

modern AQUARIUM



August 2021
volume XXVIII
number 6

Greater City Aquarium Society - New York

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Series III Vol. XXVIII, No. 6 August, 2021

ON THE COVER

Our cover photo this month features *Laetacara araguaiae*, a handsome small(ish) cichlid from Brazil. For more information about this beautiful little fish, see Arthur Mayer's article on page 11.

Photo by Arthur Mayer

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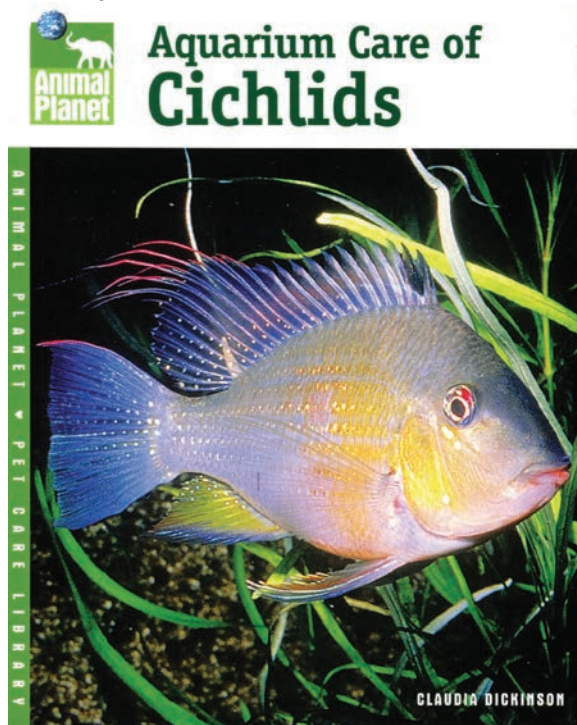
From the Editor.....	2
G.C.A.S. 2021 Program Schedule.....	3
President's Message.....	4
Our Generous Sponsors and Advertisers.....	5
Fishy Friends' Photos.....	6
My Fascination With Shell Dwellers..... by Jules Birnbaum	7
The Amazing Mag Clip..... by Joseph Ferdenzi	9
<i>Laetacara araguaiae</i> by Arthur Mayer	11
Aquarium Husbandry of the Tiger <i>Limia</i> Exchange Article by Paul V. Loiselle	12
Wet Leaves (Book Review Column)..... MA Classics by Susan Priest	15
<i>Gambusia</i> To The Rescue?..... by Dan Radebaugh	17
G.C.A.S. Member Discounts.....	18
Tonight's Speaker: Joseph Ferdenzi.....	19
Modern Aquarium Covers - 1995..... MA Classics	20
The Undergravel Reporter..... Jellyfishbot and the Hydromedusa	21
Fin Fun (Puzzle Page)..... What's In A Word?	22

From the Editor

by Dan Radebaugh

Well, it looks like we'll soon be able to enjoy real meetings again. Hallelujah! Not that the virtual meetings have been horrible—far from it! But it will be nice to see and talk to one another in person once again in a more spontaneous atmosphere. That's why clubs have meetings, right? Well, to have auctions, too, I guess.

You'll notice in this issue a couple of convention dates—one for the American Livebearer Association in October, and another for the Keystone Clash in September. I don't know that I'll be travelling to either of these, but I think it's a positive development that they will be happening. The sooner and greater the national vaccination rate increases, the less we'll all have to worry about being around folks whose vaccination status we don't know. I don't think I've ever met anyone who'd had smallpox, but I did have a few friends growing up who contracted polio. Wasn't good. Get vaccinated—for everyone's sake!



by Greater City member Claudia Dickinson
(Animal Planet® Pet Care Library)

Hardcover – Also available on Amazon Kindle
<https://www.amazon.com/Aquarium-Cichlids-Animal-Planet-Library/dp/0793837774>



I was chatting with Joe Ferdenzi a few days ago (well, longer ago than that by the time you read this), and he brought up a fact that I hadn't up to then thought of at all. Namely, that while we rightly feature regularly appearing ads in **Modern Aquarium** for our good friend Rosario LaCorte's marvelous book, **An Aquarist's Journey** (which we produced), we have somehow neglected to regularly run advertisements for GCAS superstar Claudia Dickinson's book, **Aquarium Care of Cichlids**. And I have two copies of it at home! Sheesh! Well, that state of affairs ends now. Take a look at the lower left corner of this page. Also, for a review of this book at the time of its publication, see Sue Priest's Wet Leaves column, reprinted from the June 2007 issue of **Modern Aquarium**.

Speaking of stars, I'd like to thank one group who doesn't receive much in the way of recognition for all the wonderful work they do year in and year out—Covid or no, and without whom this publication would simply not be possible to produce month after month and year after year to the standard to which we are accustomed. That group is of course our wonderful proofreaders. They are listed in our masthead (see page 1), but in case you don't read that every month, they are Al and Sue Priest, Tom Warns, Donna Sica, and Joe Ferdenzi. I should also include my wife Marsha, who checks this column before I dare print it. Issue after issue, year after year, they catch error after error and help clarify the less-than-clear. From my heart—thanks to each and every one of you!





GCAS Programs

2021

While because of the Covid19 situation we cannot yet resume our normal meeting schedule at the Queens Botanical Garden, our latest information is that we *will* be able to resume our regular meeting schedule in **September**. We will keep you advised if this changes.

March 3	Joseph Ferdenzi <i>Lake Tanganyika Cichlids (via Zoom)</i>
April 7	Dr. Richard Pierce <i>A Second Look at Tetras (via Zoom)</i>
May 5	Joe Graffagnino <i>A Pond Grew In Brooklyn (via Zoom)</i>
June 2	Markita Savage <i>The Xiphophorus Genetic Stock Center (via Zoom)</i>
July 7	Sal Silvestri <i>Interesting and Unusual Fish I Have Worked With (via Zoom)</i>
August 4	Joseph Ferdenzi <i>A Tour of My Fishroom (via Zoom)</i>
September 1	"Welcome Back" Auction!
October 6	TBA TBA
November 3	TBA
December 1	TBA

Articles submitted for consideration in **Modern Aquarium** (ISSN 2150-0940) must be received no later than the 10th day of the month prior to the month of publication. Please email submissions to gcas@earthlink.net, or fax to (347) 379-4984. Copyright 2021 by the Greater City Aquarium Society Inc., a not-for-profit New York State corporation. All rights reserved. Not-for-profit aquarium societies are hereby granted permission to reproduce articles and illustrations from this publication, **unless the article indicates that the copyrights have been retained by the author**, and provided reprints indicate source, and that two copies of the publication are sent to the Exchange Editor of this magazine. For online-only publications, copies may be sent via email to gcas@earthlink.net. Any other reproduction or commercial use of the material in this publication is prohibited without prior express written permission.

The Greater City Aquarium Society meets every month except January and February. Members receive notice of meetings in the mail or by email. For more information, contact: Dan Radebaugh at (718) 458-8437, email gcas@earthlink.net, or fax to (347) 379-4984. For more information about our club or to see previous issues of **Modern Aquarium**, you can also go to our Internet Home Page at <http://www.greatercity.net>, <http://www.greatercity.org>, or <http://www.greatercity.com>.

President's Message

by Horst Gerber

After more than 30 years in the club and five years at the helm, I would like to retire as President by the end of 2022 and let some young whipper-snapper take over the reins of this marvelous organization. To me, anyone around 40 is still pretty young, whereas I am definitely feeling that I'm too old to keep doing this. I would think we'd have plenty of volunteers. After all, who wouldn't like to be called *El Presidente* of such a wonderful organization?

One of my main hints for success for the new president is that he (or she) develop a close working relationship with our former longtime president Joe Ferdenzi. If Joe has your back very little is likely to go wrong, and if it does he will usually show you a way to fix it. Joe brought this club out of the dark ages and made it what it is today.

Greater City's 100th anniversary is knocking on our door, and we need people and ideas to carry us into our next century. This month will hopefully be our last Zoom meeting. I've enjoyed them, even though I'm using my phone instead of a computer. Still, there's nothing like really seeing and speaking with one another and exchanging fish and plants (and jokes). So let's hope that the dimmer bulbs in our country will go ahead and get themselves vaccinated so that we can put this much-too-long Covid nightmare behind us.

A lot of our members have been breeding fish galore, with nowhere to get rid of the little buggers. Stores have been closing right and left. I look at our list of stores at the back of this magazine and wonder how many of them are still with us, and how many have given up the ghost. So for our September meeting we are planning a giant "Welcome Back" auction. Bring your fish, plants, and money—there will be plenty of stuff for everyone. It'll also be a good way for you to make room in your tanks for new endeavors.

So far we have not had the need for a Sergeant-at Arms to help keep order during our meetings, but with the post-Covid realities we are looking for one, and if you check the masthead in your copy of Modern Aquarium you'll see that we have a couple of other open positions as well. Please! Help us out! None of these jobs requires too much time or effort, and your help can make us a better club!

Right now we are told that we can have a maximum of 75 people at the September meeting. This could very well change, so we will let you know as we get more updates from the Queens Botanical Garden. See you in September!





GCAS Thanks You!

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Fishy Friends' Photos

by Greater City Aquarium Society Fishy Friends

Below are photo submissions to our “Fishy Friends” Facebook group. I’ve left the subjects unnamed, but not the photographer. If you see a shot you like, and want more info, ask the photographer about it! I’m sure he or she will be delighted to tell you!



My Fascination With Shell Dwellers

Story and Photos by Jules Birnbaum*



In all my (70+) years of fish keeping I've had many favorite tropical fish. There were guppies, angels, platies, swordtails, tetras, cichlids (new world and old, big and small) and bettas. Then there were the rainbows, a beautiful, active fish. Corys and plecos. There were the killifish. There are so many varieties of killies, a few of which I've bred. The experts in this (killifish) group are some of the top scientists in the hobby, but a little too intense for my tastes. The beauty and the breeding habits of the killifish are special, and sometimes addictive. I guess any hobby or sport has those who are particularly intense. They are over-achievers, and I know and admire many of them.

Over the past few years I've become fascinated with some little fish from Lake Tanganyika that make their homes in small shells. They live, breed, and raise their fry in small shells. The parents also form colonies. They have small bodies about two inches in length, with each species having a distinctive fin color. The small shell dwellers look just like their big brothers in the lake. Some "shellies" are very brave, and will attack the hand that feeds them. In my experience they are a very hardy fish—not prone to many fish diseases if maintained properly.

Some of these shell dwellers are still rare in the hobby and bring prices as high as \$40 per fish plus shipping. I know three or four sources that have a number of species available. Sand City Cichlids and WetSpot are just a couple of the good reliable sources. Sand City has some very good pictures of each species. During Covid-19 (with no auctions) I have been selling my *N. similis* with 100% of the proceeds going as donations to our club, The Greater City Aquarium Society.

I acquired my first shell dweller, *Neolamprologus similis* (photo above by the author) some years ago

from fellow aquarist Ed Vukich, a longtime member and expert breeder here at Greater City. As I had no experience with or knowledge of shell dwellers, I consulted Warren Feuer, another member and expert breeder of our club, who some years ago gave us a wonderful presentation about shell dwellers.

I placed the six or seven *N. similis* in a 30-long tank, and purchased some crushed coral from JEHMCO to give them the higher pH (more basic than acidic) which they require to thrive. Most of the breed love to dig. Shell dwellers like to build a little protection from predators by sinking the shell lower into the substrate. I ordered at least 50 or more small (under 2") shells, (the more the better) from a retailer I found on [smile.amazon.com](https://www.smile.amazon.com) (Ordering via Amazon/Smile benefits GCAS at no cost to the buyer). Some of the shells were escargot shells—the type used in French cooking. These shells are less expensive than the decorative shells on the market. I kept adding shells that I purchased on Amazon/Smile. The tank temperature is 78 degrees F, which is the temperature of my fish room, and I perform 50% water changes once a week. I had set up two 4" SwissTropicals sponge filters with Jet lifters (in my opinion the best sponge filters available) to provide filtration and cross circulation at each end of the tank.

The *N. similis* were too young to sex when I placed them in their new home, but the males are much larger than females, so some patience is needed. I fed these juveniles a very small pellet food in the morning with KilliFeast, small pellets from Brine Shrimp Direct (high protein), and live Brine Shrimp in the evening. I use a turkey baster to get the food down to the shells. Adult shell dwellers will eat from the surface, but fry usually stay low.

After almost a year of patience I noticed parents taking care of fry. This tank now has several colonies,

with some fish swimming without a colony. I estimate I now have over 80 *N. similis* in that tank. I've raised some money for GCAS by selling some of these fish to members at ridiculously low prices. Since the shell dwellers are impossible to get out of their shells, I have developed a method using a pail over a section of egg crate, suspended over about 4" of water, placing the shells removed from the tank onto the egg crate at water level. Overnight, the shell dweller drops out of the shell but can't or won't reenter the shell. The process takes overnight, with an air hose running to give the fish oxygen.



Lamprologus ocellatus

With my success raising *similis* I decided to look for other species of shell dwellers. Covid was keeping us home, and I needed more things to keep



Lamprologus ornatipinnis "Kigoma"



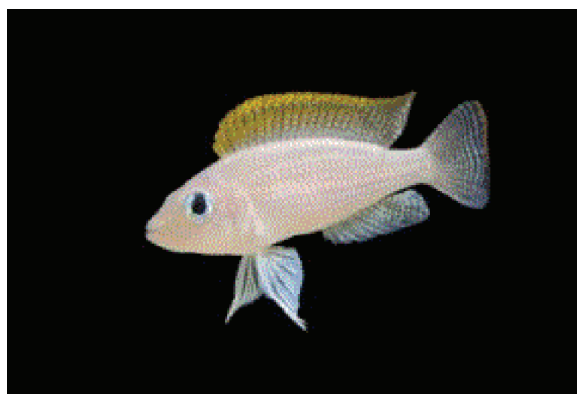
Altolamprologus compressiceps Sunbu

me interested and busy. I decided to make contact with Sand City Cichlids because I liked their website, which showed a variety of shell dwellers available for sale. I placed an order for six fish to see how reliable this online seller was and how healthy the fish were when delivered. I've now ordered six times from Sand City, with each order consisting of seven or eight fish of different species of shell dweller. They are housed in 15 and 20 gallon tanks. I list the fish below and whether I have bred them. I recommend ordering at least six or seven juvenile fish when ordering any fish online, to make sure you will eventually have at least one breeding pair.

<i>N. similis</i>	bred
<i>L. ornatipinnis</i> Kigoma	bred
<i>L. caudopunctatus</i>	Not yet
<i>L. ocellatus</i> blue	Not yet
<i>L. ocellatus</i> gold	Not yet
<i>A. compressiceps</i> sumba dwarf	bred (5/1/21)
<i>L. calliurus</i> Magara	Not yet.

*Just outside my fishroom there is a framed 3' X 4' poster depicting most of the known shell dweller species from Lake Tanganyika. I purchased it from Sand City Cichlids and framed it. Some of the photos are presented below.

Some aquarists say they never saw a tropical fish they did not like. Well I found one I like very much, and maybe you will too!



Lamprologus caudopunctatus



Lamprologus calliurus Magara

The Amazing Mag Clip

by Joseph Ferdenzi

Zoo Med, the company that makes this product, labels it the “Industrial” Mag Clip®, but I prefer to call it amazing. It is the only product of its kind that I know of on the American market, and I find it so useful in so many ways that I am amazed by its versatility.



As this photo shows, the product comes in a blister pack and consists of two round magnets in plastic housing, plus seven assorted clips. As you can see, the clips come in assorted sizes. There is a size to fill virtually any need, and I know because I’ve just about used them all.

One of the truly great features of this product is that the clips are threaded! Yes, they screw into the threaded

base that goes inside the tank. This feature means that they will not dislodge from the base.

The obvious use for these Mag Clips is in place of suction cups that usually accompany heaters and filter tubes. Many of these suction cups work well at first, but over time they often lose their ability to adhere to the glass. That is never a problem with Mag Clips—the two powerful magnets never let go.

But beyond these obvious uses, I have employed Mag Clips in a variety of ways that I have found very helpful. For example, in the past I have often used so-called “veggie clips” for feeding lettuce and seaweed to various fish.



These inexpensive clips come with suction cups, which are OK, but besides the fact that they lose their grip, they have one big disadvantage—you cannot move them along the glass. If you want to

change the placement in the tank you have to reach in with your hand, dislodge the suction cup, and then stick it somewhere else.

So what I now do is remove the suction cup from the clip. Then I choose the Mag Clip that is the smallest one that is wider than the hole left by the removal of the suction cup. The threaded side goes through the hole and is screwed into the threaded Mag Clip base (photo at upper right). Now I not only have

a veggie-clip that won’t fall, but I can move it all around the front glass by simply moving the outside magnet—wherever it goes, the inside magnet follows. No more getting hands wet or possibly contaminating your tank every time you want to change the location of the veggie-clip.



Another great use for Mag Clips is illustrated in this photo (right). Traditionally, in-tank breeder boxes or isolation boxes used suction cups or plastic brackets that hung over the rim of the tank. Suction cups of course would sometimes dislodge, resulting in unwanted occupants in your aquarium. Aluminum or plastic brackets solved that problem, but had a different one: you could usually not fully close the canopy of your aquarium.

This was apt to be a problem if your aquarium housed fish that were likely to jump through even small openings. The solution to that problem is simple: use a set of Mag Clip magnets—with or without a clip. As the photo shows, by sandwiching one side of the box and aquarium glass between the two magnets, you have a permanent way of keeping the box up, and in a way that does not interfere with closing the lid on your tank.



I’ve mentioned the obvious uses of the Mag Clips for heaters and for filter tubes, but there is another, less obvious use that is related to heaters, for which I find Mag Clips to be indispensable. I am talking about heaters that have a temperature sensor on a remote wire. These high-tech heaters are the kind I prefer, and to use them most effectively it is useful to place the sensor as far away from the heating tube as possible. In order to do this, the manufacturers supply a small suction cup that is attached to the sensor. As you have probably already surmised, these suction cups are not very reliable. Once again, Mag Clips come to the rescue (see photo on opposite page).

I am sure that in the future I will find many other uses for these Mag Clips. Because of their unique and well thought-out design, they have a great deal



of versatility. I have also found that these magnets are budget-friendly. Good quality magnets tend to be expensive. Have you checked the prices of brand-name magnetic cleaning pads lately? Mag Clips are definitely strong, quality magnets, and if you shop around you will figure out

that they are being sold for a reasonable price.

With a large fishroom to take care of, I really do not have the time or desire to deal with suction cup failures. Therefore I use a lot of Mag Clips and am not deterred by their cost. To quote the slogan of a friend of mine in the hobby, "You can always get more money, but you can't get more time." For those of you with only a few aquariums, the cost could be an even more negligible consideration, and given the mishaps you may avoid by using Mag Clips, you might even save money in the long run.

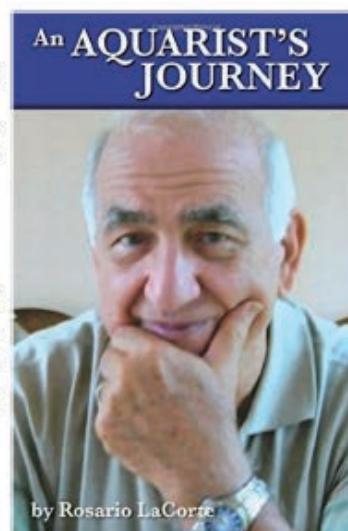


An Aquarist's Journey

Rosario La Corte is one of the world's leading authorities on breeding fish and he has written numerous articles and books, contributing greatly to our understanding of fish and their habits.

Now, for the first time, here is a compilation of his travels, adventures, successes (and, very occasional failures) all relating to collecting, keeping, and breeding fish, and in his own words (and edited by Modern Aquarium's Editor, Dan Radebaugh).

Available in softcover at Amazon.com



Laetacara araguaiaie

A Terrific Mid-sized Cichlid

Story and Photos by Arthur Mayer

Several years ago I was lucky enough to win a bag of two *Laetacara araguaiaie* (formerly called *Aequidens* sp. Buckelkopf), raised by Victor Hritz at our club auction. Once home and acclimated in my 75 gallon community aquarium, I knew that I had something special. Not since I had purchased a pair of *Aequidens metae* back in the late 1970s from the defunct Tony's Aquarium LFS had I seen such regal, beautiful and well-tempered cichlids.

Not content with the two I had acquired, I purchased two more from Victor. I now had four of these fish living alongside three *Laetacara curviceps*, two *Cleithracara maronii* keyholes and an assortment of other tankmates including Congo and bleeding heart tetras, gold barbs, clown loaches and zebra loaches (*Botia striata*) and a *Synodontis* catfish.

While *L. araguaiaie* is labeled as a “dwarf cichlid” based upon its average size of about 3.5 inches, I would call them “mid-sized,” because my males have reached at least 4.5 to 5 inches in length and the females just under 4 inches. Still, these fish do not disturb or eat plants, and spawning behavior involves a bit of trench digging, which you can stop by offering the pair a nice small piece of flat slate rock in their chosen location. While the

pair will nudge other fish away from the site, they do not terrorize the tank's population.

Adhesive eggs will be deposited on the rock, and soon you will see small clouds of gray matter moving about the site. It was at this point that on three happy occasions I removed as many fry as possible and placed them in a ten gallon grow-out tank, where they thrive on the usual fry introductory foods. Most of these fish were happily accepted in trade at local aquarium stores, and I am sure they sold rather quickly.

What is eye-catching about *L. araguaiaie* is their understated but wonderful coloration. The mature *L. araguaiaie* presents with a blue that runs from a powdery to a more intense hue throughout the body into the fins and face. A black segmented lateral line runs from the eye back to the tail fin, and this pleasing blue is then contrasted with orange-amber accents which decorate this fish from just below the eyes, over the gill plates up along the body and fading into the tail fin. Add to this a less vivid beige coloration that fills in between the blue splotches also running on the top half of the fish's sides, and you have just a great looking fish that is suitable for so many set-up situations!



Aquarium Husbandry of the Tiger *Limia*

by Paul V. Loiselle



Figure 1. The bars on the flanks of the Tiger *Limia* vary considerably in width. Pictured is a male of the broad-bar morph. These markings are much more numerous in the narrow-bar morph.

The genus *Limia* Poey 1854 comprises twenty-two described and at least one undescribed species. It was placed in the synonymy of *Poecilia* in 1963 (Rosen and Bailey, 1963), while recognized as a subgenus of that genus. However, on the strength of both morphological and molecular data, subsequent workers (Rodriguez, 1977; Ghedotti, 2000) restored *Limia* to full generic rank. With the exception of a single questionable species from Venezuela, all are native to the Greater Antilles. Grand Cayman Island, Cuba and Jamaica are each home to a single species. The remainder are native to the island of Hispaniola, and of these, eight are endemic Haiti's Lac Miragoane. Three species, *Limia vittata* (Guichenot 1852), *Limia melanogaster* (Gunther 1866) and *Limia nigrofasciata* Regan 1913 have a long history in the hobby, having made their debuts as aquarium fishes in 1907, 1908 and 1912 respectively (Sterba, 1966). Nine of the ten species currently being maintained were introduced to the hobby in the 1980s and 1990s, a period characterized by an upsurge of interest in "species livebearers" by serious poeciliid enthusiasts.

The subject of this article is a representative of the "new wave" *Limia* species. The current aquarium population is descended from fish collected by Dominic Isla in 1989 from the southwest bight of Lake

Miragoane. Its distinctive coloration both earned this species its generally recognized common name and led to its initial misidentification as *Limia garnieri* Rivas 1980, a somewhat similarly marked Lake Miragoane endemic known only from the two type specimens.

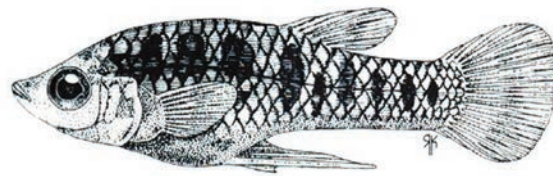


Figure 2. Line drawing of the male-type specimen of *Limia* (*Odontolimia*) *garnieri*. Reproduced from Rivas. L. R. and R. Frantz, 1983.

That species, like most other Lake Miragoane endemics, is placed in subgenus *Odontolimia*. These species differ from representatives of the nominate subgenus *Limia* in having fewer but larger teeth in their jaws (Rivas, 1980). Dan Fromm, who first brought many Haitian *Limia* species to the United States, pointed out (Fromm, 2000) both that the dentition of the Tiger *Limia* places it in the subgenus *Limia* and that the color pattern of *L. garnieri* differed significantly from that of the Tiger *Limia*. As matters presently stand, this species remains undescribed, a



Figure 3. A male narrow-bar Tiger *Limia*. Such individuals have a more elaborately marked dorsal fin than do males of the broad-bar morph.

state of affairs that will hopefully change in the near future.

I first encountered this *Limia* on a visit to my friend Ron Harlan's fish room after speaking to Orange County's C.O.A.S.T. club in March 2016. I was struck by this species' attractive coloration, lively behavior and small adult size—the largest of Ron's females was slightly over 1.5" (4.0 cm) SL. Late the following month I spoke to the Greater Cincinnati Aquarium Society. When a bag of subadult Tiger *Limia* came up for sale at their regular meeting auction, I took the plunge and acquired my initial starter culture of this species. In the interest of broadening the genetic base of my incipient population, I ordered two additional pairs from Select Aquatics, a Colorado based on-line vendor. The fish arrived in excellent condition and joined the Cincinnati fish in a planted five gallon Matineland Eclipse® tank.

As a visit to Haiti in 1988 had afforded me the opportunity to do on the spot measurements of water quality in a number of habitats, I was quite confident that I would have no difficulty providing my new arrivals with water to their taste. The pH in the habitats I sampled ranged from 7.2 to 8.0. Carbonate and total hardness values were virtually identical and ranged from 7 and 18 DH. A mixture of equal parts Rahway tap and R/O water to which was added a level tablespoon of commercial Malawi salt mix gave me water with a pH of 7.2, a total hardness of 17 DH and a conductivity of 650 FSiemens/cm². A vigorous



Figure 4: Like those of most poeciliid species, male Tiger *Limia* spend most of their waking hours trying to copulate. Very few of these attempts result in sperm transfer. Both of the females pictured are of the narrow-bar morph.

growth of *Vallisneria* and *Ceratophyllum* along with the use of PolyFilter® has to date kept nitrate levels sufficiently low to make large-scale water changes unnecessary. How long this happy state of affairs will continue given the rapidity with which the tank's original population has increased remains to be seen! The tank's heater is set at 72F. (22C.), but as it sits in a west-facing window, incident sunlight can raise the late afternoon temperature as high as 78F. (26C.)F.

The generic name *Limia*, derived from *limus*, the Latin word for mud, refers to the feeding behavior of these poeciliids in the wild. Like other detritus-feeding fish, Tiger *Limia* are easily fed in captivity. I feed my fish ZooMed Can o' Cyclops® daily, supplemented with two TetraMin tablets every other day. The grated Repashy FruutLuups® I will sometimes substitute for the tablets is enthusiastically devoured. So is the mixture of live *Daphnia* and mosquito larvae the fish get as an occasional treat. The enthusiasm and efficiency with which Tiger *Limia* devour the mosquito larvae before starting in on the *Daphnia* argues that this species would perform quite well as a larvivore in its native Haiti.



Figure 5: Female Tiger *Limia* display neither an obvious gravid spot nor grow heavily full-bodied as they approach their delivery date. This female gave birth to six fry three days after this picture was taken.

As previously noted, Tiger *Limia* are active little fish. While I have never regarded poeciliids as the sharpest knives in the piscine drawer, it took this species only two days to make the connection between my appearance and that of food. The only other fish in their tank are two very small Siamese Algae Eaters, so I can only speculate on how Tiger *Limia* would behave in a community setting. However, males tolerate one another rather than establishing a dominance hierarchy in which the alpha fish proceeds to systematically harass his tankmates of the same sex. This suggests that Tiger *Limia* would be appropriate residents in a community of comparable-sized companions. Given its preference for hard alkaline water, I suspect that this species would be an appropriate dither fish for Tanganyikan shell-dwelling cichlids.

Breeding the Tiger *Limia* is simplicity itself—just set fish of both sexes up in a single-species tank and feed them well. Females will deliver a brood every thirty days. While they do become somewhat fuller-bodied as their delivery date approaches, females of

this species never become as obviously gravid as do those of many other livebearing fishes. Broods are not large. My record number to date is fifteen fry from a female 1.5" SL. That said, the fry are quite robust. Neonates measure 1.0 cm SL and have a conspicuous black spot on the dorsal fin. They can take *Artemia* nauplii and finely divided flake food for their initial meal and within a week are large enough to eat sifted *Daphnia*. Tiger *Limia* do not eat their fry. Small brood sizes notwithstanding, in the absence of retroactive birth control Tiger *Limia* numbers in a single species tank can increase with surprising rapidity. The fry grow quite rapidly. Male gonopodial folding begins to be evident at just under 1" (2.5 cm) TL. Females deliver their first broods at an age of four months *post partem*.

This is not the most striking representative of the genus. *Limia nigrofasciata* have more impressive finage, while *Limia melanonotata*, *L. melanogaster* and *L. vittata* are much more vividly colored. However, what the Tiger *Limia* lacks in looks, it makes up for in manners, while its modest adult size makes it an excellent choice for smaller aquaria. This Haitian charmer is well worth the attention of neophyte and experienced hobbyists alike.



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WET LEAVES



a Series On Books For The Hobbyist

by SUSAN PRIEST

Over the years I have written more than sixty-five book reviews for Modern Aquarium. I can't help but feel that each one has been part of a grand plan, a stepping stone, if you will, leading up to this very special opportunity. What makes this one so special? Why, the author, of course!

As if there weren't already enough reasons for us to take pride in being able to claim her as one of our own, Claudia Dickinson has written a book just for us! When I say "US," I of course include aquarists from throughout the entire English-speaking world. (I wonder how long it will be before Aquarium Care of Cichlids is translated into other languages.) However, those of us here at Greater City can't help but to take an extra-personal interest, as well as to indulge ourselves in some not-so-modest "boasting rights."

In between the table of contents, the list of resources, and the index, there are eight chapters simply overflowing with advice and information. The titles of the chapters are: Why Cichlids?, Understanding Cichlids, Preparing the Cichlid Aquarium, Water Changes! (And Other Maintenance), The Cichlid Diet, Prevention is the Best Medicine, So Many Cichlids To Choose From, and lastly, Breeding Cichlids and Beyond. Of particular interest are the various text boxes which draw the reader's attention to those items which Claudia hopes we will remember most. You may want to take a separate tour through the book, focusing only on the yellow circles most aptly titled "The Expert Knows."

Our author starts us off with the question "Why Cichlids?" I find this to be so much more refreshing than "what is a cichlid?" which I have come across countless times. Intelligence, heart and mind, personality-plus; right from the beginning she makes us want to know more!

On a scale of one to ten (one being a rank beginner, and ten being a top expert), this book is a good choice for readers in the one through eight range of fishkeeping experience. Those readers in the upper twenty percent levels of expertise may not find it to be challenging, which is not to say that they won't enjoy it. The writing style is friendly without being flippant!

Main themes which Claudia returns to throughout the text are water changes, good bacteria, water changes, conservation of energy, and water changes. I offer you a few quotes which emphasize these concepts: "Treat your 'good bacteria' with as much care as you do your cichlids" (Chapter Four). "Will they (cichlids) go out of their way to kill another cichlid that is not in their territory? No, because that would expend energy that they could not afford to waste" (Chapter Eight). "Nothing matters more to the health of your cichlids, and indeed of all fish, than regular water changes. Other maintenance is important too, but nothing trumps changing water." (Chapter Four).

I have often heard hobbyists bemoan the downside of the water changers which hook up to a faucet (of which there are a few different brands). They waste large amounts of clean water in the process of

removing water from the tank. Claudia offers us a solution to this problem. After the siphoning action has been started by running the faucet, it will continue to "suck" (my word) even if the faucet has been shut off. She gives us no excuses for postponing this most important task!

Chapter Six could just as aptly be called "Prevention of **Stress** is the Best Medicine." Stress is described by our author as the "root of illness." So, what puts a fish under stress? A "Stress Checklist" may contain such items as: overcrowding, overfeeding/poor nutrition, insufficient good bacteria, insufficient "hidey-holes" (my word) which will lead to fear, water too hot or too cold, inappropriate tankmates, etc. Hopefully when you start thinking about it, and look around at your own fish's environment, your stress checklist will be a short one.

If you are someone who doesn't actually **read** aquarium books, but is best described as a browser, there are a few highlights I would like to make sure you don't overlook. I guarantee that the the description of "fish stuff" (her words) on page 37 will strike a chord of familiarity in every one of you. Page 48 has a text box entitled "Keep a Little Extra," which recommends tucking a "spare" (my word) sponge filter or two in your established tanks so that you are prepared for the unexpected. You should go out of your way to read the explanation of what makes water changes so important on page 57. Aggression management, which is discussed on pages 102 and 103, tells you when to grab the net, when to set up another tank, and when to let "Mr. Hot-to-Trot" (her words) pace for a while. And, to soothe the soul of the browser within you,

MA Classics: Reprinted from *Modern Aquarium*, Series III Vol. XIV, No. 4 June, 2007

don't miss out on the photo of the "cichlid paradise" (my words) on pages 36 and 37.

Does anyone know the name of the fish on the cover of this book? It is an *Acarichthys heckelii* (a.k.a. the Thread-Finned Acara). How do I know this? I had to ask our author. I would not be doing my job as a reviewer if I did not point out any obvious shortcomings. To me, one that stands out is the lack of identification of the fishes in the photos, including the one on the cover. The majority of the photos were taken from the T.F.H. archives, and Claudia did not make the choices or do the design layout. Newcomers to the world of cichlids, as well as more seasoned aquarists, need to know this information, and will have to do independent research when a fish face jumps off the page at them that they want to know the name of.

Now that I have gone on the record with a gripe, I must make a qualified retraction. Chapter seven, "So Many Cichlids To Choose From," was not authored by Claudia, but by David Boruchowitz (T.F.H. editor extraordinaire). In this chapter, virtually all of the photos are labeled with their scientific names. The intent of this chapter is to help the reader make an informed choice when they are ready to purchase a cichlid. "Let's take a look at the world of cichlids and point out a few species which are particularly good ambassadors for the family."

Having a bit of an insider's advantage, I can offer you a couple of "tidbits" that other reviewers won't know about. For example, the reference to temperature on page 44 was written on the night of Thanksgiving, 2006. I can also report to you that the photo of the *Nandopsis* (formerly *Cichlasoma*) *haitiensis* on page 103 is of a fish which once belonged to none other than our own Joe Ferdenzi (this being the one and only fish of Joe's among the T.F.H. photo archives).

This may actually be the most fun I have ever had while reading a book. I can see Claudia's face beaming out at me from every page while she carefully chooses each idea, concept, and fact, as well as the words to express them. On one page she becomes an historian, on another a scientist, and on many others she is a hobbyist just like you or me. Where does the hot cocoa mix fit into the equation? You will have to look that up on your own. "If the phone rings or the dog needs to be let out while you're changing the aquarium water, you can become distracted and end up with a drenched

floor." I even know that the dog is a Boston Terrier! (See photo inset on this page.)

Published by T.F.H., a name we all know well, this book is also part of the Animal Planet Pet Care Library; "Expertly written, these user-friendly guides are bound to delight the entire family." To find out more about this series, visit www.animalplanet.com

Our publisher wants us to know that Claudia Dickinson is an award-winning author, the managing editor of the American Cichlid Association's Buntbarsche Bulletin, and that her personal focus is on cichlids from South America, Central America, Madagascar, and West Africa. Oh, there's more, including the fact that she writes for Modern Aquarium. How often has she labeled one of us a "STAR?" Now it is our turn to return the sentiment. Claudia, you are our **"STAR AUTHOR,"** and we are so very proud of you!!!



Tyler and Emily

As I re-visit each chapter and page, I wish I could relate many more pearls of wisdom. I could squeeze in a few more by foregoing a visit with Tyler and Emily, but some things are just too good to give up!

I had chosen a few of her own words from the text of Aquarium Care of Cichlids to bring this review to a close, however Claudia has written a personal message just for us.

"My greatest wish was to write a book that offered an understanding of why cichlids act and thrive (or not, as the case may be) as they do in our aquariums through an awareness by the reader of the extent to which their behavior is driven by natural inclinations. I wanted it to be a book that would inspire those new to cichlids to discover the justified allure of this captivating, diverse family of fishes, and one that would start them out on the right foot, thereby securing a place for cichlids in their tanks for years to come. We can all learn from each other, just as we do at each meeting of the GCAS, and hopefully those who already keep cichlids, and other fishes as well, will find something new within these pages, too."

Sometimes we have to read between the lines, and sometimes she comes right out and says it. Basically, Claudia is telling us that she wants to share her love of all things "cichlid" with us. Of course, it is easy for us to see this because she has been sharing her love with us for years.



Gambusia To The Rescue?

by Dan Radebaugh

In the aftermath of Tropical Storm Elsa I received a phone call from one of my sisters in Tampa describing the aftermath of the storm there. One of the problems where she lives is that it's fairly low-lying, and even though there are plenty of catch ponds and drainage ditches to help with the excess water during the rainy season, those are barely able to keep up during a real 'weather event' such as a tropical storm or hurricane.

One of her neighbors apparently has planted so many shrubs along the border of her property that my sister's efforts to dig a trench to help drain the water from the yard down to the catch pond in back were stymied by the root systems of the shrubs. The result of course is that, even after the rain stopped, it's still not possible to walk on that side of her house without



sinking to ankle depth in water that will be there for a while. This is of course only a minor inconvenience, until you consider the mosquitoes, which are quite happy to breed in this sort of semi-aquatic lawn & garden environment.

Enter capitalism to the rescue! (?) My sister noticed that there were numerous signs posted around the area offering mosquitofish for sale to help stem the tide of the lawn & garden mosquito population explosion! There are lots of hungry fish in the drainage ditches and catch ponds. From my memory most of the fish I've seen over the years in the catch pond behind her house were small, but rather larger than the *Gambusia* being hawked on these fliers. Nevertheless, desperate times...



Photos by Patricia Radebaugh





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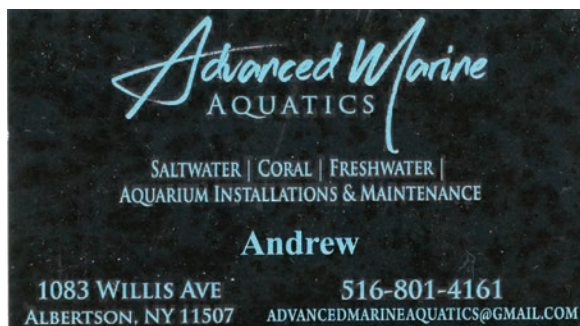
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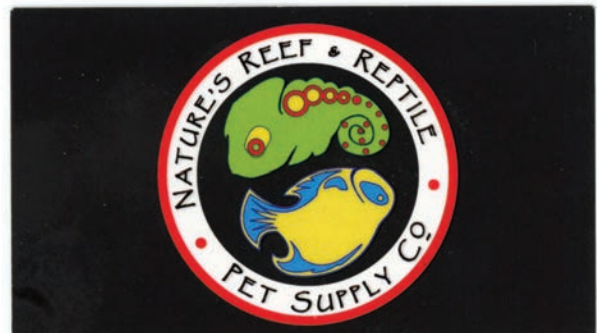
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Tonight's Speaker: August 4, 2021

Joseph Ferdenzi

A multifaceted aquarist, Joe Ferdenzi has kept tropical fish since the mid 1960s, and during this time has done extensive writing, breeding, showing, speaking, and judging. His skilled and articulate writing has been published locally as well as nationally, and he was awarded the high honor of Author of the Year by the Federation of American Aquarium Societies in 1994 and again in 1996.

This evening Joe takes us on a virtual tour of his unique fishroom, part fish breeding operation, part decorative aquariums, part museum of recent and historical aquarium artifacts, with a focus on the story of Greater City.



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Jellyfishbot and the Hydromedusa

A series by the Undergravel Reporter

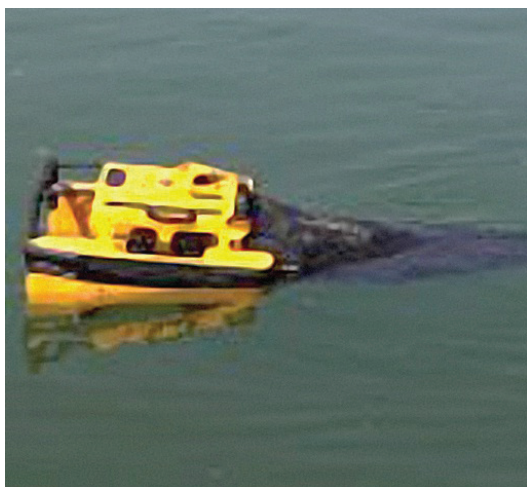
In spite of popular demand to the contrary, this humor and information column continues. As usual, it does NOT necessarily represent the opinions of the Editor, or of the Greater City Aquarium Society.

Tourists visiting the picturesque port at Cassis, southern France, often see an unedifying sight: plastic bags, discarded drinks bottles, and even used surgical masks,

Jellyfishbot is in operation in around 15 French ports and has been exported to other countries including Singapore, Japan, and Norway, according to Carlesi's company.¹

Jellyfishbot appears to lack one thing that any well-equipped boat should have, namely lights. Well, Mother Nature has already added that feature to some organic jellyfish. Scientists on NOAA's Okeanos Explorer Vessel caught video of just such a creature in April near the Mariana Trench, the deepest part of the ocean. It was hanging out about 12,000 feet (3700 m) below the water's surface. (That's far above the 13,000 - 20,000 feet abyssal zone where no light reaches and even more wild and terrifying creatures lurk.)

NOAA has identified it as a "Hydromedusa," which is an excellent



A Jellyfishbot



A Hydromedusa

floating in the water among the boats in the marina. But the port has found a solution, in the shape of a bright yellow remote-controlled electric powered boat that weaves around the harbor sucking the trash into a net that it trails behind its twin hulls.

The boat, called "Jellyfishbot," is about the size of a suitcase and so it can get into the corners and narrow spaces where rubbish tends to accumulate, but which are difficult for cleaners with nets to reach. "It can go everywhere," said Nicolas Carlesi, who has a Ph.D. in undersea robotics and whose company, IADYS, created the boat.

classification. It does look very "Medusal," if the mythological villain also glowed from the inside. The original video of the creature was shared almost 10,000 times from the NOAA Office of Exploration and Research Facebook page. Fans of the video have been trying to think of exactly WHAT this luminescent Hydromedusa looks like. They described it as a "deep sea firefly," "an alien, plain and simple" and "bad 90s computer graphics."²



References:

¹ <https://www.ksl.com/article/50200552/meet-jellyfishbot-the-robot-that-likes-to-eat-sea-trash>

² <https://www.ksl.com/article/39618868/science-lovers-enthralled-by-crazy-glowing-jellyfish>



Fin Fun



What's In A Word?

All of the words (ok, some are names) in the box below can be found somewhere in this issue of Modern Aquarium. Can you find them all?

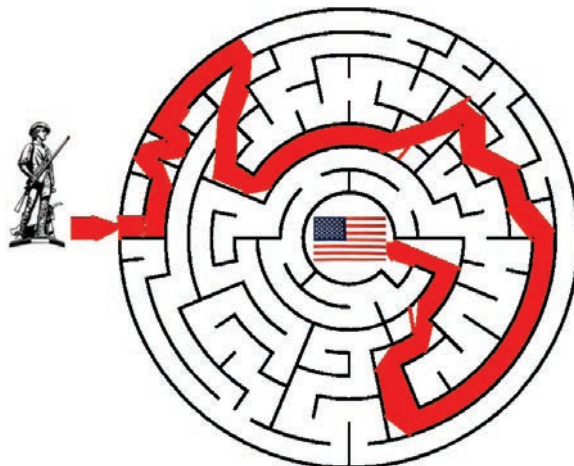


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