moving, we have to worry about our hands moving. A very small movement of the hand can make a picture very blurry. A faster shutter speed will make this less of an issue.

So why wouldn't we always use a fast shutter speed? Well, because sometimes we can't. As we discussed previously, the speed of the shutter is related to the size of the aperture. If the aperture isn't big enough then we cannot set the shutter speed as high as we would like. This is one of the advantages of a "fast" lens. A "fast" lens, that has a big aperture, allows more light to come in letting us set a faster shutter speed.

So how fast is fast enough? Generally, a good rule of thumb is that $1/(\text{focal length of the lens})$ is the minimum shutter speed you should use. For example, if you are using a 60mm lens then the shutter speed should be at least $1/60$. If you are using a 200mm lens then the shutter speed needs to be at least $1/200$. The good news is that your camera can also take care of this for you. Modern cameras know what kind of lens you are using and will adjust accordingly.



The effect of aperture

The aperture you use will affect how much of the im-



age is in focus. This is also called Depth of Field (DOF). Depth of Field is the amount of the picture that will be in focus. If the DOF is bigger, then more of it will be in focus. For example, the picture of *A. baenschi* (see previous page) was taken with a fairly large aperture (f/3.5) and has a very narrow depth of field. Only the fish is in focus, the background is not in focus. By keeping the DOF shallow it creates a blurred background which can help the subject stand out. In comparison, the picture of the flamingos was taken with a smaller aperture (f/11). It has a very large DOF and so all of the flamingos are in focus.

Once again, your camera will try to help you with this. The autofocus system will try to figure out what you are focusing on and set the aperture to provide the appropriate Depth of Field.

So that's it for the theory part. We have learned what aperture and shutter speed are and how they affect our pictures. Armed with this knowledge we can make some better decisions about what we need to purchase and some of our options for taking shots.

What to buy

Camera Type

The first thing we need to do is select between a standard Point & Shoot (P&S) camera and a Digital SLR (DSLR). There are some pretty big trade-offs here in terms of cost and quality.

Point & Shoot Advantages

Small and portable
Less expensive

Digital SLR Advantages

No noticeable shutter lag
Much faster autofocus

Interchangeable lenses

Lots of flashes and other accessories available

Larger sensor size

We will talk more about sensor later but for now it is important to understand that sensor size makes a big difference in image quality. To put this in perspective, the average P&S camera has a sensor that is about 0.28 cm². In comparison, DSLR sensors are between 3.32 cm² and 8.64 cm². This means that DSLR sensors are 10-30 times larger.

Fast autofocus and no shutter lag are also important for aquarium photography. Since many fish are constantly in motion being able to snap a picture and know that it will be taken when you press the button is key. Being able to use an off camera flash for overhead light is also very advantageous with an aquarium. In the end, if you are serious about getting high quality pictures of your fish you will want to have a DSLR.

Due to the overwhelming advantages of DSLR for aquatic photography, we will be focusing on DSLR's for the remainder of the article. However, much of the information is also applicable to P&S cameras.

Brand

The next thing we need to decide when making a digital SLR purchase is the brand we will be using. If you are not familiar with SLR's you are probably wondering why that would be the next thing to consider. The answer to that question is that when you are buying a SLR you are not just buying a camera. You are buying into a system. Each brand of camera has its own proprietary set of accessories that they work with. Over time you will want lenses and other accessories such as flashes. These accessories will only work with a particular brand so once you choose a brand you will probably not want to switch even if you get a new camera down the road. For this reason I always recommend that you select a prominent brand with lots of available accessories. There is an active and vibrant used market for equipment from the larger brands as well so you will have a lot more options when buying or selling down the road.

The body

The next thing you will have to decide is the camera body. The camera body is by far the most complicat-

complicated thing you will purchase and can also be the most confusing as there are a lot of options. As of the time of this writing the big two alone have 18 different digital SLR's in the market. There are a lot of things to consider and there are entire articles dedicated to this subject alone. I am only going to cover a few of the most important things to consider.

Sensor size

As we discussed previously, the sensor is the equivalent of film in a digital camera so the size of the sensor can have a big impact. A full frame sensor is one in which the sensor is the same size as 35mm film. Full frame sensors can capture more detail and generally have less noise than smaller sensors. Unfortunately, cameras with full frame sensors are very expensive. Because of this, most of the SLR's you will see have smaller sensors.

Smaller sensors in DSLR's have an interesting effect. That is that they reduce the effective view of the camera based on their size. The amount that they reduce the view by is commonly referred to as the crop factor. Most small sensors SLR's have a crop factor between 1.5x and 2x. For example, if a camera has a crop factor of 1.5 and we are using a 100mm lens then the view through that lens will be the equivalent of 150mm. This does not have a huge impact on fish pictures but can make wide angle shots harder to achieve.

One last thing on sensor sizes. The crop factor also increases depth of field. In practice, this will make the camera a little easier to use for the less experienced.

Auto-focus

Each camera uses a different auto focus system. Some are better than others. It is worth investigating and reading reviews on the accuracy of the auto-focus system when buying a camera body. It does not matter how sharp your lens is if you fail to focus on the subject.

Feel and control

The size, weight and general feel of the camera will be very different from camera to camera. Before you make any purchase I would recommend getting a hold of some of the cameras you are considering and getting a feel for how they handle. The ease of use and ability to directly access important controls are things you should check on.

Megapixels

The question of whether or not the number of megapixels matter is an often debated topic. The number of megapixels in the camera will define how much resolution the image has. The earliest mass produced digital SLR's were around 3 megapixels. Today, high end SLR's are packing well over 20 megapixels. That's a huge difference but does it matter? Unless you make poster size prints or crop tiny things out of an image it will not matter much. The quality and size of the sensor is far more important than how many megapixels it has.

All that being said, if you are new to digital SLR's my most important piece of advice when shopping for a camera body is don't overbuy. Buy the least expensive body that has the features you really need. If you have extra cash to spend it is better used on lenses and accessories such as flash then on the camera body. Technology changes fast and most manufacturers are replacing the entry-level and mid-level models on a 12-18 month cycle meaning that your camera body will shortly be obsolete. Lenses, on the other hand, have much longer product lifecycles.

Lenses

For aquarium photography you only need one lens. That is a good quality prime macro lens. A prime lens is a lens which has a fixed focal length. In other words, not a zoom lens. A macro lens is one which is specialized for taking close up shots of small objects. On a crop-body I would recommend a lens size of 60mm for taking pictures of normal sized fish. On a full frame something in the neighborhood of 100mm would be more appropriate. That being said I have used my 100mm lens on my crop-body quite often. There have only been a few times when I have not been able to get my subject in frame.

You may be thinking that you can get the best of both worlds by getting a zoom lens with a macro feature. Unfortunately, this is not really the case. Not only will the dedicated macro lenses be sharper and faster than the similarly priced zooms but the magnification you can get will be far greater. This means less cropping and higher quality images. For comparison, both of the big two manufacturers make an 18-55mm zoom lens and a 60mm macro. These lenses have similar specs. The 18-55 zoom lenses have a maximum magnification of 1:3. The dedicated macro lenses have a maximum magnification of 1:1 which means you will be able to get much closer. Moreover, the 60mm macro lenses are materially sharper, focus faster and more accurately, don't suffer from barrel

distortion, are much faster and produce better bokeh.

None of this is to say that you cannot take good aquarium pictures with a zoom lens. If you already have one or one came with your camera then by all means start out by using it. One last thing, remember to pick a good UV filter to protect your lens. These filters don't cost much and they will really help protect your lens from dirt and scratches.

Flash

For aquarium photography you will want overhead light if you can get it. Not only will you reduce reflections off the scales from front flash but overhead light is much more natural looking. The easiest way to get a lot of overhead light is with an off-camera flash. An off-camera flash is simply a flash unit which is connected to your camera with an off-camera shoe. An off-camera shoe is just a cable that connects to your flash allowing you to move it away from your camera. Another option is to use a wireless transmitter but those tend to be more expensive. I would also recommend the use of a diffuser which is small translucent cover that goes over your flash. It helps make the light less harsh.

Other

Other than that you will also need a memory card and maybe a spare battery. Although I would mention that personally I almost never use my spare battery. The battery in most SLR's lasts a long time because you do not use the LCD much on a SLR.

Seems expensive

Well, you can certainly spend thousands of dollars if you are so inclined. Everything I mentioned above would cost at least \$1,300. There are a couple of things to keep in mind though. The first thing is that you don't have to buy it all at once. Personally, I have accumulated all the camera equipment I use today over the course of the many years. The second is that you can get an entry-level DSLR kit & memory card for around \$500. This is a great way to get started and will be a significant upgrade over the average point and shoot camera.

Setting up your camera

OK, so you just got home with your new camera. It is out of the box assembled and ready to go and you are wondering what to do next. Let me help you. On the top of the camera there will be a round mode dial. One of the settings will either be a green box or say

"Auto". Just switch it over to that mode and start taking pictures. Take some pictures of the family, the house, the yard and even the cat. Once you are done with your session and you have downloaded the pictures to your computer you need to do one very important thing....

NEVER USE THE FULLY AUTOMATIC MODE AGAIN.

Seriously, you have just spent a lot of money on a specialized piece of equipment to make your photography better. What is the point in shooting in a mode where you have absolutely no control over the outcome of the pictures? I know there are a lot of settings in there and it can be a little intimidating at first but there are really only a few settings you really need to understand when you are first starting. In this section I will describe what I feel are the most important settings and how you should set them.

The mode dial



Somewhere on the top of your SLR there will be a mode dial. What exactly is on it will depend on the specific camera you have. All cameras will have an automatic mode that we now know shouldn't be used. Many cameras will have a group of modes denoted by pictures.

Each manufacturer calls these different things but essentially they are fully automatic modes tailored to a specific purpose. For example, some are setup for macro work, night photography, portraits, etc. These all function very similar to automatic but change some key settings to things the camera feels are more appropriate. For example selecting the landscape option will use a very small aperture to ensure a large Depth of Field.

With that out of the way there are a few modes that SLR's will have in common. These are the ones we will focus on and really the only ones you will need to know.

Program

Program mode is denoted by a "P" on the mode dial. This mode is very similar to the fully automatic mode because the camera will automatically set both the aperture and shutter speed based on available light. The difference between this and the automatic mode is

that in program mode you can set some of the other settings such as ISO, metering and auto-focus points which will be explained below. This is where you should start. This mode allows you to set your camera up before you start and then to shoot your pictures without worrying about specific settings while shooting.

Shutter Priority

Depending on the manufacturer shutter priority will be denoted with either an “S” or a “Tv” on the mode dial. In shutter priority, you set the shutter speed and the camera will automatically choose the aperture. Shutter priority can be useful when you are shooting fish in motion without flash. If there is enough light you can set a higher shutter speed to ensure that even a fast moving fish will not be blurry.

Aperture Priority

Depending on the manufacturer aperture priority will be denoted with either an “A” or an “Av” on the mode dial. Aperture priority means that you can set the aperture and the camera will set the appropriate shutter speed. This is very useful as it allows you to control Depth of Field as you are shooting. When doing aquarium photography this is method I would recommend shooting at once you are more comfortable with you camera. When you first start out it might be a little too much to think about.

Manual

Manual mode is denoted by a “M” on the mode dial. Manual mode is just what it sounds like, entirely manual. You set the shutter speed and the aperture manually. I don’t use this much in aquarium photography because my fish move around so much it is hard to set the correct settings in advance. If you have consistent lighting across your tank or if you can wait for the fish to come to the right area then manual mode is a great option.

ISO

Back in the days of film cameras we all bought film. Film came with different ratings. ISO 100 film gave us a high quality film when we had lots of light and with ISO 800 film we could shoot well in low light but at the cost of a picture with some grain. With digital cameras it works exactly the same way except that

rather than having to buy different kinds of film we can just adjust the ISO setting in the camera. Unfortunately, the trade-offs are also still the same as they were with film. Increasing the ISO setting increases the amount of visible grain in the image. Except in the digital world it is called noise instead of grain.

In general, you want to set you ISO value as low as you can and still get a good picture. If you are using flash then it will usually make sense to set the ISO to 100 as this will give you the best picture quality. If you are trying to take pictures without the aid of flash, your mileage will vary depending on your camera. Test out different ISO settings and see where the noise gets too noticeable to use. Typically this will be in the 400+ range for DSLR’s but the technology is getting better all the time.

With point and shoot cameras ISO noise is a much bigger issue because of the smaller sensors in these cameras. You will almost always want to shoot with the lowest ISO possible to reduce digital noise. In most of these cameras anything over 200 will demonstrate visible noise. You are much better served to set the ISO setting by hand in your camera and use flash when doing aquarium photography.

Autofocus

The autofocus engines on DSLR’s work by sampling a number of points and setting focus appropriately. Most low to mid-end cameras have 7-9 different points. Some higher end camera bodies have as many as 45 points. However, when we are doing aquarium photography these points can sometimes get in our way. For example, how many times have you tried to get a great shot of a fish and instead ended up with an out-of-focus fish and an in-focus rock or plant. Worse yet, you get a great shot of some little spots on the glass.

One way to deal with this is to not use all the autofocus points but instead use just one of them. Most DSLR’s will allow setting a single point to autofocus with. The easiest thing to use is the one in the center but you can use another one instead if you prefer.

Image Quality

Almost all DSLR’s have a plethora of image quality options. They basically break down into a few key choices, various quality JPEG, RAW or sRAW. JPEG is a standard file format readable on any computer. JPEGs are processed by the camera’s internal processor and have effects such as sharpening and other post processing applied. With JPEG output the camera does its best to process the image for you and

make it look as good as possible.

A RAW image is a manufacturer specific file format that has all the data possible from the sensor. Typically, the camera does very little post-processing to RAW files. RAW files need to be converted before you can use them on your computer. The advantage that RAW files have is they contain more information which opens up more options during digital editing. sRAW is just a smaller RAW format. In the long run you will probably want to shoot RAW but to start out I would recommend using the highest quality JPEG your camera has available.

Wrapping it up

Well, that is it for this article. Hopefully this article has helped provide some basics on how cameras work and how to set them up for your aquarium shots. With that, I will leave you with one last piece of advice. Take pictures, lots of pictures. Experience is the best teacher and digital pictures don't really cost anything. Although we did not talk about photo software, most photo editing software will show you the settings you used when you took your picture. Looking at this information when you look at both your good and bad pictures will give you a good idea of what works and what doesn't.

FOTAS 2009 Recap

Kyle Osterholt



The incredible first floor of the Omni North West in Houston TX, Site F.O.T.A.S Convention 2009.

Whew, what a weekend! Too bad it had to end.

I spent Thursday doing water changes and getting the house ready for a long weekend alone and then bagged up fish. Friday morning, we hit the road a little

before 6am and headed South. The weather was dreary the whole way down, misting and raining intermittently so it was a fulltime job running the wipers. We hit Houston early afternoon and actually walked up behind Gerald and Kayla as they were checking in at the Omni Hotel so they must have gotten there just as we were getting off the interstate.



Marion inspecting the registration table.

Once checked in and everything hauled into the room, we went downstairs and assisted HAS in setting up the show-tanks and air-system. As the afternoon went on, people started to trickle in from all over. A group of us decided to go out and eat dinner so we loaded up in a few cars and headed to a nearby steakhouse. Attending dinner was Diane Tennison (HCCC), Greg and Lee Ann Steeves (HCCC, Fish Hobby Supply), Dave Schumacher (HCCC, Dave's Rare fish), Dave Hansen (HCCC, Laterallinephotography), Charles Hawks (Minnesota Angelfish Breeder), Monica and I, Gerald and Kayla Griffin and Spencer Jack (Canadian importer/wholesaler, cichlid expert). We had an awesome time sharing stories over some excellent food and since we had most of the event's speakers with us, they held up the Friday night speaker long enough we were able to make it back and see most of the discussion.

When we returned to the hotel, we made it just in time to see all but the beginning of Evan Bowers (HCCC, Apisto expert, speaker at ACA convention this year) talk on *Apistogramma* which was very informative. As the presentation went on, I realized Dean Hougen had made it and was sitting a few rows in front of us. After Evan's talk, several of us had a nice chat sitting around the lobby of the hotel discussing many things. Diane Tennison, Dave Schumacher, Greg Steeves, Dave Hansen, Dean Hougen and my-

self found ourselves having a great time up until we realized it was almost 2am and many of us were to be attending the FOTAS delegate meeting early the next morning so we retired for the evening.



The showroom comes together.

I woke around 6am and made it downstairs for the delegate meeting to find Diane and Greg discussing breakfast so I joined them at the hotel restaurant and

we joined the 8am FOTAS delegate meeting to discuss the past and next year's events. Marvin England (TCA, FOTAS president), Evan Bowers (HCCC), Keith Arnold (BVAS, FOTAS treasurer), Greg Steeves (HCCC delegate), Dean Hougen (OKAA), Kathy England (TCA, FOTAS secretary), Diane Tennison (HCCC) and myself (OKAA delegate) were in attendance.

At the Delegate meeting we discussed the future of FOTAS and the only officer change was Greg Steeves was elected VP for FOTAS and Diane Tennison was elected as a Treasurer apprentice so that next year, Keith may retire from the position. Evan was also asked to take on the FOTAS website and make it a more desirable and information filled site for all the FOTAS clubs to use. We also voted Wally Nida (Texas Betta Association) as the 2009 Altruism award winner. There were also several other things discussed but I won't bore you with those details.

The meeting ended just in time to attend Dr. Art Leutermann's talk on *Lamprichthys tanganicus* and the costs and difficulties in doing your own collecting in a foreign country (VERY informative).



Dr. Art Leutermann lecturing on *Lamprichthys tanganicus* and collecting abroad.

The next presentation was Charles Hawks from Minnesota doing a presentation on keeping and breeding angelfish as well as genetics on angelfish.

Once Charles was finished with his presentation, we broke for lunch. Dean and I joined Diane Tennison, Greg and Leeann Steeves, Dave Hansen and Spencer Jack for the exploits of Whataburger for a quick lunch (not sure why we were worried about time since we had the next speaker with us).



Charles Hawks lectures on angelfish genetics.

After Lunch, Spencer Jack gave an excellent talk on collecting in Uruguay (Spencer is a hilarious speaker, I'm glad I was able to finally see his presentation).

Greg Steeves was up next with his talk about Victorian basin cichlids and some of the myths and truths about them as well as some of the perils they face.



Spencer Jack, a noble looking chap!

After the speakers, we had a couple hours break so I wandered around the show/sales room and checked out some of the awesome fish available for sale and for show. then I retired to the room for a little relaxation before the banquet.

At 7pm, they started the awards banquet which was catered by the hotel. BTW, the hotel is filled with joined "ponds" full of koi, goldfish, plants and a few pacu as well and there is also ponds around the outside as well. they catered a buffet of Italian food which was excellent. After the meal, Charles Jones

(HAS) handed out the fish-show awards (which I was suprised to win one with my Xystichromis sp. "Blue Fire Fin" I brought for Greg to ID and decided last minute to put it into the show). After the show, they announced the winner of the Altruism Award (although Wally wasn't able to attend) as well as suprising Dr. Keith Arnold in creating an award in his name. following the awards, Charles held a small auction to raise money for the Braz Walker Endowment fund where I scored Ad Konings catalog DVD "The Cichlids of Lake Malawi" and Dean STOLE a huge compilation of the ACA Buntbarche bulletins in PDF format . After the Braz Walker Auction, Dave Hansen gave a really good presentation on aquarium photography. After the presentation, some attendants had a round-table discussion in the Hospitality suite but I knew I had a long day and needed a few hours of sleep so we went back to our room and got to sleep around midnight.



Evan Bowers, Friday Night's mystery speaker.

7am my alarm went off but I severely underestimated the time it would take me to re-bag all my fish for the auction. I FINALLY got everything bagged and ready about 11:15 and made it down and was applying the color dots as they started the auction. Thankfully Gerald helped Monica and I fill out the index cards and get the bags placed on the tables or I'd probably still be standing there preparing everything for the tables.

The auction was pretty big, I think we checked out the last bidder about 8:30. We hauled our stuff to the room, threw on my swimming trunks and jumped in the pool for a much needed time of relaxation. We swam for about half an hour and then headed back in just in time to tell Charles and Marion thanks and goodbye as they loaded their last box into the van for their much needed rest. We got up about 7am this morning and hit the road only to be rained on the whole way back North.

Other than the weather, this was a great event and we gained a LOT of information that will help us with the future of the club and our events.



Dave Hansen with his winning entry (the only one) in the non-live fish class.



Charles Jones and Dave Schumacher.



Dr. Keith Arnold at the awards banquet.



Charles Jones and Kyle Osterholt.

John Hansen, Spencer Jack, Marvin England. Do we really want to know what Marvin is telling them?



Evan Bowers, Kyle Osterholt, Monica Osterholt, Dean Hougen.

Cichlids and More: Exploring the Rio Comal, The World's Shortest River

Greg Steeves



The Comal River winds through Landa Park, New Braunfels, TX.

We have quite a diverse group of cichlid keepers down here in South Central Texas. We are fortunate to have wonderful knowledgeable retailers that always have the latest and greatest new finds, and hobbyists that have larger fish rooms than many descent sized stores. As a cichlidphile, this is of course a great advantage to have at your disposal but for me, equally appealing is the native fauna in and around our area.

When I first visited this area ten years ago, I was aware that the most northern native cichlid in the new world was found in Texas. I had no idea that I could see it so close to where I was. My wife to be told me that the Texas cichlid (*Herichthys cyanoguttatus*) could be found in the waters all

around our area. I had never seen a cichlid, native or introduced, in any water outside an aquarium. Off we went in search of the Texas cichlid!

Herichthys cyanoguttatus is native to northern Mexico and the Rio Grand drainage of South Texas. All sources say it has been introduced into the spring fed waterways of our area however, no one seems to know who, how or why it is here. The Texas cichlid is a rather robust fish and can grow to 30cm. Normal coloration consists of silver spangling with several black blotches along the flanks to the caudal peduncle. Slight vertical barring is usually visible as well. When in breeding morph, both sexes sport

sport a silver head and black coloration at the rear of the flank. The black can extend along the belly to the lower jaw in some cases. These fish are pair bonding and capable of thwarting intruders to their territory much larger than they are. I have witnessed a pair of *H. cyanoguttatus* attacking a much larger Guadalupe bass (*Micropterus treculii*) that had made the mistake of venturing too close to the nesting site.



Herichthys cyanoguttatus in breeding dress.

Our first try at locating *H. cyanoguttatus* was a municipal park in the nearby city of New Braunfels Texas. This park is an incredible place! It has become one of my favorite spots that I have ever been to. The Comal River originates here. It flows out of springs at an area called Panther Canyon at the North end of the park. These springs are what make the Comal River so unique and such a wonderful place to explore. The swift outflow of water varies little in temperature throughout the year maintaining a constant 22-24C. This makes swimming in the summer a refreshing way to stay cool, and on a cold winter day, a wonderful, almost tropical dip. As we crossed a walking bridge over a small estuary, through the crystal clear water, we could see pairs of Texas cichlids defending territory from con specifics. The search for this fish lasted all of 20 seconds!

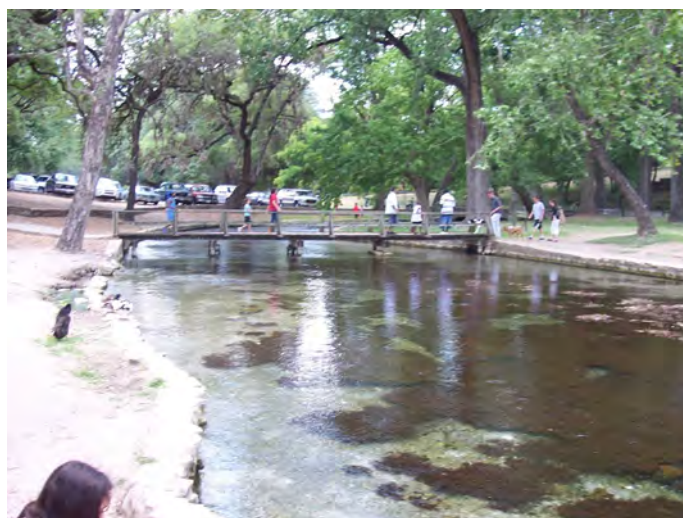
Over the years, I have spent a great deal of time exploring the Comal River. As stated earlier, the rivers main outflow is from rushing springs that form a short stretch of river that feed a good sized lake. This small stretch of river is home to an endangered species of fountain darter (*Etheostoma fonticola*).



Panther canyon, the main spring outflow of the Comal River.



Herichthys cyanoguttatus as seen from a walking bridge.



One of the many walking bridges of Landa Park.

The river flows for 45m and then empties into Landa Lake. At the transition area between river and lake, thick mats of *Ludwigia repens* (red ludwigia) contrast beautifully against the large expanses of *Vallisneria americana gigantean*



Headwaters of the Comal River, habitat of *Etheostoma fonticola*.

(jungle val). This area is where we find large populations of livebearers. The two species most commonly encountered are *Gambusia affinis* (the common mosquito fish) and *Poecilia latipinna* (sailfin molly). On a recent snorkel trip of this location, Walter Wooton discovered another livebearing species later identified as *Gambusia geiseri* (largespring gambusia). We have since found several *G. geiseri* but only in this small transitional area. *G. geiseri* can be differentiated from *G. affinis* by a dark patch on the lower jaw, and obvious midventral stripe. Both of these features are absent on *G. affinis*. A close examination reveals an additional dorsal ray on *G. geiseri*, 7-9 vs 6-7 on *G. affinis*. This is the only area we have discovered that all three species can be found together.

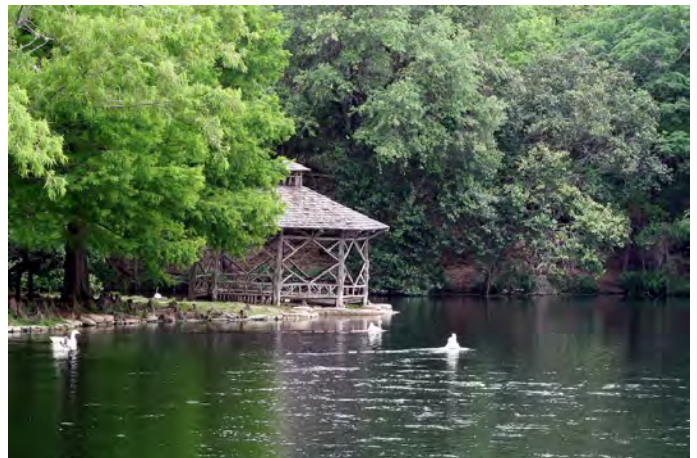


The endangered *Etheostoma fonticola*.

Along the north side of the lake, the shoreline area consists of waterlogged fallen trees with a substrate of small pebbles.

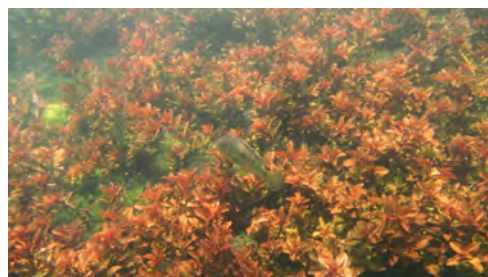


Poecilia latipinna, the sailfin molly.



This beautiful gazebo sits at the transition zone between river and lake in Landa Park.

The water is shaded by terrestrial shrubs and trees along with the invasive non-native elephant ear *Colocasia esculenta*. This is where we start so see some of the larger bass in particular, *Micropterus dolomieu*, the small mouth bass. Even though these bass are voracious predators, other species are commonly encountered seemingly



coexisting in harmony. These fish include *Herichthys cyanoguttatus* (the Texas cichlid), *Lepomis au-*

ritus (redbreast sunfish), and *Lepomis cyanellus* (green sunfish) which is found in abundance. An infrequent find is *Ambloplites rupestris* (the rock bass). I have not found the latter in any other area of the Comal River that I have explored.

Moving with the current the lake opens up into a large area that is dominated by *Vallisneria americana gigantean* (jungle val). It is here that such an incredibly diverse assemblage of fishes can be found, one has to see it first hand to fully appreciate it. The waving val is home to millions of *Gambusia affinis*. These mosquito fish are everywhere! Mixed in these massive schools are *Poecilia latipinna* (sailfin molly) which are usually found midway up the water column grazing on the algae which grows on the long val leaves. Other grazing species include *Cherax quadricarinatus* (red claw crayfish), *Marisa cornuarietis* (giant Colombian ramshorn snail), *Palaemonetes kadiakensis* (grass shrimp) and *Melanoides tuberculatus* (Malasian trumpet snail) which can be found everywhere. Large *Oreochromis aureus* (blue tilapia) and *Hypostomus plecostomus* (common pleco) can be seen near the base of the val along the lake floor. The plecocs excavate holes in the lakes mud bottom and along the banks of the river where nesting occurs. *Micropterus dolomieu* (small mouth bass) patrol the waving val in pairs. Mixed with the shoals of *Gambusia affinis* is *Dionda nigrotaeniata* (Guadalupe roundnose minnow) and occasional sightings of *Astyanax mexicanus* (Mexican tetra).



Colocasia esculenta, a highly invasive bog plant.

A recent addition to the park has been an observation pier which overlooks the area of thick giant val and has a view of a small land area dubbed Pelican Island. The particular area has an incredible array of bird life along with a healthy population of turtles. The waters

around this small island are shallow and populated by some of the colorful sunfish species as *Lepomis megalotis* (longear sunfish), *Lepomis miniatus* (redspotted sunfish), *Lepomis macrochirus* (bluegill sunfish), and *Lepomis humilis* (orangespotted sunfish). Smaller bass up to 15cm use this area to hone their hunting skills. Stands of water lilies and *Eichornia crassipes* (water hyacinth) shade the shallow waters below.

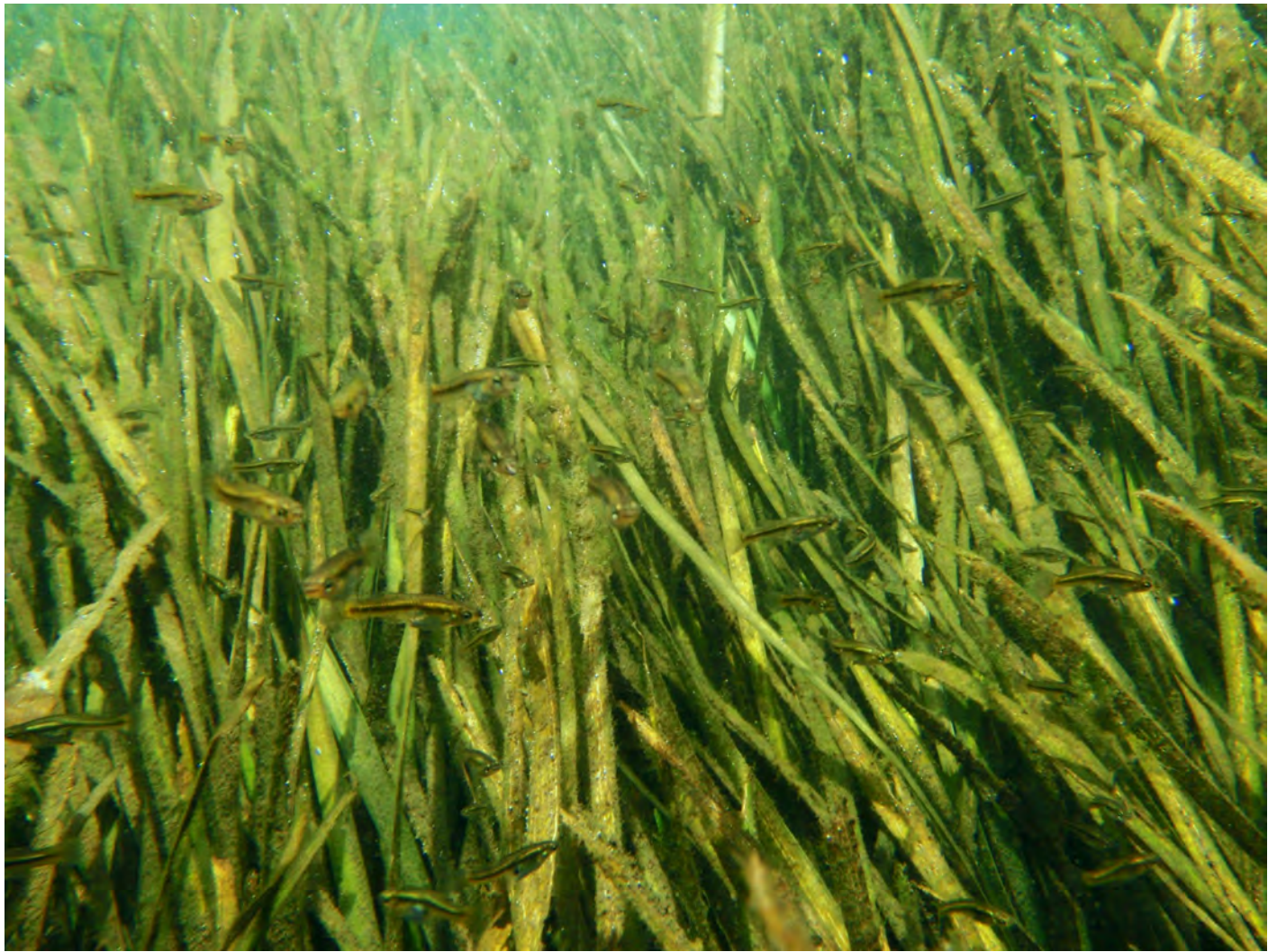


This shaded area near shore is habitat to some of the larger predatory fish species.



Micropterus dolomieu usually can be found in pairs.

At the observation pier, the waters underneath contain habitat for thousands of *Astyanax mexicanus* (Mexican tetra). Here we also find large *Lepomis megalotis* (longear sunfish) and a healthy population of *Herichthys cyanoguttatus* (Texas cichlid). When the current tangles large mats of jungle val around the supporting legs of the pier, it is likely to see nutria swimming



Gambusia affinis are the most abundant fish in this habitat.



Dionda nigrotaeniata (Guadalupe roundnose minnow) is endemic to the Comal and San Marcos Rivers.



The pier looking out to Pelican Island.

swimming amongst it. In this area we have also encountered *Nerodia rhombifer* (the Texas diamond back water snake) which is a fairly large, non-venomous species but still startling when encountered.

Following the current around the pier, another spring fed estuary dumps into Landa Lake. Following this waterway up, the *Vallisneria americana gigantean* (jungle val) recedes to thick stands of *Ludwigia repens* (red ludwigia). We have found very small *Ameiurus melas* (black bullhead catfish) here. At this point the stream splits into two arms.



Astyanax mexicanus (Mexican tetra) is heavily concentrated under the waters of the pier.

Following the main artery leads to another large spring feeding the river from the hillside. A smaller branch is fed from another spring as well but it is this pocket of water, doubling as a wading pool for children, that is the preferred spawning site for the areas Texas cichlids (*Herichthys cyanoguttatus*).

The water here is shallow and devoid of plant life. The bottom consists of both small and large water worn rocks. We have been able to observe spawning pairs of cichlids in February while the air is still quite cool. By April, the bottom is alive with fry of various sizes. It is quite a sight to see!

There is still much of Landa Lake left to explore. The main section of open water reforms into a swiftly moving stream that meanders through the Landa Park and over a spillway into a channel that used to drive a power plant. The old building is still there and due to the hazards with the fast water and numerous manmade obstacles, we move around this area to where the discharge from the power plant again forms the Comal River. This is a very popular area where, in the summer, thousands of people float lazily down the river in tubes. For the most part, these folks are completely unaware of what incredible scenery lies beneath the surface. The beginning of this region is dominated by fast moving water over a rock strewn bottom that slows as the river widens. Many freshwater clams are found here filtering the nutrient rich water passing by. A particular behavior is exhibited by large *Herichthys cyanoguttatus* here. The cichlids push rather large (in comparison to their own size) stones aside and rapidly bury their heads in the exposed gravel. I have on occasion witnessed two cichlids seemingly working together to turn a stone that was too large for a single fish. This is the only area that I have encountered this feeding strategy. It is fascinating to observe. Along the calmer water of the bank we find the small *Notropis amabilis* (Texas shiner) in schools of several hundred.



Nerodia rhombifer (the Texas diamondback water snake) is found around the lake.



JB Edmundson getting up close and personal with a spawning pair of *Herichthys cyanoguttatus*.

As the water slows, large boulders are surrounded by thick stands of *Ludwigia repens* (red ludwigia) and a plant mistakenly thought to be *Cabomba caroliniana* but now identified as *Limnophila sessiliflora* a similar looking plant native to India and Southeast Asia. *Melanoides tuberculatus* (Malasian trumpet snail) plagues the entire area. Amongst these thick plant stands are thousands of tiny fry who find refuge here. In areas of transition between the two plant species, there are always several species of sunfish. *Herichthys cyanoguttatus* (Texas cichlid) is abundant in this area with pairs often protecting herds containing hundreds of fry. The apex predators are the bass species *Micropterus dolomieu* (Smallmouth bass), *Micropterus salmoides* (largemouth bass) and the beautiful *Micropterus trecultii* (Guadalupe bass). Here again, along the riverbank are holes dug and inhabited by *Hypostomus plecostomus*

(common pleco).

Throughout this section of the river, sunfish are as common as the cichlids and are often found foraging together.



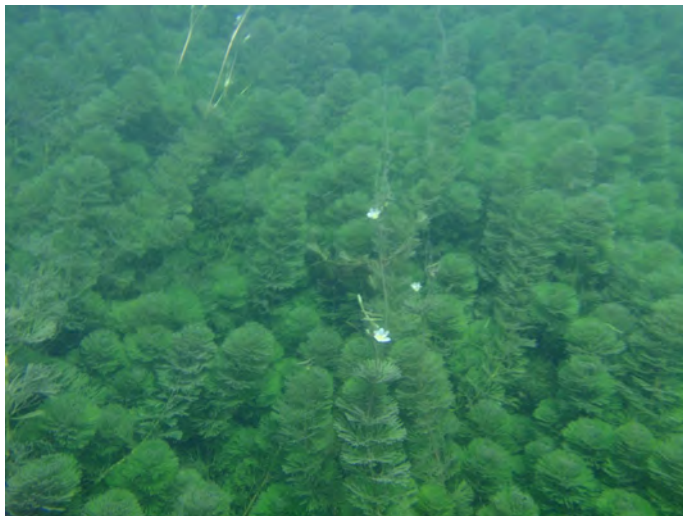
***Micropterus salmoides* (largemouth bass) over a lush bed of *Ludwigia repens* (red ludwigia)**



A lily type plant with a lettuce-like base inhabits several areas of slow moving water.



Lepomis humilis (orangespotted sunfish).



Limnophila sessiliflora (a cabomba-like plant).



Lepomis auritus (redbreasted sunfish).



Herichthys cyanoguttatus over a stand of *Limnophila sessiliflora*.



Lepomis macrochirus (bluegill sunfish).

On the web!!
www.fotaswebsite.com



Jungle val (*Vallisneria americana gigantean*) dancing in the current.



Walter Wooton exploring Landa Lake.

Another spring fed creek feeds the flow of the Comal just before it feeds to Schlitterbahn Water Park. From here this 4 km long, nutrient rich river that begins its flow at 50,000 gallons per min

mi-



nute, becomes part of the Guadalupe River and flows to the Gulf of Mexico. The popularity of exploring the wondrous Comal River is catching on. What a resource we have in our own back yard.

I'm sure there are many other surprises that are yet to be uncovered along this amazing stretch of water, and I'm looking forward to finding them!

2009 Altruism Award Winner Announced



Wally Nida, 2009 FOTAS Altruism Award winner.

The Federation of Texas Aquarium Societies, during its annual convention held September 11-13, 2009, hosted by Houston Aquarium Society, named Walden "Wally" Nida, from the Texas Betta Society, as the 2009 winner of the Altruism Award. The Altruism Award is presented annually to an individual for his or her outstanding service to the fishkeeping hobby and to their local club or other aquarium/fishkeeping organization.

Wally is the face of the Texas Betta Society, which is located in the Dallas/Fort Worth area. He handles organization of meetings and shows, takes care of getting imported show bettas into the country, and is generous with his fish stock, giving fish to those who are interested but perhaps unable to afford good quality fish. Wally is also active in the IBC Species Maintenance Program, helping to preserve wild bettas whose habitats are threatened and which could become extinct in the wild.

Wally and the Texas Betta Society recently hosted the national show and convention of the International Betta Congress in Irving, Texas. They did such a good job that they have been requested to host it again in 2011!

Kudos to you, Wally, for your work in the aquarium hobby, for encouraging individuals to participate, and for your concerns regarding betta conservation.

Congratulations on being the latest winner of the FOTAS Altruism Award.

BRAZ WALKER ENDOWMENT PROGRAM

Braz Walker, perhaps the best known of Texas' aquarists, set a standard for contributions to this hobby that may never be surpassed. Though paralyzed from the neck down from an accident while a college student, Braz managed to keep, breed, write and photograph a number of aquarium fishes. He published articles in a number of club publications, science journals and aquarium magazines.

Shortly after his death, FOTAS created the Braz Walker Endowment Program in Aquarium Science to honor his accomplishments and as a means to carry forth some of his interests. The program, funded from interest generated by a growing corpus, involves the following:

- **SPECIAL COLLECTION OF AQUARIUM LITERATURE:** One of the earliest efforts of this program focused on accumulating books and magazines that would remain available. This collection, housed at the Sterling A. Evans Library of Texas A&M University, contains a wide variety of books that include simple, introductory ones, those related to a specific topic, and those containing scientific literature. The collection also includes large "runs" of the aquarium magazines, some back to the 1950's.
- **RESEARCH GRANTS:** On a biennial basis, FOTAS has up to \$500.00 for supporting research that enhances the aquarium hobby. Usually these grants go to university students, but eligibility varies, depending upon the proposal. To apply for the research award, submit a two- to three-page description of the project, a budget and a letter of support from an adviser to any FOTAS officer.



A small sampling of the many books written for the aquatic hobbyist by Braz Walker.



Federation of Texas Aquarium Societies

Fish Tales is the official publication of the
Federation of Texas Aquarium Societies.